



Government of India
Ministry of Communications
Department of Posts – Civil Wing
Postal Electrical Division, Kolkata
Yogayog Bhawan, P-36, CR-Avenue, Kolkata-700012



PERCENTAGE RATE E-TENDER DOCUMENT

Name of work : SITC of 160 KVA 3 Phase DG set with AMF panel and allied work at Shillong GPO.

NIT No : 12/EE/PED/KOL/NIT/2026-27

Dated: 12.05.2026

Estimated Cost : ₹ 1950397.00

EMD : ₹ 39008.00

Time Allowed : 120 Days

Executive Engineer(E)
Postal Electrical Division
Kolkata

INDEX**NIT No:** 12/EE/PED/KOL/NIT/2026-27**Dated:** 12.05.2026

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This NIT contains Total **39** Pages (Tender documents page 1 to 34, Schedule of Quantities/ Works page 1 to 4 and BoQ 1 page)

Issued to : _____ Tender document made available Online

Signature of officer issuing the documents
Designation

Executive Engineer(E)
Postal Electrical Division
Kolkata

**GOVERNMENT OF INDIA
DEPARTMENT OF POSTS
NOTICE INVITING TENDER (CPWD 6)
(e-tendering mode)**

- 1 The Executive Engineer (Electrical), Postal Electrical Division Kolkata invites online percentage rate tenders on behalf of President of India for following work from the eligible firms who fulfils the below mentioned conditions:-

SITC of 160 KVA 3 Phase DG set with AMF panel and allied work at Shillong GPO.

- 1.1 The work is estimated to cost **Rs. 1950397.00** This estimate, however is given merely as a rough guide.
- 1.2 **ELIGIBILITY CONDITIONS:**
- 1.2.1 The OEM / OEA of the make of EA sets provided in the Product Directory having successfully completed works in the Central Government / State Government/PSU during last seven years ending last day of the month previous to the one in which applications are invited (for the bidders not registered with the Department of Posts):
- | | | |
|--|-----------------------|--|
| Three similar works each for value not less than | Rs. 780159.00 | i.e. 40% of the estimated cost put to tender |
| OR | | |
| Two similar works each for value not less than | Rs. 1170238.00 | i.e. 60% of the estimated cost put to tender |
| OR | | |
| One similar work each for value not less than | Rs. 1560318.00 | i.e. 80% of the estimated cost put to tender |
- Note:-**
- (i) For the purpose of this clause ‘similar work’ means, the tenderer should have experience of works of “SITC of DG Sets with individual capacity of minimum 80% of 160 KVA, i.e. 125kVA”.
- (ii) The value of all above executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum calculated from the date of completion to previous day of last date of submission of tenders.
- (iii) Certificate of successful completion of work in respect of the experience issued by an officer not below the rank of Executive Engineer or equivalent and shall clearly mention the capacity of the system, amount of work done. Works in which compensation is levied shall not be treated as satisfactory completion. If the work is completed beyond the stipulated date of completion then compensation levied or not levied should be mentioned in the completion report.
- (iv) Joint Ventures are not accepted.
- 1.2.2 Average Annual financial turnover during the last 3 years, ending 31st March of the previous financial year, should be at least 100% of the estimated cost put to tender. **CA Certificate** to establish the turnover copy of the same is to be uploaded by the firm.
- 1.2.3 The firm should have valid GST registration/Certificate of provisional registration for GST and copy of same is to be uploaded.
- 1.2.4 The firm should have valid Electrical contractor’s license as per IE rule/Central Electrical Authority (Measures relating to safety and electric supply) Regulations 2010.
- 1.2.5 To become eligible for issue of bid, the bidders shall have to furnish a Notarized affidavit on non-judicial stamp paper (of value not less than Rs.10/-) as under :-
- I/We undertake and confirm that eligible similar works(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/we shall be debarred for bidding in DoP in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee. **(Scanned copy to be uploaded at the time of submission of bid).**
- 3 Agreement shall be drawn with the successful tenderer on prescribed form No. **C.P.W.D.- 7** which is available as a Govt. of India Publication. Tenderer shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
- 4 The time allowed for carrying out the work will be **120 Days** defined in schedule ‘F’ or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the tender documents.
- 5 The site for the work is available.
- 6 The bid documents consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except standard general conditions of contract form can be seen from website <https://eprocure.gov.in/eprocure/app>.
- 7 After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of bid as notified.
- 8 While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of bid as notified.

- 9 **Earnest Money Deposit:** Earnest money shall be in the form of Treasury Challan or Demand Draft / Pay Order / Banker's Cheque of a Scheduled Bank (issued in favor of Accounts Officer, Postal Electrical Division, Kolkata) or Deposit at Call Receipt / Fixed Deposit Receipt of a Scheduled Bank (pledged in favor of tender inviting authority).
- 9.1 A part of earnest money is acceptable in the form of bank guarantee also. In such case, minimum 50% of earnest money or 20 lakh, whichever is less, shall have to be deposited in the shape prescribed above and balance may be deposited in shape of bank guarantee issued by any Scheduled Bank having validity of six months or more from last date of receipt of bids which is to be scanned and uploaded by the intending bidders.
- 9.2 The earnest money should be deposited (on all working days up to 16:00 hours either in the office of Executive Engineer (E) inviting bids or division office of any Executive Engineer, Postal Electrical/ Civil Division within the period of bid submission. For this list of Executive Engineers along with address where EMD can be deposited is enclosed as Annexure-II. The officer receiving EMD shall issue a receipt of deposition of earnest money to the bidder in a prescribed format as per Annexure-I. This receipt shall be scanned and uploaded on the e-tendering website within the period of bid submission.
- 9.3 Alternatively, earnest Money may also be deposited through RTGS/NEFT in the account of Accounts Officer, Postal Electrical Division, Kolkata. The bank A/c's details are as follows:- A/c's Name: Accounts Officer, Postal Electrical Division, Kolkata, State Bank Government Business Branch, Kolkata. Account No. 32348385589, IFSC Code- SBIN0000001 (Kolkata Main Br.). (UTR) of RTGS/NEFT shall have to be uploaded by the bidder in the e-tendering system by the prescribed date. The Executive Engineer concerned will get earnest money verified from the Bank based on the unique transaction reference number against each RTGS/NEFT payment before the tenders are opened.
- Note:**
- (i) Earnest money must be deposited through separate transaction.
- (ii) The bidder will use one UTR for one work only. In case it is found that he has used one UTR number for different tenders submitted by him will be rejected and he shall be debarred from further tendering in the department in future.
- 10 Interested contractor who wish to participate in the bid has to be enrolled on the e-Procurement module of the Central Public Procurement portal (URL: <https://eprocure.gov.in/eprocure/app>). No E-Tender Processing Fee is required.
- 11 Copy of certificate of work experience and other documents as specified shall be scanned and uploaded to the e-tendering website within the period of bid submission. **However, certified copy of all the scanned and uploaded documents as specified shall have to be submitted by the lowest bidder only within a week physically in the office of tender opening authority.**
- 12 Online bid documents submitted by intending bidders shall be opened only of those bidders, who has paid e-tender processing fee, and has paid / deposited earnest money; and other documents scanned and uploaded are found in order.
- 13 The e-Tenders shall be submitted under two envelopes system to the e-tendering website before the last date and time of Bid submission, the first electronic envelope will be named as **Technical BID Envelope** & shall contain documents of bidder's satisfying the eligibility conditions and tender document i/c schedule of works and second electronic envelope shall be named as **Financial BID Envelope** containing Bill of Quantities (BoQ). The bidder shall submit TECHNICAL BID & FINANCIAL BID simultaneously. The technical bids will be evaluated first and thereafter financial bids of eligible bidders only shall be opened. These envelopes shall contain one set of the following documents:-
- 13.1 **Technical Bid Envelope shall contain :**
- i) Receipt of deposition of original EMD issued from division office of any Executive Engineer (including NIT issuing EE/AE), DoP; if deposited in physical form.
 - ii) Scanned copy of PAN Card in .pdf format.
 - iii) Scanned copies of Certificate of Registration of GST/Certificate of provisional registration for GST in .pdf format.
 - iv) Scanned copy of valid electrical Contractor License as per IE Rules/Central Electrical Authority (Measures relating to safety and electric supply) Regulations 2010 in .pdf format.
 - v) Scanned copy of valid OEM / OEA certificate as applicable in .pdf format.
 - vi) Scanned copy of Affidavit in .pdf format.(as per page 12 of this document)
 - vii) Scanned copy of UNDERTAKING (as per page 11 of this document) duly filled, stamped & signed in .pdf format.
 - viii) Scan copies of WORK EXPERIENCE CERTIFICATES of requisite magnitude with appropriate Authority as per NIT in .pdf format. The contractor is required to submit satisfactory work completion certificate issued by an officer not below the rank of Executive Engineer, clearly stipulating the "Date of start, stipulated date of completion, actual date of completion".
 - ix) Scanned copy of Chartered Accountant's Certificate for turnover for last 3 financial years in .pdf format.
 - x) NIT Document in .pdf format (NIT XXXX.pdf file) digitally signed.
 - xi) Tender Document in .pdf format (TENDER XXXX.pdf file) digitally signed.
 - xii) Schedule of Quantities Document in .pdf format (SoQ XXXX.pdf file) digitally signed.
 - xiii) Any other document required to establish the eligibility as per the NIT conditions.
- 13.2 **Financial Bid Envelope shall contain :**
- i) Bill of Quantities (BoQ) in xls format (BoQ_XXXXX.xls) file duly filled & digitally signed without changing the name of file.

- 13.3 The bidder shall have to download the Full Tender Documents and again shall upload the documents with Digital Signature before the prescribed date and time of submission.
- 13.4 All documents shall be self attested/digitally signed & original document may be demanded at anytime before or after award of work.
- 13.5 The online bids shall be submitted before or on **22.05.2026** up to **11:00 Hrs**
Online Technical bid envelope will be opened by Executive Engineer (E), Postal Electrical Division, Kolkata or his authorized representative in his office, on **25.05.2026** up to **11:30 Hrs** The technical bids will be evaluated first and thereafter financial bids of eligible bidders only shall be opened.
- 13.6 In case the date of submission (opening) of bid is declared to be a holiday, the date of submission (opening) of bid will get shifted automatically to next working day at the same scheduled time.
- 14 The bid submitted shall become invalid if:**
- 14.1 The bidder is found ineligible.
- 14.2 **The bidder does not upload all the eligibility documents as stipulated in the bid document (as per para 13.1 & 13.2 above) including the NIT documents, Tender documents and Schedule of Quantities/Works.**
- 14.3 If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest bidder in the office of bid opening authority.
- 15 The eligibility/technical bid envelope on www.dopcivil.euniwizarde.com shall be opened first on due date and time as specified herein above. The time and date of opening of financial bid envelope of contractors qualifying the eligibility bid shall be communicated to them at a later date.
- 16 Addendum / Corrigendum shall be uploaded by the Engineer-in-Charge, if felt necessary by him, which shall form part of tender document.
- 17 The contractor whose bid is accepted will be required to furnish performance guarantee of **5%** of the bid amount within the period specified in Schedule F. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs. 10000/-) or Deposit at Call receipt of any scheduled bank/Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/ Pay order of any Scheduled Bank of any scheduled bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank (in case guarantee amount is more than Rs. 1,00,000/-) in accordance with the prescribed form given at page 13 of this NIT. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F', including the extended period if any, the Earnest money deposited by the contractor shall be forfeited automatically without any notice to the contractor. The earnest money deposited along with bid shall be returned after receiving the aforesaid performance guarantee.

The contractor whose bid is accepted will also be required to furnish either copy of the applicable licences/registrations or proof of applying for labour licences, registration with EPFO, ESIC and BOCW Welfare Board including Provident Fund Code No, if applicable and also ensure the compliance of aforesaid provisions by the sub-contractors, if any engaged by the contractor for said work, and Programme Chart (Time and Progress) within the period specified in Schedule 'F'.

The bank A/c's details of Postal Electrical Division, Kolkata are as follows:- A/c's Name: Accounts Officer, Postal Electrical Division, Kolkata, State Bank Government Business Branch, Kolkata. Account No. 32348385589, IFSC Code- SBIN0000001 (Kolkata Main Br.)

- 18 The description of the work is as follows:
SITC of 160 KVA 3 Phase DG set with AMF panel and allied work at Shillong GPO.
- Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidder shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.
- 19 The competent authority on behalf of the President of India does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.
- 20 Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.
- 21 The competent authority on behalf of President of India reserves to himself the right of accepting the whole or any part of the bid and the bidders shall be bound to perform the same at the rate quoted.

- 22 The contractor shall not be permitted to bid for works in the Postal Electrical Circle, Bangalore responsible for award and execution of contracts, in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of Junior Engineer and Superintending Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any gazetted officer in the Department of Posts. Any breach of this condition by the contractor would render him liable to be debarred for tendering in this Department.
- 23 No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.
- 24 The bid for the works shall remain open for acceptance for a period of **75 days from the last day of receipt of technical bid**. If any bidders withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then the Government shall without prejudice to any other right or remedy be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidder shall not be allowed to participate in the re-bidding process of the work.
- 25 This Notice Inviting Tender shall form a part of the contract document. The successful bidders/ contractor, on acceptance of his bid by the Accepting Authority, shall, within **15 days** from the stipulated date of start of the work sign the contract consisting of :-
 - 25.1 The Notice Inviting Tender, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online (in BoQ_XXXXX.xls file) at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.
 - 25.2 Standard CPWD Form as mentioned in Schedule 'F' or other Standard CPWD Form as applicable.
 - 25.3 CPWD General Conditions of Contract 2020 (GCC 2020)
- 26 In case any discrepancy is noticed between the document as uploaded at the time of submission of the bid online and hard copies as submitted physically in the office of Executive Engineer, then the bid submitted shall be come invalid and the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit the EMD absolutely. Further the bidder shall not be allowed to participate in the retendering process of the work.

For & on behalf of the President of India

Executive Engineer(E)
Postal Electrical Division
Kolkata

**INSTRUCTIONS TO THE CONTRACTORS/BIDDERS FOR THE E-SUBMISSION OF THE BIDS ONLINE THROUGH
TENDER SITE. <https://eprocure.gov.in/eprocure/app>**

This tender document has been published on the <https://eprocure.gov.in/eprocure/app>. The bidders are required to submit soft copies of their bids electronically on the <https://eprocure.gov.in/eprocure/app>, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the <https://eprocure.gov.in/eprocure/app>, prepare their bids in accordance with the requirements and submitting their bids online on the <https://eprocure.gov.in/eprocure/app>. More information useful for submitting online bids on the <https://eprocure.gov.in/eprocure/app> may be downloaded from “Download” section available on home page on <https://eprocure.gov.in/eprocure/app>.

REGISTRATION

- 1) Bidders are required to enroll on the e-tendering portal (URL:<https://eprocure.gov.in/eprocure/app>) by clicking on the link “Register” on the e-tendering portal.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and password for their accounts.
- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the DoP e-tendering portal.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class III Certificates with Signing+Encryption key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC’s to others which may lead to misuse.
- 6) Bidder then login to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

SEARCHING FOR TENDER DOCUMENTS

- 1) Bidder can search any tender by clicking on “Live Tender” under search option on Home Page. Once the bidders have selected the tenders they are interested in, they may download the required documents after clicking on “Tender Document”.
- 2) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted.
- 2) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF formats. Bid documents may be scanned with 50 dpi with black and white option.
- 3) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such documents (e.g. GST registration copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Document” available to them to upload such documents. These documents may be directly attached from the “My Document” library while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS

- 1) Bidder should log into the site well in advance for bid submission so that he/she uploads the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2) The bidder has to digitally sign and upload the bid documents one by one as indicated in the tender document.
- 3) The Tender Inviting Authority (TIA) will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders. The bidder should see that the bid documents submitted should be free from virus and if the documents could not be opened, due to virus, during tender opening, the bid is liable to be rejected.
- 4) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. The price bid has been given as a standard BoQ format (BoQ_XXXXX.xls) with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the blue colored (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
- 5) The server time (which is displayed on the bidder's dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission. The bidders are requested to submit the bids through online e-tendering system to the TIA well before the bid submission end date & time (as per Server System Clock).

- 6) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening.
- 7) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 8) Upon the successful and timely submission of bids, the portal will give a successful bid submission acknowledgement copy will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 9) The acknowledgement copy has to be printed and kept as an acknowledgement of the submission of the bid.

ASSISTANCE TO BIDDERS

- 1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the TIA i.e. Executive Engineer(E), Postal Electrical Division, Kolkata. Ph: 033-22120646, e-mail id- eeepedkolkata@gmail.com.
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is 0120-4711508 / 4001002 / 6277787 and Email ID : support-eproc&nic.in cpp-nin&nic.in.

Executive Engineer(E)
Postal Electrical Division
Kolkata

Format for Receipt of Deposition of Physical Earnest Money

Receipt No. _____

Date: _____

1	NIT No.	12/EE/PED/KOL/NIT/2026-27
2	Name of work	SITC of 160 KVA 3 Phase DG set with AMF panel and allied work at Shillong GPO.
3	Estimated Cost	1950397.00
4	Earnest money deposit	39008.00
5	Last date and time of submission of bids	22.05.2026 up to 11:00 Hrs

Name of bidder# :

Form of EMD# :

Amount of EMD# :

Date of submission of EMD# :

Signature, name and designation of EMD receiving officer(EE/ AE(P)/ AE/ AAO) along with Office Stamp

Note: # To be filled by officer receiving the EMD.

1. The Executive Engineers of all Postal Civil / Electrical Divisions should receive the physical EMD of other divisions.
2. The Executive Engineer receiving the physical EMD shall examine the EMD deposition by the bidder and shall issue the receipt of deposition of Earnest Money in the above format. The receipt may be issued by AE / AAO.
3. The Executive Engineer receiving physical EMD should also intimate tender inviting Executive Engineer about deposition of EMD by bidder through e-mail / fax or over phone.
4. The tender inviting Executive Engineer will call for physical EMD of the L-1 bidder
5. The physical EMD receiving Executive Engineer shall release the EMD after verification from the e-tendering portal website [https://eprocure.gov.in/eprocure/app\[Tender Status> AOC\]](https://eprocure.gov.in/eprocure/app[Tender Status> AOC]) for the tender ID to be obtained from the tender inviting Executive Engineer) that the particular contractor is not L-1 bidder and work is awarded.
6. List of Executive Engineers (along with address), where physical EMD can be deposited is enclosed as NIT Annexure – II.

Annexure-II**List of Executive Engineers with address**

The Executive Engineer (E) Postal Electrical Division-I, MeghdootBhawan,New Delhi - 110001.Ph: 011-23514049	The Executive Engineer (E) Postal Electrical Division-II, MeghdootBhawan,New Delhi - 110001.Ph: 011-23514049	The Executive Engineer (C) Postal Civil Division, MeghdootBhawan,New Delhi – 110001. Ph: 011-23628366
The Executive Engineer (E) Postal Electrical Division CSO, Gandhi Nagar, Jaipur – 302015. Ph: 0141 – 2708841	The Executive Engineer (C) Postal Civil Division, 2nd Floor, HPO Building Shastri Nagar, Jaipur – 302016. Ph: 0141-2365941	The Executive Engineer (C) Postal Civil Division,5th Floor, C.T.T. Nagar, PO Building Bhopal – 462003. Ph: 0755-2779149
The Executive Engineer (C) Postal Civil Division, GPO Building, Ambala – 133001. Ph: 0171- 2645721	The Executive Engineer (C) Postal Civil Division, PO Building, 1st Floor, Summer Hill, Shimla – 171005. Ph: 0177–2832943	The Executive Engineer (C) Postal Civil Division, Postal Colony, Roop Nagar, Jammu – 180013. Ph: 0191-2592924
The Executive Engineer (C) Postal Civil Division, HPO Bldg. Civil Lines Allahabad – 211001. Ph: 0532- 26221100	The Executive Engineer (E) Postal Electrical Division, PO Building, Sector-C,Aliganj, Lucknow – 226024. Ph: 0522 – 2336053	The Executive Engineer (C) Postal Civil Division, PO Building, Sector-C, Aliganj, Lucknow – 226024. Ph: 0522-2335165/2324419
The Executive Engineer (C) Postal Civil Division, MeghdootBhawan, GPO Compound, Patna – 800001. Ph: 0612 – 2226070/2233936	The Executive Engineer (E) Postal Electrical Division, YogayogBhawan, P-36, CR-Avenue, Kolkata-700012. Ph: 033-22120646, 22120637	The Executive Engineer (C) Postal Civil Division, YogayogBhawan, P-36, CR-Avenue, Kolkata - 700012. Ph: 033-22121441 / 22121280
The Executive Engineer (C) Postal Civil Division, 3rd floor, Postal Store Depot building, Satyanagar, Bhubaneswar – 751007. Ph: 0674 – 2570960	The Executive Engineer (C) Postal Civil Division, MeghdootBhawan Complex, Guwahati – 781001. Ph: 0361 – 2542679	The Executive Engineer (C) Postal Civil Division, R.N. Compound, Opp. Raj Bhawan, Shillong – 793001. Ph: 0364-2224398
The Executive Engineer (E) Postal Electrical Division, 3rd Floor, Sion PO Building Mumbai – 400022. Ph: 022 – 24044164	The Executive Engineer (C) Postal Civil Division, SionPO Building, Mumbai – 400022.Ph: 022-24013900	The Executive Engineer (C) Postal Civil Division, Khadki PO Compound, Pune – 411003. Ph: 020-25817762
The Executive Engineer (C) Postal Civil Division, Akashwani Square, DA (P) Compound, Nagpur- 400010. Ph: 0712-2540368	The Executive Engineer (C) Postal Civil Division, Admin Building, Khanpur, Ahmedabad – 380001. 079-25504055	The Executive Engineer (C) Postal Civil Division, 2nd Floor, HPO Building, Rajkot – 360001. 0281-2228933
The Executive Engineer (E) Postal Electrical Division 2nd Floor, Bansvangudi HPO, Bangalore – 560004. Ph: 080-26676804	The Executive Engineer (C) Postal Civil Division, 1st Floor, RT Nagar HPO, Bangalore – 32 Ph: 080-23332025	The Executive Engineer (C) Postal Civil Division, K.C. Park, P.O. Compound, Dharwad- 580008.Ph: 0836-2445252
The Executive Engineer (C) Postal Civil Division, Gandhi Nagar, PO Building, Hyderabad – 500080. Ph: 040-23463910, 909, 908	The Executive Engineer (C) Postal Civil Division, No. 5, EthirajSalai, Chennai – 600008. Ph: 044-28203435	The Executive Engineer (C) Postal Civil Division, Manacaud, P.O. Trivandrum –691009.Ph: 0471- 2466748

UNDERTAKING

To be submitted by bidders (on company letter head duly signed with stamp & seal) online in pdf format on or before last time of date of bid submission.

To

**The Executive Engineer (E)
Postal Electrical Division
Kolkata-12**

Subject: Acceptance of Terms & Conditions of Tender.

Tender Reference No: **12/EE/PED/KOL/NIT/2026-27**

Dated: **12.05.2026**

Name of work : **SITC of 160 KVA 3 Phase DG set with AMF panel and allied work at Shillong GPO.**

Dear Sir,

- 1 I/We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site: <https://eprocure.gov.in/eprocure/app> as per your advertisement, given in the aforesaid website.
- 2 I/We hereby certify that I / we have read the entire terms and conditions of the tender document from **Page No 1 to 39** (including all documents like annexures, schedules etc.), Page **1 to 4** (for SOQ) & Page **1** (for BOQ), which form part of the contract agreement and I/we shall abide hereby by the terms / conditions / clauses contained therein.
- 3 The corrigendum(s) issued from time to time by your department/ organization too have also been taken into consideration, while submitting this acceptance letter.
- 4 I/We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.
- 5 In case any provisions of this tender are found violated, then your department/organization shall without prejudice to any other right or remedy be at liberty to reject this tender/bid including the forfeiture of the Earnest Money absolutely.
- 6 I/We undertake and confirm that eligible similar work(s) has/ have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of department, then I/we shall be debarred for tendering in Department of Posts in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer in charge shall be free to forfeit the entire amount of Earnest Money Deposit/ Performance Guarantee.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

AFFIDAVIT

I,(Name), Son/Daughter/wife of aged about..... years, resident of (Full Address) by Occupation- Contractor, by Nationality- Indian, do hereby solemnly affirm on oath and declare as under:

NIT No: **12/EE/PED/KOL/NIT/2026-27**

Dated: **12.05.2026**

Name of Work: **SITC of 160 KVA 3 Phase DG set with AMF panel and allied work at Shillong GPO.**

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

(Signature of the Bidder)

Form of Performance guarantee / Bank guarantee bond [Reference para 21.1.(1)(V)]

In consideration of the President of India (hereinafter called "The Government") having offered to accept the terms and conditions of the proposed agreement between.....and (hereinafter called "the said Contractor(s)") for the work..... (hereinafter called "the said agreement") having agreed to production of an irrevocable Bank Guarantee for (Rupees..... only) as a security/guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement.

- 1 We, (hereinafter referred to as "the Bank") hereby undertake to pay to the Government an amount not exceeding ₹ (Rupees..... Only) on demand by the Government.
- 2 We,(indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demure, merely on a demand from the Government stating that the amount claimed as required to meet the recoveries due or likely to be due from the said contractor(s). Any such demand made on the bank shall be conclusive as regards the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding ₹..... (Rupeesonly)
- 3 We, the said bank further undertake to pay the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment thereunder and the Contractor(s) shall have no claim against us for making such payment.
- 4 We, (indicate the name of the Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineerin- Charge on behalf of the Government certified that the terms and conditions of the said agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.
- 5 We, (indicate the name of the Bank) further agree with the Government that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligation hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor(s) or for any forbearance, act of omission on the part of the Government or any indulgence by the Government to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.
- 6 This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).
- 7 We, (indicate the name of the Bank) lastly undertake not to revoke this guarantee except with the previous consent of the Government in writing.
- 8 This guarantee shall be valid up tounless extended on demand by the Government. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to ₹ (Rupees) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged. Dated theday of for..... (indicate the name of the Bank)

Note: Performance guarantee shall be valid upto three months after the time period allowed for the work.

IMPORTANT NOTE FOR CONTRACTORS

1 INSPECTION OF SITE AND CONTRACT DOCUMENTS

For purpose of inspection of site and relevant contract documents the firm is required to contact the Assistant Engineer (E) Postal Electrical Sub Division, **Shillong** Contact No: **8910632715** who shall give reasonable facilities for inspection of the same. The firm shall inspect and examine the site and shall satisfy himself before submission of the tender as to the form and nature of the work, their quantities materials necessary for completion of the work and in general shall himself obtain all necessary information as to risk contingencies and other circumstances which may influence or affect his tender. No extra charges consequent on any misunderstanding or otherwise shall be paid.

2 SUFFICIENCY OF TENDER

The firm shall be deemed to have satisfied himself before entering into the contract as to the correctness and sufficiency of his offer for the work and of the rates quoted in the schedule of works. These rates and amount shall, except as otherwise provided cover all his expenditure under the contract and all matters and things and co-ordination among DOP/EB/Statutory Inspection Authorities necessary for proper completion and maintenance and guarantee of the work.

3 TAX AND DUTIES:

- 3.1 All statutory deductions etc shall be made at source as per the prevalent laws.
- 3.2 The rates quoted by the tenderer, shall be firm and inclusive of all taxes, duties, levies, octroi etc and all charges for packing, forwarding, insurance, freight and delivery, installation, testing, commissioning and clearance from Statutory Inspection Authorities etc inclusive of GST. Tax deduction at source (TDS) of all the applicable Taxes/duties shall be carried out at source as per the Government rules.
- 3.3 No concession forms will be issued by the Department.
- 4 The department reserves the right to accept the quantities in full or in parts or delete any item.

5 STANDING ORDER No.286

- 5.1 Tender rates are inclusive of all taxes and levies including GST. However pursuant to the constitution (Forty Six Amendment) Act 1982, If any further tax or levy is imposed by a state, after the date of receipt of a tender and the contractor thereupon necessarily and properly pays such taxes/ levies the contractor shall be reimbursed that amount to be paid provided such payment if any is not in the opinion of Superintending Engineer (E) (whose decision will be said binding) attributable to delay in execution of work within the control of the contractor.
- 5.2 The Contractor shall keep necessary books of accounts and other documents for the purpose of his condition as may be necessary of Government and further shall furnish such other information as the Engineer-in-charge may require.
- 5.3 The Contractor shall within 30 days of imposition of any further tax or variation in tax or levy pursuant to the Constitution (46th amendment) Act 1982 gives written notice thereof to the Engineer-in-charge that the same is given pursuant to this condition together with all necessary information relating thereto.
- 5.4 Clause 10CC is not applicable to this tender.

6 SECURITY DEPOSIT

The person/ persons whose tender(s) may be accepted (hereinafter called the contractor (s) shall permit Govt. at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 2.5% of the gross amount of each running bill till the sum will equal the amount of security deposit i.e. 2.5% of the tendered value of the work.

7 PERFORMANCE GUARANTEE

The successful tenderer shall submit an irrevocable performance guarantee of 5 % of the tendered amount in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement within 10 days of issue of letter of acceptance. This guarantee shall be in the form of government securities or fixed deposit receipts or guarantee bonds of any scheduled bank or the State Bank of India in the specified format. The performance guarantee shall be valid upto the stipulated date of completion plus 60 days beyond that.

8 **INDEMNITY**

The successful tenderer shall at all times indemnify the department, consequent on this works contract. The successful tenderer shall be liable, in accordance with the Indian Law & Regulations for any accident occurring due to any cause and the department shall not be responsible for any accident and damage incurred or claims arising there from during the period of Erection, construction & putting into operation the equipments and ancillary equipment under the supervision of the successful tenderer in so far as the latter is responsible. The successful tenderer shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the successful tenderer due to the above.

9 **ERECTION TOOLS**

No tools and tackles either for unloading or for shifting the equipment for erection purpose would be made available by the Department. The contractor shall make his own arrangement for all the facilities.

10 **CO-OPERATION WITH OTHER AGENCIES**

At the site of work more than one agency may be working. Full co-operation shall be extended to other agencies during progress of work. The work will be carried out in such a way so that it may not cause abnormal noise and hindrance to the offices of the DOP.

11 **STORES AND SAFETY**

All the stores and materials required for the satisfactory completion of the work shall be arranged at site by the contractor from his own sources. Lockable space, if available, for storing the material may be provided on request. However, safe custody of the material stored at site will be responsibility of the contractor.

12 **COMPLIANCE WITH REGULATIONS AND INDIAN STANDARDS.**

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

- a) Factories Act.
- b) Indian Electricity Rules/ Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulation 2010
- c) IS &BS Standards as applicable.
- d) Workmen's compensation Act.
- e) Statutory norms prescribed by local bodies like CEA, ISEB etc.,

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

14 Successful tenderer shall arrange for compliance with statutory provisions of safety regulations and departmental requirement of safety codes in respect of labour employed on the work by the tenderer, Failure to provide and safety requirement will be at liberty of the department to make arrangement for the safety requirements at the cost of tenderer and recover the cost thereof from him.

15 **COMPLETION OF TENDER**

All sundry equipment, fittings unit assemblies, accessories, hardware items, foundation bolts, termination lugs for electrical connections and all other items which are useful and necessary for efficient assembly and installation of equipment and components of the work shall be deemed to have been included in the tender irrespective of the fact whether such items are specifically mentioned in the tender documents or not.

16 **CARE OF THE BUILDING**

Care shall be taken by the contractor while handling and installing the various equipments and components of the work to avoid damage to the building. He shall be responsible for repairing all damages and restoring the same to their original finish at his cost. He shall also remove at his cost all unwanted and waste materials arising out of the installation from the site of work.

17 No mobilization amount/ incentive for early completion shall be paid for this work.

18 **Defect Liability Period**

The entire installation in general shall be guaranteed for a period of 12 months from the date of completion. Any defective materials and equipment shall be replaced free of cost at the direction of the Engineer-in-Charge.

Executive Engineer(E)
Postal Electrical Division
Kolkata

GENERAL DESCRIPTION OF WORK

Note:- Below mentioned specifications are for preliminary reference. However considering the site requirement, Engineer-in-charge may alter / modify the specifications. Bidder shall be bound to carry out the work as per such revised specifications without any extra cost.

- 1 The EI & fans work shall comprise of items described in the schedule of work and specifications for various items of work detailed in the following sections.
- 2 **General Specification**
- A **Specification for Electrical Installation work**
- 2.1 The work shall be done as current CPWD specifications for Electrical works as amended from time to time and Indian Electricity Rules as amended up to date.
- 2.2 The work shall be supervised by a qualified overseer/Degree Holder Supervisor and the contractor will have to submit the Credentials of the overseer/ Degree Holder before he will be allowed to work at the site.
- 2.3 The layout of the work will be given by the Engineer-in-Charge or his duly authorized representative at site of work.
- 2.4 Separate conduits shall be provided for following.
 - a Power plug wiring.
 - b Light and fan point wiring.
 - c Telephone wiring
- 2.5 The number of power plug points may not exceed one two ckt in any of the cases
- 2.6 The earthing sets(if required) shall be provided in the presence of the Engineer-in-charge or his authorized representative failing which the Contractor will have to redo the earthing in the presence of the Engineer-in-Charge or his authorized representatives.
- 2.7 The Contractor will have to give the following tests in the proforma at his cost and intimate test results before final bills are paid. Nothing extra will be paid to him on this account. These tests will be carried out in the presence of the Engineer-in-Charge or his duly authorized representative.
 - a Earth test.
 - b Polarity test.
 - c Insulation test.
 - d Earth continuity test of the surface conduit pipes.
- 2.8 Any damage done to the building by the Contractor during the execution of work shall have to be made good at his cost and risk. If he does not do it himself within a reasonable time determined by the Executive Engineer(E), then the same will be got done at his cost Departmentally after giving notice to him.
- 2.9 The runs of various circuit wiring at various places shall be kept minimum by taking the runs on the walls .
- 2.10 All the M.S distribution boards, sub-main boards & main boards and their complete fittings shall be sign written clearly indicating the number of distribution board, the type of load it is serving and the number of circuits contained in the distribution box shall be pasted in tabular form on the reverse of the cover of the distribution box.
- 2.11 The contractor will have to use metal clad switches and metal clad distribution boxes of specified categories as given in the schedule of work
- 2.12 Interconnection between bus bar and switches (100 Amps and above) on sub main boards will be done with solid copper conductor with PVC sheathing.
- 2.13 While making the end connections of wire, no strand shall be out and the termination of wire shall be done with necessary lugs and ferrules without any extra payment.
- 2.14 Lugs should be provided while terminating 8 SWG G.I. wire for earth continuity without any extra payment.
- 2.15 The termination of conduits etc. in the junction box to be provided above DB's should be done by making proper holes instead of cutting the box.
- 2.16 If any conduit is laid before the award of this work the recovery for the same will be made from the contractor at schedule rates plus abatement of this tender.
- 2.17 The bus bar provided in main board shall be suitable for current density of not more than 100Amp/sq.mm.
- 2.18 Air conditioning plant rooms, weather maker rooms, sub station rooms and engine alternator rooms shall be provided with lights only on walls.
- 2.19 Three pin ceiling rose outlets shall be provided on walls in substation rooms at 2300 mm from floor level for installation of wall mounting fans / air circulators.
- 2.20 Conduits leading from switch boards to SDBs shall preferable be clubbed in junction boxes to be provided below the beams and reduced number of higher sizes conduits may be taken down to SDBs for termination of circuits & sub mains.

- 2.21 The tenderer should submit along with the tender the makes of material to be used on the work whenever not specified in the schedule. Unapproved materials, if used on work shall have to be removed immediately at the cost and risk of contractor

B Specification for LT panel

- 1 The work shall be done as per CPWD General Specifications for Electrical Works Part-IV Substations 2007 as amended up to date and Central Electricity Authority (Measures relating to safety and electric supply) Regulations 2010 as amended up to date.

1.1 LT PANEL BOARD:

The relevant IS shall be followed for all the equipments.

1.2 ENCLOSURE PROTECTION:

IP-42 as per IS-13947- Part-I as amended up to date for indoor applications and IP-55 for out door applications.

1.3 CONSTRUCTION

The switchboards like main L.T.panels, capacitor panels shall be cubicle type factory assembled fabricated from CRCA sheet steel framework, 2 mm thick including covers. The cleaning and painting shall be done in 7 tank process with final finishing in required shade of powder coating. The bus bars shall be copper strips of suitable size and rating mounted on SMC/DMC support at regular intervals required to suit fault rating as specified above including fasteners and hardware etc., MCCB module shall have minimum depth of 300 mm and shall be maintained throughout the length to keep a uniform depth.

The panels shall be complete with all internal wiring and bus bars connections of suitable rating. The panels shall be fabricated in transportable sections with lifting hooks on top and MS base channels of not less than 100x50mm x 5mm size and segregated multi-tier formation, floor mounting. An Aluminium earth bus of adequate capacity shall run all along the length and breadth at bottom of the panel with proper supports.

The switch board shall be suitable for climate conditions as called for. The design shall include all provision for safety of operating & maintenance personnel. Overall height of the panel shall not exceed 2.2 m with maximum operating lever at 1.8 m. Cable entries shall be from the sides of the panel for main panel and shall be made through gland plates. Cable supports shall be provided in cable alleys. **General arrangement of the panel shall be got approved before final fabrication is taken up.**

1.4 BUS BARS CONNECTION

The Bus bars connections shall be high conductivity aluminium alloy of electrolytic quality and of adequate section as per fault levels and current ratings of the panel. The bus bar provided in main board shall be suitable for current density of 100Amp/sq.mm. The system may comprise of main horizontal bus-bars and auxiliary vertical bus bars as per requirement of the panel. All connections to individual feeders shall be with solid connections. Bus Bars/Connections shall be suitably sleeved by Heat Shrinkable Coloured Sleeves.Fault withstands capacity for bus bars – 50 KA for 1 second

1.5 INCOMER TERMINATIONS

Incomer MCCB/SDF/Change over shall be suitable to receive high conductivity tinned copper of electrolytic quality bus bar.

1.6 OUTGOING TERMINATIONS

The outgoing terminals shall be brought out into the cable alley with solid conductors of appropriate size for easy termination of the cables.

1.7 Instruments & Indicating Lamps

The indicating instruments shall be LED/Digital type of class 1.5 as para IS:1248 as amended upto date. All meters shall be provided with HRC type cartridge fuses.

The indicating lights shall be provided as called for in schedule of quantities. All lights shall be provided with HRC type cartridge fuses. The coloured filters shall be used as per norms. All phase indicating lights shall be provided with ON/OFF toggle switches.

1.8 Tests

All tests shall be carried out as per relevant Indian Standards & CPWD Specifications. Contractors shall have to furnish test reports of all 'Tests'.

1.9 HEAVY DUTY COMPOSITE UNITS OF SWITCHES & FUSES

All switches shall be suitable for operation from the front and shall be as IS 13947-1997. The ranging of switch fuses shall be as specified. Outgoing feeders shall be neatly arranged in different compartments. Normally switches for individual feeders shall be accommodated in separate modules.

1.10 CABLE COMPARTMENTS

A full height compartment running behind the vertical modules shall be provided for easy termination of all incoming and outgoing cables entering from top or from bottom. Adequate supports shall be provided for the cables wherever necessary. The cable compartment shall have its own hinged cover which can be removed for easy access during cabling.

1.11 INTERCONNECTIONS AND CONTROL WIRING.

Switch board shall be completely factory wired ready for connecting to the equipment. Power connection of the circuit shall be done by Aluminium flats or by adequate size of PVC insulated stranded copper wires. Control wiring shall be done by PVC insulated wires of minimum size 1.5sqmm copper. All control wiring shall be fitted with identification ferrule at each end and not more than two connections shall be made at any one terminal. The wires shall be arranged and supported in such a manner that there shall be no strain on the terminations.

1.12 TERMINAL ARRANGEMENT :

The terminals shall be adequate current rating and size to suit individual feeder requirements. Cable lugs used for terminations shall be mounted in such a manner so as to facilitate easy cable connections. Terminals shall be mounted in cable compartment. Tap-off connections at the busbars shall be made with nuts, bolts and washers. Busbars shall not be threaded for terminating wire connections.

1.13 CABLE ENTRY

The switch board shall be designed to facilitate Copper/Aluminium conductor PVC cable entry from top or bottom as the case may be. Removable sheet steel plate provided with suitable size of cable glands as specified shall be fitted at the top or bottom.

1.14 EARTHING BUSBARS.

The earth bus bar shall be Aluminum/copper and of appropriate size.

1.15 ACB

All Air Circuit Breakers shall be of 3/4 Pole with minimum 50 KA breaking capacity (35 MVA at 433 V) as per schedule & Conforming to IS 13947 (Part II) Rated current shall be as per the capacities and as per the schedule

1.16 PAINTING.

All sheet metal work shall undergo seven tank process such as degreasing, pickling in the acid, cold rinsing, phosphating, passivating etc and then be sprayed with high corrosion resistant primer. The primer shall be baked in an oven. The finishing treatment shall be by application of two coats of synthetic paint of approved shade of supply.

2 GENERAL:

- 2.1 The Panel board shall be complete with necessary interconnections, cable sockets, circuit labels, control wiring colour and number coding ferrules. The panel shall be powder coated, duly painted with approved colour (Seimens gret matte finish).
- 2.2 The meters, indicating lamps shall have necessary protective fuses.
- 2.3 Suitable size of earth bus bar to be provided running along the length of the switch board with earth terminals.
- 2.4 The design, manufacture and testing of various equipments covered by the latest issue of IS specifications.
- 2.5 Guarantee: The panel components shall be guaranteed against material and/or manufacturing defects and for its perfect functioning for a period of eighteen months from the date of supply or one year from the date of commissioning of the equipments whichever is earlier.
- 2.6 Drawings of Panel may be got approved from Engineer-in-charge before fabrication.
- 2.7 The panels shall be got inspected by the Engineer-in-charge before 7 tank process and before dispatch from the manufacturer's workshop.

3 Cable work

Cables shall be laid in accordance with the CPWD General specification for Electrical works –Part-II (External) 1994 amended up to date.

4 Earthing

The Earthing shall be done as per the as per Section 7 of CPWD specification for Electrical works Part-IV(Sub stations)

5 MCCB

The incoming MCCB should be provided with earth fault release.

SPECIFICATIONS FOR E/A SET WORKS

- 1.0 SCOPE:** The offer should cover complete supply, installation, testing, and commissioning of ready to use diesel engine alternator sets in acoustic enclosure. All minor civil works, electrical and other works associated with installation and commissioning of the set shall be carried out by the tenderer.
- 2.0 REQUIREMENT:** The Engine Alternator supplied should be of ready-to-use type (RTU), the BHP of engine may be suitably enhanced as per site conditions in order to deliver the minimum required KVA at site. In case of water cooled engine it should be supplied with first filling of coolant and water mixture as per the manufacturer recommendation. The Engine shall be equipped with governor of class **A1** accuracy and all standard fittings, flexible pipe, 12 Volt **180** AH low maintenance lead acid automotive duty battery fixed between base frame, suitable capacity fuel tank of **285** litres capacity with GI wire braided fuel pipe, silencer, MS exhaust pipe of suitable size and length as per site requirement covered with two layers of 6 mm. thick asbestos rope, instrument panel equipped with necessary instruments, directly coupled with alternator of suitable capacity on a suitable length of common base frame, channel fixed on necessary AVM pads including required length of suitable size copper conductor cable with lugs for inter connection between alternator and control panel, providing tools for normal maintenance and all other accessories complete as required and as per detailed specifications attached. The Engine and the Enclosure shall confirm to the latest environment (protection) Act 1986 (29 of 1986) of ministry of Environment and forest notification No. dated 17th May 2002 and 12th July, 2004 and second amendment of 2002 and 2004 respectively. No set shall be accepted without the CPCB certificate of authorised agencies such as ARAI of Pune, NPL New Delhi, NSTL Vishakapatnam, FCRI Palghat and NAL Bangalore. The make and model no. of Engine and alternator shall be as per approved product directory.
- 3.0 OPERATING CONDITIONS**
The engine alternator shall be capable of working at any ambient temperature between 0° C to 50° C and relative humidity up to 95% condition.
- 4.0 PERFORMANCE REQUIREMENT**
i) The working KVA rating at NTP condition shall be obtained at 0.8 power factor.
ii) When there is an electrical main supply failure it will be required to work continuously for a period which may even exceed 24 hour at a time.
iii) The set shall be capable of taking 10% overload for a period of one hour during every 12 hours period while operating continuously at full load.
- 5.0 OUTPUT VOLTAGE FREQUENCY AND WAVEFORM**
Normal output voltage shall be 3 Phase, 415Volt with ± 5% manual adjustment at all conditions of the load. Frequency shall be 50 Hz ± 1.5 Hz.
- 6.0 DIESEL ENGINE**
Engine shall be multi cylinder, reciprocating compression ignition diesel engine as per manufacturer's standard design and conforming to IS10001- 1981 &BS-5514.
- 7.0 LUBRICATION**
Lubrication shall be positive pressure type lubricating all moving parts. No moving parts shall require lubrication by hand either prior to the starting of the engine or while it is in operation. Lubrication oil shall confirm to relevant IS amended up to date. Necessary oil filter shall be provided for operation at normal conditions for a period of 250 hours. Temperature and pressure gauge shall be fitted to the lubricating system.
- 8.0 FUEL TANK**
Fuel tank shall be removable/ draw out type for easy maintenance provided between base frames or separately installed in case of installation in a canopy. The fuel tank shall be made of 2 mm thick MS sheet and having **285** litre capacity. The tank shall have fuel level indicator marked in litres, filling inlet with removable fuel screen, fuel outlet located at minimum of 25 mm above from the bottom of the drain plug, air vent and necessary piping shall be provided. Hand pump for pumping the fuel into the service tank with necessary pipe or tube shall be provided. The outlet of the pump shall be provided with 3 meters long reinforced flexible pipe. Extra fuel sufficient for the operation of the set on full load for 2 hours shall be left in the fuel tank after the successful completion of the acceptance testing.
- 9.0 FUEL PIPING**
GI wire braided pipe with hydraulically compressed benzo of superior quality shall be provided for fuel piping.

10.0 SPEED AND GOVERNING `A2`

The engine shall operate on 1500 RPM, and be able to meet site conditions with regard to Voltage, Speed, Frequency and regulation equipped with governor of Class A2 accuracy.

11.0 ENGINE START

Engine shall be cold and self-starting type. The starter battery shall have suitable copper connecting lead, sufficient to meet engine starting and control gear requirement as per manufacturer's specification.

12.0 BATTERY CHARGING

12.1 Battery/ Electrical System Batteries supplied with Genset are generally dry and uncharged. First charging of uncharged batteries is very important and should be done from authorized battery charging centre. Initial charging should be done for 72-80 hours.

12.2 Batteries should be placed on stands and relatively at cool place.

12.3 Battery capacity and copper cable sizes for various engine capacity are recommended as indicated in the table below. Cable sizes shown are for maximum length of 2 m. If length is more, cable size should be selected in such a way that voltage drop does not exceed 2 V. However capacity as recommended by manufacturer may be taken.

DG Set Capacity Battery	Capacity (AH)	Cable Size (Material Copper) Sq. mm	Electrical System (Volts)
Above 500 KVA	360	70	24
Above 125 KVA upto 500 KVA	180	70	12
Above 82.5.KVA upto 125 KVA	180	50	12
Above 62.5 KVA upto 82.5 KVA	150	50	12
Above 25 KVA upto 62.5 KVA	120	50	12
Upto 25 KVA	88	35	12

12.4 For AMF applications, a static battery charger working on mains supply is recommended to keep the batteries charged at all times.

12.5 1.5 sq.mm copper wire should be used for wiring between junction box and Control Panel.

13.0 RESIDENTIAL TYPE SILENCER

Residential type exhaust silencer with minimum insertion loss of 25dB(A), with suitable length of flexible bellow. Silencer shall be provided with cladding of glasswool, wiremesh and GI/aluminium foil.

14.0 THE ENGINE SHALL HAVE FOLLOWING ACCESSORIES: -

- (i) Heavy duty fly wheel
- (ii) Coupling with guard
- (iii) Fuel Pump suitable for lifting the fuel from fuel tank
- (iv) Governor
- (v) Pre filter
- (vi) Fuel Filter
- (vii) Per-filter in lift pump/button filter
- (viii) Lubricating oil filter
- (ix) Residential exhaust silencer
- (x) Starter
- (xi) Blower fan /Radiator fan
- (xii) Battery charging Alternator
- (xiii) Mechanical type hour meter cum RPM indicator

15.0 ENGINE INSTRUMENT PANEL :-

It shall comprise of the following: -

- (i) Starting switch with key
- (ii) Lubricating oil temperature gauge
- (iii) Lubricating oil pressure gauge
- (iv) Battery charging ammeter
- (v) Stop lever switch
- (vi) Cylinder head temperature for air cooled engine or water temperature gauge for water cooled engine

16.0 ALTERNATOR

(i) The alternator shall be 3 phases, 415 V copper wound, brushless type and totally enclosed for screen protected class-F insulation, designed and constructed to withstand tropical conditions. Manual adjustment at all conditions of load with coarse and fine controls to obtain voltage adjustment of $\pm 5\%$ shall be available and shall be conforming to IS 13364 (Part I):1992

(ii) The winding shall be star connected and neutral shall be brought out to the terminal box for earth with two independent earths. The terminal of the alternator output shall be enclosed in the terminal box. The AC/DC wiring shall be separated from each other.

17.0 AMF Control Panel

17.1 General Features: The control panel shall be fabricated out of 1.6 mm thick sheet steel, totally enclosed, dust, damp and vermin proof free standing floor mounted type & front operated. It shall be made into sections such that as far as feasible, there is no mixing of control, power, DC & AC functions in the same section and they are sufficiently segregated except where their bunching is necessary. Hinged doors shall be provided preferably double leaf for access for routine inspection from the rear. There is no objection to have single leaf hinged door in the front, all indication lamps, instruments meter etc. shall be flushed in the front. The degree of protection required will be IP-42 conforming to IS 2147.

17.2 Terminal Blocks and Wiring: Terminal blocks of robust type and generally not less than 15 Amps capacity, 250/500 V grade for DC upto 100 V and 660/ 1100 volts grade for AC and rest of the junction shall be employed in such a manner so that they are freely accessible for maintenance. All control and small wiring from unit to unit inside the panel shall also be done with not less than 2.5 sqmm copper conductor PVC insulated and 660/ 1100 volts grade. Suitable colour coding can be adopted. Wiring system shall be neatly formed and run preferably, function wise and as far as feasible segregated voltage wise. All ends shall be identified with ferrules at the ends.

17.3 Labeling: All internal components shall be provided with suitable identification labels suitably engraved. Labels shall be fixed on buttons, indication lamps etc.

17.4 Painting: The entire panel shall be given primer coat after proper treatment and powder coating with 7 tanks process before assembly of various items.

17.5 Equipment requirements: The control cubical shall incorporate into assembly general equipment and systems as under: (a) Control system equipments and components such as relays, contactors, timers, etc. both for automatic operation on main failure and as well as for manual operation. (b) Equipment and components necessary for testing generating set's healthiness with test mode and with load on mains.

(c) Necessary instruments and accessories such as voltmeter, power factor meter, KW meter, KWH meter, Ammeter, Frequency meter etc. in one energy analyzer unit with selector switch to obtain the reading of desired parameters. (d) Necessary indication lamps, fuses, terminal blocks, push buttons, control switches etc. as required. (e) Necessary engine/generating set shut down devices due to faults /abnormalities. (f) Necessary visual audio alarm indication and annunciation facility as specified. (g) Necessary battery charger. (h) Necessary excitation control and voltage regulating equipment. (Alternatively provided on the Alternator itself). Necessary over head bus trunking terminations all internal wiring, connections etc. as required. (j) Breakers as specified in the schedule of work.

17.6 System Operation: The above mentioned facilities provided shall afford the following operational requirements.

17.6.1 Auto Mode: (a) A line voltage monitor shall monitor supply voltage on each phase. When the mains supply voltage fails completely or falls below set value (variable between 80 to 95% of the normal value) on any phase, the monitor module shall initiate start-up of diesel engine. To avoid initiation due to momentary disturbance, a time delay adjustment between 0 to 5 second shall be incorporated in start-up initiation. (b) A three attempt starting facility shall be provided 6 seconds ON, 5 seconds OFF, 6 seconds ON, 5 seconds OFF, 6 seconds ON, if at the end of the third attempt, the engine does not start, it shall be locked out of start, a master timer shall be provided for this function. Suitable adjustment timers be incorporated which will make it feasible to vary independently ON-OFF setting periods from 1-10 seconds. If alternator does not build up voltage after the first or second start as may be, further starting attempt will not be made until the starting facility is reset. (c) Once the alternator has built up voltage, the alternator circuit breaker shall close connecting the load to the alternator. The load is now supplied by the alternator. (d) When the main supply is restored and is healthy as sensed by the line voltage monitor setting, both for under voltage and unbalance, the system shall be monitored by a suitable timer which can be set between 1 minute to 10 minutes for the load to be transferred automatically to main supply. (e) The diesel alternator set reverts to standby for next operation as per (a), (b) and (c) above.

17.6.2 Manual Mode:

(a) In a manual mode, it shall be feasible to start-up the generator set by the operator on pressing the start push button. (b) Three attempt starting facility shall be operative for the start-up function. (c) Alternator circuit breakers close and trip operations shall also be through operator only by pressing the appropriate button on the panel and closure shall be feasible only after alternator has built up full voltage. If the load is already on 'mains', pressure on 'close' button shall be ineffective. (d) Engine shut down, otherwise due to faults, shall be manual by pressing a 'stop'

17.6.3 Test Mode: (a) When under 'test' mode pressing of 'test' button shall complete the start up sequence simulation and start the engine. The simulation will be that of mains failure. Sequence 17.6.1(a) and (b) shall be completed. (b) Engine shall build up voltage but the set shall not take load by closing of alternator circuit breaker. When the load is on the mains, monitoring of performance for voltage/ frequency etc. shall be feasible without supply to load. (c) If during test mode, the power supply has failed, the load shall automatically get transferred to alternator. (d) Bringing the mode selector to auto position shall shut down the set as per sequence of 17.6.1(d) provided main supply is ON. If the mains supply is not available at that time, the alternator shall take load as in (c) above.

17.7 Engine shut down and alternator protection equipment: Following shut down and protection system shall be integrated in the control panel. (a) Engine: (i) Low lubricating oil pressure shut down. This shall be inoperative during start up and acceleration period. (ii) High coolant (water) temp. shut down. (iii) Engine over speed shut down. (b) Alternator Protection: Following protection arrangement shall be made: (i) Over load (ii) Short circuit (iii) Earth fault (iv) Over voltage

17.8 Monitoring and Metering Facilities: (a) Necessary energy analyzer unit for visual monitoring of mains, alternator and load voltage, current, frequency, KWH, power factor, etc. (b) A set of visual monitoring lamp indication for: (i) Load on set (ii) Load on mains (iii) Set on test (Alternator on operation duty, Alternator on standby duty). (iv) Set of lamp for engine shut down for over speed, low lub. oil pressure and high coolant water temperature, overload trip of alternator, earth fault trip of alternator, engine lock out and failure to start etc. All these indications shall have an audio and visual alarm. When operator accepts the alarm, the hooter will be silenced and the fault indication will become steady until reset by operating a reset button.

17.9 Operating Devices: A set of operation devices shall be incorporated in the front of panel as under: (a) Master Engine Control Switch: This shall cut off in 'OFF' position DC control to the entire panel, thus preventing start-up of engine due to any cause. However, battery charger, lamp test button for testing the healthiness of indication lamps, DC volt meter / ammeter etc. shall be operative. It shall be feasible to lock the switch in OFF position for maintenance and shut down purposes. (b) Operation selector switch OFF/AUTO/MANUAL/TEST position. (c) Energy analyzer unit for display of various electrical parameters like voltage, current, frequency, KW, power factor, etc. (d) A set of push button as specified. (e) Relays, contactors, timers, circuit breakers as required. (f) Necessary battery charger with boost/ trickle selector, DC voltmeter and DC ammeter.

18.0 SAFETY CONTROL TRIP

- (I) Low lubricating oil pressure
- (ii) High cylinder / water temp
- (iii) Lack of fuel
- (iv) Over speed

19.0 SOUND PROOF ENCLOSURE

- (i) The canopy should be sound proof, weather proof & environment friendly conforming to the latest environment (protection) Act 1986 (29 of 1986) of ministry of Environment and forest notification No. dated 17th May 2002 and 12th July, 2004 and second amendment of 2002 and 2004 respectively. No set shall be accepted without the CPCB certificate of authorized agencies such as ARAI of Pune, NPL New Delhi, NSTL Vishakapattanam, FCRI Palghat and NAL Bangalore.
- (ii) The canopy shall be in modular construction with the provision of assembly at site. The acoustic panels shall be fabricated in 2 mm thick CRCA sheet. The finished sheet metal components shall undergo seven tank treatment process for degreasing, derusting, phosphatising etc. for longer life and should be Poly polyester based coated inside & outside. The nuts, bolts and other hardware shall be Zinc coated. The door shall be provided with high quality EPDM gaskets to avoid leakage of sound. The door handles and hinges shall be Zinc plated & lockable type.
- (iii) The Radiator fan of the water cooled Engine shall be used for ventilation. A pusher fan (for air cooled Engines) or in addition to Radiator fan, if required shall also be provided. The motor of this fan shall be of approved make.
- (iv) Adequate ventilation shall be provided to meet the air requirement for combustion and also to expel heat to maintain temperature inside the enclosure within 5 degree Celsius above ambient at 10% overload with tripping arrangement between (50 – 60) degree Celsius.
- (v) An arrangement for adequate illumination inside the enclosure shall be provided.
- (vi) Separate door with locking arrangement for easy access to D.G. set during operation & maintenance should be provided.
- (vii) The enclosure shall be guaranteed for a period of **12 months** from the date of completion of work against defective materials & rust, welding, painting, smooth functioning of doors, inspection window etc. Minor civil work is to be carried out without any extra cost.
- (viii) Small see through window for reading meters etc. made of transparent polymer sheet of thickness not less than 10 mm shall be provided.
- (ix) Radiator bellows to be provided in case of Water Cooled Engines.
- (x) Fuel Tank and Control Panel shall be incorporated inside the canopy.
- (xi) Two point lifting arrangement.
- (xii) Main base frame will be of size 100mm X 50mmX 5mm MS channel welded with 5mm thick MS sheet for bolting arrangement complete as required.
- (xiii) Framework will be provided for floor made out of 3 mm thick chequered plate i/c welding, painting etc complete around foundation as required.
- (xiv) Sound proof enclosure in modular construction will be supplied and erected, made out of 35mmX35mmX5mm angle at every co-inside plane & support of angle 45mmX45mmX5mm at every door structure, and hinged at two points with refrigeration lock arrangement, fitted over the MS plate of 50mmX5mm with nut & bolt i/c cutting, welding, painting complete as required.
- (xv) Insulation on enclosure will be provided and fixed of mineral rock wool Slabs of density not less than 96 kg/M³ of 75 mm thickness, covered with 22 gauge GI sheet having 3 mm perforation fitted with strips of aluminum by hydraulic riveting to support the whole insulation rigidly complete as required. Specially designed sound attenuators shall be provided to control sound at air entry & exit points i/c louvers.
- (xvi) The canopy shall be provided with emergency stop button easily approachable from outside.
- (xvii) The canopy shall be provided with following meters (visible from out side):

20.0 GENERAL REQUIREMENT

- (i) The set shall have minimum vibration and noise under all conditions of load. The set shall be properly statically and dynamically balanced. Anti vibration mountings shall be provided for supporting the set.

- (ii) The size of E.A. set base frame channels shall be of 100 mm X 50 mm. and not less than 5 mm thick. Each channel shall be provided with 3 ribs in between the ends and also holes for earth connections.
- (iii) Control wiring shall be done with 1.5 Sq mm multi strand PVC insulated copper conductor cable.
- (iv) Earthing provision should be made for earthing all current carrying metal parts of the equipment. Earth lugs of suitable size shall be provided.
- (v) All the exposed moving parts like fan belt, coupling etc. shall be provided with suitable guards/ covering to avoid the chances of accidents.
- (vi) All exposed metal parts shall be suitably finished to prohibit corrosion under climatic conditions prevailing at site.
- (vii) A name plate showing rating connection diagram should be provided on engine and alternator. All the important and major parts should bear their catalogue number, make of the parts etc. All the control wiring shall be provided with letter number ferules at both ends. Three sets of manual giving the details about design, specifications, special features of the equipment, schematic and wiring diagram, instructions regarding installation and maintenance etc. should be supplied. A laminated control wiring diagram and operation & maintenance instructions shall be framed and displayed.

21.0 TESTING AND Acceptance Testing (A/T)

The EA set shall be tested as per following format in the presence Engineer-in-charge or its authorized representative.

SCOPE:

This section lays down the procedure for conducting test on the installation. In general the procedure laid down here shall be followed, which is at variance, the same may be adopted.

PHYSICAL CHECKS:

Particulars such as name plate details of all major components/equipments shall be recorded and compared with what has been offered by the contractor as per the concluded agreement.

Physical visual inspection of the installations especially on the following aspect shall be conducted.

1. Firmness of mounting.
2. Verticality of installed set
3. Tightness of nuts & bolts.
4. Proper installation of exhaust pipe.
5. Insulation of exhaust pipe.
6. Provision of guards on EA set coupling joint.
7. Proper location of fuel tank.
8. Size of electrical cables as per approved plan.
9. Termination of cables.
10. Ratings of various fuses.
11. Termination of earth leads on neutral & body.

EARTH RESISTANCE:

Measurements shall be taken in respect of earth resistance or earth stations provided for grounded of neutral and body. The resistance shall be measured by isolating the connecting earth load in respect of all earth stations individually. The results shall be recorded as under:-

Sl. No.	Identification of earth station	Used for	Earth stations (ohms)
(1)	(2)	(3)	(4)

RUN TEST:

The engine shall be given a test run continuously for at least six hours with alternator supplying full rated load. During this run following observation shall be recorded.

Sl.No.	ITEM	Time (After start of run test)						
		1Hr.	2 Hr.	3 Hr.	4 Hr.	5 Hr.	6Hr.	7Hr.

1. Lubricating oil pressure.
2. Exhaust gas colour
3. Speed of Engine
4. Output voltage
5. Load current

FUEL CONSUMPTION TEST:

- i) Fuel consumption for half an hour shall be measured after the full load operating conditions have stabilized.
- ii) During the measurement the load shall be maintained unchanged.
- iii) The fuel consumption shall be compared with values given in technical particulars.

OVERLOAD TEST:

Over load test to the extent of 10% over the rated load for one Hr. shall be conducted Immediately after the full load run test.

The various parameters as in the case of run test shall regularly be monitored and recorded.

After the overload test the load shall be normalized to rated value and all Parameters recorded accordingly in addition to recording stator body temp.

ENGINE GOVERNOR:

Suitable to meet requirement as given under Speed Governing of A/T Test

SPEED GOVERNING:

The Engine shall run steadily and load up to its maximum rated load to the standard given below:

Maximum change of speed as a LOAD VARIATION percentage of rated speed

- | | |
|---|----------------------|
| * Load variation on suddenly taking off or throwing on the rated load | Temporary change 10% |
| | Permanent Change 4% |
| * On change of load by any step of 20 percent of the rated load | Temporary change 3% |
| | Permanent change 2% |

INSULATION TEST:

- i) Insulation test shall be conducted after testing the EA set at over load.
- ii) The insulation resistance between the stator coil and frame shall be measured with 500 volts megger.
- iii) Insulation resistance of control wiring with 500V megger shall be measured which shall not be less than one mega ohm.

FUNCTIONAL TEST:

- i) Functional tests in respect of various components like controls, inter locks, measuring devices, battery charger and annunciation devices shall be considered.

BATTERY TEST:

- i) The batteries shall be tested for six successive attempts for starting of engine in order establish healthy condition of battery.

22.0 GUARANTEE ETC. :

- (i) The entire installation system shall be guaranteed against any inherent defect of faulty workmanship and for its perfect functioning for a period of one year from the date of successful AT of entire system.
- (ii) Free services as per manufacturer's standard practice and norms will be provided free of cost.
- (iii) The contractor shall impart training to the operator deputed by the department for operation and attending the minor faults free of cost.
- (iv) All work will be executed as per CPWD (Internal / External) specifications, relevant IE rules.

Executive Engineer (E)

SPECIAL CONDITIONS OF CONTRACT

Technical

1 I.S. STANDARDS

The Diesel E/A set equipments and installation shall conform to various standards amended up to date wherever applicable.

2 PROGRAM FOR EXECUTION

The firm shall supply detailed program to Engineer-in-Charge for execution of contract within fifteen days of award of work. The program shall contain details about submission of drawings and supply of materials. Tentative dates for installation, testing, commissioning and A/T of the E/A set shall also be submitted.

3 DRAWINGS TO BE SUBMITTED FOR APPROVAL

The contractor shall submit the following drawings for approval before the start of the work.

- (a) General arrangement drawing incorporating DEA set, Control panel, Fuel tank, Base frame, Acoustic enclosure etc.
- (b) Foundation details of E/A set
- (c) Control Panel :
 - (i) G A drawing
 - (ii) Schematic diagram
 - (iii) Control wiring diagram
- (d) Acoustic Enclosure

4 CO-ORDINATION

At the site of works, as various agencies will be working, it should be the aim of different agencies that on their account the work of other agency /agencies is not delayed. Full cooperation and full coordination is to be extended during progress of work and at the time of testing by all the agencies.

5 INSPECTION AT CONTRACTOR'S PREMISES

(i) The DOP's authorized representative shall have full powers to inspect drawings of any portion of the work or examine the materials and workmanship of the equipment at the contractor's works or at any other place from where the material or equipment is obtained. Acceptance of any material or equipment shall in no way relieve the contractor of his responsibility for meeting the requirement of the specifications but shall have to be replaced free of cost by the contractor in case the equipment of work is found defective or of inferior quality.

(ii) The DOP reserves the right to send/depute its representative for inspection of material/equipment and witness the test at manufacturer's / supplier's premises before dispatch and firm should not demand any extra payment for this.

6 TEST CERTIFICATES

The firm shall submit following test certificates along with supply of the materials.

- (i) Manufacturer's test certificates for E/A set and all major equipments e.g. Engine, Alternator, AMF panel etc.
- (ii) Excise duty gate pass/ Invoice of E/A set at the time of supply as proof of factory assembled set.
- (iii) Test certificate of Residential type silencer with specified sound insertion loss
- (iv) The certificates for manufacture's Type Test Approval for noise & emission level for DEA set along with acoustic enclosure by an agency authorized by the Central Pollution Control Board.

7 PACKING, FORWARDING & STORAGE

Before dispatch to site, the equipment/ component/ materials shall be properly packed so as to afford protection against transit damages and damages against storage in open areas either at transporter's premises or at store/ work site. Special care shall be taken in respect of sensitive items. When storage in open area is inevitable proper water proof covering shall be provided to protect damages on account of rain water etc. However, damaged items shall be replaced as per the direction of Engineer-in-Charge.

8 REJECTION OF DEFECTIVE EQUIPMENT

i) If the completed E/A set installation or any portion thereof, before it is taken over, is found defective or fails to fulfill the intent of the specifications, the contractor shall on receipt of a written notice from the Engineer-in-charge, forthwith make good the defective equipment / installation.

ii) If the contractor fails to rectify the defects and / or make good the defective equipment / installation within a stipulated time mentioned in the written notice or replace the equipment at no extra cost, DOP may make good, reject and/or replace at the risk and expenses of the contractor, the whole or any portion of the installation which is defective or fails to fulfill requirements of the contract.

9 COMPLETION OF WORK

On completion of work in all respect as per agreement, the work shall be considered as completed only after successful Acceptance Testing.

10 TAKING OVER OF INSTALLATION

i) The Diesel E/A set installation shall be taken over by DOP after successful completion of Acceptance Testing.

ii) Till the installation is complete and handed over to the Engineer-in- Charge, watch & ward of E/A set shall be the responsibility of the supplier.

11 GUARANTEE AND DEFECTS LIABILITY

i) The guarantee shall be valid for 12 months from the date of successful A/T. The contractor shall guarantee that all equipments shall be free from any defect due to the defective material and / or bad workmanship and also the equipments shall work satisfactorily with performance and efficiencies not less than the guaranteed values.

ii) Any part found defective during this period shall be replaced free of cost by the contractor. The service of the contractor's personnel, if required during this period, shall be made available free of cost to the DOP.

iii) The contractor shall depute his representative without delay on intimation of the defect.

vi) The following aspects are, however, not covered under the purview of guarantee.

12 MAINTENANCE

The contractor shall provide free maintenance for a period of 12 months after the installation is taken over by the DOP, and attend to any defects that may arise in operation of the E/A set. Consumable items required during the maintenance, loss of which is not attributable to bad material and/or workmanship will be arranged by the DOP free of cost.

13 TRAINING OF DOP PERSONNEL

The contractor shall arrange to impart the training to the DOP personnel on the following aspects prior to take over of the installation:-

- (a) Operation of E/A set, control panel
- (b) Adjustments of settings for controls and protection devices
- (c) Preventive maintenance

14 BYE-LAWS, INDEMNITY AGAINST LIABILITIES

a) The contractor shall comply with all bye-laws and regulations of local and statutory authorities having jurisdiction over the works and shall be responsible for payment of all fees and other charges and giving/ receiving all necessary notices and keep the Engineer-in-charge informed about the notices issued and received.

b) The contractor shall indemnify the DOP against all claims in respect of patent rights, design, trade mark or name of other protected rights in respect of any plant, machine, work or materials used for or in connection with the work or temporary works and from and against all claims, demands, proceedings, costs, charges and expenses whatsoever in respect of or in relation thereto. The contractor shall defend all actions arising from such claims and shall himself pay all royalties.

c) License fees, damages, cost and charges of all and every sort that may be legally incurred in respect thereof shall be borne by the contractor.

d) All liabilities/ penal recoveries on matters arising out of tax/ excise/ levies such as incorrect deductions, discrepancies in the filing of returns, revised assessment by the concerned authorities etc. shall be borne by the contractor.

e) It is contractor's liability to follow all safety procedures in accordance with relevant I.S. amended up to date during execution of work at site.

Executive Engineer (E)

**GOVERNMENT OF INDIA
DEPARTMENT OF POSTS- CIVIL WING**

State	Meghalaya	Circle	PEC, Bangalore
Branch	Electrical	Division	PED, Kolkata
Zone		Sub division	PESD, Shillong

Percentage Rate Tender & Contract for Works

(A) Tender for the work of:-

SITC of 160 KVA 3 Phase DG set with AMF panel and allied work at Shillong GPO.

To be submitted through e-tendering on **22.05.2026** up to **11:00 Hrs** to the office of the Executive Engineer(E), Postal Electrical Division, Kolkata

To be opened through e-tendering in presence of tenderers who may be present at on **25.05.2026** at **11:30 Hrs** in the office of the Executive Engineer(E), Postal Electrical Division, Lucknow

Issued to : _____ Tender document made available Online

Signature of officer issuing the documents:

Designation: Executive Engineer (E), Postal Electrical Division, Kolkata

Date of issue :- As per INFORMATION AND INSTRUCTIONS FOR BIDDERS

TENDER

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

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

We agree to keep the tender open for **75 days from the last day of receipt of technical bid** and not to make any modifications in its terms and conditions.

A sum of ₹ **39008.00** is paid at e-tendering portal / is hereby forwarded in Treasury Challan / Demand Draft / Pay Order/Banker's Cheque of a Scheduled Bank / Deposit at Call Receipt of a Scheduled Bank / Fixed Deposit Receipt of Scheduled Bank / bank guarantee issued by a Scheduled Bank as earnest money. Receipt of deposition of earnest money is scanned and uploaded.

If I/we, fail to furnish the prescribed performance guarantee within prescribed period, I/we agree that the said President of India or his successors in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely.

Further, if I/we fail to commence work as specified, I/we agree that President of India or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and performance guarantee absolutely. The said performance guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, up to maximum of the percentage mentioned in Schedule 'F' and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

Further, I/We agree that in case of forfeiture of Performance Guarantee as aforesaid. I/We shall be debarred for participation in the re-tendering process of the work.

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

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

Dated _____

Signature of contractor
Postal Address

Witness:

Address:

Occupation:

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the President of India for a sum of _____
(Rupees _____)

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

i)

ii)

iii)

For & on behalf of the President of India

Signature _____

Designation _____

Dated _____

SCHEDULES (A to F)

SCHEDULE 'A'

Bill of Quantities (BoQ_XXXXX.xls file on the website against this work item).

SCHEDULE 'B'

Schedule of materials to be issued to the contractor.

Sl. No	Description of items	Qty	Rates in figures & words at which the material will be charged to the contractor	Place of Issue
1	2	3	4	5
NIL				

SCHEDULE 'C'

Tools and plants to be hired to the contractor:

Sl. No	Description	Hire charges per day	Place of Issue
1	2	3	4
NIL			

SCHEDULE 'D'

Extra schedule for specific requirements/ document for the work, if any, specification of work, if any etc.

As attached

SCHEDULE 'E'

Reference to General conditions of contract: CPWD General Conditions of Contract for Maintenance Works–2020 amended up to the last date of submission of online tender.

Name of work:- SITC of 160 KVA 3 Phase DG set with AMF panel and allied work at Shillong GPO.

i	Estimated cost of work	:	1950397.00	
ii	Earnest money	:	2%	of estimated amount
iii	Performance Guarantee	:	5%	of tendered amount
iv	Security Deposit	:	2.50%	of tendered amount

SCHEDULE 'F'

General Rules & Direction : CPWD General Conditions of Contract for Maintenance Works–2020 with up to date amendments (As on Date of opening of price bid) shall be read with NIT.

Officer inviting tender : **Executive Engineer (E), Postal Electrical Division, Kolkata**

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

Definitions

2(v)	Engineer-in-Charge:	Executive Engineer (E), Postal Electrical Division, Kolkata
2(viii)	Accepting Authority:	Superintending Engineer (E), Postal Electrical Circle, Bangalore
2(x)	Percentage on cost of materials and labour to cover all overheads and profits	15%
2(xi)	Standard schedule of Rates	DSR/MR/MNRE
2(xii)	Department	Department of Posts
9(ii)	Standard CPWD contract Form	CPWD General Conditions of Contract for Maintenance Works–2020, CPWD Form 7/8 modified & corrected upto date

Amendments up to last date of submission of online tender shall be read with NIT

Clause 1

i)	Time Allowed for submission, of Performance Guarantee from the date of issue of letter of acceptance	10 Days
II)	Maximum allowable extension with late fee @ 0.1% per day of Performance Guarantee amount beyond the period provided in (i) above	5 Days

Clause 2

Authority for fixing compensation under clause 2. **SE (E), Postal Electrical Circle, Bangalore**

Clause 2 A

Whether Clause 2 A shall be applicable **No**

Clause 5

Number of days from the date of issue of letter of acceptance for reckoning date of start **10 Days**

Mile stone(s) as per table given below:-

Sl. No	Description of milestone (physical)	Time allowed in days (from date of start)	Amount with held in case of non achievement of milestone
1	1/8 th (of whole work)	1/4 (of whole work)	In case of not achieving the necessary progress, 1% of the tendered value of work will be withheld for failure of each milestone.
2	3/8 th (of whole work)	1/2 (of whole work)	
3	1/2 th (of whole work)	3/4 (of whole work)	
4	Full	Full	

Time allowed for execution of work	120 Days
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Authority to Decide:

i)	Extension, of time for completion of work.	E.E(E) / S.E(E)
ii)	Rescheduling of mile stones	S.E(E)

Clause 6

CMB applicable

Clause 7

Gross work to be done together with net payment/adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment	N.A
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Clause 10A

List of testing equipment to be provided by the contractor at site lab. N. A.

Clause 10B(ii)

Whether Clause 10 B (ii) shall be applicable No

Clause 10C

Component of labour expressed as percent of value of work N.A.

Clause 10CA

N.A.

Clause 10CC

Clause 10CC to be applicable in contracts with stipulated Period of completion exceeding the period shown in next column:	Not applicable
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Clause 11

Specifications to be followed for execution of work:	As per NIT/ CPWD Specifications guidelines amended upto date
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Clause 12

12.2 & 12.3	Deviation Limit beyond which clauses 12.2. & 12.3 shall apply for building work	25%
	& 12.3 shall apply for foundation work	N.A

Clause 16

Competent Authority for deciding reduced rates S.E.(E)

Clause 18

List of mandatory machinery, tools & plants to be deployed by the contractor at site: As required for timely execution of work

Clause 25

Constitution of Dispute Redressal Committee (DRC)	Competent Authority to appoint DRC
DRC shall constitute one Chairman and two members	Chief Engineer or Additional Director General if there is no Chief Engineer

Clause 36 (i)

S. No.	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical/Technical representative)	Minimum Experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision, of clause 36(I)	
						Figures	Words
1	Recognized Diploma Holder	Electrical	Electrical	3 years	1	Rs.10000/- per month	Ten Thousand Only
2	Recognized Degree Holder	Electrical	Electrical	3 years	1	Rs.15000/- per month	Fifteen Thousand Only

Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers

Clause 42

i) (a) Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates _____ printed by C.P.W.D. N.A

ii) Variations permissible on theoretical quantities. N.A

a) Cement for works with estimated cost put to tender not more than Rs 5 lakhs 3% plus / minus

Cement for works with estimated cost put to tender more than Rs 5 lakhs 2% plus / minus

b) Bitumen for all works 2.5% plus only & nil on minus side

c) Steel Reinforcement and structural steel sections for each diameter, section and category 2% plus / minus

d) All other materials. Nil.

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

Sl. No.	Description of item	Rates in figures and words at which recovery shall be made from the contractor Rate in schedule 'B' plus 10% in case materials issued by Department	
		Excess beyond Permissible variation	Less use beyond Permissible variation
1	Cement	N.A.	
2	Steel reinforcement		
3	Structural Sections		
4	Bitumen issued free		
5	Bitumen issued at stipulated fixed price		

CORRECTION SLIPS

CPWD FORM 6:

- 1 Wherever Form -7/8 is appearing in this form, figure 8 stands deleted.
- 2 Wherever item rate tender is appearing in this form, it stands deleted.
- 3 Para 1 of this form is substituted as Press Notification enclosed in the tender documents.

CPWD FORM 7:

- 1 Wherever Form -7/8 is appearing in this form, figure 8 stands deleted.
- 2 Wherever item rate tender is appearing in this form, it stands deleted.
- 3 All the Para's in this form related to Form CPWD-8 (for item rate tender) may be treated as deleted.
- 4 Clause 2A of this form related to incentives for early completion may be treated as deleted.
- 5 Clause-5(1)(i):-Time allowed to submit Time and Progress Chart for approval from Engineer-in-Charge shall be 7 days from date of award of work.
- 6 Clause-16- Guarantee period shall be 1 year.

All reference to:-

- (i) CPWD / Public Works Department;
- (ii) Administrative Head of CPWD;
- (iii) Director General of works, CPWD;
- (iv) Chief Engineer, CPWD;
- (v) CPWD Circle; and
- (vi) Ministry of Urban Development

in various clauses shall respectively be taken to mean:

- (i) Department of Posts / Civil Wing;
- (ii) Administrative Head of Department of Posts;
- (iii) Chief Engineer (C), Department of Posts;
- (iv) Chief Engineer (C), Department of Posts;
- (v) Postal Electrical Circle; and
- (vi) Ministry of Communications, Department of Posts

except in the following places and clauses where no modifications are intended:

- (i) C.P.W.D. Safety Code;
- (ii) Clause 11, 19 B(i), 19B(iii), 19C and 19 G;
- (iii) Model rules for protection of health and sanitary arrangement for workers employed by CPWD or its contractors (heading only);
- (iv) C.P.W.D. Contractor's Labour Regulations (in heading and Regulation No.1 only); and
- (v) CPWDDelhi Schedule of Rates and CPWD Specifications.

Annexure- III (List of material of approved make/PRODUCT DIRECTORY)

Sl. No	Item	Make
1	Engine	CUMMINS/ KOEL/ ESCORTS/ CATERPILLAR/ ASHOK LEYLAND/ GREAVES
2	Alternator	Kirloskar / NGEF/ Leory Somer / Stamford/ Crompton Greaves (Brushless, 6-200KVA)/AVK-SEG (Up to 250 KVA)/ Electrodyne (up to 100 KVA) Crompton Greaves A1 series
3	ACB	L&T/ Siemens/ Crompton/ Control & Switchgear/ GE Power Controls.
4	MCCB	Siemens/ L&T/ GE Power Controls/ Control & Switchgear/ Crompton/ Havells
5	TPN Switch& HRC Fuses	Siemens/ L&T/ GE Power Controls/ Havells/ H- Elecon/ HPL
6	CT	AE/ IMP/ Marshal/ Pactil/ Kappa/ L&T/ Asmor/ Indcoil/ Waco/ Meco
7	AMMETER/VOLTMETER	AE/ MP/ Universal/ Reshabh/ Kaycee/ Meco/ Enercom
8	SELECTOR SWITCH	L&T/ KAYCEE/ AE/ IMP/ Thakoor/ Reco/ Vaishno/ Selzser/ Rsscontrol
9	INDICATING LAMP	Vaishno/ Siemens/ L&T/ AE/ IMP/ Rasscontrol/ Teknic/ Crompton/ Kaycee.
10	CAPACITOR	Khatau/ Junkar/ Crompton/ L&T/ Universal/ Electric/ Usha/ Asian/ AE/ IMP
11	Cables	a) Upto 1.1 KV grade: Rallison / Polycab/ Finolex/ Havells/ RR/ Grandlay/ KEI
		b) Above 1.1 KV grade: Rallison/ Polycab/ Finolex/ Havells/ RR/ Grandlay/ KEI
12	PVC insulated copper conductor wire	Polycab/ Finolex/ Havells/ RR/ Grandlay/ Rallison/ KEI/ Kalinga
13	Fire Extinguishers	Minimax/ Ceasefire
14	Rubber Matting	ISI Mark
15	Cable Joint Kit	Raychum/ M-Seal/ Densons
16	Single phasing Preventor	L&T/ Minilac/ Zerotrip/ Siemens
17	Timers	L&T/ Siemens/ Minilac/ Telemecanique/ AE
18	MCBs/Isolators& Distribution board	Havells/ Siemens/ MDS/ L&T/ ABB
19	Change over Switch	Havells/ Control and Switch Gear/ H-Elecon/ L&T/HPL Socomec/ Siemens
20	Piano Switch	Anchor/ Havells/ M-Kay/ AKG/ Siemens
21	M.S. Conduit	Vikas/ M-Kay/ AKG/ Steel Craft/ BEC/ National/ NIC/ MST
22	ELCB	MDS/ Havells/ Datar/ Siemens/ GE Power Control
23	Contactors	Siemens/ L&T/ GE Power Controls/ Crompton/ MEI/ Laxmi
24	A/C UNIT	VOLTAS/ BLUESTAR/ HITACHI/ TATA LIBERTY & CARRIER
25	Compressor of A/C	As per manufacturer design
26	G.I. pipe	BST/ TATA/ JINDAL/ ZENITH/ Swastik
27	G.M. VALVES	SANT/ LEADER/ TRISHUL/ Zoloto/ ANNAPURNA
28	G.I. SHEET	TATA/ SAIL/ NIPPON DENRO/ HSL/ JINDAL/ NATIONAL
29	Lead Acid batteries	EXIDE/ FURUKAWA/ AMAR RAJA/ HITTACHI/ CROMPTON GREEAVES/ AMCO
30	ENGINE	CUMMINS/ RUSTON/ ESCORTS/ CATERPILLAR/ ASHOK LEYLAND/ GREAVES
31	ALTERNATOR	KIRLOSKER/ NGEF/ STAMFORD/ CROMPTION/ GREEAVES/ ELECTRDYNE/ ELGI
32	HEAT DETECTOR	APPOLLO/ NITTON/ CHEMTRON/ EDWARD/ FENWAL/ WORMALD/ HOCHIKI
33	MONOBLOCK PUMP	CROMPTON/ KSB/KIRLOSKAR/ GE
34	Submersible pump	CROMPTON/ KSB/ KIRLOSKAR/ GE
35	Pole boxes	SINTEX/ HENSEL
36	Modular type switches/ Sockets/ TV/ Telephone outlet	Anchor/ Havells/ M.Kay/ Legrand/ AKG
37	BLDC Fan	Usha/ Atomberg

Note:- 1. Materials other than the above list shall be any ISI marked make.

2. In some cases similar superior make (SS make) are mentioned. SS make can only be considered for acceptance by the engineer – in – charge during unavoidable circumstances. The contractor shall not enforce to provide items at his own convenience. The decision of engineer- in- charge in such cases are final and binding.

Executive Engineer (E)