

E- TENDERS DOCUMENT

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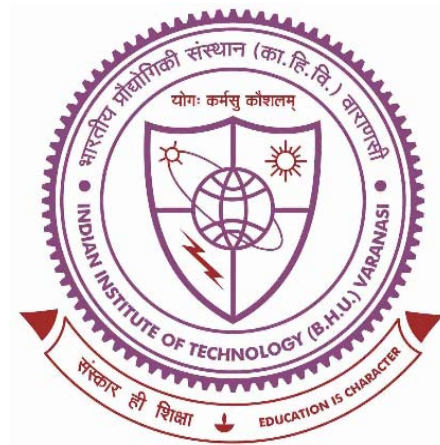
SUPPLY & INSTALLATION OF 125 KVA SILENT DG SET FOR BACKUP SUPPLY IN THE COMPUTER UNIT OF THE IIT(BHU), VARANASI.

Tender No.:-IIT(BHU)/IWD/ET/02/2018-19/878

Tender Date: 06.07.2018

Last Date of Submission of bids: 27.07.2018

Tender Opening date: 28.07.2018



**Indian Institute of Technology
(Banaras Hindu University)
Varanasi-221005**

E-mail: office.iwd@iitbhu.ac.in

ABSTRACT OF COST

NAME OF WORK:- Supply & Installation of 125 KVA Silent DG Set for backup Supply in the Computer Unit of the IIT (BHU), Varanasi.

Sl. No.	Details of Sub-Head	Amount (in ₹)
1	Electrical works	9,82,600.00
Say ₹		9,82,600.00

This NIT containing pages 53 as per Index amounting to Rs. 9,82,600.00 is hereby approved.

Sd-
Member Secretary
IWC, Indian Institute of Technology(BHU), Varanasi

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It is certified that this document contains total 53 pages.

Sd-
MEMBER SECRETARY, IWC, IIT(BHU)



**NOTICE INVITING TENDER
(INVITATION FOR BIDS)**

1. Online bids are invited from manufactures or their authorized dealers, who submit/letter /certificate in originals from the manufactures that they have been authorized to bid in response to this NIT for the following electrical work:-

S. No.	Tender no.	Specifications & quantity of the item	Earnest Money Deposit (EMD)
1.	IIT(BHU)/IWD/ET/02/2018-19/878	Name of the Project: - Supply & Installation of 125 KVA Silent DG Set for backup Supply in the Computer Unit of the IIT (BHU), Varanasi. Estimated Cost Rs. 9,82,600.00 1. Eligibility & Technical Criteria (Cover-1) 2. Financial Bid (Cover-2)	Rs. 25,000.00

- Interested eligible Bidders may obtain further information from IIT(BHU) website: www.iitbhu.ac.in/iitnotifications/purchase_enquiries/ or from Central Public Procurement Portal (CPPP) <https://eprocure.gov.in/eprocure/app>.
- Intending bidders are advised to visit IIT (BHU) website www.iitbhu.ac.in/iitnotifications/purchase_enquiries/ and CPPP website <https://eprocure.gov.in/eprocure/app> regularly till closing date of BID submission of tender for any corrigendum / addendum/ amendment.
- Earnest Money Deposit is to be submitted in the form of DD/FDR as per details mentioned in the critical data sheet. Bidders are required to submit the scan copy of payment receipt details of Tender fees and EMD at the time of Bid uploading.

CRITICAL DATA SHEET

Name of Organization	Indian Institute of Technology(BHU), Varanasi
Tender Type (Open/Limited/EOI/ Auction/Single)	Open
Tender Category (Services/Goods/Works)	Works
Type/Form of Contract	Supply & Installation
Product Category (Civil Works/Electrical Works/Fleet Management/ Computer Systems)	Electrical works
Date of Issue/Publishing Original Tender	06.07.2018 (10:00 Hrs)
Document Download Start Date	07.07.2018 (10:00 Hrs)

Document Download End Date	27.07.2018 (15:00 Hrs)
Last Date and Time for Uploading of Bids	27.07.2018 (15:00 Hrs)
Date and Time of Opening of Bids	28.07.2018 (15:30 Hrs)
Tender Fee	Rs.1000/- (To be paid through RTGS/NEFT) as per the following details: Name of Account - Registrar, IIT(BHU) Name of the Bank - State Bank of India Name of Branch - IT, BHU, Varanasi Account No. - 32778803937 IFSC Code - SBIN0011445 (The proof of payment must be uploaded in cover-1)
EMD	Rs. 25,000.00 to be paid in the form of DD/FDR in the name of Registrar, IIT(BHU), Varanasi, payable at VARANASI. (Scanned copy of DD/FDR to be uploaded in cover-1) (Original to be submitted in cover-1 alongwith eligibility criteria and technical documents)
No. of Covers (1/2/3/4)	02
Bid Validity days (180/120/90/60/30)	180 days (From last date of opening of tender)
Address for Communication	The Chairman (IWC), Institute Works Department, IIT(BHU), Varanasi - 221005, U.P.
Email Address	office.iwd@iitbhu.ac.in

INSTRUCTIONS FOR ONLINE BID SUBMISSION

As per the directives of Department of Expenditure, this tender document has been published on the Central Public Procurement Portal ([URL:http://eprocure.gov.in/eprocure/app](http://eprocure.gov.in/eprocure/app)). The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at: <http://eprocure.gov.in/eprocure/app>.

1. Registration

1. Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal ([URL:http://eprocure.gov.in/eprocure/app](http://eprocure.gov.in/eprocure/app)) by clicking on the link "Click here to Enroll". Enrolment on the CPP Portal is free of charge.
2. As part of the enrolment process, the bidders will be required to choose a unique username and assign a 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 CPP Portal.
4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing 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 DSCs to others which may lead to misuse.
6. Bidder then logs in to the site through the secured log-in by entering their user ID/password and the password of the DSC/eToken.

2. Searching for Tender Documents

1. There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal.
2. Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
3. 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.

3. Preparation of Bids

1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
2. 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. Any deviations from these may lead to rejection of the bid.

3. 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 100 dpi with black and white option.
4. 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 standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Space” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area 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.

4. Submission of Bids

1. Bidder should log into the site well in advance for bid submission so that he/she upload 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 required bid documents one by one as indicated in the tender document.
3. Bidder has to select the payment option as “on-line” to pay the tender fee / EMD as applicable and enter details of the instrument. Whenever, EMD/Tender fees is sought, bidders need to pay the tender fee and EMD separately on-line through RTGS.
4. A standard BoQ format has been provided with the tender document to be filled by all the bidders.

Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. Bidders are required to download the BoQ file, open it and complete the white coloured (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 bidders’ 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.
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. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done.
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 message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
9. Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.

5. Assistance to Bidders

1. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
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 1800 233 7315

6. General Instructions to the Bidders

1. The tenders will be received online through portal <http://eprocure.gov.in/eprocure/app> . In the Technical Bids, the bidders are required to upload all the eligibility criteria documents in **.pdf format**.
2. Possession of a Valid Class II/III Digital Signature Certificate (DSC) in the form of smart card/e-token in the company's name is a prerequisite for registration and participating in the bid submission activities through <https://eprocure.gov.in/eprocure/app>. Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the web site <https://eprocure.gov.in/eprocure/app> under the link "Information about DSC".
3. Tenderer are advised to follow the instructions provided in the 'Instructions to the Tenderer for the e-submission of the bids online through the Central Public Procurement Portal for e Procurement at <https://eprocure.gov.in/eprocure/app>.

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

INSTITUTE WORKS DEPARTMENT, NIT

1. IWC,IIT(BHU) invites the online percentage rate/Item rate Bids from manufactures or their authorized dealers, who submit/letter /certificate in originals from the manufactures that they have been authorize to bid in response to this NIT for the following electrical work:

Supply & Installation of 125 KVA Silent DG Set for backup Supply in the Computer Unit of the IIT(BHU), Varanasi

- 1.1 The work is estimated to cost Rs. **9,82,600.00** The estimate, however, is given merely as a rough guide).
- 1.2 Intending bidder is eligible to submit the bid provided, if he has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below:-
- 1.2.1 Criteria of eligibility for submission of bid documents:

- (a) Intending bidder should not be a joint venture. **(Self Certified copy of relevant documents clearly establishing the status of bidder to be uploaded)**
- (b) Intending bidder should be an original equipment manufacturer or their authorized dealers, who submit/letter /certificate in originals from the manufactures that they have been authorized to bid in response to this NIT. **(Self Certified copy of documents clearly stating the status of bidder to be uploaded. OEM need not upload any such certificate.)**
- (c) Should have satisfactorily completed Three similar works each of value not less than Rs 3.93 Lacs or Two similar works each of value not less than Rs 5.90 Lacs or One similar work of value not less than Rs 7.86 Lacs during last seven years ending 31st March 2018. **(Self Certified photocopy of work order alongwith work completion certificate to be uploaded as proof of eligibility criteria)**

Explanation:-

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

Similar work means **“Supply & Installation of DG Set and other allied Electrical work”**

- (c) Should have had average annual financial turnover of Rs 10.00 Lacs on account of electrical works executed during the last three preceding financial years ending 31st March, 2018, duly audited by a Chartered Accountant **(Self Certified photocopy of certificate from CA to be uploaded)**. The year in which no turnover is shown would also be considered for working out the average.
- (d) Should not have incurred any loss in more than three years during the last five years ending 31st March, 2018. **(Self Certified photocopy of certificate from CA to be uploaded alongwith certified copy of last three years Profit & Loss Account)**
- (e) Should have a solvency certificate of **Rs 10.00 Lacs** issued by Bank during the last six months. **(Certified copy of original solvency certificate to be uploaded in cover-1).**

- 1.2.2 **To become eligible for bidding , the bidders shall have to furnish an affidavit as under:-**

I/We undertake and confirm that eligible similar works(s) has/have not been got executed through another bidder on back to back basis. Further that, if such a violation comes to the notice of Indian Institute of Technology(BHU), then I/we shall be debarred for tendering in IWC, IIT(BHU) in future

forever. Also, if such a violation comes to the notice of Indian Institute of Technology(BHU) before the date of start of work, the Member Secretary-IWC, IIT(BHU) shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee. **(Scanned copy of affidavit to be uploaded in cover-1)**

- 1.2.3. The detailed technical specification as per original equipment manufacturer of the quoted DG set and other items such AMF panel etc. shall be part of the eligibility criteria and to be uploaded in cover-1. **(Scanned copy of technical details provided by OEM to be uploaded in cover-1)**
2. Agreement shall be drawn with the successful bidder on prescribed Format.
3. The time allowed for carrying out the work will be 2 months (60 days) from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the Published documents.
4. The site for the work is available for start of the work.
5. The Published document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen/downloaded from website www.eprocure.gov.in or www.iitbhu.ac.in
6. While submitting the bids, bidder can revise the rate, but before last date and time of submission of bids as notified. In this case, the last submitted bid before the last date and time will only be considered.
7.
 - a) **Earnest Money** of **Rs. 25,000.00** shall be paid in the form of Banker's cheque/ Demand Draft / Fixed Deposit Receipt (**drawn in favor of Registrar, IIT(BHU), Varanasi, payable at Varanasi**) of any Scheduled Bank. The same shall be submitted along with technical bid in Cover-1 and scanned copy uploaded with cover-1.
 - b) **Tender processing fees - 1000/-** shall be paid online as per details given in critical data sheet and details of online transaction ID i.e. UTR number to be uploaded with cover-1.

Proof of online submission of tender processing fees, EMD & Eligibility criteria document like work experience, financial turn over certificate, Affidavit in original, Solvency certificate in original and any other documents mentioned in relevant clauses above, shall be placed in single sealed envelope superscripted as **(Cover-1 "Cost of Tender Document, E.M.D. & Eligibility criteria documents")** with name of work and due date of opening of the Tenders mentioned thereon and submitted in office of IWD before the last date & time of submission of bid. **The scanned copies of above mentioned documents shall be uploaded under cover-1 on the e-tendering website.**

All the documents for cover-1 (as per serial no. 1.2.1 to 1.2.3 alongwith proof of submission of tender fee and EMD) shall be placed in an envelop with due mention of Name of work, date & time of opening of Tenders and is to be submitted in the office of Member Secretary, IWC, IIT(BHU), Varanasi on or before 3:00 PM 27.07.2018. The documents submitted shall be opened at 03:30 PM on 28.07.2018. Kindly note that in case of any discrepancy regarding uploaded documents in cover-1 and physically submitted documents in the office, the uploaded documents shall be considered as final.

Kindly note that no financial bid in physical format is to be submitted with cover-1 in the office of IWD, IIT(BHU). Financial bid is to be uploaded under cover-2 only on the e-tendering website.

Online Financial Bids submitted by intending bidders shall be opened only of those bidders, whose Earnest Money deposit, tenders processing fees and other documents placed in the envelop (Cover-1) and uploaded on e-tendering website under cover-1 are found in order and are found eligible and meet the technical specifications.

11. The bid submitted shall become invalid and cost of bid & tender processing fee shall not be refunded if:
 - (i) The bidder is found ineligible.
 - (ii) The bidder does not provide all the documents (including PAN No., GST registration etc.) as stipulated in the bid document.
12. The bidder whose bid is accepted will be required to furnish performance bank guarantee of 5% (Five Percent) of the tender amount within the 15 days of issue of letter of acceptance. This guarantee shall be in the form of Demand Draft of any scheduled bank or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. In case the bidder fails to deposit the said performance guarantee within the period as indicated, the Earnest Money deposited by the bidder shall be forfeited automatically without any notice to the bidder.
13. Intending bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their Tender. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent upon 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 tender 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 Institute and local conditions and other factors having a bearing on the execution of the work. Cost of site visit shall be borne by the bidder.
14. The competent authority on behalf of the Institute does not bind itself to accept the lowest or any other Tenders and reserves to itself the authority to reject any or all the Tenders received without the assignment of any reason. All Tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected.
15. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the Tenders submitted by the bidders who resort to canvassing will be liable to rejection.
16. The competent authority on behalf of Institute 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.
17. The bidder shall not be permitted to tender for works in the IWC, if his near relative is posted as an officer in any capacity between the grades of Chairman(IWC) and Junior Engineer (both inclusive).. Any breach of this condition by the bidder would render him liable to be removed from the Tendering process.
18. 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 act as a bidder within a period of one year after his retirement from Government service, without the previous permission of the Government of India in writing. This contract is liable to be cancelled if either the bidder or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the tender or engagement in the bidder's service.
19. The bid for the works shall remain open for acceptance for a period of 180 days from the date of

opening of financial bids. If any bidder withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the Indian Institute of Technology(BHU), then the Indian Institute of Technology(BHU), without prejudice to any other right or remedy, be at liberty to forfeit of the said earnest money as aforesaid. Further the bidders shall not be allowed to participate in the re-bidding process of the work.

20. The notice inviting bid shall form part of the contract document. The successful bidder, on acceptance of his bid by the Accepting Authority, have to sign the contract consisting of "The Notice Inviting bid, all the documents including Special Conditions, General Specifications/ Particular Specifications and drawings, if any, forming part of the bid as submitted at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto. Within 15 days from the stipulated date of start of the work.

21. Composite Tender

- 21.1.1 The Member Secretary is calling this bid for the composite work. The Earnest money is fixed with respect to the combined estimated cost put to Tender for the composite tender.

- 21.1.2 The bid document is including following components:

General / specific conditions, general technical specifications along with list of Makes.

Schedule of quantities applicable.

Specifications/Design and Drawings.

Composite bill of quantities.

- 21.1.3 The eligible bidders have to quote rates for all items given in the bill of quantity.

- 21.1.4 After acceptance of the bid by competent authority, the Member Secretary shall issue letter of award on behalf of the Institute. After the work is awarded, the bidder will have to enter into one agreement with Chairman, IWC.

- 21.1.5 Entire work under the scope of composite tender including major and all minor components shall be executed under one agreement.

- 21.1.6 Security Deposit will be worked out separately for each component corresponding to the quoted/accepted cost of the respective component of works. The Earnest Money will become part of the security deposit of the respective projects under the head Mega projects in ratio of the corresponding estimated value of these projects.

- 21.1.7 The bidder may associate agency(s) for minor component(s) conforming to eligibility criteria as defined in the tender document and has to submit detail of such agency(s) to Member Secretary. Name of the agency(s) to be associated shall be approved by Member Secretary. Before engaging such associate agencies bidder has to inform to Member Secretary along with his past experience and all credential's and got the approval of the same from the Member Secretary.

- 21.1.8 In case the bidder intends to change any of the above agency/ agencies during the operation of the contract, he shall obtain prior approval of respective Member Secretary. The new agency/ agencies shall also have to satisfy the laid down eligibility criteria. In case Member Secretary is not satisfied with the performance of any agency, he can direct the bidder to change the agency and this shall be binding on the bidder.

- 21.1.9 The main bidder has to enter into agreement with bidder(s) associated by him for execution of minor component(s). Copy of such agreement shall be submitted to Engineer-in-charge In case of change of associate bidder, the main bidder has to enter into agreement with the new bidder associated by him.

- 21.1.10A. The composite work shall be treated as complete when all the components of the work are complete. The completion certificate of the composite work shall be recorded by Engineer-in-charge of major component after record of completion certificate of all other components.

21.1.10B. Final bill of whole work shall be finalized by IWC.

21.1.11 It will be obligatory on the part of the bidder to sign the tender documents for all components before the first payment is released.

Sd-
MEMBER SECRETARY
INSTITUTE WORKS COMMITTEE
INDIAN INSTITUTE OF TECHNOLOGY(BHU)

List of Documents to be scanned and uploaded under cover-1 on e-tendering website and submitted up to the last date and time mentioned above in sealed cover-1 in office of IWD, IIT(BHU):

- a) **Self Certified copy of documents clearly stating the status of bidder to be uploaded.** OEM need not upload any such certificate.
- b) Documents regarding legal status of firm and written power of attorney of the signatory.
- c) Self certified copy of work orders alongwith work completion certificate as per eligibility criteria.
- d) Scanned copy of technical details of DG set and other items provided by OEM to be uploaded in cover-1.
- e) Solvency certificate from bank and scanned copy of DD/FDR for EMD.
- f) Affidavit as per 1.2.2 and proof of submission of tender processing fee.
- g) No loss certificate, turnover from CA, GST registration certificate, PAN card ESI, EPF etc.

List of document to be uploaded upto the last date & time mentioned above in cover-2 (Financial Bid):

- a) Duly filled in priced BoQ.
- b) Duly signed and scanned copy of priced BoQ in PDF format.

(Kindly note that no physical submission of duly filled in BoQ is required and it is to be uploaded only on e-tendering website).

Sd-
MEMBER SECRETARY
INSTITUTE WORKS COMMITTEE
INDIAN INSTITUTE OF TECHNOLOGY(BHU)
VARANASI

A: GENERAL INSTRUCTIONS

1.0 Scope of Tender.

- 1.1 Indian Institute of Technology(BHU) (referred to as Owner in these documents) invites Tenders for *Supply & Installation of 125 KVA Silent DG Set for backup Supply in the Computer Unit of the IIT(BHU), Varanasi* (as defined in these documents and referred to as “the works”) detailed in the table given in the Notice Inviting Tenders (NIT).
- 1.2 The successful Bidder shall complete the works within the completion date specified in the Notice Inviting Tenders (NIT).

2.0 Non Association / Relation

- 2.1 All Bidders shall provide in the bid tender and Qualification Information, a statement that the Bidder is not associated, nor has been associated in the past, directly or indirectly, with the IIT(BHU) or any other entity that has prepared the design, specifications, and other documents for the Project.

3.0 Qualification of the Bidder

- 3.1 All Bidders shall provide tender qualification information.
- 3.2 All Bidders shall include the following information by submitting relevant documents and certificate with their tenders:

The Bidder must be registered with the GST Department and should submit the registration certificate of GST, ESI, PF, labour license etc.

4.0 Cost of tendering

- 4.1 The Bidder shall bear all costs associated with the preparation and submission of his tender, and the Owner will in no case be responsible and liable for those costs.
- 4.2 The Bidder, at its own responsibility and risk is encouraged to visit and examine the Site of Work and its surroundings and obtain all information that may be necessary for preparing the tender. The costs of visiting the Site shall be at the Bidder’s own expense.

B: DOCUMENTS INVITING TENDERS

5.0 Invitation

5.1 Tenders are hereby invited on behalf of Indian Institute of Technology(BHU).

6.0 Contents of documents as mentioned in the relevant clauses mentioned.

The Bidder shall be deemed to have examined all instructions, forms, terms, and specifications in the Documents. Failure to furnish the information required in the Tender Document or submission of a Bid not substantially responsive to the Tender Documents in every respect will be at the Bidder's risk and may result in the rejection of the bid.

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

In case of any discrepancy between the Schedule of Quantities, the specifications and/ or the drawings, given in the tender document the following order of preference shall be observed:

Description of Schedule of Quantities.
Particular Specification and Special condition, if any.
Drawings. C. P. W. D. specifications/ IWC specification.
Latest edition Indian Standard Specifications of B. I. S.

7.0 Amendment of Tendering Documents

7.1 Before the deadline for submission of bids, the Indian Institute of Technology(BHU) may modify the Tender documents by issuing addenda/corrigendum.

7.2 Any addendum thus issued shall be part of the Tendering documents and shall be submitted on Tendering website www.eprocure.gov.in and Institute website www.iitbhu.ac.in.

7.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their Publish s, the enlisted may extend if necessary the deadline for submission of tenders.

C: PREPARATION OF DOCUMENT

8.0 Earnest Money Deposit (EMD)

EMD amounting to **Rs. 25,000.00** in the form of a bankers cheque or demand draft/F.D.R in favour Registrar, IIT(BHU) payable at Varanasi must accompany each bid. **Bids not accompanying with EMD and unconditional acceptance letter will be summarily rejected.**

The EMD of the unsuccessful Bidders will be discharged / returned within Thirty (30) days from the date of opening of the bids. The EMD of the successful Bidder shall be converted as Security deposit.

The EMD may be forfeited: if the Bidder withdraws his bid during the validity period of the bid ; or in case of a successful Bidder, if the Bidder fails to sign the contract or furnish performance security.

9.0 Period of validity of bid

The bids shall remain valid for a period of 180 days after the date of opening of bid. A bid valid for a shorter period, shall be rejected by the Indian Institute of Technology(BHU) as non-responsive and the EMD paid along with it will be forfeited.

10.0 Language of Bid

10.1 The document shall be written in English language. The total amount should be written in the same language.

11.0 Document comprising the E-Tender

11.1 No page of this tenders document shall be removed and the set must be submitted as it is. Each page of the tenders document form is to be signed by the Bidder and must bear the Seal of the Company/Firm.

The tender submitted by the Bidder shall comprise as mentioned above in relevant sections:

12.0 Tender Prices

12.1 The contract shall be for the whole works as described in Sub-Clause 1.1 based on the priced Schedule of Quantities submitted by the Bidder.

12.2 The tender submitted on behalf of Company shall be signed by a person who has the proper legal authority on behalf of the Company to enter into the contract; otherwise, the bid is liable to be rejected. Each page of the tender document and each drawing accompanying is required to be signed by the authorized person submitting the bid, with the company seal as the token of their having examined and acquainted themselves with the General conditions of contract, drawings, specifications, special conditions of contract etc. The forms of tender are to be filled in completely. Any bid with any of the documents not signed is liable to be rejected.

12.3 The notation R.O. written against items of BOQ means 'rate only' and the bidder is to quote only unit rate in such cases.

12.4 The Bidder shall fill in the percentage rate/in rates for items of the Works described in the Schedule of Quantities along with total bidding price. **In case if the rates are not filled for any of the Items of Schedule of Quantities, in such cases the tender shall be summarily rejected.** Failure to comply with either of these conditions will make the bid liable for rejection.

12.5 The work shall be carried out by the Bidder in a manner complying in all respect with the requirement of relevant bye-laws/orders of the Local/Municipal bodies and pay all fees and charges which may be leviable at his own cost. The completion/ occupancy certificates including clearance from fire committee or any other statutory obligation shall be arranged by the bidder. Any official fees shall be paid by the Owner. All other cost of liasoning shall be borne by the bidder.

12.6 All duties, taxes, and other levies payable by the Bidder under the contract, or for any other cause, shall be included in the rates, prices and total Bidding Price submitted by the Bidder. Bidders must include in their rates, the cost of transportation of materials to site, **GST**, Cess as per Building & other construction workers cess act, excise duty, octroi, and any other tax and duty levied by the Central / State Government. None of the above taxes & levies will be entertained by the Owner and no tax exemption forms will be issued by the Owner. Bidder should also take a Group Insurance Policy for his Workmen, Supervisors and Engineers working on site for an adequate insurance cover. BHU shall not be responsible for any accident or happening of any untoward/unforeseen event involving

workmen, labour, supervisor or engineer or any person directly or indirectly associated with the execution of work. The insurance policy to be obtained by the successful Bidder must be comprehensive and shall cover all associated risks (known and unknown).

NOTE: ALL RATES QUOTED BY THE BIDDER ARE INCLUSIVE OF ALL TAXES LIKE GST CESS AS PER BUILDING & OTHER CONSTRUCTION WORKERS CESS ACT.

OR ANY STATUTORY TAX APPLICABLE AS PER STATE GOVERNMENT.

- 12.7 The rates quoted in the tender shall include cost of electrical power supply, water supply, cost of all materials, labour, telephone rent and call charges, water and meter rent charges, electric charges, temporary electric wiring / lighting for execution of work at site, hire for any tools and plants, shed for materials, marking out and clearing of site, transportation complete in all respects. The rates quoted in the tender shall be treated as rated for finally completing the item of work.
- 12.8 The quantities furnished in the schedule of quantities are only probable quantities and are liable to alterations, by omission, deductions or additions to any extent at the discretion of Indian Institute of Technology(BHU). Payments will be regulated on the actual quantities of work done at accepted rates. Any item of work may be omitted from the schedule of quantities and may be awarded to another agency at any time / stage of the work.
- 12.9 Errors in the Schedule of Quantities shall be dealt with in the following manner:
- i In the event of a discrepancy between the rates quoted in words and the rates in figures, rate quoted in words shall be considered to be correct.
 - ii In the event of an error occurring on account of arithmetical calculations the same shall be corrected according to rates written in words and quantities in B.O.Q.
 - iii All the errors in totaling in the amount column and in carrying forward the totals shall be corrected. The tender total shall be accordingly amended.
- 12.10 The calculations made by the bidder should be based upon quantities of the items of work which are furnished in the Schedule of Quantities, but it must be clearly understood that the contract is not a lump sum contract. The Owners do not in any way assure, represent or guarantee that the said probable quantities are correct or that the work would correspond thereto. The items of work irrespective of the quantities which may vary shall be carried out at the same accepted bidding e-tender rates and no escalation in the rates will be entertained whatsoever. Any item of work may be omitted from the schedule of quantities and may be awarded to another agency at any time / stage of the work.
- 12.11 The bidders must obtain for themselves on their own responsibility and their own expenses all the information which may be necessary, including risks, contingencies and other circumstances to enable them in making a proper bid and for entering into a contract, and must examine the drawings, specifications and conditions and inspect the site of the work, nature of the work, availability of power, water, shelter for workmen and all the matters pertaining thereto before submitting the bid. They can also get any clarifications required from the Owner, before tendering, by contacting them at their office during working hours.

13.0 Format and signing of Tender document

- 13.1 The bid shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder. All pages of the tender where entries or amendments have been made shall be initialed by the person or persons signing the tender.
- 13.2 The tender shall contain no alterations or additions, except those to comply with instructions issued by the Owner, or as necessary to correct errors made by the Bidder, in which case such corrections shall be initialed by the person or persons signing the bid. **ANY CONDITIONAL BID WILL BE SUMMARILY REJECTED.**

D: MODE OF SUBMISSION OF BID DOCUMENT

14.0 Sealing and marking of bids.

- 14.1 All the document to be put in cover-1 should be scanned and uploaded under cover-1 on the e-tendering website.
- 14.2 All the envelopes/covers needed to be properly sealed by the bidder and shall indicate the name and address of the bidder.
- 14.3 If the envelopes/covers is not sealed and marked as above, the Owner will assume no responsibility for the misplacement of the bid document.
- 14.4 Financial/price bid is to be uploaded online only & no hard copy to be submitted.

15.0 Deadline for submission of bid:-

- 15.1 Any bid will not be received by the Indian Institute of Technology(BHU) after the deadline of submission of bids.

TENDER OPENING AND EVALUATION

16.0 Tender opening

The Owner along with Architect will open all the tenders received, on the date and the place specified in the NIT. In case of any unavoidable circumstances or unforeseen event on the specified date and time of tender opening, the bids will be opened at the appointed time and location on the next working day.

17.0 Clarification of Tenders

17.1 To assist in the examination, evaluation, and comparison of bids, the Owner/Architect may, at his discretion, ask any Bidder for clarification of his bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by fax, but no change in the price or substance of the tendering shall be sought, offered, or permitted.

18.0 Examination of Bids and Determination of Responsiveness

18.1 Prior to the detailed evaluation of bids, the Owner will determine whether each bid (a) meets the eligibility criteria defined (b) has been properly signed and meets the requirements mentioned (c) is accompanied by the required securities and; (d) is responsive to the requirements of the tendering documents.

18.2 A responsive bid is one which conforms to all the terms, conditions, and specifications of the tendering documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works; (b) which limits in any substantial way, inconsistent with the tender documents, the Indian Institute of Technology(BHU) rights or the Bidders' obligations under the contract; or (c) whose rectification would affect unfairly the competitive position of other Bidders presenting responsive bids.

18.3 If a bid is not responsive, it will be rejected by the Indian Institute of Technology(BHU), and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.

19.0 Correction of Errors

19.1 Bid determined to be substantially responsive will be checked by the Owner for any arithmetic errors. Errors will be corrected by Owner as follows:

Where there is a discrepancy between the rates in figures and in words, the rate in words will govern, and where there is a discrepancy between the unit rate and the item total resulting from multiplying, the unit rate as quoted will govern.

19.2 The amount stated in the tender will be adjusted by the owner in accordance with the above procedure for the correction of errors and shall be considered as Binding upon the Bidder. If the Bidder does not accept the corrected amount the tender will be rejected, and the EMD will be forfeited.

20.0 Evaluation and Comparison of Bids

20.1 The Owner along with Architect will evaluate and compare only the bids determined to be substantially responsive.

20.2 In evaluating the bids, the Owner along with Architect will determine for each bid the evaluated bids Price by adjusting the bid Price as follows:

- (a) Making any correction for errors; or
- (b) Making an appropriate adjustments for any other acceptable variations, deviations; and
- (c) Making appropriate adjustments to reflect discounts offered.

21.0 The Owner reserves the right to accept or reject any variation, deviation, or alternative offer and other factors which are in excess of the requirement of the tender.

F: AWARD OF TENDER

22.0 Award criteria

- 22.1 The acceptance of bid will rest with the Owner, which does not bind itself to accept the lowest bid and reserves to itself the authority to reject completely / partially, any or all of the bid/s received without the assignment of a reason.
- 22.2 The owner with recommendation from the Architect reserves to itself the right of accepting the whole or any part of the Bid and the Bidder shall be bound to perform the same at the rate quoted.
- 22.3 The Owner reserves to itself the right of omission of any item of work from the awarded tender at any time / stage during the execution of work and award the same to another agency / bidder.

23.0 Notification of award

The successful Bidder will be issued a Letter of Intent (LOI) by the Owner after recommendation from the Architect. The issuance of LOI shall not constitute an award of work.

24.0 Performance security

- 24.1 Within seven (7) days of the receipt of notification of award of work the successful Bidder shall furnish the performance security @ 5% of value of work in the form of Performance Bank Guarantee Format provided in the tender document. The Performance security shall be returned/refunded to the bidder on completion of the work and recording of the completion certificate.

25.0 Signing of contract form

- 25.1 On the acceptance of LOI and Performance Bank Guarantee of the successful Bidder that his tender has been accepted in writing, the Indian Institute of Technology(BHU) will send the Bidder the contract form provided in the document duly signed and sent along with the bid incorporating all agreements between the parties.

G: DURING EXECUTION

26.0 During Execution

The Bidder shall carry out all the works strictly in accordance with the drawing, details and instructions of the Owner/Architect. If in the opinion of the Owner, changes have to be made in the design, and they desire the bidder to carry out the same, the Bidder shall be bound to comply. The Owner/Architect's decisions in such cases shall be final.

The Bidder is bound to carry out any items of work necessary for the completion of the job even though such items are not included in the schedule of quantities and rates. Schedule of instructions in respect of such additional items and their quantities with the prior consent from the Owner. Rates for such items of work will be recommended by the Owner with recommendation from the Architect for approval by the Owner on the basis of Analysis of Rates which will be derived from **actual prevailing market rates of similar item along with 15% as bidder's profit & overhead**. The rates approved by the Owner in such cases will be final.

The Owner may at any time / stage of execution demand for the Analysis of Rates for any item / items of work which in their opinion is / are abnormally high / low rates or required for the Analysis of Rates of other bid/ extra item / items. The Bidder is bound to present the same and if the Bidder is unable to present a justified Analysis of Rates for any item / items, the rate / rates for such item may be adjusted accordingly and the decision of the Owner in such cases shall be final.

The Bidder shall get the quality of work done inspected for material and workmanship at different stages of execution as per instructions given by the Owner or their representative time to time. Any item of work done which is found not conforming to the Contract shall be rejected by the Owner. The decision of the Owner in such cases shall be final.

The Owner may instruct at any stage of execution for testing of samples of any material taken at random. The Owner will decide the testing laboratory / agency and the cost of testing including the expenses for sending the samples to the laboratory / agency and receipt of test reports shall be borne by the Bidder. The material shall be rejected in case the test reports are not within the permissible limits.

The Bidder shall have to present the invoice for purchased material from the manufacturer or from the dealer along with the certificate from the manufacturer. In case material is found to be of sub-standard quality, the same shall be rejected by the Owner. The decision of the Owner in such cases shall be final.

The Bidder shall not be entitled to any compensation for the Loss suffered by him on account of delays in commencing or executing the work whatever the cause of delay may be, including delays arising out of modifications to the work entrusted to him or in any subcontracts connected therewith or delays in awarding contracts for other trades of the project or in commencement or completion of such other works or in procuring Government controlled or other building materials for any other reasons whatsoever. The Owner/Architect shall not be liable for any sum besides the e-tender amount, subject to such variations as are provided for herein and as instructed by Owner. However, necessary time extension will be given if the delays are not attributed to the Bidder.

III. ARTICLES OF AGREEMENT

Articles of Agreement shall be as per Indian Institute of Technology(BHU), Varanasi.

FORM 'A'

FINANCIAL INFORMATION

1. Financial analysis – Details to be furnished duly supported by figures in balance sheet/ profit & loss account for the last three years duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax AUTHORITIES

YEARS

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(i) Gross Annual Turnover on construction works

(ii) Profit/Loss

2. Financial arrangements for carrying out the proposed work.
3. The following certificates are enclosed :
 - (a) Audited Balance sheet.
 - (b) Solvency certificate from Bankers of Applicant

Signature with Seal & Date

FORM 'B'

PROFORMA FOR LIST OF SUPPLY & INSTALLATION OF DG SET AND OTHER ALLIED ELECTRICAL WORK EXECUTED BY THE BIDDER DURING THE LAST 5 YEARS AND ABOVE

Sl. No	Name of work/ project with address	Name & postal address of the owner & contact person	Contract Value	Date of Start	Date of Completion	Actual Date of Completion

Note: Bidder may furnish the above information in separate sheet if the space is not sufficient.

GENERAL CONDITIONS OF CONTRACT

A: GENERAL

1.0 Definitions

1.1 In this contract, the following terms shall be interpreted as indicated:

- (a) "The Contract" means the agreement entered into between the Owner and the Bidder, as recorded in the contract form signed by the parties, including all the attachments and appendices thereto and all documents incorporated by reference therein.
- (b) "The Contract Value" means the amount payable to the Bidder under the contract for the full and proper performance of its contractual obligations.
- (c) "Contract Data" means any information provided in the tender document and agreed to by the Bidder.
- (d) "The Work" means all labour, materials, tools and plant, equipment including government taxes and transport, that may be required in preparation of and for and in the full and entire execution and completion of "the Work".
- (e) "Services" means services ancillary to the execution of the work such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training and other obligations of the Bidder covered under the contract.
- (f) "GCC" means the General Conditions of Contract contained in this section.
- (g) "SCC" means the Special Conditions of Contract.
- (h) "The Owner" means the Indian Institute of Technology(BHU), Varanasi.
- (i) "The Owner" means the Owner/Project Management Consultant appointed by the Owner for preparing all the drawings, details and specifications of items required for the execution of the work and supervise and monitor the execution at site along with checking and verifying Bidder's bill.

The Bidder shall offer the Engineer or any representative of Owner every facility and assistance for examining the works and materials. The Engineer or any representative of the Owner shall have power to give notice to the Bidder or to his staff, of non-approval of any work or materials and such work shall be suspended or the use of such materials shall be discontinued until the decision of the Owner. Such examinations shall not in any way exonerate the bidder from the obligations to remedy any defects which may be found to exist at any stage of the work or after the same is completed.
- (j) "The Bidder" means the individual or the firm executing the work.
- (k) "The Project Site" where applicable, means the place or places named in SCC.
- (l) "Day" means calendar day.

2.0 Interpretation and Application

- 2.1 These general conditions shall apply to the extent that provisions in other parts of the contract do not supercede them.
- 2.2 In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Owner will provide instructions clarifying queries about the Conditions of Contract.
- 2.3 If sectional completion is specified in the Contract Data, references in the Conditions of Contract to the Works, the Completion Date, and the Intended completion date are for the whole of the Works.

3.0 Standards

- 3.1 The works executed by the Bidder should be carried out in most professional manner, both as regards material and otherwise, in every respect, in strict accordance with the Technical Specifications. All materials and workmanship shall so far as procurable be of the respective kinds described in the priced schedule of quantities and/ or specifications and in accordance with the Owner' instructions,

and the Bidder shall upon the request of the Owner, furnish them with all invoices, accounts; receipts and other vouchers to prove that the material procured complies therewith. When no applicable standard is mentioned, the work shall be carried out as per the directions of the Owner. The Bidder shall at his own cost arrange for and/or carry out any test of materials which the Owner may require. In case of discrepancies in tender wording as regards the specifications of materials workmanship etc., written instructions will supersede the tender wording unless otherwise mentioned.

- 3.2 The Owner/Owner in their absolute discretion from time to time shall issue further drawings and/ or written instructions, details, directions and explanations which are hereafter collectively referred to as “the Owner’s instructions” in regard to: -
- a. The variation or modification of the design quality or quantity of works or the addition or omission or submission on any work.
 - b. Any discrepancy in the drawings or between the schedule of quantities and / or drawings and /or specifications/ dimensions etc.
 - c. The removal and / or re-execution of any works executed by the Bidder.
 - d. The removal from the site of any materials brought thereon by the Bidder and the substitution of any other materials therefore / or rejection of the material brought on site.

4.0 Use of Contract Documents and Information

- 4.1 The Bidder shall not, without the Owners’ prior written consent, disclose the contract or any provision thereof, or any specifications, plan, drawing, pattern, sample or information furnished by or on behalf of the Owner in connection therewith, to any person other than a person employed by the Bidder in performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far, as may be necessary for purposes of such performance.
- 4.2 The Bidder shall not, without the Owner’s prior written consent make use of any document or information enumerated in Para 4.1 except for the purposes of performing the contract.
- 4.3 All documents included but not limited to contract agreement shall remain the property of the Owner and shall be returned (in all copies) to the Owner on completion of the Bidder’s performance under the contract, if so required by the Owner.

5.0 Owner’s Decisions

- 5.1 Except where otherwise specifically stated, the Owner will decide contractual matters between the Owner and the Bidder, in the role of representing the Owner.

6.0 Performance Security

- 6.1 Within 7 days after the Bidder’s receipt of notification of award of the contract, the Bidder shall furnish performance security in the form of a bank guarantee to the Owner, of the amount specified in the Special Conditions of Contract.
- 6.2 The proceeds of the performance security shall be payable to the Owner as compensation for any loss or dues resulting from the Bidder’s failure to complete its obligations under the contract.
- 6.3 The performance security shall be in one of following forms:
- a) A Bank Guarantee form provided in tender documents issued by a Nationalized/ Scheduled bank to the Owner.
 - b) The performance security shall be discharged by the Owner and returned to the Bidder on completion of the work and recording of the completion certificate.

7.0 Programme and Reporting

- 7.1 The bidder shall furnish to the Indian Institute of Technology(BHU) a bar chart laying down weekly financial and physical targets to complete the project within stipulated time for approval within fifteen days from the date of receipt of notification of award. Weekly progress report shall be furnished to the Member Secretary, Indian Institute of Technology(BHU) showing the progress.

7.2 The bidder must submit every week the following information to the Owner in writing:

- i. Number of men employed, trade wise;
- ii. Progress achieved;
- iii. Expected dates for completion of work;
- iv. Any actual or potential delay in completion schedule.

8.0 Assignment and Sub-contracting

- 8.1 The whole of the works included in the Contract shall be executed by the bidder and the bidder shall not directly or indirectly transfer, assign or underlet the contract or any part, share or interest therein without the written consent of the Owner.
- 8.2 No sub-contracting shall relieve the Bidder from the full and entire responsibility of the Contract or from the active superintendence of the work during their progress.

9.0 Bidder to provide everything necessary for proper execution of work

- 9.1 The Bidder shall provide everything necessary for the proper execution of the works according to the intent and meaning of the drawings, priced schedule of quantities and specifications taken together whether the same may or may not be particularly shown or described therein provided that the same can reasonably be inferred there from. If the Bidder finds any discrepancy therein he shall immediately and in writing refer the same to the Owner whose decision shall be final and binding. Further, if any sample(s) of material(s), fittings, fixtures or finished item(s), to be used in the construction work, has/have been called for from the bidder, no work related to it/these shall be executed unless the same has/ have been approved by the Owner failing which no payment shall be made to the bidder on this account. Any sample, duly approved by the Owner shall become part of the supply to be used in "the works".
- 9.2 The Bidder shall arrange for water & power supply at site at his cost for the entire work. The water to be used for construction shall be free from excessive salts and minerals that are harmful to the construction work. Making arrangement of water good for construction either through external supply or through treatment at site shall be entirely the responsibility of the Bidder. The Bidder shall on demand of the Owner / Owner get any random water samples tested at the approved testing laboratories. No extra payment shall be made for arranging water good for construction under any circumstances. No excuse for / of Municipal water / electric supply shall be entertained. The bidder shall ensure provision of electricity by generator and water by tanker transport if necessary. No claim shall be entertained on this account. In case the same will be provided by the Owner at any stage, then water/electricity charges shall be deducted from the Bidders running bills as per actual metered consumption.
- 9.3 The Bidder shall supply fix and maintain at his cost, during the execution of any works, all the necessary power supply, water supply, centering, scaffolding, watching and lighting by night as well as by day, required not only for the proper execution but also for protection of the public and the safety of any adjacent roads, streets, pavements, walls houses, building and other erections, matters or things. The Bidder shall take down and remove any or all such centering, scaffolding, staging, planking, timbering, strutting, shoring pumping, fencing, hoarding, watching and lighting by night as well as by day, required not only for the proper execution but also for protection of the public and the safety of any adjacent roads, streets, pavements, walls houses, building and other erections matters or things. The bidder shall take down and remove any or all such centering, scaffolding, staging, planking, timbering, strutting, shoring etc. as occasion shall require or when ordered so to do so and shall fully reinstate and make good all matters and things disturbed during the execution of the works, to the satisfaction of the Owner.
- 9.4 Throughout the execution of the work, the Bidder or his representative duly authorized and fully responsible and technically conversant with the work under this agreement, acting on his behalf shall be available at the site for supervising the work. The Bidder shall make adequate arrangements for watchmen to guard the materials brought by them to the site and shall ensure the safety, breakage and any theft of materials fixed or unfixed by him. Any material, T & P brought to the site for bonafide use of the Project shall not be removed/ shifted from the site without the prior written permission of the Engineer/Owner.

- 9.5 The bidder has to provide at his cost leveling pipe, steel/ metallic tapes etc. required by the supervising staff of the Owner's/Owner' representative during execution of the work.
- 9.6 Whenever required by the Owner the Bidder shall provide shop drawings / details before execution of work and get them approved by the Owner.
- 9.7 Wherever the specifications of any item indicates the usage of approved equivalent of any material, the Bidder shall get the sample of the equivalent material approved from the Owner before execution. The approval of the equivalent material is entirely at the discretion of the Owner.

10.0 Infrastructure:

- 10.1 For storage of materials, bidder has to provide at his own cost sufficient fenced and covered appropriate area on site for storage of above materials with lock and key arrangement. For arranging meetings suitable sized table and chairs shall be provided by Bidder. Temporary space shall be provided to the Bidder for construction of stores for storage of materials /site office/ labour hutments for the project period.

11.0 Site Establishment

The bidder shall provide all stores, workmen and materials. All materials likely to deteriorate in the open shall be stored under suitable cover.

The security of the bidder's equipment and materials is his own responsibility. The Owner accepts no liability for loss or damage to the bidder's plant tools or materials.

The materials issued to the bidder by the Owner will remain under the custody of bidder as a trustee. However, title on the same will remain with the Owner. The bidder will be responsible for loss or damage to such materials and shall preserve them in good working conditions as required for the contract and good construction practices till such time that they are incorporated in the works and erected, aligned and fully installed in position and handed over to the Owner. In case the Owner feels that arrangements made by the bidder are not adequate he shall so advise the bidder and the bidder shall promptly take corrective action. In case the bidder fails to take corrective action, Owner shall take such corrective actions and recover the cost thereof from the bidder's bills. Accounts of such material on completion of work shall be rendered and surplus material returned to the Owner as per instructions of Owner.

The bidder shall clear away periodically or as instructed by Owner any rubbish, scrap materials, etc. and dump the same in the authorized dump sites notified by local authority/area indicated by the Owner. All construction materials shall be neatly stacked in an orderly manner as directed by the Owner and care shall be taken to allow proper access to workmen and easy movement of men, vehicles, cranes and materials.

The bidder shall maintain all the drawings carefully mounted on the board of appropriate size and well protected from the ravages of weather, termites and other insects.

The bidder shall not permit the entry to the site of any person not directly connected/concerned with the work without first having obtained the written permission of Owner.

The bidder shall submit a list of plants, equipments, tools, tackles, etc. which he will use, to perform the work. These tools, etc. shall not be removed from the site till the completion of job. A gate pass must be obtained from the Indian Institute of Technology(BHU), chief proctor office, in order to remove from site any plant equipment, tools and materials.

All items such as instructions and other pertinent data regarding erection/commissioning and maintenance should be typed and classified for transmittal in a manner approved by the Owner.

For all employees of Owner, the bidder shall conform for no misconduct from any of his workforce, failure of this will be sufficient cause for removal of such person from the site.

12.0 Messing & Accommodation

- 12.1 The bidder will make his own arrangements for messing and accommodation. No accommodation and messing shall be provided by the Owner.

13.0 Procurement, Consumption and Storage of Materials

- 13.1 The bidder shall at his own expenses, provide all materials including cement & steel required for the works. Adequate stocks of all materials required for the work are to be maintained at site. No material (unless as provided elsewhere in this document) shall be supplied by the Owner.
- 13.2 All materials to be provided by the bidder shall be in conformity with the detailed specifications laid down in the contract and the bidder have to prove that the materials conform to the laid down specifications, if requested by the Indian Institute of Technology(BHU).
- 13.3 All materials required for execution of work must be got approved by the site representative of the Owner before they are actually put to use. All facilities for prior inspection of materials and subsequent inspection of work by the Site Engineer must be made available.
- 13.4 The bidder shall, at his own expenses and without delay, supply to the Owner samples of materials proposed to be used in the work. The Owner shall within seven days of supply of samples, or within such further period as Owner may require and intimate the bidder in writing, whether samples are approved by Owner, or not. If samples are not approved, the bidder shall forthwith arrange to supply, for their approval, fresh samples complying with the specification laid down in the contract.
- 13.5 The Owner shall have full powers to require removal of any or all the materials brought to site by the bidder which are not in accordance with the contract specifications or do not conform in character or quality to the samples approved Owner. In case of default on the part of the bidder in removing rejected materials, the Owner shall be at liberty to have them removed by other means. The Owner shall have full powers to direct other proper materials to be substituted for rejected materials and in the event of the bidder refusing to comply. Owner may cause the same to be supplied by other means. All risks and costs which may attend upon such removal and/or substitution shall be borne by the bidder.
- 13.6 Bidder shall be responsible for procurement of all materials/equipments etc. No delay due to non availability of any material equipment will be entertained by Owner.

14.0 Method of storing the materials

- 14.1 The bidder shall at his own cost, provide for all necessary storage on the site in specified areas for all materials such as steel, cement and such other materials which are likely to deteriorate by the action of sun, wind, rain, dampness or other natural causes due to exposure in the compounds or in stores in such a manner that all materials, tool etc. shall be duly protected from damage by weather or any other cause.
- 14.2 Materials required for the works, by the bidder be stored by the bidder only at places approved by the Owner. Storage and safe custody of materials shall be the responsibility of the bidder.

All the materials including bidder's Tools & Plants brought by the bidder to the site shall become and remain the property of the Owner and shall not be removed off the site without prior written approval of the Owner/Owner. But whenever the works are finally completed and advances, if any, in respect of such materials are fully recovered, the bidder shall at his own expenses forthwith remove from the site all surplus materials supplied by him and upon such removal, the same shall revert in and become the property of the bidder.

15.0 Shuttering and Scaffolding Materials

- 15.1 It shall be desirable to have adequate amount of shuttering and scaffolding materials to complete the work speedily and Owner decision so as to the quantum of these desirable/ resources of the site shall be final and binding.

16.0 Completion of Work

- 16.1 Before finally leaving site, all the Bidders stores, plant, tools and rubbish shall be removed and the site left clean and tidy. The space allocated by Owner shall be vacated and handed over to the Owner.

17.0 Water and Electricity for Construction work

- 17.1 Water & Electricity as per relevant section's mentioned above

18.0 Employment of Labour

- 18.1 The bidder shall comply with the requirement of statutory provisions and shall be solely responsible for fulfillment of all legal obligations under Contract Labour (R. & A) Act, Inter State Migrant

Workmen (Registration of Employment and condition of Service Act, payment of Wages Act, Minimum Wages Act, Workmen's Compensation act, Factories Act, Employee's Provident Fund & Miscellaneous Provisions Act, Payment of Bonus Act, Payment of Gratuity Act, Industrial Disputes Act and all other Industrial/Labour enactments and Rules made there under as applicable from time to time. In case Owner incurs any liability towards payment of any dues, compensation, cost of any other liability of any kind whatsoever, due to non fulfillment of statutory provisions under any industrial/labour laws by the bidder, the same shall be made good by the bidder and Owner shall have full right to recover and claim the same against the bidder from his outstanding bills or otherwise. No Labour to stay at site.

- 18.2 The bidder will be expected to employ on the work only his regular skilled employees with experience of this particular work. The permission of the Owner must be obtained before tradesman are recruited locally for the work. This rule does not apply to unskilled labour. No female labour shall be employed in dark hours/ i.e. hours prohibited under the applicable law. No person below the age of eighteen years shall be employed at any point of time. The bidder shall pay, to each person, the wages as per minimum Wages Act of the State Government.
- 18.3 All traveling expenses including provision of all necessary transport to and from site, lodging allowances and other payments to the bidder's employees are his own responsibility.

The hours of work on the site shall be decided by the Owner and bidder shall adhere to the same.

All bidders employees shall wear safety helmet and such identifications marks as may be provided by bidder on work site and duly approved by Owner.

All notices displayed on the site and any instructions issued by the Owner shall be strictly adhered to by the Bidder's and/or his sub-bidders employees.

The bidder shall be required to maintain employment records as covered in relevant Acts and produce documentary evidence to the effect that he has discharged his obligations under the Employees Provident Fund Act 1952, and ESI Act, 1948 Group Insurance and other Acts for the workmen working at site.

19.0 Working And Safety Regulations

- 19.1 The bidder shall observe all statutory safety and legal requirements regulations issued by Central and State Governments applicable to the work as well as any local regulations applicable to the site issued by the Owner or any other authority.

20.0 Particular attention is drawn to the following:

In case of accident, the Owner shall be informed in writing forthwith and First-Aid, Hospitalisation shall be provided by the Bidder. The bidder shall strictly follow regulations laid down by Govt. and State authorities in this regard and all cases are to be defended by the bidder. The Owner shall not refund any insurance claims.

Bidder shall fence his plant, platforms, excavations etc.

Compliance with all electricity regulations.

Compliance with statutory requirements for inspection and test of all lifting appliances and auxiliary lifting gear.

Staircase, doors or gangways shall not be obstructed in any way that will interfere with means of access of escape.

Where it is necessary to provide and/or store petroleum products or petroleum mixtures and explosive, the bidder shall be responsible for carrying out such provision and/or storage in accordance with the rules and regulation laid down in Petroleum Act 1934. Explosive Act 1948 and Petroleum and Carbide of Calcium Manual Published by the Chief Inspector of Explosive of India. All such storage shall have prior approvals of the Owner. In case any approval or clearance from Chief Inspector of Explosive or any statutory authorities is required, the bidder shall be responsible for obtaining the same.

The bidder shall have his own Fire Fighting Extinguishers and Equipment.

The bidder shall be responsible for the provision of all safety notices safety equipments including the safety gadgets for his workmen required by both the relevant legislation and such as the Owner may deem necessary.

While working at heights, safety belts and safety helmets shall necessarily be used.

21.0 Owner's and Bidder's Risks

The Owner carries the risks, which this Contract states are The Owner risks, and the Bidder carries the risk, which this Contract states are The Bidder's risks.

21.1 Owner's Risks- The Owner is responsible for the excepted risks which are (a) insofar as they directly affect the execution of the Works. These include war, hostilities, invasion, act of foreign enemies, rebellion, revolution, insurrection of military or usurped power, civil war, riot commotion or disorder (unless restricted to the Bidder's Employees), and contamination from any nuclear fuel or nuclear waste or radioactive toxic explosive, or (b) a cause due solely to the design of the Works, other than the Bidder's design.

21.2 Bidder's Risks- All risks of loss or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks are the responsibility of the Bidder.

21.3 The Bidder shall be responsible for all injury to persons, animals or things, and for all damages to the structural and/or decorative part of property which may arise from the operations or neglect of himself or of any sub-bidder or of any of his or sub-bidder's employees whether such injury or damage arises from carelessness accident or any other causes whatsoever in any way connected with the carrying out to the Contract. This clause shall be held to include interalia any damage to buildings, whether immediately adjacent or otherwise and any damage to roads, footpaths, or ways as well as all damage caused to the buildings and the work forming the subject to this Contract by frost, rain or other inclemency of the weather. The Bidder shall indemnify the Owner and hold him harmless in respect of all and any expenses arising from any such injury or damage to persons or property as aforesaid and also in respect of any claim made in respect of injury or damage under any acts of Government or otherwise and also in respect of an award of compensation or damages consequent upon such claim.

The bidder shall make good all damages of every sort mentioned in the Clause, as to deliver up the whole of the Contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property of third parties.

22.0 Insurance

22.1 The Bidder shall provide, in the joint names of the Owner and the Bidder, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the Contracted Data for the following events which are due to the Bidder's risks and shall be covered under respective policies as under :

- (a) Workmen Compensation Policy;
- (b) Bidder's All Risk Policy;
- (c) Third Party Insurance.

22.2 Policies and certificates for insurance shall be delivered by the Bidder to the Owner for the Owner's approval before the Date of Start of work i.e. date of execution of the contract. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

22.3 If the Bidder does not provide any of the policies and certificates required, the Owner may effect the insurance which the Bidder should have provided and recover the premiums the Owner has paid from payments otherwise due to the Bidder or if no payment is due, the payment of the premiums shall be a debt due.

22.4 Alterations to the terms of the insurance shall not be made without the approval of the Owner or Owner.

22.5 Both parties shall comply with the conditions in the insurance policy.

23.0 Setting out Works

23.1 The bidder shall set out the works and responsible for the true and perfect setting out of the same and for the correctness of the positions, levels, dimensions and alignment of all parts thereof, if at any time any error shall appear during the progress of any part of works the bidder shall at his own expenses rectify such error, if called upon to the satisfaction of the Owner.

24.0 Bidder to remove all offensive matter, non-suitable material etc immediately.

24.1 All debris, excavated soil, filth or other matter or an offensive nature taken out of any trench, sewer, drain cesspool or other place shall not be deposited on the surface but shall be at once carted away by the bidder out of the premises/ site under intimation to concerned authorities.

24.2 Any material brought on site if found unsuitable shall be removed from site at once by the Bidder under intimation to the concerned authorities.

25.0 Inspections by Owner

25.1 The representative of the Owner at all times have free access to the works and /or to the workshops, factories or other places where materials are being prepared or constructed for the Contract and also to any place where materials are lying or from which they are being obtained. No person except the representatives of Public authorities shall be allowed on the work at any time without the written permission of the Owner. If any work is to be done at a place other than the site of the works, the Bidder shall obtain written permission of the Owner for doing so.

25.2 The Owner and their representatives shall have the right to test and/ or inspect the works to confirm their conformity to the contract, at all times, whenever in progress either on the site on the Bidder's premises wherever situated or any firm or company where work in connection with this contract may be in hand. All records, registers or documents relating to the works including materials used on works shall be kept open to the inspection of the Owner or his Authorized representative when so called for in writing.

25.3 The Bidder shall get the quality of work done inspected for material and workmanship at different stages of execution as per instructions given by the Owner or their representative time to time. Any item of work done which is found not conforming to the Contract shall be rejected by the Owner. The decision of the Owner in such cases shall be final.

25.4 The inspections and tests may be conducted on the premises of the Bidder or at the Project site. When carried out on the premises of the Bidder or its sub-Bidder(s), all reasonable facilities and assistance including access to drawings and production data shall be furnished to the inspectors at no charge to the Owner.

25.5 Should any inspected items of work fail to conform to the specifications, the Owner shall communicate them and the Bidder shall either replace them or make all alterations necessary to meet specification requirements free of cost to the Owner.

25.6 The Bidder shall permit the Owner/Architect to inspect the Bidder's accounts and records relating to the performance of the Bidder and to have them audited by auditors appointed by the Owner, if so required.

26.0 Covering Up/Uncovering of Works

26.1 No part of the works shall be covered up without the approval of Owner/Architect and the Bidder shall afford full opportunity for examination and inspection by the Owner/Architect. The bidder shall give due notice to the Engineers of Institute about the work to be covered up for its measurements and examination. The Engineer shall within a reasonable time attend for the purpose of examining such work, unless the Engineer specifically advises the Bidder in writing of his unwillingness not to attend for such examination in which case the Bidder may proceed further with the Contract work.

26.2 Should the Owner consider it necessary in order to satisfy himself as to the quality of the work, the Bidder shall at anytime during the continuance of the contract pull down or cut into any part of the work and make such opening into and to such an extent through the same, as the Engineer may direct and the Bidder shall make good the whole to the satisfaction of the Engineer, should the work prove to be faulty or in any respect not in accordance with the terms of the contract documents, the

Engineer shall be at liberty to order such further removal as he may consider necessary and the whole of the expenses incurred shall be borne by the bidder. If however, the work proves to be sound and in accordance with the contract document, the actual expenses incurred in such examination will be borne by the Owner.

- 26.3 Rates charged by the Bidder for works performed under the contract shall not vary from the rates quoted by the Bidder in its Publish , with the exception of any price adjustments authorized in SCC or in the Owner's request for Publish validity extension, as the case may be.
- 26.4 If requested by the Owner, the Bidder shall provide the Owner with a detailed cost breakdown of any rate in the Schedule of Quantities.
- 26.5 The Owner may at any time / stage of execution demand for the Analysis of Rates for any item / items of work which in their opinion is / are abnormally high / low rates or required for the Analysis of Rates of other Publish / extra item / items. The Bidder is bound to present the same and if the Bidder is unable to present a justified Analysis of Rates for any item / items, the rate / rates for such item may be adjusted accordingly and the decision of the Owner in such cases shall be final.

27.0 Change in the order/ Extra items of work

- 27.1 The Owner may at any time, by written order given to the Bidder, make alterations in, omissions from, additions to, or substitutions for, in drawings, designs or specifications or quantities of the items of work
- 27.2 IIT(BHU) reserves to itself the right of omission of any item of work from the awarded Publish at any time / stage during the execution of work and award the same to another agency / bidder.
- 27.3 The Owner may at any time, by written order given to the Bidder, increase the scope of work or include any new item of work. The Bidder shall be bound to carry out such works, the rates for which shall be arrived at on the basis of the CPWD Schedule of Rates or if the Schedule is silent by standard methods of rate analysis as derived by the Owner/ Architect.
- 27.4 If any such changes cause an increase or decrease in the cost of, or the time required for the Bidder's performance of any part of the work under the contract, whether changed or not changed by the order, an equitable adjustment shall be made in the contract value or work schedule, or both, and the contract shall accordingly be amended. Any claims by the Bidder for adjustment under this clause must be asserted within seven (7) days from the date of the Bidder's receipt of the Owner's change order. Escalation shall be payable as per Clause 10 CC of CPWD Works Manual.

28.0 Payment

- 28.1 The method and conditions of payment to be made to the Bidder under the contract shall be specified in SCC.
- 28.2 Payment shall be made promptly by the Owner within fifteen (15) days of certification of the bill by the Owner A retention amount of 10% of Gross value of each running bill shall be deducted from each running payment as Security Deposit subject to maximum of 5% of the total contract value.
- 28.3 All intermediate running payments to the bidder shall be regarded as payments by way of advance against the final payment and shall not preclude the requiring of bad, unsound and imperfect or unskillful work to the removed, taken away and reconstructed or re-erected.

29.0 Variations and Provisional Cost:

- 29.1 Where work cannot be measured and valued properly, the Bidder shall be allowed day work rates on the prices prevailing when such work is carried out (unless otherwise provided in the contract):
 - a. At the rates if any inserted by the Bidder in the priced Schedule of Quantities or
 - b. If no such rates have been inserted then at the rates prevailing in the market for material and labour and at the control rates for the controlled materials including in all cases the rate for delivery of the material at the work.
- 29.2 Provided that in any case voucher specifying the time daily spent upon the work (and if required by the Owner the workman's names) and the materials used shall be delivered for verification to the Owner, or his authorised representative not later than the end of the week following that in which the work has been executed. Effect shall be given to the measurement and valuation of variations in interim Certificates and by adjustment of the total Contract Value.

30.0 Material Advances on Unfixed Material

75 percent of the assessed rate of materials at 90% of the assessed quantity of material brought to site for incorporation except for perishable materials like glass and chinaware. This advance shall be adjusted in the subsequent running bill.

31.0 Claims for Extra or for Deductions

- 31.1 The Owner shall not be responsible for the payment of any claim for extra work not included in the contract nor the Bidder shall be entitled to claim any addition to the contract sum in respect of any changes or alterations in the materials used unless the same shall have been ordered or sanctioned, as the case may be, in writing by the Owner.
- 31.2 The Bidder has to submit a monthly return by 10th of the ensuing month for any extra work which in his opinion is not covered by the contract agreement through the Owner's/ Owner's representatives and obtain a receipt from the authorized signatory of the Owner. Failing this, he shall have no right to any such claim, whatsoever may be the circumstances, later on.
- 31.3 In the event of any dispute arising either as to validity of the claim or as to the account to be paid or allowed in respect thereof, the decision of the Owner shall be final and binding on the bidder. In the meantime, the Bidder may either proceed with the work in question or suspend the same as may be determined by the Owner.
- 31.4 All extra works (those permitted by Owner) of every description shall be executed by bidder on site of work in pursuance of any of the provision of the contract, shall be measured up, and shall be paid according to actual quantities ascertained by such measurements and the prices as finalized by the Owner based on the priced schedule of quantities so that such priced schedule of quantities shall include all such operations and accessories as appear in the said schedule of prices or specification to be or shall in the opinion of the Owner the contingencies upon the works mentioned in such schedule of prices or required to make such works perfect and fit for use.
- 31.5 Provided also that if any work shall be ordered by the Owner and executed by the Bidder for the payment of which no provision in the opinion of the Owner have been made in the priced schedule of quantities or the specifications, the Owner shall fix and determine such prices for the same based on the prices appearing in the priced schedule of quantities, such allowance being made as may seem to the Owner sufficient for any difference in the character of conditions of the work. However rates for extra items shall be fixed on the basis of actual rate analysis.
- 31.6 The Owner may at any time / stage of execution demand for the analysis of rates for any item / items of work which in their opinion is / are with abnormally high / low rates or required for the analysis of rates of other Publish / extra item / items. The Bidder is bound to present the same and if the Bidder is unable to present a justified analysis of rates for any item / items, the rate / rates for such item may be adjusted accordingly and the decision of the Owner in such cases shall be final and binding.

Removal of Imperfect Work.

- 31.7 If, it shall appear that the work has been executed with unsound, imperfect or unskilled workmanship, or with material of any imperfect or any inferior quantity or otherwise not in accordance with the contract documents the Bidder shall at his own cost rectify, reform, remove, or reconstruct the same, wither in the whole or in part, as may be directed by the Institute Engineer, whether or not the value of any such work or materials shall have been included in any payment made to the Bidder.
- 31.8 The Bidder shall remove all malba etc., wash and clean the floors and hand over the site quite clean on the completion of the work.

32.0 Delay in the Bidder's performance

- 33.1 Execution of the work and performance of the services shall be done by the Bidder in accordance with the time schedule specified by the Owner in the Notice for Invitation of Publish s.
- 33.2 If, at any time during performance of the contract, the Bidder should encounter conditions impending timely execution of the works and performance of services, the Bidder shall promptly notify the Owner in writing of the fact of the delay, its likely duration and its cause(s). As soon as possible, after receipt of the Bidder's notice, the Owner shall evaluate the situation and may, entirely at its discretion, extend the Bidder's time for performance with or without liquidated damages.

34.0 Liquidated Damages.

If the Bidder fails to execute any or all of the works or to perform the services within the period(s) specified in the contract, the Owner shall deduct from the contract value, as liquidated damages, a sum specified in the SCC for each week or part thereof delay until actual completion or performance, up to a maximum deduction of the percentage specified in SCC. Once the maximum is reached, the Owner may consider termination of the contract. The prorata progress envisaged and expected from the bidder shall maintained, time being the essence of the contract.

35.0 Termination by Default

35.1 The Owner may without prejudice to any other right or remedy, by written notice (of fifteen days) of default sent to the Bidder, terminate the contract in whole or part:

a) if the Bidder fails to complete any or all of the works within the period(s) specified in the NIT or any amendment thereof, or within any extension thereof granted by the Owner,

or

b) if the Bidder fails to perform any other obligation(s) under the contract,

35.2 In the event, the Owner terminates the contract in whole or in part, the Owner may procure, upon such terms and in such manner as it deems appropriate, works or services similar to those unexecuted and the Bidder shall be liable to the Owner for any excess costs for such similar work or services. However, the Bidder shall continue the performance of the contract to the extent not terminated.

36.0 Force Majeure

36.1 The Bidder shall not be liable for forfeiture of its performance security, liquidated damages or termination by default, if and to the extent that, its delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure.

36.2 For purposes of this clause, "Force Majeure" means an unforeseeable event beyond the control of the Bidder and is not because of the Bidder's fault or negligence. Such events may include acts of the Owner either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics.

36.3 If a Force Majeure situation arises, the Bidder shall promptly notify the Owner in writing of such conditions and the cause thereof. Unless otherwise directed by the Owner in writing, the Bidder shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

37.0 Termination for Insolvency

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

38.0 Termination for Convenience

The Owner, by written 30 days prior notice sent to the Bidder, may terminate the contract, in whole or in part, at any time for its convenience. The notice shall specify that the termination is for Owner's convenience, the extent to which performance of the Bidder under the contract is terminated, and the date upon which such termination becomes effective.

The items of work that are complete and ready within (1) month after the Bidder's receipt of notice of termination shall be accepted by the Owner at the contract terms and values. For the remaining works, the Owner may elect;

a) to have any portion completed at the contract terms and value and/or

b) to cancel the remainder and pay to the Bidder an amount, finalized by the Owner, for partially completed works and for materials and parts previously procured by the Bidder.

39.0 Resolution of Disputes

39.1 The Owner and the Bidder shall make every effort to resolve amicably by direct informal negotiations any disagreement or dispute arising between them under or in connection with the contract.

If, after thirty (30) days from the commencement of such informal negotiations, the Owner and the Bidder have been unable to resolve amicably a contract dispute, either party may require that the dispute be referred for resolutions to the formal mechanisms specified in the SCC. These mechanisms may include but are not limited to, Arbitration in accordance with rules of Arbitration Act and award made in pursuance thereof shall be binding on both the parties.

39.2 All disputes should be under the Jurisdiction of civil court Varanasi.

40.0 Governing language

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

41.0 Governing law

41.1 The contract shall be governed by the laws of The Union of India for the time being in force. All disputes arising out of or in any way connected with this agreement shall be deemed to have arisen in New Delhi and only the courts in New Delhi alone shall have exclusive jurisdiction to determine the same.

42.0 Notices

42.1 Any notice given by one party to the other pursuant to this contract shall be sent to other party in writing or by cable, telex, or facsimile and confirmed in writing to the other party's address specified in SCC.

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

43.0 Discoveries

43.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site is the property of the Owner. The Bidder is to notify the Owner of such discoveries and carry out the Owner' instructions for dealing with them.

44.0 Dismissal of workmen:

44.1 The bidder on request from the Owner, immediately dismiss from the works any person employed by him who may be found in the opinion of the client to be unsuitable or incompetent or who has shown misconduct.

45.0 Working Hours:

45.1 Normal working hours shall be from 9.00 a.m. to 6.00 p.m. No construction work of important structural nature shall be carried out on Sundays, Holidays and during nights. However permission to work beyond normal working hours can be granted by the Owner/ Owner in exceptional circumstances to achieve the target schedule of completion.

B. TIME CONTROL

46.0 Programme

46.1 Within the time stated in the Contract Data the Bidder shall submit to the Owner for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the works, along with weekly cash flow forecast.

An update of the Program shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work including any changes to the sequence of the activities.

The Bidder shall submit to the Owner, for approval, an updated Program at intervals no longer than the period as stated in the clause no. 7.1. If the Bidder does not submit an updated Program within this period, the Owner may withhold the amount stated in the Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue program has been submitted.

The Owner's/Owner's approval of the Program shall not alter the Bidder's obligations. The Bidder may revise the Program and submit it to the Owner again at any time. A revised Program is to show the effect of Variations.

At any stage of work, Owner award any item/part of item of work to bidder's workman/ external agency, if in their opinion, the progress of work is suffering because of that. The work done will be added to the Bidder's bill and the amount paid for the job will be deducted from the Bidder's account.

47.0 Delay and Extension of time

If in the opinion of the Owner the work be delayed (a) by force majeure or (b) by reason of any exceptionally inclement weather or (c) by reason of proceedings taken or threatened by or disputes with adjoining or neighboring owners or public authorities or (d) by delays of other bidder or Tradesmen engaged by the Owner or the Owner and the works not referred to in the Schedule of Quantities and/or specification or (e) by reasons of Owner's instruction as per Clause No. 2 or (f) by reason of civil commotion, local combination of workmen or strike or lockout affecting any of the building trades or (g) in consequence of the bidder not having received in due time necessary instructions from the Owner for which he shall have specially applied in writing or (h) from other cause which the Owner may certify as beyond the control of the bidder or (i) by reason of non-payment of interim certificate at specified time, the Owner shall recommend for approval by the Owner a fair and reasonable extension of time for completion of the Contract works. In case of strike or lockout the bidder shall as soon as may be given written notice thereof to the Owner, but the bidder shall nevertheless constantly use his endeavours to prevent delay and shall do all that may reasonably be required to the satisfaction of Owner to proceed with the work.

C. QUALITY CONTROL

48.0 Identifying Defects

48.1 The Owner/Architect shall check the Bidder's work and notify the Bidder of any Defects that are found. Such checking shall not affect the Bidder's responsibilities. The Owner may instruct the Bidder to search for a Defect and to uncover and test any work that the Owner/Architect consider may have a Defect.

49.0 Correction of Defects

49.1 The Owner shall give notice to the Bidder of any Defects before the end of Defects Liability Period, which begins at Completion and is defined in the Contract Data. The Defects Liability period shall be extended for as long as Defects remain to be corrected.

49.2 Every time notice of Defect is given, the Bidder shall correct the notified Defect within the length of time specified by the Owner' notice.

50.0 Uncorrected Defects

50.1 If the Bidder has not corrected a Defect within the time specified in the Owner' notice, the Owner will assess the cost of having the Defect corrected, and the Bidder will pay this amount.

D. COST CONTROL

51.0 Schedule of Quantities

51.1 The Schedule of Quantities shall contain items for the construction work, installation, testing, and commissioning work to be done by the Bidder.

51.2 The Schedule of Quantities is used to calculate the Contract Price. The Bidder is paid for the quantity of the work done at the rate in the priced Schedule of Quantities for each item.

52.0 Variations

52.1 All variations in the programme pursuant to clause no. 7.0 of GCC shall be included in the updated programmes produced by the Bidder.

53.0 Payments for Variations

53.1 The Bidder shall provide the Owner with a quotation (with breakdown of unit rates) for carrying out the Variation when requested to do so by the Owner. The Owner with recommendations from Architect shall assess and finalise the quotation, which shall be given within seven days of the request or within any longer period stated by the Owner and before the Variation is ordered.

- 53.2 If the Bidder's quotation is unreasonable, the Owner/Architect may order the Variation and make a change to the Contract Price which shall be based on Owner's own forecast of the effects of the Variation on the Bidder's costs.
- 53.3 If the Owner decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and shall be treated as a Variation.
- 53.4 The Bidder shall not be entitled to additional payment for costs, which could have been avoided by giving early warning.
- 53.5 Escalation shall be payable as per Clause 10 CC of CPWD Works Manual.

E: FINISHING THE CONTRACT

54.0 Completion Certificate

- 54.1 The Bidder shall request the Owner to issue a Certificate of Completion of the Works and the Architect will do so upon deciding that the Work is completed.

55.0 Taking Over

- 55.1 The Owner shall take over the Site and the Works within seven days of the Owner issuing a certificate of Completion. Before handing over the site, the bidder must obtain a site clearance certificate from the Owner/Architect.

56.0 Final Account

- 56.1 The Bidder shall supply to the Owner a detailed account of the total amount that the Bidder considers payable under the Contract before the end of the Defects Liability Period. The Architect shall issue a Defect Liability Certificate and certify any final payment that is due to the Bidder within 5-6 days of receiving the Bidder's account if it is correct and complete. If it is not, the Owner shall issue within 5-6 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Owner shall decide on the amount payable to the Bidder and issue a payment certificate within 5-6 days of receiving the Bidder's revised account.

SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract are supplementary, to the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract. The corresponding clause number of the General Conditions of Contract is indicated in parentheses.

1.0 Definition (GCC clause 1.0)

- (A) Owner means
**The Chairman
INSTITUTE WORKS COMMITTEE
Indian Institute of Technology(BHU)
Varanasi**
- (B) Site means the project site situated at BHU, Main campus

2.0 (i) Total Security Deposit

The (Earnest Money Deposit) EMD of the successful Bidder shall form a part of the Total Security Deposit.

A retention amount of @ 10% of the gross amount of the bill shall be deducted from each running bill of the bidder till the sum along with sum already deposited as earnest money, will amount to Security Deposit of 5% of the tender value of the work.

Release of Security Deposit: Security Deposit will be refunded by the Owner after completion of Defect Liability Period i.e. 12 months from date of virtual completion.

(ii) Performance Security

Within seven days (7) after the Bidder's receipt of Notification of Award, the Bidder shall furnish Performance Security to the Owner for an amount of 5% of the accepted bid Value in the form of Cash or Bank Guarantee from Nationalised/Scheduled Bank to the Owner. The Performance security shall be refunded/returned to the bidder on completion of work and recording of the completion certificate.

3.0 Payments

Following terms of payment shall be applicable –

3.1 Mobilization Advance

Mobilization advance shall be payable to the bidder equivalent to 10% of contract value. The mobilization advance shall be against a Bank Guarantee for the equivalent amount from any Nationalized / Scheduled Bank in the prescribed proforma.

Recovery of this advance shall be made @ 15% from each bill so that full mobilization advance is recovered by the time 67% of work is done. Mobilization Advance shall be paid only on signing of agreement and establishment of site office by bidder. The guarantee shall remain valid till the entire advance is recovered or repaid by the Bidder.

3.2 Payment against Running Bills

The Bidder shall be paid for the work done against running bills to be raised not more than fortnightly.

75% of the Bill amount will be paid as on account payment within 15 working days from the date of Interim certificate issued by the Owner with recommendation from Architect and balance will be paid within 15 days from the date of final certificate issued by the Owner with recommendation from Architect. The Final bill will be certified within 60 days from the date of submission. The following payment will be recovered from the bills:

Value of chargeable materials issued by the Owner/Architect.

Mobilization advance as indicated above.

Retention money @ 10% of gross value of the bill

Statutory deductions like income Tax, Cess under Building and Other Construction Workers Welfare Cess Act, 1996 etc. as applicable.

Any other recovery if becomes due.

Payment shall not be released against 1st R/A bill until submission of following documents by bidder to the Owner.

- Financial Guarantee for Performance
- Labour License (as per statutory requirements)
- EPF Code Registration number with RPFC.

- Insurance – Bidder’s All Risk (CAR) Policy
- Workmen compensation policy
- Third Party Liability Insurance.
- GST registration number.

Registration under Building and Other Construction Workers Welfare Cess Act, 1996.

Undertaking for compliance of all labour laws

3.3 Basis of Payment in RA bills

Payment in RA bills shall be based on quantity of work executed at site (as per the item of work) & verified by Owner and certified by the Architect as per the item rate in work orders. Owner is authorized to allow part rate/reduced rate for any item of work. The Owner shall specify the reason for the part rate payment in the RA bill.

3.4 Disallowance of payment

If payment has been made in RA bill for any item of work but later on some defect is noticed, Owner/Architect is authorized to disallow the payment in the subsequent bills till rectification of the work.

3.5 Final bill

The final bill complete in all respect shall be submitted by the bidder within 60 days from the date of submission of bill. The bill should be accompanied with the following documents.

Job completion certificate.

No claim certificate on Owner/s prescribed proforma

Site clearance certificate.

Performance guarantee duly amended to cover certified maintenance period.

Indemnity certificate towards labour payment and all statutory payments.

The final bill should be accompanied with the following documents:

Certificate of test on materials etc.

Statement of accounts showing the advances taxes, deductions, security deposit at a latest position duly attested by Owner.

Certificate of measurement sheets.

Copy of the insurance policy. (Workmen compensation act and bidders all risk policy).

Original quality control record, measurement records and any other joint site records maintain at site.

No claim shall be entertained after receipt of final bill.

Settlement of final bill shall be made subject to deduction of all dues payable by bidder, settlement of all disputes and furnishing of all required documents/clarifications and grant of extension of time, if any, by Owner’s competent authority.

3.6 Secured Advance

Payment of secured advance against materials brought at site shall be considered to the extent of 75% of the assessed rate of materials at 90% of the assessed quantity of material brought to site for incorporation except for perishable materials like glass and chinaware etc. This advance shall be adjusted in subsequent running bill. The bidder shall be required to submit the bill for secured advance payment along with photocopies of vouchers of cost of materials and proof of bringing the materials at site (if applicable). Bidder shall also be required to submit indemnity bond on Non-judicial stamp paper of appropriate value. Recovery of the secured advance shall be effected from running account bill, on consumption basis of that material in works.

3.7 Escalation

Escalation shall be payable as per Clause 10 CC of CPWD Works Manual.

4.0 Liquidated Damages

0.5% per week upto a maximum of 5% (Five percent) of the Contract value from the stipulated date of completion.

5.0 Resolution of Disputes

In case the parties cannot agree to the advice of IIT(BHU), then the Director, INDIAN INSTITUTE OF TECHNOLOGY(BHU) shall appoint a sole arbitrator within 30 days of receipt of request forthwith. The arbitration shall be governed by Arbitration and Reconciliation Act 1956.

6.0 Notices

For the purpose of all notices, the following shall be the address of the Owner and the Bidder.

Owner: **The Chairman
INSTITUTE WORKS COMMITTEE
Indian Institute of Technology(BHU)
Varanasi**

Bidder: _____

(To be filled in at the time of Signing of the Contract)

7.0 Resolution of Disputes & Arbitration

Except where otherwise provided in the contract all questions and disputes relating to the meaning of the specifications, design, drawings and instructions here in before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, terminations, completion or abandonment thereof shall be dealt with as mentioned hereinafter.

If the bidder considers any work demanded of him to be outside the requirements of the contract or disputes any drawings, record or decision given in writing in connection with or arising out of the contract or carrying out of the work, he shall promptly within 15 days request the Owner in writing for written instruction or decision.

If the Bidder is dissatisfied with this decision, the Bidder shall within a period of 30 days from receipt of the decision, give written notice to the Indian Institute of Technology(BHU) for appointment of Arbitrator failing which the said decision shall be final binding and conclusive and not referable to adjudication by the Arbitrator.

Except where the decision has become final, binding and conclusive in terms of Sub Para (i) above disputes or difference shall be referred for adjudication through arbitration by a sole arbitrator appointed by The Director, Indian Institute of Technology(BHU). If the arbitrator so appointed is unable or unwilling to act or resign his appointment or vacates his office due to any reason whatsoever another sole arbitrator shall be appointed in the manner aforesaid. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor.

It is a terms of this contract that the party invoking arbitration shall give a list of disputes with amounts claimed in respect of each dispute along with the notice for appointment of arbitrator.

It is also a term of this contract that no person other than a person appointed by such Indian Institute of Technology(BHU) as aforesaid should act as arbitrator and if for any reason that is not possible, the matter shall not be referred to arbitration at all.

It is also a term of this contract that if the contractor does not make any demand for appointment of arbitrator in respect of any claims in writing as aforesaid within 30 days of receiving the intimation from the Owner that the final bill is ready for payment, the claim of the bidder shall be deemed to have been waived and absolutely barred and IIT(BHU) shall be discharged and released of all liabilities under the contract in respect of these claims.

The arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 (26 of 1996) or any statutory modifications or reenactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause.

8.0 Protection of environment

- 8.1 The Bidder shall take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.
- 8.2 During continuance of the contract, the Bidder and his sub-bidders shall at all times abide by all existing enactment on environmental protection and rules made there under, regulations, notifications and bye-law of the State or Central Government, or local authorities and any other law,

by-law, regulations that may be passed or notification that may be issued in this respect in future by the State or Central Government or the local authority.

8.3 Salient features of some of the major laws that are applicable are given below:

The Water (Prevention and Control of Pollution) Act, 1974 This provides for the prevention and control of water pollution and the maintaining and restoring of wholesomeness of water. 'Pollution' means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms.

The Air (Prevention and Control of Pollution) Act, 1981, This provides for prevention, control and abatement of air pollution, 'Air Pollution' means the presence in the atmosphere of any air pollutant', which means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment.

The Environment (Prevention and Control of Pollution) Act, 1986 This provides for the protection and improvement of environment and for matters connected to herewith, and the prevention of hazards to human beings. Other living creatures, plants and property, 'Environment' includes water, air and land and the interrelationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property.

The Public Liability Insurance ACT 1991. This provides for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling hazardous substance means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act 1986, and exceeding such quantity as may be specified by notification by the Central Government.

INDIAN INSTITUTE OF TECHNOLOGY(BHU)
INSTITUTE WORKS DEPARTMENT
(IWD) FORM-1

TENDER FOR WORKS

Tender for the work of: **Supply & Installation of 125 KVA Silent DG Set for backup Supply in the Computer Unit of the IIT(BHU), Varanasi**

(Time) (Date)

- (i) To be submitted by **3:00 P.M. on 27.07.2018** to the Member Secretary, INSTITUTE WORKS COMMITTEE, IIT(BHU), Varanasi.
- (ii) To be opened in presence of bidders who may be present at **3:30 P.M hours on 28.07.2018** in the office of the Member Secretary, INSTITUTE WORKS COMMITTEE, IIT(BHU), Varanasi

BID

I/We have read and examined the notice inviting Tender , schedule, A, B, C, D, E & F Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the Tender document for the work. I/We hereby submit bid for the execution of the work specified for the Institute within the time specified in Schedule 'F' viz., schedule of quantities and in accordance in all respect with the specifications, designs, drawing 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 respect of accordance with, such conditions so far as applicable.

We agree to keep the Bid open for Thirty/Forty five/Sixty/ninety/one eighty (30/45/60/90/180) days from the due date of its opening and not to make any modification in its terms and conditions.

A sum of **Rs. 25,000.00** is hereby forwarded in fixed deposit receipt of scheduled bank/demand draft of a scheduled bank as earnest money. If I/We, fail to furnish the prescribed performance guarantee within prescribed period. I/We agree that the Institute has to right to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that the Institute has to right to forfeit the said 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 those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the Tender form. Further, I/We agree that in case of forfeiture of Earnest Money or Performance Guarantee as aforesaid, I/We shall be debarred for participation in the re-Tendering process of the work.

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

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

Dated:

Signature of Bidder

Witness:

Postal Address

Occupation:

ACCEPTANCE

The above Tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for an on behalf of the Indian Institute of Technology(BHU) for a sum(Rupees..... of)

The letters referred to below shall form part of this contract agreement: (a)
(b)
(c)

For & on behalf of Indian Institute of Technology(BHU).....

Dated: Designation

SALIENT / MANDATORY REQUIREMENTS FOR THE TENDER

NAME OF WORK: *Supply & Installation of 125 KVA Silent DG Set for backup Supply in the Computer Unit of the IIT(BHU), Varanasi*

The bidder is advised to read and examine the Tender documents for the work and the set of drawings available with Engineer-in-charge and on www.itbhu.ac.in . He should inspect and examine the site and its surroundings by himself before submitting his Publish .

- 1 Schedule of quantity is included in this Tender is for components of work. If the bidder wants to offer any unconditional rebates on their rates that should be clearly mentioned.
- 2 Time allowed for the execution of work is 2 months (60 days).
- 3 The bidder(s) shall submit a detailed program of execution in accordance with the master programme/milestone within 7 days from the date of issue of award letter.
- ~~4 Bidder has to arrange and install~~ during the currency of work and nothing extra will be paid on this account.
- 5 Quality of the project is of utmost importance. This shall be adhered to in accordance with the provisions of Tender specifications and guidelines given in the relevant para's.
- 6 Cement if available may be issued by the IIT(BHU), otherwise have to be arranged by the bidder, Steel Reinforcements shall be arranged by the bidder himself.
- 7 Bidder has to deploy required Plant and machinery in sufficient number on the project.
- 8 The bidder shall submit the running bills in the shape of the computerized MB in pages of A-4 size as per the standard format of COMMITTEE .
- 9 The bidder shall comply with the provisions of the Apprentices Act 1961, and the rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the Member Secretary/Executive Engineer may in his discretion, without prejudice to any other right or remedy available in law, cancel the contract. The bidder shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.

ADDITIONAL TERMS AND CONDITIONS

- 1 Unless otherwise provided in the Schedule of Quantities/Specifications, the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the work and nothing extra shall be payable to him on account of the same. Extra payment for centering/shuttering, if required to be done for heights greater than 3.5 m shall however be admissible at the rates arrived at in accordance with clause 12 of the agreement, if not already specified.
- 2 Other agencies doing works related with this project may also simultaneously execute their works and the contractor shall afford necessary facilities for the same. The contractor shall leave such necessary holes, openings etc. for laying/burying in the work, pipes cables, conduits, clamps, boxes and hooks for fan clamps etc. as may be required for the other agencies. Nothing extra over the Agreement rates shall be paid for doing these.
- 3 Some restrictions may be imposed by the security staff etc. on the working and for movement of labour, materials etc. The contractor shall be bound to follow all such restrictions/instructions and nothing extra shall be payable on account of the same.
- 4 The contractor shall fully comply with all legal orders and directions of the Public or local authorities or municipality and abide by their rules and regulations and pay all fees and charges for which he may be liable in this regard. Nothing extra shall be paid/reimbursed for the same.
- 5 The building work shall be carried out in the manner complying in all respects with the requirements of the relevant bylaws and regulations of the local body under the jurisdiction of which the work is to be executed or as directed by the Engineer-in-charge and nothing extra shall be paid on this account.
- 6 If as per local Municipal regulations, huts for labour are not to be erected at the site of work; the contractor shall be required to provide such accommodation at a place as is acceptable to the local body and nothing extra shall be paid on this account.
- 7 It shall be ensured by the contractor that no electric live wire is left exposed or unattended to avoid any accidents in this regard.
- 8 In case the supply of DG sets and allied materials etc. is made by some other agency, the contractor shall make necessary arrangements for their safe custody on the direction of the Engineer-in-charge till the same are fixed in position by him & nothing extra shall be paid on this account.
- 9 The contractor shall maintain in perfect condition, all portions executed till completion of the entire work allotted to him. Where however phased delivery of work is contemplated these provisions shall apply separately to each phase.
- 10 The entire royalty at the prevalent rates shall have to be paid by the contractor on all the boulders, metals, shingle sand etc. collected by him for execution of the work, directly to the Revenue authority or authorized agents of the State Government concerned or the Central Government, as the case may be.
- 11 The contractor shall bear all incidental charges for cartage, storage and safe custody of materials issued by the departments and shall construct suitable go downs, yards at the site of work for storing all materials as to be safe against damage by sun, rain, dampness, fire, theft etc. at his own cost and also employ necessary watch and ward establishment for the purpose, at his own cost. Materials to be charged directly to work and stipulated for issue free of cost shall also be issued to the contractor as soon as those are received at site or at the stipulated place of issue. The provision of this para shall apply equally and fully to those as well.
12. **LT Power Cable will be provided by the Institute Works Department store.**
13. **Platform foundation and other civil work for installation of DG Set is in scope of IWD,IIT(BHU)**
14. **Warrantee/Guarantee should be specified separately for each part of the DG set i.e**
 - a- **Engine part**
 - b- **Alternator part**
 - c- **AMF Panel**

PERFORMANCE GUARANTEE BOND

In consideration of the Indian Institute of Technology(BHU) having agreed under the terms and conditions of agreement No..... dated..... made between and

.....(hereinafter called "the contractor(s)")..... for the work.....(hereinafter called "the said agreement") having agreed to production of a 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 IIT(BHU)

(Indicate the name of the bank)

Institute an amount not exceeding Rs..... (.....only) on demand by the Indian Institute of Technology(BHU).

2. Wedo hereby undertake to pay the amounts due..... and payable

(Indicate the name of the Bank) under this Guarantee without any demur, merely on a demand from the Indian Institute of Technology(BHU) stating that the amount claimed is 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 (Rupees.....only).

3. We, the said bank further undertake to pay to the Institute 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 there under and the contractor(s) shall have no claim against us for making such payment.

4. Wefurther agree that the guarantee herein contained shall (Indicate the name of the Bank) remain in full force and effect during the period that would be taken for performance of the said agreement, and it shall continue to be enforceable till all the dues of the Indian Institute of Technology(BHU) under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer-in-charge on behalf of the Institute 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 bank) further agree with the Indian Institute of Technology(BHU) that Indian Institute of Technology(BHU) shall have the fullest liberty without our consent and without effecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Indian Institute of Technology(BHU) against the said contractor(s) and to forebear 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 Institute or any indulgence by the Indian Institute of Technology(BHU) 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 Indian Institute of Technology(BHU) in writing.
8. This guarantee shall be valid up to..... unless extended on demand by Indian Institute of Technology(BHU). Notwithstanding anything mentioned above, our liability against this guarantee is restricted to(Rupees.....only)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)

TECHNICAL SPECIFICATIONS

QUALITY ASSURANCE OF THE WORK

1. The contractor shall ensure quality control measures on different aspects of construction including materials, workmanship and correct construction methodologies to be adopted. He shall have to submit quality assurance programme within two weeks of the award of work. The quality assurance programme should include method statement for various items of work to be executed along with check lists to enforce quality control.
2. The contractor shall get the source of all other materials, not specified else where in the document, approved from the Engineer-in-Charge. The contractor shall stick to the approved source unless it is absolutely unavoidable. Any change shall be done with the prior approval of the Engineer-in-Charge for which tests etc. shall be done by the contractor at his own cost. Similarly, the contractor shall submit brand/ make of various materials not specified in the agreement, to be used for the approval of the Engineer-in-Charge along with samples and once approved, he shall stick to it.
3. **Other Laboratories :**
 - 3.1 The contractor shall arrange carrying out of all tests required under the agreement through the laboratory as approved by the Engineer-in-Charge and shall bear all charges in connection therewith including fee for testing. The said cost of tests shall be borne by the contractor/department in the manner indicated below.
 - (i) By the contractor, if the results show that the test does not conform to relevant CPWD Specifications / BIS code or specification mentioned elsewhere in the documents.
 - (ii) By the department, if the results conforms to relevant CPWD Specifications / BIS code or specification mentioned elsewhere in the documents.
 - 3.2 If the tests, which were to be conducted in the site laboratory are conducted in other laboratories for what ever the reasons, the cost of such tests shall be borne by the contractor.
4. **Sampling of Materials:**
 - 4.1 Sample of building materials fittings and other articles required for execution of work shall be got approved from the Engineer-in-Charge. Articles manufactured by companies of repute and approved by the Engineer-in-Charge shall only be used. Articles bearing BIS certification mark shall be used in case the above are not available, the quality of samples brought by the contractor shall be judged by standards laid down in the relevant BIS specifications. All materials and articles brought by the contractor to the site for use shall conform to the samples approved by the Engineer-in-Charge which shall be preserved till the completion of the work.
 - 4.2 The contractor shall ensure quality construction in a planned and time bound manner. Any sub-standard material/work beyond set out tolerance limit shall be summarily rejected by the Engineer-in-Charge.
 - 4.3 BIS marked materials except otherwise specified shall be subjected to quality test at the discretion of the Engineer-in-Charge besides testing of other materials as per the specifications described for the item/materials. Wherever BIS marked materials are brought to the site of work, the contractor shall if required, by the Engineer-in-Charge furnish manufacturers test certificate or test certificate from approved testing laboratory to establish that the material produced by the contractor for incorporation in the work satisfies the provisions of BIS codes relevant to the material and/or the work done.
 - 4.4 The contractor shall procure all the materials at least in advance so that there is sufficient time to testing and approving of the materials and clearance of the same before use in work.
 - 4.5 All materials brought by the contractor for use in the work shall be got checked from the Engineer-in-Charge or his authorized representative of the work on receipt of the same at site before use.
 - 4.6 The contractor shall be fully responsible for the safe custody of the materials issued to him even if the materials are in double lock and key system.

SPECIAL CONDITION FOR SAFETY AT THE WORK SITE

The contractor will identify one of the supervisors for taking care of implementation of Safety systems.

The Contractor should follow the following General Guidelines governing the safety rules as laid down under:

1. Smoking is strictly prohibited at workplace.
2. Nobody is allowed to work without wearing safety helmet. Chinstrap of safety helmet shall be always on. Drivers, helpers and operators are no exception.
3. No one is allowed to work at or more than three meters height without wearing safety belt and anchoring the lanyard of safety belt to firm support preferably at shoulder level.
4. No one is allowed to work without adequate foot protection.
5. Usage of eye protection equipment shall be ensured when workmen are engaged for grinding, chipping, welding and gas-cutting. For other jobs as and when site safety co-coordinator insists eye protection has to be provided.
6. All safety appliances like Safety shoes, Safety gloves, Safety helmet, Safety belt, Safety goggles etc. shall be arranged before starting the job.
7. All excavated pits shall be barricaded & barricading to be maintained till the backfilling is done. Safe approach to be ensured into every excavation.
8. Adequate illumination at workplace shall be ensured before starting the job at night.
9. All the dangerous moving parts of the portable / fixed machinery being used shall be adequately guarded.
10. Ladders being used at site shall be adequately secured at bottom and top. Ladders shall not be used as work platforms.
11. Material shall not be thrown from the height. If required, the area shall be barricaded and one person shall be posted outside the barricading for preventing the tre-passers from entering the area.
12. Other than electricians no one is allowed to carry out electrical connections, repairs on electrical equipment or other jobs related thereto.
13. All electrical connections shall be made using 3 or 5 core cables, having a earth wire.
14. Inserting of bare wires for tapping the power from electrical sockets is completely prohibited.
15. A tools and tackles inspection register must be maintained and updated regularly.
16. Debris, scrap and other materials to be cleared from time to time from the workplace and at the time of closing of work every day.
17. All the unsafe conditions, unsafe acts identified by contractors, reported by site supervisors and / or safety personnel to be corrected on priority basis.
18. No children shall be allowed to enter the workplace.
19. All the lifting tools and tackles shall be stored properly when not in use.
20. Clamps shall be used on Return cables to ensure proper earthing for welding works.
21. Return cables shall be used for earthing.
22. All the pressure gauges used in gas cutting apparatus shall be in good working condition.
23. Proper eye washing facilities shall be made in areas where chemicals are handled.
24. Connectors and hose clamps are used for making welding hose connections.
25. All underground cables for supplying construction power shall be routed using conduit pipes.
26. Spill trays shall be used to contain the oil spills while transferring / storing them.
27. Tapping of power by cutting electric cables in between must be avoided. Proper junction boxes must be used.

1. Duties & Powers :

- i) Site Engineers:

The duties of the Site Engineer(s) are to watch and supervise the works and the workmanship employed in connection with the works, and to test and examine any materials to be used. He shall have no authority to relieve the contractor of any of his duties or obligations under the contract, except as expressly provided here under, to order any work involving delay or any extra payment by the Institute, nor to make any variation in the works.

The Engineer-in-charge, from time to time in writing, delegates to the Site Engineer (s) any of the powers and authorities vested in them. Any written instruction or written approval given by the Site Engineer (s) to the contractor within the terms of such delegation (but not otherwise) shall bind the contractor and the Institute as though it had been given by the Engineer-in-charge / Architect provided always as follows:

Failure of the Site Engineer (s) to disapprove any work or materials shall not prejudice the power of the Engineer In-charge / Architect to subsequently disapprove such work or materials and to order the pulling down, removal or breaking up thereof.

- a) If the contractor is dissatisfied by reason of any decision of the Site Engineer (s), he shall be entitled to refer the matter to the Engineer-in-charge / Architect, who shall thereupon confirm reverse or vary such decision.
2. The scope of contract comprises the construction, completion and maintenance of the works for (12) months after the completion and the provision of all labour, materials, construction of plant equipment and transpiration, temporary works and everything, whether of temporary or permanent nature required in and for such construction, completion and maintenance so far as The necessity for providing the same is specified in or reasonably be inferred from the contract. The contractors shall make his own arrangements for the store storage of materials; accommodation for his staff etc. and no claim for the temporary accommodation from the contractor shall be entertained.

The contractor shall carry out and complete the said work in every respect in accordance with this contract and as per the directions and to the satisfaction of the Engineer-in-charge/Architect. Issue of further drawings and /or written instructions, detailed directions and explanations which are hereinafter collectively referred to as instructions of the engineer-in-charge/ Architect's in regards to:-

- a. The variation or modification of the design, quality or quantity of works or the addition or omission or substitution of any work.
- b. Any discrepancy in the drawings or between the schedule of quantities and /or drawings and/or specifications.
- c. The removal from the site of any materials brought thereon by the contractor and the substitution of any other material thereof.
- d. The dismissal from the works of any persons employed thereupon.
- e. The opening up for inspection of any work covered up.
- f. The amending /making good of any defects.
- g. The contractor shall forthwith comply with and duly execute any instructions of work comprised in such engineers-in-charge instructions, provided always that the verbal instructions and explanations given to the contractor or his representative upon the works shall, if involving a variation , be confirmed in writing by the contractor within seven days and is not dissented in writing within a further seven days by the Engineer-In-Charge/Architect, such shall be deemed to be instructions of the Engineer-In-charge/Architect within the scope of the contract.
- h. **Works Inspection and Testing of Equipment:**

Prior to dispatch of equipment the Institute reserves the right to inspect the same by the engineer in charge at the manufacturer's works and the contractor shall provide and secure every reasonable access and facility at the manufacturers works for inspection, for witness of all acceptance and routine tests as per relevant Indian Standards. Contractor shall give a reasonable notice of about 15 days for the purpose of test, and witness of all major equipments.

SPECIFICATION OF 125 KVA DG SET

The DG set of capacity 125 KVA at 0.8 power factor developing 415 Volts, 3 phase, 4 wire A.C supply shall be complete with engine, alternator, base frame, acoustic enclosure, fuel tank, residential silencer, exhaust pipe and duct and AMF panel self starter, battery etc. complete in all respect. The DG set shall be factory assembled of the engine manufacture and all components (excluding AMF panel silencer & exhaust pipe) shall be accommodated in enclosure. The DG set components shall be selected for conditions operation at full load and 10% overload for one hour in every 12 hours at site conditions. Brief specification of various components shall be as under and makes as indicated in the list of acceptable makes.

1. **Engine:** The engine shall be water cooled, radiator air to air after cooler, pusher fan & fan drive arrangement, electric starting 1500 RPM, and diesel operated conforming to relevant BS & IS standards. The engine shall be capable of developing desired output (full load) continuously with 10% over load for one hour in any 12 hours duration. The engine shall be complete with all standard accessories and safeties, electric starting with batteries charging alternator etc.

Alternator: The alternator shall be synchronous, brush less developing 125KVA continuously at 1500 RPM generating 415 volts, 0.8 power factor, 3 phase, 4 wire, 50 Hz AC supply. The alternator shall be self excited, self regulated and foot mounted directly coupled to the engine with flexible coupling with IP23 protection. The alternator shall conform to relevant BS/IS standards. The alternator winding shall have class 'H' insulation and bearing shall be ball and roller type permanently lubricated. The alternator excitation system shall be complete with automatic voltage regulator having fast response to load changes.
2. **Bed Plate:** Both engine & alternator shall be mounted on common bed plate and coupled with flexible coupling with guard.
3. **AMF Panel:** The AMF panel shall be manufacturing by the DG set supplier and shall be designed to provide complete protection to engine, alternator and starting and stopping DG set automatically on mains failure / resumption. The panel shall be accessible through a separate door. Brief specification of AMF panel shall be as under.
 - a) **General Specification:** The panel shall be cubicle type, dust, damp & vermin proof, compartmentised with bolted construction. The panel shall be fabricated with 2 mm thick CRCA/M.S sheet for load bearing members and 1.6 mm thick CRCA/M.S sheet for covers and doors. The panel shall be powder coated after 7 tank treatment process.
 - b) **Accessories:** The panel shall be provided with following accessories.
 - (i) 2 Nos. 4 pole contactors 200 Amps with HRC fuses for alternator & main supply for load transfer.
 - (ii) Ammeter, voltmeter, selector switch, Frequency Meter for alternator supply.
 - (iii) Set of relay for AMF logic with facility for operation on manual mode and test mode.
 - (iv) Three attempts starting facility.
 - (v) Push button & indicating lamp.
 - (vi) Battery charger from mains along with DC voltmeter & Ammeter with battery low indication.
 - (vii) Engine protection i.e High water/ Coolent Temperature low lubricating oil pressure & over speeding.
 - (viii) Alternator protection-under voltage/over voltage short circuit and earth fault relay.ix). Power and control cable between AMF panel, Alternator & Engine.
 - (x) Fuel minimum indication/alarm on balance of 25 liters capacity, other indications/ alarms shall be provided as per standard scope of manufacturer.
4. **Acoustic Enclosure:** The enclosure shall be fabricated out of 16 SWG CRCA/M.S sheet and shall be of bolted construction type. The enclosure shall be powder coated after 7 tank treatment process. The enclosure shall accommodate complete DG set including fuel tank batteries etc. the insulation inside the enclosure will be provided with fiber glass / mineral wool/ foam type and sound level shall be not more 75 db at a distance of 1 meter from the enclosure. The insulation shall be finished with perforated CRCA/M.S sheet duly powder coated. Adequate number of doors with handle & locking arrangement shall be provided for access to various components of the DG set. Blower shall be provided for ventilation so that DG set can deliver desired output.

The blower shall be connected with load side of the AMF panel and shall continue to operate for 5 Minutes after stopping the engine for discharging heat. The manufacturing shall be as per CPCB norms.

5. **Fuel Tank:** Fuel tank shall be provided inside the enclosure and its capacity shall be not less than 150 Litres. Suitable for the running of DG set minimum 8 hours continuously. Fuel gauge for monitoring fuel level shall be provided. Fuel measuring indication & alarm to be provided on AMF panel on balance quantity of 100 Litrs oil on the tank.
6. **Silencer & Exhaust Pipe:** The silencer shall be residential type and may be installed out side the enclosure. The exhaust pipe shall extended from the DG set 2 Mtrs. Above the top most point of the building (the sub-station building is single storied) where DG set has been installed. Fibre glass insulation 50 mm thick with aluminium cladding 1 mm thick shall be provided on the entire length of exhaust pipe. Metallic bellows shall be provided for vibration isolation.
7. **Exhaust Duct:** The DG set is to be installed in door for hot air discharge, G.I. duct will be provided upto the front wall of the building necessary opening will be made by the contractor in the wall expanded metal shall be provided on the ends of the duct for preventing entry of birds into the duct. The ends shall be bended downwards for avoiding entry of rain water. The arrangement shall be got approved from Engineer-In-Charge.
8. **Testing of DG Set:** The DG set shall be tested in the works of the manufacturer and necessary test certificate shall be furnished. The DG set shall be operated for 12 hours at full load including 10% over load for one hour. The department may witness the testing after installation of DG set at site, the DG set shall be operated for 4 hours continuously at available load and all function shall be verified. POL for site testing shall be arranged by the contractor within the quoted rates.
9. **Installation of DG Set:** The DG set will be installed on suitable existing RCC foundation, vibration, Isolation pads shall be provided to prevent transmission of vibration to the building structure.

10. <u>DG Set:</u>	:	Engine manufacture
(i) Engine	:	Kirloskar/Cummins/Greaves Cotton/Ashok Lyland
(ii) Alternator	:	Stamford/Jyoti/Crompton/ Kirloskar
(iii) Accoustic Enclosure	:	Designed & Manufactured by DG Set Designed & manufactured by DG set supplier
(iv) AMF Panel	:	Milestone Switch Gear Pvt. Ltd./Neptune System Pvt. Ltd./ Tricolite Electrical Industries

BILL OF QUANTITY

Sl No.	Description of Item	Qty	Unit	Rate	Amount
	Sub Head-1 (DG Set)				
1	Providing, Installing, Testing and Commissioning of 'Silent Type 125 KVA Diesel Generating set 415 volts at 1500 RPM, 0.8 lagging power factor at 415 V suitable for 50Hz, 3 phase system at NTP conditions and consisting of the followings:				
(a)	Diesel Engine:				
	Diesel engine 4 stroke, Six cylinder, water cooled, electric start, of suitable BHP at 1500 RPM suitable for above output of alternator at NTP conditions and conforming to BS 5514/ISO3046, BS 649, IS 10000, capable of taking 10% over loading for one hour after 12 hour of continuous operation. The engine will be fitted complete with all the required accessories. Make- Kirlosker/Ashok Leyland/Cummins/Koelgreen /Jakson/Greaves Power				
(b)	Engine mounted Instrument Panel fitted with and having digital display for following:				
	(i) Start-stop switch with key				
	(ii) Water temperature indication				
	(iii) Lubrication oil pressure indication				
	(iv) Lubrication oil temperature indication				
	(v) Battery charging indication				
	(vi) RPM indication				
	(vii) Over speed indication				
	(viii) Low lub. Oil trip indication				
	(ix) Engine Hours indication				
(c)	Alternator:				
	Synchronous alternator Stamford make rated at 125 KVA, 415 volts at 1500 RPM, 3 phase 50 Hz, AC supply with 0.8 lagging power factor at NTP conditions. The alternator shall be having SPDP enclosure, brushless, continuous duty, self-excited and self-regulated through AVR conforming to IS: 4722/BS 2613 suitable for tropical conditions and with class-F/H insulation. +/-1.5% Voltage Regulation (max), IP23 Protection with class-H Insulation, Permanent lubricating bearing, permissible overload of 10% for one hour in 12 hours of operation.	1	No	982600.00	982600.00
(d)	Base Frame				
	Both the engine and alternator shall be mounted on suitable base frame made of MS channel with necessary reinforcement which shall be installed on existing cement concrete foundation and i/c supplying & fixing of suitable vibration isolation arrangement as per recommendations of manufacturer.				
(e)	Exhaust System:				
	Dry exhaust manifold with Residential exhaust silencer and catalytic convertor i/c all supporting structure, Turbocharger, Companion flanges for silencer & bellow				
(f)	Starting System				
	12V/24V DC starting system comprising of starter motors voltage regulator and arrangement for initial excitation complete with suitable nos of batteries (25 plate 180 AH lead acid type) as reqd as per specifications.				
(g)	Acoustic and weather proof enclosure with arrangement for fresh air intake for cooling of the engine & alternator, extraction, discharging hot air in to the atmosphere as per specifications.				
(h)	AMF Panel				

	Fabricating, installing testing and commissioning of automatic mains failure control panel (PS-500) including auto by-pass panel, suitable for 125 KVA silent type DG Set complete with relays, timers, set of CTs of metering & protection and energy analyzer to frequency power factor, KWH, KVARH & provision for overload, short circuit, restricted earth fault, under frequency, control cabling from AMF panel to diesel engine and elsewhere if require all complete and inter locking including the following:				
(i)	1 No.200Amps 4 P MCCB 36 KA (Ics =100% Icu) Make-L&T/SEIL/ABB				
(ii)	2 Nos.200 amp Contactar				
(iii)	Auto/ Manual/ Test/ Off Selector switch				
(iv)	2 Nos. over voltage relay , 2 Nos. reverse power relay and 2 Nos. under voltage relay.				
(v)	1 Set of 3 Nos. current transformers.				
(vi)	Energy analyser unit to indicate current voltage frequency power factor and KWH				
(vii)	Indicating lamps for load on mains and load on set				
(viii)	Suitable MCB for instruments				
(ix)	Battery charger, complete with transformer / rectifier DC voltemeter and ammeter selector switch for trickle off and boost and current adjustment				
(x)	Main supply failure monitor				
(xi)	Supply failure timer				
(xii)	Restoration timer				
(xiii)	Control unit with three impulse automatic engine start / stop and failure to start lockout.				
(xiv)	Impulse counter with locking and reset facility				
(xv)	ON/ OFF / Control circuit switch with indicator				
(xvi)	Audio/ Video annunciation for				
a	Low lubricating oil pressure				
b	Engine over speed				
c	Engine fails to start				
d	Full load/ maximum load warning				
e	High water temperature				
I	Fuel Tank				
	Daily service Fuel tank of 300 liters fabricated from 14SWG sheet metal built inside base frame complete with drain valve, air vent, inlet & outlet connection				
				Total	982600.00