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Name of Work: Supplying, installation, testing & commissioning of 01 Nos. 08 passenger gearless & Machine room less Elevator and its AMC for 05 years at (G+4) Faculty Building Vertical Extension IIT Kanpur.

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NIT amounting to Rs. 20,24,731/- (Rupees Twenty Lacs Twenty Four Thousand Seven Hundred Thirty One Only) is approved.

Executive Engineer
Electrical Division
IIT Kanpur

PART-A

INDIAN INSTITUTE OF TECHNOLOGY KANPUR
INSTITUTE WORKS DEPARTMENT
ELECTRICAL DIVISION
E-TENDER NOTICE

NIT No. 90/Lift/2021-22/796

Dated: 25.02.2022

The Executive Engineer, IWD, I.I.T., Kanpur on behalf of Board of Governors of IIT Kanpur invites online percentage rate tender from specialized agencies for the following work:

Sl. No	Name of work and location	Estimated cost put to tender (In Rs.) (excluding GST)	Earnest Money (In Rs.)	Period of Completion (in Month)	Last Date and time of submitting, Bid Security Declaration and other documents online	Time and Date of Opening Technical Bid	Time & date of opening of financial bid of tender
1	Supplying, installation, testing & commissioning of 01 Nos. 08 passenger gearless & Machine room less Elevator and its AMC for 05 years at (G+4) Faculty Building Vertical Extension IIT Kanpur.	20,24,731/-	NIL with Bid Security Declaration (see Page 25)	03 months	Upto 3.30 PM on 17.03.2022	Upto 3:30 PM on 21.03.2022	At 3:30 PM on 23.03.2022

The E-tender documents is available on <http://eprocure.gov.in/eprocure/app>

(Vinay Kumar Tiwari)
Executive Engineer (Elect.)

Copy to :

1. Institute website: www.iitk.ac.in/iwd/tenderhall.htm
2. Notice Board

Information of e-Tendering for Contractors

1. The intending tenderer must read the terms and conditions of FORM-6 for e-Tendering carefully. He should only submit his tender if he considers himself eligible and he is in possession of all the documents required.
2. Information and Instructions for tenderer posted on website shall form part of tender document.
3. The tender 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 can be seen and downloaded from website <https://eprocure.gov.in/eprocure/app> or www.iitk.ac.in free of cost.
4. But the tender can only be submitted after uploading the mandatory scanned documents as per list given below.
5. Those contractors not registered on the website mentioned above, are required to get registered beforehand. If needed they can be imparted training on online bidding process as per details available on the website.
6. The intending bidder must read the terms and conditions carefully. He should submit his bid only if he considers himself eligible and he is in possession of all the documents as required
7. The intending bidder must upload all the documents as detailed in this tender document.
8. Applicants are advised to keep visiting www.iitk.ac.in/iwd/tenderhall.htm, <http://eprocure.gov.in/eprocure/app>, www.tenderhome.com, and www.eprocure.gov.in/cppp/latestactivetenders, from time to time (till the deadline for bid submission) for any updates in respect of the tender documents, if any. Failure to do so shall not absolve the applicant of his liabilities to submit the applications complete in all respect including updates thereof, if any. An incomplete application may be liable for rejection.
9. The defect liability period is **12** months from the date of handing over the completed building to the Engineer- in-charge. Other related details are elaborated in the tender document. ***EMD is not applicable for this tender as Govt. orders No. F.9/4/2020-PPD, Ministry of Finance dated 12th November 2020.***
10. Site inspection, if desired, by the intending bidders will be arranged on **11.03.2022** at 03:00 PM. The intending bidders must reach the O/o the Executive Engineer (Elect. & AC), IWD, IIT Kanpur -208016. The construction site is inside the IIT Kanpur Campus. The intending bidders shall arrange for the conveyance themselves.
11. The indicative drawings are enclosed.
12. The following condition pertains to GST of Clause 37 & 38 of General Condition of contracts and corresponding amendments should be read as follows:-
 - a) The quoted rate should be exclusive of GST
 - b) The GST as applicable shall be paid extra. The total bid price quoted shall be inclusive of all statutory liabilities, taxes, cess, duties, levies as applicable under the prevailing statutes or levy by the statutory authorities/State/Central Government and payable by the bidder under the contract. All the GST benefits and credits on inputs as available to the bidder shall be taken into consideration in the quoted price and pass on the benefits/credits to the Corporation. Bidder shall also comply with the provision of Anti-Profitteering under GST act.)

BID DOCUMENT

Online bids (Technical & Financial) from eligible bidders which are valid for a period of 90 days from the date of Technical/financial Bid opening are invited for and on behalf of the Executive Engineer, IWD, IIT, Kanpur for **“Supplying, installation, testing & commissioning of 01 Nos. 08 passenger gearless & Machine room less Elevator and its AMC for 05 years at (G+4) Faculty Building Vertical Extension IIT Kanpur”**.

Notice Inviting Tender No.	90 /Lift2021-22/796 Dated: 25.02.2022
Name of Work	Supplying, installation, testing & commissioning of 01 Nos. 08 passenger gearless & Machine room less Elevator and its AMC for 05 years at (G+4) Faculty Building Vertical Extension IIT Kanpur.
Estimated Cost	Rs. 20,24,731/-
Earnest Money	Nil with Bid Security Declaration page no. 25 (Attached)
Non refundable Tender Processing fee (inclusive of GST@18%)	Rs. 7,000/- through online transfer (NEFT/RTGS).
Details of Institute Account for submitting tender processing fees	Bank Name: SBI IIT Kanpur Beneficiary Name: The Registrar IIT Kanpur A/C No. 30632766814 IFSC Code: SBIN0001161
Date of Publishing	25.02.2022
Clarification Start Date and Time	25.02.2022 (working days only)
Clarification End Date and Time	11.03.2022 (working days only)
Queries (if any)	No queries will be entertained after clarification end date and time
Bid Submission Start Date	25.02.2022 (15:30 hrs)
Pre Bid Meeting Date and Time	11.03.2022 (at 15:00 hrs.)
Last Date and time of uploading of Bids	17.03.2022 (15:30 hrs)
Last Date and time of submitting, Bid Security Declaration and other documents online	17.03.2022 (15:30 hrs)
Date and time of opening of Technical, Bids	21.03.2022 (16:00 hrs)
Date and time of opening of Financial Bids	23.03.2022 (15.30 hrs) (Tentative)

Interested parties may view and download the tender document containing the detailed terms & conditions from the website <http://eprocure.gov.in/eprocure/app>

(The bids have to be submitted online in electronic form on www.eprocure.gov.in only. No physical bids will be accepted. No hardcopy of any documents will be accepted)

INSTRUCTION FOR ONLINE BID SUBMISSION

The bidders are required to submit soft copies of their bids electronically on the Central Public Procurement (CPP) Portal ie <http://eprocure.gov.in/eprocure/app> , 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.

REGISTRATION

- (i) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL:<https://eprocure.gov.in/eprocure/app>) by clicking on the link “Online Bidder Enrollment” option available on the home page. **Enrolment on the CPP Portal is free of charge.**
- (ii) During enrolment/ registration, the bidders should provide the correct/ true information including valid email-id & mobile no. All the correspondence shall be made directly with the contractors/ bidders through email-id provided.
- (iii) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- (iv) For e-tendering possession of valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) is mandatory which can be obtained from SIFY /nCode/eMudra or any Certifying Authority recognized by CCA India on eToken/ SmartCard.
- (v) Upon enrolment on CPP Portal for e-tendering, the bidders shall register their valid Digital Signature Certificate with their profile.
- (vi) Only one valid DSC should be registered by a bidder. Bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse and should ensure safety of the same.
- (vii) Bidders can then log into the site through the secured login by entering their userID/ password and the password of the DSC/ eToken.

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.

PREPARATION OF BIDS:

- (i) For preparation of bid Bidders shall search the tender from published tender list available on site and download the complete tender document and should take into account corrigendum if any published before submitting their bids.

After selecting the tender document same shall be moved to the 'My favourite' folder of bidders account from where bidder can view all the details of the tender document.

- (ii) Bidder shall go through the tender document carefully to understand the documents required to be submitted as part of the bid. Bidders shall 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.
- (iii) Any pre-bid clarifications if required, then same may be obtained online through the tender site, or through the contact details given in the tender document.
- (iv) Bidders should get ready in advance the bid documents in the required format (PDF/xls/rar/ formats) to be submitted as indicated in the tender document/schedule. **Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.**
- (v) Bidders can update well in advance, the documents such as experience certificates, annual report, PAN, EPF & other details etc., under "My Space/ Other Important Document" option, which can be submitted as per tender requirements. This will facilitate the bid submission process faster by reducing upload time of bids.

SUBMISSION OF BIDS:

- (i) 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.
- (ii) Bidder should prepare the **Bid Security Declaration** as per the instructions specified in the NIT/ tender document. Otherwise, the uploaded bid will be rejected.
- (iii) While submitting the bids online, the bidder shall read the terms & conditions (of CPP portal) and accepts the same in order to proceed further to submit their bid.
- (iv) Bidder shall digitally sign and upload the required bid documents one by one as indicated in the tender document.
- (v) Bidders shall note that the very act of using DSC for downloading the tender document and uploading their offers is deemed to be a confirmation that they have read all sections and pages of the tender document without any exception and have understood the complete tender document and are clear about the requirements of the tender document.
- (vi) Bid documents may be scanned with 100 dpi with black and white option which helps in

reducing size of the scanned document. For the file size of less than 1 MB, the transaction uploading time will be very fast.

- (vii) **If price quotes are required in XLS format, utmost care shall be taken for uploading Schedule of quantities & Prices and any change/ modification of the price schedule shall render it unfit for bidding.**

Bidders shall download the Schedule of Quantities & Prices i.e. Schedule-A, in XLS format and save it without changing the name of the file. Bidder shall quote their percentage rate in figures in the appropriate cell, thereafter save and upload the file in financial bid cover (Price bid) only.

If the template of Schedule of Quantities & Prices file is found to be modified/corrupted in the eventuality by the bidder, the bid will be rejected and further dealt as per provision of clause no 23.0 of ITB.

The bidders are cautioned that uploading of financial bid elsewhere i.e., other than in cover 2 will result in rejection of the tender.

- (viii) Bidders shall submit their bids through online e-tendering system to the Tender Inviting Authority (TIA) well before the bid submission end date & time (as per Server System Clock). **The TIA will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders at the eleventh hour.**
- (ix) After the bid submission (i.e. after Clicking “Freeze Bid Submission” in the portal), the bidders shall **take print out of system generated acknowledgement** number and keep it as a record of evidence for online submission of bid, which will also act as an entry pass to participate in the bid opening.
- (x) Bidders should follow the server time being displayed on bidder’s dashboard at the top of the tender site, which shall be considered valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system.
- (xi) All the documents being submitted by the bidders would be encrypted using PKI (Public Key Infrastructure) 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.

ASSISTANCE TO BIDDERS:

- (i) 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 contract person indicated in the tender. The contact number for the helpdesk is **0512-2597059 between 10:30 hrs to 17:00 hrs. The email id for the helpdesk is: vktiware@iitk.ac.in.**

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 24 x 7 Help Desk Number 0120-4200462, 0120-4001002 and 0120-4001005. The helpdesk email id is support-eproc@nic.in

INSTRUCTION FOR e-PROCUREMENT

1. PREPARATION AND SUBMISSION OF BIDS :

- a. The detailed tender documents may be downloaded from <http://eprocure.gov.in/eprocure/app> till the last date of submission of tender. The Tender may be submitted online through CPP Portal <http://eprocure.gov.in/eprocure/app>
- b. The bidder should submit the bid online in two parts viz. Technical Bid and Financial Bid. Technical Bid should be upload online in cover- 1 and Financial Bid in “.Xls” should be upload online in cover-2

2. SUBMISSION OF THE BID : All interested eligible bidders are requested to submit their bids online on CPP Portal: <http://eprocure.gov.in/eprocure/app> as per the criteria given in this document:

- a. Technical Bid should be upload online in cover-1.
- b. Financial Bid should be upload online in cover-2

Both Technical and Financial Bid covers should be placed online on the CPP Portal (<http://eprocure.gov.in/eprocure/app>).

3. TECHNICAL BID: Signed and Scanned copies of the Technical bid documents as under must be submitted online on CPP Portal: <http://eprocure.gov.in/eprocure/app>.

List of Documents to be scanned and uploaded (Under Cover-1) within the period of bid submission:-

1. Scanned Copy of lift's Original Equipment Manufacturer's(OEM) or their authorized dealership certificate or specialized agency:
2. Copy of registration with the Department (if any)
3. Required experience/completion certificates of similar nature of works.
4. **Registration certificates of EPF & ESIC**
5. Details of turn over during the last five years
6. Copy of bank solvency certificate.
7. Scanned copy of Bid Security Declaration has to be uploaded
8. Scanned copy of proof of tender fee submission as per the format (Annexure B) must be upload along with transaction slip.
9. Copy of GST Registration **& PAN card**
10. Scanned copy of Networth certificate of minimum Rs. 8.09 Lacs issued by the certified Chartered Accountant.

Note: No hardcopy of any documents will be accepted

Please note that no indication of the rates/amounts be made in any of the documents submitted with the TC-BID.

4. Financial Bid

- a. The currency of all quoted rates shall be Indian Rupees. All payment shall be made in Indian Rupees.
- b. In preparing the financial bids, bidders are expected to take into account the requirements and conditions laid down in this Tender document. The financial bids should be uploaded online as per the specified “.Xls” format i.e. Price Bid in Excel sheet attached as ‘.Xls’ with the tender and based on the scope of work, service conditions and other terms of the Tender document. It should include all costs associated with the Terms of Reference/Scope of Work of the assignment.
- c. Being an individual work contract no other tax is payable other than GST. The GST shall be paid extra as applicable.

5. Last Date for Submission of Tender:

- a. Online bids complete in all respects, must be submitted on or before the last date and time specified in the schedule of events.
- b. The IIT, Kanpur may, at its own discretion, alter/extend the last date for submission of tenders.

6. Bid Validity

- a. All the Bids must be valid for a period of **90 days** from the date of financial bid opening of the tender for execution of Contract. However, the quoted rates should be valid for the initial/ extended period of the Contract from the effective date of the Contract. No request will be considered for price revision during the original Contract period.
- b. A bid valid for a shorter period shall be declared as non-responsive.
- c. In exceptional circumstances, prior to expiry of the original time limit, the IIT may request the bidders to extend the period of validity for a specified additional period beyond the original validity of 90 days. The request and the bidders' responses shall be made in writing. The bidders, not agreeing for such extensions will be allowed to withdraw their bids without forfeiture of their Bid Security.

7. Modification / Substitution/ Withdrawal of bids:

- a. No Bid shall be modified, substituted or withdrawn by the Bidder after the Bid 's due Date.
- b. Any alteration/ modification in the Bid or additional information supplied subsequent to the Bid's due Date, unless the same has been expressly sought for by the Authority, shall be disregarded.

8. Rejection of the Bid: The bid submitted shall become invalid if:-

- a. The tenderer is found ineligible.
- b. The tenderer does not upload all the documents as stipulated in the tender document.
- c. **If any discrepancy is noticed between the documents as uploaded at the time of submission of tender and hard copies required after tender opening.**

FORM -6 FOR e-Tendering

- 1.** The Executive Engineer, IWD, I.I.T., Kanpur on behalf of Board of Governors of IIT Kanpur invites online percentage rate tenders from specialized agencies for the works of: **Supplying, installation, testing & commissioning of 01 Nos. 08 passenger gearless & Machine room less Elevator and its AMC for 05 years at (G+4) Faculty Building Vertical Extension IIT Kanpur.**

1.1 The authority competent to approve NIT for the combined cost and belonging to the major discipline will consolidate NITs for calling the tenders. He will also nominate Division which deal with all matters relating to the invitation of tenders.

1.2 Initial Eligibility & Technical Criteria: Joint ventures are not accepted. **The bidders satisfying the initial eligibility & Technical criteria shall only be considered for financial bid opening.** Should have satisfactorily completed the works as mentioned below during the last seven years ending previous day of last date of submission of bids.

* 3 (three) similar completed works costing not less than **Rs. 8.09 Lacs**

or

* 2 (two) similar completed works costing not less than **Rs 12.14 Lacs**

or

* 1 (one) similar completed work of aggregate cost not less than **Rs 16.19 Lacs.**

And

One completed work of similar nature (either part of (a) or a separate one) costing not less than Rs. **8.09** Lacs with some Central Government Department / State Government Department / Central Autonomous Body / Central Public Sector Undertakings).

Note: : Similar nature of work means , “supply, installation, testing & commissioning of passenger Elevators(lifts) for multistoried buildings with at least 5 no. of landings.

2. 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 the previous day of last date of submission of bids.
3. Should have average annual financial turnover of Rs. 8.09 Lacs during the last three years ending 31-03-2020.
4. Should not have incurred any loss in more than two years during the last five years ending 31-03-2020.
- 5. Should have solvency of Rs. 8.09 lacs.**
6. Should have Networth certificate of minimum Rs. 8.09 Lacs issued by the certified Chartered Accountant.
7. Should have valid registration of EPF, ESIC, GST & PAN Card.
- 8. Technical Datasheets: The bidder’s proposed equipment’s technical parameters/specification shall be matching with the required parameters/specifications by IIT Kanpur as per the Technical Datasheet for Passenger Elevator specified at Appendix-II of the Tender Document.**

9. **After the award of the tender**, the tenderer shall have to furnish an affidavit on non judicial stamp paper of Rs. 10.00 as under:

“I/We undertake and confirm that eligible similar work(s) has /have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the light, then I/We shall be debarred for tendering in IIT Kanpur contracts in future forever. Also, if such a violation comes to light before date start of work, the Superintending Engineer shall be free to forfeit the entire amount of Performance Guarantee along with other procedures.”

10. Agreement shall be drawn with the successful tenderers on prescribed Form No. CPWD 7 (or other Standard Form as mentioned) which is available as a Govt. of India Publication and also available on website www.iitk.ac.in Tenderers shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
11. The time allowed for carrying out the work will be **03 Months** from the date of start as defined in schedule ‘F’ or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the tender documents.
12. The site for the work is available for execution of the works.
13. The tender 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 on website <http://eprocure.gov.in/eprocure/app>, <https://eprocure.gov.in/cppp/latestactivetenders> or www.iitk.ac.in.
- Pre Bid Meeting shall be held in the office of Office of Executive Engineer, IWD IIT Kanpur at 11.00 AM on 11.03.2022** to clear the doubt of intending bidders/ associates, if any. For physical attendance in pre bid meeting only one representative of firm shall be allowed to maintain the physical distance. Bidders are advised to send their queries/doubts by email to the executive engineer on email id: **vktiwari@iitk.ac.in** least one day prior to the pre-bid meeting. A bidder can send multiple mails with different queries/doubts in each mail. The bidder may also raise query on the date of pre-bid meeting. If found necessary, an addendum/corrigendum to the tender document and /or minutes of meeting shall be issued and same shall be uploaded on the website and no further queries after pre-bid meeting shall be entertained. Such addendum/corrigendum shall become part of tender.
14. After submission of the tender the contractor can re-submit revised tender any number of times but before last time and date of submission of tender as notified.
15. When tenders are invited in three stage system and if it is desired to submit revised financial tender then it shall be mandatory to submit revised financial tender. If not submitted then the tender submitted earlier shall become invalid.
16. Copy of Enlistment Order and certificate of work experience wherever applicable and other documents as required and specified in this bid document shall be scanned and uploaded to the e-Tendering website within the period of tender submission.

Online tender documents submitted by intending tenderers shall be opened only of those tenderers, whose Bid Security Declaration Document & tender fee proof submission and other documents as mentioned are found in order.

The financial bid of only pre-qualified eligible bidders shall be opened at 03:30 PM on **23.03.2022 (tentative)**.

Non Refundable E-tender Processing Fees Rs. 7,000/- is required to be submitted through online transfer (NEFT/RTGS) to the Institute account. Proof of submission as per the format (Annexure B) must be upload along with transaction slip with due mention of NIT No. : in the CPP portal for valid tender submission. Details of Bank Account details can be found in (Annexure-C).

Annexure B

Format for proof of submission to be uploaded along with transaction slip.

NIT No.	Name of Agency	GST Number of the Agency	Date of Transaction	Total Amount Transferred	UTR Number

Annexure C

Details of Institute Bank Account for submitting tender processing fees.

Bank Name	Beneficiary Name	A/C No.	IFSC Code
SBI IIT Kanpur	The Registrar, IITK	30632766814	SBIN0001161

17. The tender submitted shall become invalid if:
 - (i) The tenderer is found ineligible.
 - (ii) The tenderer does not upload all the documents as stipulated in the tender document.
 - (iii) If any discrepancy is noticed between the documents as uploaded at the time of submission of tender and hard copies required after opening of the tender.

18. The contractor whose tender is accepted will be required to furnish performance guarantee of 3% (Three Percent) of the tendered amount within the period specified in Schedule F. This guarantee shall be in the form of cash (in case guarantee amount is less than ` 10,000/-) or Deposit at Call receipt of any scheduled bank/Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay order of any Scheduled Bank of any scheduled bank (in case guarantee amount is less than ` 1,00,000/-) or Government Securities 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 contractor fails to deposit the said performance guarantee (PG) within the period as indicated in Schedule 'F', the contract would be liable to rejection by competent authority along with other procedures.**

19. Intending Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the terrace/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 tenderers shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The tenderers 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 tenderer 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 and local conditions and other factors having a bearing on the execution of the work.

20. The competent authority on behalf of the Board of Governors, IIT, Kanpur does not bind itself to accept the lowest or any other tender 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 tenderers shall be summarily rejected.
21. On opening date, the contractor can login and see the bid opening process. After opening of bids, he/she will receive the competitor bid sheets.
22. **Certificate of Financial Turn Over:** At the time of submission of bid, contractor has to upload Affidavit/Certificate from CA mentioning Financial Turnover on construction work of last 5 years or for the period as specified in the bid document and further details if required may be asked from the contractor after opening of technical bids containing pre-qualification documents. The balance sheet in case of private public limited company shall include its standalone finance statement and consolidated financial statement both. There is no need to upload entire voluminous balance sheet
23. Canvassing whether directly or indirectly, in connection with tenderers is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable for rejection.
24. The competent authority on behalf of Board of Governors, IIT, Kanpur reserves to himself the right of accepting the whole or any part of the tender and the tenderers shall be bound to perform the same at the rate quoted.
25. The contractor shall not be permitted to tender for works in the IIT Kanpur responsible for award and execution of contracts, in which his near relative is posted a Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any gazetted officer in the IIT Kanpur. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.
26. No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the tender or engagement in the contractor's service.

27. The tender for the works shall remain open for acceptance for a period of **ninety (90) days** from the date of opening of tenders if any tenderer withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, the tenderers shall not be allowed to participate in the retendering process of the work.
28. This Notice Inviting Tender shall form a part of the contract document. The successful tenderers/contractor, on acceptance of his tender by the Accepting Authority shall within **07** days from the stipulated date of start of the work, sign the contract consisting of:-
- The Notice Inviting Tender, all the documents including additional conditions, specifications and drawings, if any, forming part of the tender as uploaded at the time of invitation of tender and the rates quoted online at the time of submission of tender and acceptance thereof together with any correspondence leading thereto.
 - Standard C.P.W.D. Form 7 or other Standard C.P.W.D. Form as applicable.
- 28.1 The tender document will include following three components:
- Part A:-**
CPWD-6, CPWD-7 including schedule A to F for the major component of the work, Standard General Conditions of Contract for CPWD 2020, CPWD Works manual 2019 & SOPs 2019 as amended/modified up to **17.03.2022**
- Part B:-**
General/specific conditions, specifications and schedule of quantities applicable to major component of the work.
- Part C:-**
Schedule A to F for minor component of the work, General/specific conditions, specifications and schedule of quantities applicable to minor component(s) of the work.
- 28.2. The tenderers must associate himself, with agencies of the appropriate class eligible to tender for each of the minor component individually.
29. The EPF & ESI contribution paid to the contract workers shall be reimbursed on actual basis.
30. Protocols pertaining to COVID-19 to be followed at site by the contractor as decided by the Government of India time to time. Nothing extra shall be payable on this account.
- 31. Construction equipment proposed to be deployed for the project and proof of its availability; equipment proposed to be purchased or leased.**
- 32. Key personnel available and proposed to be engaged for management and supervision of the Project, their qualifications and experience. Valid certificates by a recognized University, technical Board, or Ministry of Government of India would only be taken cognizance of.**

Superintending Engineer

For & on behalf of the Board of Governors, IIT, Kanpur

PERCENTAGE RATE TENDER AND CONTRACT FOR WORK

- | | |
|------------------------------------|--|
| <p>(A) Tender for the work of:</p> | <p>Supplying, installation, testing & commissioning of 01 Nos. 08 passenger gearless & Machine room less Elevator and its AMC for 05 years at (G+4) Faculty Building Vertical Extension IIT Kanpur.</p> |
|------------------------------------|--|

TENDER

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

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

We agree to keep the tender **open for (90) ninety days from the date of opening of tender (financial bid)** and not to make any modifications in its terms and conditions.

If I/we, fail to furnish the prescribed performance guarantee or fail to commence the work within prescribed period I/we agree that the said Board of Governors, IIT, Kanpur or his successors in office shall without prejudice to any other right or remedy be at liberty to be debarred for participation in the re-tendering process of the work. Further, if I/we fail of commence work as specified, I/we agree that Board of Governors, IIT, Kanpur or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the performance guarantee absolutely and security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, up to maximum of the percentage mentioned in Schedule 'F' and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

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

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

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

Dated _____**_____

**

Signature of contractor
Postal Address **

Witness: **
Address: **
Occupation: **

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the Board of Governors, IIT, Kanpur for a sum of Rs. _____ (Rupees _____)

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

- a) _____
- b) _____
- c) _____

For & on behalf of the Board of Governors, IIT,
Kanpur

Dated _____

Signature _____
Designation _____

Operative schedules

SCHEDULE 'A'

Schedule of Quantities:

SCHEDULE 'B'

Schedule of materials to be issued to the contractor:

S. No.	Description of item	Quantity	Rates in figures & words at which the material will be charged to the contractor	Place of issue
1	2	3	4	5
-----NIL -----				

SCHEDULE 'C'

Schedule of Tools and Plants to be hired to the contractor

S. No.	Description	Hire charges per day	Place of issue
1	2	3	4
-----NIL -----			

SCHEDULE 'D'

Extra schedule for specific requirements/document for the work, if any: **As attached in tender form.**

SCHEDULE 'E'

Schedule of component of other Materials, Labour, POL etc. for price escalation on SITC part: **N.A.**

SCHEDULE 'F'

Reference to General Conditions of contract. .

Name of Work:	Supplying, installation, testing & commissioning of 01 Nos. 08 passenger gearless & Machine room less Elevator and its AMC for 05 years at (G+4) Faculty Building Vertical Extension IIT Kanpur.		
Estimated cost of the work:	Items of Work	20,24,731/-	
Earnest money	Bid Security Declaration		
<i>Performance Guarantee</i>	<i>3% of the tendered value of the work valid up to 6 months after the final completion period has to be submitted post award of work within stipulated time period as per Schedule-F. After recording of the</i>		

	<i>completion certificate for the work by the competent authority, the 50% performance guarantee shall be returned to the contractor, without any interest. 50% of Performance Guarantee shall be retained as Security Deposit till the completion of the 5 years of amc period. The same may be returned year wise proportionately on the request of the contractor.</i>
Retention Money	3% of the tendered value of the work, will be deducted from each bill. Same would be released after successful completion of one (1) year defect liability period.
General rules and direction :	

Definitions:

2(v) **Engineer-in-Charge**

For Lift/Electrical items of work

**Executive Engineer,
Institute Works Department
IIT, Kanpur**

2(vi) **Accepting Authority**

**Superintending Engineer,
Institute Works Department
IIT, Kanpur**

2(vii) **Percentage on cost of materials and labour to cover all overheads and profits**

15%

2(viii) **Standard Schedule of Rates:**

Lift/ Electrical Items of Work:

D.S.R. 2018 with up to date correction slips

2(ix) **Department:**

Of Central Public Works Department

2(x) **Standard CPWD contract Form:**

GCC 2020, SOPs 2019 ,CPWD **form-7** as modified & corrected up to **17.03.2022** (Whether correction vide latest circulars are incorporated or not in this document).

Clause 1

i) Time allowed for submission of Performance Guarantee, programme chart (Time and Progress) and applicable labour licenses, registration with EPFO,ESIC and BOCW welfare board or proof of applying there off from the date of issue of letter of acceptance.

**7 Days, from the
award of work**

ii) Maximum allowable extension with late fee @.01% per day of Performance Guarantee amount beyond the period as provided in i) above

**7 Days, after
expiry of time period
mentioned in Clause 1(i)
above.**

Clause 2

Authority for fixing Compensation under Clause 2

**Superintending Engineer,
Institute Works
Department
IIT, Kanpur.
Or successor thereof**

Clause 2	Whether Clause 2 shall be applicable	Yes
Clause 5	i) Number of days from the date of issue of letter of acceptance for reckoning date of start	15 Days
	ii) Time allowed for execution of work	03 Months
Authority to decide	Extension of time	Superintending Engineer, Institute Works Department IIT, Kanpur
Clause 6		Applicable.
Clause 7	Gross work to be done together with net payment/Adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment	Not applicable <i>Applicable</i>
Clause 7A		
Clause 10A	Material to be provided by the contractor.	Applicable
Clause 10B (i),(ii), (iii),iv	Whether clause 10-B (ii) and 10-B (iii) shall be applicable.	Applicable
Clause 10 C	Component of labour expressed as percentage of value of work	Not Applicable
Clause 10 CA	Materials covered under this clause.	Nearest material(other than cement, reinforcement bars and structural steel) for which All India Whole sale price Index is to be followed.
	1. Cement (PPC)	Nil
	2. Steel	Nil
Clause 10 CC	Increase/Decrease in Price of materials/wages except Annual operation part	Not Applicable
Clause 11	Specification to be followed for execution of work:	
For electrical & Lift works	CPWD specifications 2013 internal and 2013 external electrical works CPWD Specifications Part-I Internal - 2013 for electrical works and Part-III for Lifts & escalators-2003 , with up to date correction slips.(Hereinafter called CPWD specifications also)	
Clause 12		
12.2 & 12.3	Deviation limit beyond which clause 12.2 & 12.3 shall apply for building work	Applicable

Clause 16	Competent Authority for Deciding reduced rates:	Superintending Engineer, Institute Works Department IIT, Kanpur
Clause 18	For electrical/civil/Air-conditioning & refrigeration items of work List of mandatory machinery, tools & plants to be deployed by the contractor at site.	Hydra Crane, Chain Pulley block, welding machine with safety kit, Gas cutter machine with safety kit, Hydro Testing Equipment, Ultra Sonic Flow meter, Multimeter, drill machine, crimping tools, spanner set, blower, welding torch, vacuum pump, air compressor, meggar etc.
Clause 32		Requirement of technical Representative(s)

Requirement of Technical Representative (S) and recovery Rate

Sl. No	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical / Technical representative)	Minimum Experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36(i)	
						Figures	Words
1.	B.E./B.Tech	Electrical / Mechanical	Project Manager/ Site Engineer	5	1	Rs. 25,000/- p.m	Twenty Five Thousand per month

For supervision of lift installation as well as electrical items of work, technical representatives of the respective disciplines will be required to be deployed.

MANDATORY REQUIREMENTS FOR THE TENDER

Name of Work: **Supplying, installation, testing & commissioning of 01 Nos. 08 passenger gearless & Machine room less Elevator and its AMC for 05 years at (G+4) Faculty Building Vertical Extension IIT Kanpur.**

- 1 Quality of the project is of utmost importance. This shall be adhered to be in accordance with the provisions of CPWD specifications and guidelines given in the relevant paras.
- 2 Contractor has to deploy required Plant and machinery on the project. In case the contractor fails to deploy the plant and machinery whenever required and as per the direction of the Engineer-in-charge, he (Engineer-in-charge) shall be at a liberty to get the same deployed at the risk and cost of the contractor.
- 3 The contractor 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 Superintending Engineer/Executive Engineer may in his discretion, without prejudice to any other right or remedy available in law, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.

Performa of Bid Security Declaration

*(To be submitted by bidder on its Company Letterhead (scanned copy) on
<http://eprocure.gov.in/eprocure/app>)*

It is here by submitted that if I/We ----- (Name of bidder/firm/company) withdraw or modify the bids during period of validity, or if I/We ----- (Name of bidder/firm/company) are awarded the contract and I/We ----- (Name of bidder/firm/company) fail to sign the contract or to submit a performance security before the deadline defined in the tender documents, I/We ----- (Name of bidder/firm/company) will be suspended to take part in IIT Kanpur's tendering process for the period of two years from the date of occurrence of the above mentioned default."

Date:

Authorized Signatory

PART-B

QUALITY ASSURANCE OF THE WORK

Sampling of Materials:

- 1 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.
- 2 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.
- 3 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.
- 4 There shall be pre dispatch factory inspection for all major equipment's like lift.
- 5 The testing charges shall be borne by the bidder.
- 6 The visiting & lodging expenses shall be borne by the Institute and not to be loaded into the contract except the testing charges. The contractor shall only facilitate the inspection at manufacturing works. However any transportation, freight, loading & unloading of lift for testing at the manufacturing location shall be included in the price quote.
- 7 The lift manufacturer shall comply with BIS standards, duly certified by the manufacturer itself.
- 8 The manufacturer shall be complaint to the Public Procurement (Preference to make in India), Order 2017 (as amended from time to time) issued by the Department of Industrial Policy and Promotion (DIPP), ministry of Commerce and Industry.
- 9 The complete lift installation including its components, safety devices, various types of controls etc., testing, inspection, operation & maintenance shall confirm to relevant Codes, Standards code of practices, guidelines, safety rules, inspection manual (s), rules issued by Bureau of Indian standards, as amended up to the last date of receipt of tenders.
- 10 Quality standards shall conform to latest IS/ ISO-9001:2015.
- 11 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.
- 12 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.
- 13 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.
- 14 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.
 - a. 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.

16. 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.
17. The structural and architectural drawings shall at all times be properly co-related before executing any work. However, in case of any discrepancy in the item given in the schedule of quantities appended with the tender and Architectural drawings relating to the relevant item, the former shall prevail unless otherwise given in writing by the Engineer-in-charge.
18. For the purpose of recording measurements and preparing running account bills, the abbreviated nomenclature indicated in the publications Abbreviated Nomenclature of Items of DSR 2018 shall be accepted. The abbreviated nomenclature shall be taken to cover all the materials and operations as per the complete nomenclature of the relevant items in the agreement and relevant specifications.
 - a. In case of items for which abbreviated nomenclature is not available in the aforesaid publication and also in case of extra and substituted items for which abbreviated nomenclature are not provided for in the agreement, full nomenclature of item shall be reproduced in the measurement books and bill forms for running account bills.
 - b. For the final bill, however, full nomenclature of all the items shall be adopted in preparing abstract in the measurement books and in the bill forms.
19. The contractor shall take instructions from the Engineer-in-charge for stacking of materials. No excavated earth or building materials etc. shall be stacked/collected in areas where other buildings, roads, services, compound walls etc. are to be constructed.
20. Any trenching and digging for laying sewer lines/water lines/cables etc. shall be commenced by the contractor only when all men, machinery's and materials have been arranged and closing of the trench(s) thereafter shall be ensured within the least possible time. All the excavation and digging of the trenches shall be done manually as numbers of service line are passing inside the campus except in certain cases as approved by IITK. **No Hydraulic Excavator shall be allowed for earth digging work** except in certain cases as approved by IITK.
21. It shall be ensured by the contractor that no electric live wire is left exposed or unattended to avoid any accidents in this regard.
22. In case the supply of timber/steel frames/shutters for doors, windows 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.
23. 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.
24. 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.
25. 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.

26. All materials obtained from the Institute Works Department store or otherwise on receipt shall be got checked by the Engineer-in-charge of the work or his representations before use.
27. Registers for the materials to be issued by the department shall be maintained as required by the Engineer-in-charge and these shall be signed by the contractor or his authorized agent and representative of Engineer-in-charge on each day of transactions.

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-ordinator 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 an 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.

Executive Engineer

SPECIAL TERMS & CONDITIONS

1. In the Contract (as hereinafter defined) the following definitions words and expressions shall have the meaning hereby assigned to them except where the context otherwise required.
 - i) Institute shall mean the Indian Institute of Technology (IIT), Kanpur
 - ii) The President shall mean the Board of Governor, IIT Kanpur.
 - iii) The Engineers In-charge, who shall administer the work, shall mean the Executive Engineer for Eelectrical and Air-conditioning works.
 - iv) Government or Govt. of India shall mean the Indian Institute of Technology represented by its Director.
 - v) The term Director General of Works shall mean the Chairman, Building & Works Committee of the Institute.
 - vi) Accepting authority shall mean the Director, IIT Kanpur or his authorized representative.
 - vii) Superintending Engineer shall mean the Superintending Engineer of the Institute, who as overall In-charge and head of the Institute Works Department shall direct the contract.
 - viii) Site Engineers shall mean the Assistant Engineer (Electrical) & Jr. Engineer (Elect/AC) for Electrical & Air-conditioning works, appointed by the Institute Works Department.

2. 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 nor, 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, delegate 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 provided always as follows :

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

- b) 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, who shall thereupon confirm reverse or vary such decision.
3. The scope of contract comprises the supply, installation, testing & commissioning of SITC of 01 no. Passenger Gearless lifts (08 passengers capacity) and its amc for 05 years at Faculty Building Vertical extension block. 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. 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 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.

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, such shall be deemed to be instructions of the Engineer-In-charge within the scope of the contract.

4. **Contract Document:**

- 4.1 The several documents, forming the contract, are to be taken as mutually explanatory of one another and in case of ambiguities or discrepancies the same shall be explained and adjusted by the Engineer-In-Charge who shall thereupon issue to the contractor its interpretation directing in what manner the work is to be carried out. In case the contractor feels aggrieved by the interpretation of the Institute then the matter shall be referred to the Superintending Engineer and his decision shall be final, conclusive and bind on both parties.

- 4.2 The drawings etc. shall remain in the custody of the Institute. One complete sets of drawings, specification and bill of quantities shall be furnished by the Engineer-In-Charge to the contractor in such time which must not delay the progress of the construction and the Institute shall furnish copies of any additional drawings, which in their opinion may be necessary for the execution of any part of the work. One complete set shall be kept on the work site and the Engineer-In-Charge and his representatives shall be, at all reasonable times, have access to the same. The contractor shall study the drawings thoroughly before the commencement of work. In case of any discrepancy, the contractor shall seek clarification before proceeding with the works. Figured dimensions are in all case to be accepted in preference to the scaled sizes. Large scale details shall take preference over small scale one.

The contractor shall give adequate notice in writing to the Engineer-in-charge of any further drawings or specification that may be required for the execution of the works or otherwise under the contract.

The Engineer-in-charge shall have full powers and authority to supply the contractor from time to time during the progress of the work such drawings and instructions as shall be necessary for proper execution and the contractor shall carry out and be bound by the same.

- 4.3 The successful tenderer shall be required to enter into an agreement with the Institute. The Bill of Quantities & rates filled by the successful tenderer in, the General Condition of the Contract for CPWD works 2020 , CPWD specifications for Civil, Electrical ,lifts& escalators & Air-conditioning works, the special conditions, additional specifications, negotiation letter and the award letter etc. shall form part of the agreement to be signed by the successful tenderer. The cost of stamp paper and stamp duty, required for the agreement, shall be borne by the contractor.

5. **Contract Agreement:**

The contractor shall, when called upon to do so, enter into and execute a contract agreement in the form annexed as Appendix `V` with such modifications as may be necessary. The contract agreement, inclusive of its enclosures, shall remain in the custody of the Superintending Engineer, Institute Works Department, IIT Kanpur and the made available him as and when required contractor shall however be supplied, an attested copy there free of cost.

6. Canvassing in connection with tenders is prohibited and the tenders, submitted by the tenderers who resort to canvassing, are liable for rejection.
7. Tenderers shall have to sign the attached declarations and if the declaration is not found to represent a true statement of facts the contract is liable to be cancelled, and the contractor shall have no claim on the Institute.
8. Tenderers are not allow to make additions and alterations in the tender document. Any additions and alternations, if incorporated in the tender, shall be at the tender's risk since the modified tender is liable for rejection.

Conditional tenders violative of the sprit and the scope or the terms & conditions of the tender, are liable to be rejected without assigning any reasons. Tenders with any form of rebate shall be rejected summarily.

9. Water and electricity required for electrical & air-conditioning works shall be supplied free of charge.
10. Stamps duty on the security money shall also be the borne by contractor as per prevailing notification of U.P Govt.

11. Income tax shall be deducted as per prevalent law.

12. **Conditions for Electrical Works:-**

- 12.1 All chase cuttings in the wall, for recessed conduits & boxes and drilling the holes shall be done with power operated machines only. No chase shall be allowed to be cut manually with the use of hammer & chisel.
- 12.2 All cuttings in cement plaster and brick shall be made good by using cement mortar 1:3 (1 part cement, 3 part coarse sand)
- 12.3 The cut surfaces shall be repaired by an experienced mason only so as to match the repaired plaster with the original.
- 12.4 All such repaired surfaces shall be cured for 3 to 4 days to keep the surfaces wet, using water spray machine (hand/motor operated) and avoid unnecessary flooding of the area.

13. **Payment shall be regulated as under**

- a.) **90% of the tendered rate on receipt of materials at site..**
- b.) **10% of the tendered rate on testing and commissioning.**
- c.) **The corresponding deducted security (3%) from the total completed cost item wise, shall be retained by IIT Kanpur till the completion of the comprehensive warranty of the major equipment's/completion of the defect liability period of 1 year or it may be released against the Bank Guarantee of same amount for the above said period.**
- d.) **The amc payment shall be made after completion of the amc for the respective quarters. The agency should furnish the bills in respect of quarterly amc charges for providing services under the contract on 2nd week of the every next quarter.**

14. **Drawings required prior to commencement of work**

The Contractor shall within four weeks after award of the work submit the following drawings in quadruplicate for approval by the Engineer In Charge.

- Layout drawings showing general arrangement of elevators
- Schematic wiring diagrams
- Maintenance check charts and lubricating charts

These drawings shall incorporate detailed layouts of machines, motors, controllers, guide rails, counter weights, pulleys etc. Details of cut-outs, pockets, foundations etc. shall also be furnished. The Engineer In-charge of the work shall within 15 days of the submission of drawings convey comments/approval on receipt of these drawings. The Contractor shall incorporate any modifications, if found necessary by the Architect and four prints of such modified drawings shall be furnished to the Consultant within 15 days of receipt of

comments/approval by the Contractor. No modifications shall be made in drawings after the same have been approved by the Engineer in Charge/Architect without their prior consent. The manufacture shall commence work only after such approval is obtained. The Contractor shall be responsible for cost of all alteration of the works due to discrepancies or omissions in the drawings or other particulars supplied by him, whether such drawings have been approved by the Consultant or not.

15. Works Inspection and Testing of Equipment:

Prior to dispatch of the lifts, the Institute reserves the right to inspect the same 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/International Standards. Contractor shall give a reasonable notice of about 15 days for the purpose of test, and witness of all major equipment's.

The testing charges shall be borne by the bidder. The visiting & lodging expenses shall be borne by the Institute and not to be loaded into the contract except the testing charges. The contractor shall only facilitate the inspection at manufacturing works

Pre-commissioning test: All routine tests shall be carried out on the lift. Protective & measuring devices should be checked for calibration. The checklists and pre commissioning tests for different equipment's have to be provided by the lowest tenderer at the time of equipment's specification approval.

16. Rates: The work shall be treated as on works contract basis and the rates tendered shall be for complete item of work and all charges for items contingent to the work, such as packing, forwarding, insurance, freight, testing charges of lifts delivery at site for the materials to be supplied by the contractor, watch and ward of all materials at the site, labour related expenses as per relevant labour laws, testing of materials/ samples etc. excluding Goods & Service tax (GST).

NOTE:- All the excavation and digging of the trenches shall be done manually as numbers of service line are passing inside the campus except in certain cases as approved by IITK. **No Hydraulic Excavator shall be allowed for earth digging work** except in certain cases as approved by IITK.

17. Taxes & Duties:
18. Being an indivisible works contract, no other tax is payable other than GST. The GST shall be as applicable to IIT Kanpur as per Government rules.
19. The tender document contains 70 pages. No page of the tender document shall be removed, mutilated, detached, or cancelled.
20. Rates for finished works shall be given for each items separately, in both words & figures. In the event of non-compliance, the tender shall be deemed incomplete and liable for rejection.
21. The work shall be executed on the basis of the following CPWD specifications:
- i) Electrical & Lift Works:
- General specifications for Electrical Works Part-1 (Internal) 2013 with up to date corrections.

- General specifications for electrical works (external) 2013 with upto date corrections.
 - General specifications for electrical works Part-IV Sub-station- 2013with upto date corrections.
 - General specifications of Electrical part-III (Lifts & Escalators) 2003 with up to date corrections.
22. For the purpose of clause 12 of the General conditions of contract the following schedule of rates shall be applicable.
- i) Electrical Works: Electrical Works, Based upon prevailing market rates
23. The special conditions listed above shall take precedence over all above provisions of the contract. The General Condition of contract for CPWD works shall be generally followed including the clause 21 i.e. work shall not be sublet.
24. The contractor shall have to execute the work in such place and condition where other agencies will also be engaged for other works such as site grading, filling and leveling, interiors, landscape, and electrical and mechanical engineering works, etc. No claim shall be entertained due to work being executed in the above circumstances.
25. No contractor, to whom the provisions of the BOCW Act apply, shall be allowed to commence work on the campus unless he has produced the 'Registration Certificate' issued by the office of Dy. CLC (Central).
26. The contractor shall engage only such workers who are registered as beneficiaries with U.P. BOCW Welfare Board and in case of engagement of new workers; he shall ensure the submission of applications for registration of such workmen within appropriate time.
27. A certificate for administrative convenience shall be obtained from the contractor covered under BOCW Act whether he has engaged 10 or more workmen while working in the Institute and only thereafter, Cess @1% from the bills raised by him shall be deducted at source for all running works. Cess, so deducted shall be deposited with the BOCW Welfare Board.
28. As per clause 36 (I) of GCC: It should be noted that license & competent welder and fitter shall only be allowed for the piping work.
29. ***Contractor must submit post award of work within 7days complete schedule of work along with deployment details of resources, i.e. manpower and machinery. Schedule so submitted by the contractor, within the defined time period of the work, will be considered to be sacrosanct except for delays as might be considered by Engineer-in-Charge.***

SPECIAL CONDITION OF WORK

1.1 General

Work under this contract shall be executed as given in the specifications and at site whether specially shown or not. The Contractor shall carry out and complete the work under this contract in every respect in conformity with the contracts documents and with the directions of and to the specification of the Owners.

The specification is intended to cover the Design, **Supplying, installation, testing & commissioning of 01 Nos. 08 passenger gearless & Machine room less Elevator and its AMC for 05 years at (G+4) Faculty Building Vertical Extension IIT Kanpur.** *(suitable for PH/disabled person)* is not the intent to specify completely constructional features of the equipment and details of the work to be carried out but nevertheless the intent of the specification is to ensure that the equipment and the work shall conform in all respects to the relevant Bureau of Indian Standards Specifications, codes of practice, Acts and other Statutory Regulations as may be applicable and to high standards of engineering design and workmanship. The equipment and work shall perform in continuous operation in a manner acceptable to the Owners who will interpret the meaning of the specifications and the drawings and shall have the right to reject or accept any equipment or work which in their assessment is not complete to meet the requirement of this specification and/or applicable codes and standards.

1.1.2 Special Conditions of contract shall be read in conjunction with the general conditions of the contract, specifications of work, drawings and any other document forming part of this contract. For any discrepancies between the General Conditions and these Special Conditions, the provisions of Special Conditions shall prevail.

1.1.3 Wherever it is mentioned in the Specifications that the Contractor shall perform certain work or provide certain facilities, it is understood that the Contractor shall do so at his cost.

1.1.4 The materials, design and workmanship shall satisfy the relevant Indian Standard, the job Specifications contained herein and codes referred to where the job specifications stipulated requirements in addition to those contained in the Standard Codes and Specifications, these additional requirements shall also be satisfied.

1.1.5 The Contractor must get acquainted with the proposed site for the works and study specifications and conditions carefully before tendering. The work shall be executed as per programme approved by the Owners. If part of site is not available for any reason or there is some unavoidable delay in supply or materials stipulated by the Owners, the programme of construction shall be modified accordingly and the Contractor shall have no claim for any extras or compensation on this account.

1.2.0 Scope of Work

The scope of work under this specification shall include the design, manufacture, works testing, supply, storage, erection, site testing, commissioning, putting into operation, final testing and trials of the passenger elevators as per technical parameters attached with this document.

The scope work shall also include all civil works associated with erection of the equipment and making good and painting the civil works as required.

The Contractor shall include for the supply of entire materials in accordance with this specification and the whole of the work and fixing necessary for the complete installation as set down in his specification and with the accompanying schedules. All apparatus, appliances, materials or labour which may be necessary for satisfactory installation and operation of the system in accordance with the intent or purpose of the specifications shall be considered to be in scope of work of the contract and shall be furnished without extra charges, as if fully described and called for in the specifications and/or shown in plans.

1.3.0 **Specification**

The following BIS and Codes of Practice with upto date amendments will apply to the equipment and the work covered by the scope of this contract.

IS-1860-1980: Code of practice for installation & maintenance of electric Freight & Good Lifts.

IS-3534-1976: Outline dimensions of electric Lifts.

IS-4666-1986: Specification for Electric Freight and Good Lifts

IS-6383-1971: Specification of Electric Service Lifts.

IS-732-1963 :Codes of Practice for electric wiring installations (system voltage not exceeding 650 volts)

In addition the relevant clauses of the Indian Electricity Rules 1956 as amended upto date and the Indian Electricity Act 1910 shall apply. The Contractor must also take into account local and State regulations as in vogue in UP for the design and installation of Lifts.

Wherever appropriate Indian Standards are not available, relevant British and/or IEC Standards shall be applicable. BIS certified equipment shall be used as a part of the Contract.

1.4.0 **Site Conditions**

All equipment shall be suitable for satisfactory and continuous operation under the following site conditions:

Maximum 45°C 90% RH

Minimum 2°C 90% RH

1.5.0 **Authorities**

The work shall conform to all provisions of the relevant Government Legislation, Regulations and by-laws of the Central/Local Authorities and of any Companies to whose system the installation is proposed to be connected. The Contractor shall give all notices required under the said Acts, Regulations and/or by-laws. The Contractor shall be liable for any omissions and commissions in this regard.

1.6.0 Specifications and Schedules

The Specifications and Schedule of Quantities shall be considered as part of this contract and any work or materials shown in Schedule and not called for in the Specifications or vice versa, shall be executed as if specially called for in both. The drawings indicate the extent and general arrangement of the equipment, landings, hoistways etc. and area essentially diagrammatic.

The work shall be installed as indicated on the drawings. However any minor changes found essential to co-ordinate the installation of this work with other trades shall be made without any additional cost to the Owner. The data given herein is as exact as could be secured, but its complete accuracy is not guaranteed. Exact locations, distances and levels will be governed by the site conditions.

1.7.0 Departure from Specifications

Should the Contractor wish to depart from the provisions in these specifications such departure shall be listed in a separate Schedule with full particulars and reasons for the same. Unless this is done the tender shall be deemed to comply in every respect with these specifications. The Contractor should submit complete and detailed technical specification clearly describing the equipment to be supplied and its capability alongwith the bid.

1.8.0 All similar parts and/or equipment shall be interchangeable with one another.

1.9.0 Works to be done by the contractor.

In addition to the manufacturer, supply, installation, testing and commissioning of the lift including all auxiliary equipment, following works shall be deemed to be included within the scope of the work to be done by the contractor.

- All minor building work necessary for installation of equipment such as making of opening in wall/ floors, either of RCC or brick masonry etc., and restoring them to original condition and finish. The scope of minor building work includes all grouting of foundation concrete pads to be formed or made as base for supporting R.S. joists etc., grouting and anchoring of all boards clamps, supports, foundation bolts, installation in position of R.S. joists in the machine room, lift well or in the pit, such work shall exclude cutting of marble work and construction of partition wall wherever involved.
- Supply of necessary R.S. joists or angle iron support brackets etc., for installation of the lift, either in the machine room or at other places as may be necessary including their installation in position.
- All electrical works except bringing in main connection and earth connection to the machine room terminated on suitable switch fuse unit/ board. All electrical works including inter-connection from this switch / board and loop earthing from the earth bar to be provided in the machine room shall be done by the successful contractor.
- Responsibility to ensure safety of lift materials against pilferage and damage till the installation is handed over to the consignee.
- All scaffolding as may be necessary in the lift well during erection work and subsequently removed.
- Temporary barricades with caution boards at each landing to prevent accident during execution of work.

- Supply and installation of landing facia plates made of steel, car apron plates, sill support angles with necessary clamps, foundation bolts support etc., as are necessary in connection with the installation of the lift.
- Steel ladder to be provided for access to lift pit wherever required under regulations.

1.9.01 Coordination with other agencies

The successful contractor shall coordinate lift installation work with other contractor / agencies engaged in construction of building if any and exchange freely all technical information so as to make the execution of works contract smooth.

1.9.02 Completeness of tender

All fittings, equipments, units, assemblies and accessories, hardware, foundation bolts, terminal lugs for electrical connections, cable glands, junction box and items which are useful and necessary for efficient assembly in operation and installation shall be complete in all details whether such details have been mentioned in the specification or not.

1.9.03 Structural

The Owner shall provide all structural steel for the hoisting beams in the machine room only. All other structural steel shall be provided by the Contractor. These include Minor builders work, MS Steel Angles, facia plates and MS beams for fixing machine in the machine room.

1.10.0 Scaffolding

Scaffolding, minor builders work including providing dash fasteners for fixing rails, brackets etc. shall be the responsibility of Contractor.

1.10.1 Steel

Contractor shall include in his scope of work all steel requirements for machine beams, bearing plates, buffer supports, channels as required. All steel items not including but required for the installation work shall be part of the tender document.

1.10.2 Completion Certificate

On completion of the installation a certificate shall be furnished by the Contractor countersigned by the licence Supervisor under whose direct supervision the installation was carried out. This certificate shall be in the prescribed form as required by the local supply authority. The Contractor shall be responsible for getting the installation inspected and approved by the local authorities concerned.

1.10.3 Statutory Approvals

The Contractor shall submit the required applications, drawings, etc to the Corporation, lift Inspector, Electrical Inspectors, Factory Inspectors and/or any other statutory authorities and obtain the approval, licenses and/or sanctions. The final completion certificate shall be obtained by the Contractor from all statutory authorities to enable the Owners to commission the equipment or its utilization. The Contractor shall be responsible for all fees etc to be paid to the various authorities in this respect. The work shall not be deemed to have

been completed until the above approval certificates, etc have been obtained by the Contractor.

1.10.4 Spares

Contractors shall submit list of recommended spares for 5 years operation listing items with individual prices.

1.10.5 Documentation

The Contractor shall provide six sets of operation & maintenance manuals with instructions for routine and periodic maintenance.

1.10.6 Levelling

The Elevators shall be leveled by the suppliers and the required leveling accuracy maintained with 20mm thick flooring in the car to be provided by the Owners. The weight of flooring that can be accommodated in the car with guaranteed leveling as required shall be intimated in the tender.

Special Condition for Comprehensive & Maintenance

Provision of maintenance service by the contractor

The contractor shall perform the maintenance services as agreed to in the contract and in these general terms and conditions. In performing the said services, the contractor shall take all reasonable steps to maintain the equipment in proper operating condition. The contractor shall use trained and appropriately supervised personnel to perform the maintenance services shall be conducted during the normal working hours, shall send at regular intervals and as frequently as the company thinks necessary, having regards to the age, the nature and condition of the elevator (but not less than 12 times per annum), a technician to systematically inspect, adjust and lubricant the parts of the elevator to the extent necessary to maintain the elevator in satisfactory working order. If not separately agreed, any work conducted outside the normal working hours is not included in the price and shall be invoiced separately. The contractor will supply all lubricants (made as per standards of the contractor). Necessary for this purpose.

Upon notification by the costumer of a breakdown or failure in the elevator, the contractor shall send his technical team within 48 hrs.(except beyond their control) to carry out necessary repairs in order to restore the elevator to satisfactory working condition. Else, IIT Kanpur may impose penalty on the contractor on per day basis finalized by the competent authority of the Institute by assessment of loss incurred to the Institute due to delay in the rectification of the defect.

The contractor will carry out according to its standards customary annual safety test to examine all safety devices the contractor will not be required to make any other tests. The contractor will neither be required to install new attachments' nor to make replacements with parts of a defective design to the elevator whether or not recommended or directed by Insurance companies or by governmental or non governmental authorities.

In performing the services, the contractor will replace (identical or equivalent item) or rectify at its option any components of the elevator rendered defective due to normal wear and tear and arising out of ordinary and reasonable use of the elevator except for such items and conditions which are excluded hereunder as particular and general exclusions. The parts which are replaced shall become the contractor's property.

The contractor reserves the right to keep the control cubicle locked.

The equipment under contract will remain out of commissioning while the maintenance process is being carried out. No one will be allowed to use the equipment during this period.

TECHNICAL SPECIFICATION FOR ELEVATORS

1. Electric Supply

The available system of electric supply is 415 volts between phases and 230 volts between neutral & phase and neutral – 3 phase 4 wire AC 50 Hz system suitable for operation at $\pm 10\%$ of rated supply voltage. In addition for illumination and control power required for elevators and equipment shall be indicated in the tender. Power shall be provided at one point in each Machine Room at a point to be indicated by the Contractor. All subsequent electrical systems shall be the responsibility of the Contractor.

1.2 Technical Particulars

The technical particulars of the Elevators are detailed in the enclosed schedule. The schedule indicates the capacity, travel, speed, number of openings, machine room and hoist way sizes etc. Should any further information required by the Contractor the same can be obtained from the offices of the Consultants.

1.3 Driving Mechanism

1.3.1 Elevator Machine

The Elevator machine shall be suitable for 415 volts 3 phase 50 Hz AC supply with a voltage variation of $\pm 10\%$ and shall be placed directly above the hoist way upon the machine room floor slab and steel beam furnished in place by the Contractor.

The machine shall have a high efficiency and low power consumption and shall be designed to withstand the peak currents in lift duties. Anti vibration rubber pads of adequate thickness shall be used below the machine to reduce the noise and vibrations.

The elevator machine shall be worm gearless reduction type and shall consist of a motor, electromechanical brake worm gear, sheave shaft and sheave all completely mounted on a common bed plate. The worm shall be provided with ball bearings to take the end thrust and roller bearings shall be provided for the sheave shaft to ensure alignment and long bearing life. The hard alloy cast iron or steel sheave shall have rope grooves to ensure proper traction and minimum rope wear. Adequate means of lubrication shall be provided for all bearings and worm gear.

Means for manual operation of the lift car shall be made by providing winding wheel suitably marked to indicate the direction of the movement to enable the lift car to be brought to the nearest landing. There shall be a warning display for switching off electrical supply before the manual operations.

1.3.2 Brake

The electromagnetic brake shall be spring applied and electrically released. It shall come into action after the lift has come to a complete halt to hold the car in position. The brake shall operate automatically with the safety devices and release the brake manually such release requiring the action of manual force to move the lift in short stops.

1.3.3 AC Motor

The AC self lubricating motor shall be suitable for elevator use with high starting torque and low starting current. Thermostats shall be embedded in the stator winding to indicate the temperature rise in the motor. The AC motor shall have class F insulation and suitable for 210 starts per hour with a maximum temperature rise of 50°C over the ambient.

1.4 **Controls**

The Elevators control shall be AC variable voltage variable frequency (A.C.V.V.V.F). The system shall control the starting, stopping direction of motion, running of the lift motor and application of the brake and/or safety devices in the event of power failure or any other emergency. It shall be so designed as to ensure a smooth and constant acceleration and retardation under all opening conditions.

The contractor shall be wall/floor mounted, vertical totally enclosed cubicle type with hinged doors on the front and the rear to provide easy access to all components in the controller. The cubicle shall be well ventilated such that the temperature inside never exceeds the safe limits of the components at ambient room conditions in the machine room.

The controller shall operate within the supply voltage variation of plus 10% to minus 20% of the nominal voltage.

- a) Over current
- b) Under voltage
- c) Over voltage
- d) Single phasing
- e) Phase reversal

The controller shall be designed to cut off the power supply, apply the brake and bring the car to a rest in the event of any of the above failures occurring.

The Contractor must state clearly the forms of protection provide for each equipment.

If any devices of the electro mechanical type are used the same shall be equipped with arc chutes to prolong the life of contacts. Contractors must stipulate the type of devices used and the material of the contacts.

Contractors must support such offers with complete details of experience, number of lifts installed and operational in India, collaboration for equipment design and manufacture etc.

1.5 **Hoist Ropes**

Round standard steel wire ropes as per Indian standards shall be used for Lift suspension. The number and size of the hoist way ropes shall be so selected to ensure proper factor of safety minimum 10 and adequate traction for the elevator. The governor ropes shall also be wire ropes.

The Hoist way landing door shall be provided with an interlock such that:

- a) It shall not be possible for the car to be started or kept in motion until all the landing doors and the car door are locked in the closed position.

- b) It shall not be possible to open the landing door from the landing unless the Lift car is within the particular landing zone.
- c) The car doors & Hoist way landing doors open automatically as the car is stopping at a landing. The closing of the car and landing door must occur before the car is set in motion.

1.6 **Car Platform**

The car platform shall be of framed construction and designed on the basis of rated load.

1.7 **Car Enclosure**

The elevator car enclosure shall be as per parameters enclosed in the schedule of quantities. The ceiling shall have an arrangement for a cabin fan mounted on the roof of the car. Indirect fluorescent lighting shall be provided to evenly illuminate the car. The car enclosure shall be SS304 grade, hairline finish with floor 5mm thick steel chequered plate.

Car Design:

Car walls finish stainless steel, front and doors in stainless steel, mirror on rear car panel, Dimpled anti skid vinyl flooring

Car operating Panel:

Stylish brushed SS finish car operating panel, visual call confirmation, dot matrix display, car position indicator

Landing doors:

fully automatic landing doors in powder coated finish

1.8 **Car Door**

The car entrance for the elevators shall be automatic power operated SS 304 type.

1.9 **Hoist way Landing Doors**

For the hoist way doors at each landing, two mild steel painted panels centre opening horizontal sliding doors shall be provided to give a clear opening as indicated in the technical parameters. These shall be duly painted to the shade approved by the institute and suit to the site condition.

1.10 **Car and Hoist way Operations**

The car and hoist way doors shall be mechanically connected such that both move simultaneously for opening and closing. The hoist way landing door shall be provided with and interlock such that.

It shall not be possible for the car to be started or kept in motion until all the landing doors and the card door are locked in the closed position.

It shall not be possible to open the landing door from the landing unless the lift car is within the particular landing zone.

The car doors and hoist way landing doors open automatically as the car is stopping at a landing. The closing of the car and landing door must occur before the car is set in motion.

2. **Door Hangers and Tracks**

The car and the landing door shall be provided with two point suspension sheave type hangers complete with tracks sheaves and rollers shall be steel with moulded nylon collar and shall include shielded ball bearings. Tracks shall be of suitable steel section with smooth surface. The landing doors shall be complete with headers, sills, frames etc as reqd.

2.1 **Cabin Fan**

A noiseless cabin fan shall be include for all elevators.

2.2 **Emergency Light**

An emergency light unit using sealed maintenance free battery power pack and fluorescent lamp to operate automatically in case of power failure shall be provided in each elevator car.

2.3 **Alarm Bell**

An emergency alarm bell including wiring shall be provided and connected to plainly marked push button in the car operating panel. The alarm shall be provided in the Ground floor lobby if required, The Owner may at his own cost extend the alarm bell to the security/control room.

The alarm unit shall be solid state siren type operated by 2 nos. 9 volts dry batteries to give a waxing and warning siren when the alarm button in the car is pressed momentarily.

2.4 **Operation Buttons**

The following operation buttons shall be provided

2.5 **In Each Lift Car**

Stainless steel return panels of suitable thickness shall be provided on each side of the door with the following flush mounted controls on one side:-

- a) Illuminated type push buttons corresponding to the floors served. Floor nos. on push buttons shall be numbered from 1 to onward.
- b) Door open button
- c) Emergency stop button
- d) Emergency call button connected to a bell for an emergency signal
- e) Two position key operated switch for 'with attendant' and 'without attendant' operation
- f) Ventilation fan ON/OFF switch
- g) Built in intercom of the pick and speak type
- h) UP/DOWN direction display

2.6 **At Landing**

Illuminated type 'UP' and 'DOWN' push buttons at each intermediate landings and single illuminated type push buttons at terminal floors. The push buttons shall illuminated when the same is pressed to indicate that the call has been registered. The button shall remain illuminated until the call is answered.

One set of calling buttons shall be provided for a bank of two elevators

2.7 **Indications**

2.7.1 In Each Car

The following indications shall be provided in the cars:

- a) Digital car position indicator provided above door to indicate the landing at which the car is stopped or passing.
- b) Illuminate “UP” and “DOWN” arrows on the position indicator above door to indicate direction of travel.

2.17.2 At all landings

Combined hall position indicator and hall lanterns is not part of the offer. This feature is generally a standard part of the equipment for Duplex Lifts i.e. two Lifts in the same control.

2.17.3 Safety Devices

The following safety devices shall be provided:

2.17.4 Self Leveling

The Lift shall be provided with a +/- 5mm self leveling accuracy feature of the two way automatic type. The self leveling device should automatically correct for under run, over run and rope stretch.

2.17.5 Terminal & Final Limits

Terminal limit switches shall be provided to slow down and stop the car automatically at the terminal landings and final limit switches shall be furnished to automatically cut off the power and apply the brake should the car travel beyond the terminal landings.

2.17.6 Terminal Buffers

Suitable spring buffers shall be used from existing Lift.

2.17.7 Interlocking

Adequate interlocking is to be provided so that the car shall not move if the landing doors are even partially open.

2.17.8 Car Safety and Governor

The car safety shall be provided to stop the car whenever excessive descending speed is attained. The safety will be operated by a centrifugal governor located at the top of the hoist way and connected to the governor through a continuous steel rope. Suitable means shall be supplied to cut off power from the motor and apply the break on application of the safety.

2.17.8 Fireman Switch

Each elevator shall have a fireman switch glass front for access by the fireman. The operation of this switch shall cancel all calls to this Lift and will stop at the next nearest landing if traveling upwards. The doors will not open at this landing and the Lift will return to the ground floor. In case the elevator is traveling downwards when the fireman's switch is operated it will go straight to the ground floor by passing all calls enroute. The emergency stop button inside the car shall be rendered inoperative.

3. **Gearless machine:**

The gearless machine shall consist of a motor, traction sheave and break-drum or brake disc completely aligned on a single shaft. Gearless machine shall be A.C. gearless with VVVF drive.

4. **Hand winding wheel or handle:**

At times of lift stoppage due to any reasons, it shall be possible to move the lift car to the nearest landing manually. The manual operation shall be by means of winding. Wheel or handle mounted on the end of the motor shaft. The up or down direction of the movement of the car should be clearly marked on the motor or at suitable location. A warning plate written in bold signal red colour advising the maintenance staff to switch off the mains supply before releasing the break and operating the wheel is to be prominently displayed.

5. **Inter- communication system:**

Recommends for provision of either an emergency or a telephone inside the car but as a general experience it is seen that over a period of time these devices become inoperative due to one reasons or the other. Therefore, in order to have at least one device of communication functioning at all the times, as an alternative arrangement, provision of both i.e. telephone with minimum tow connections-one at the operator's room and other at guard room and the emergency signal with re-chargeable batteries as source of supply shall be made in the lift cars.

The device used for emergency signals should incorporate a feature that gives immediate feed-back to the car passengers that the device has worked properly and the signal has been passed on to the intended agency. This shall be achieved by pressing of button from control room which shall give audio signal to the passengers in the car.

6. **Emergency Power Supply for lift car:**

This shall include suitable secondary battery with trickle/boost charge arrangement and inverter power pack with necessary contactors for supplying the light fixtures in the lift car. The same battery shall also feed the alarm bell and communication equipment.

7. **Car landings:**

All the lift car landing shall be well lit to an illumination level of 150 lux and shall be free from obstructions. The control for landing lights and the sigh lights shall be tamper proof. Wherever stand by power supply is available, these lights shall be connected to standby circuits also.

8. Instructions:

Detailed instructions as specified for guidance of passengers shall be prominently displayed inside the car by contractor and outside the car at all landings by the department. The Braille signage will be posted by the department outside lift lobby at all landings for the lift meant for barrier free requirements as per specifications.

9. Levelling:

All lift (s) shall be incorporated with suitable floor leveling devices. In case of lifts with automatic power operated doors and with A.C. VVVF controller a separate level device for automatic leveling with leveling accuracy of $\pm 5\text{mm}$ shall be incorporated.

10. Counter Weight Guards:

Guards of wire metal/ mesh shall be provided in the lift pit to a suitable height above the pit floor to eliminate the possibility of injuries to the maintenance personnel.

11. Guide shoes:

Two numbers of guide shoes at the top and two numbers at the bottom shall be provided on the lift car and counter-weight.

12. Type of shoes:

For passenger lifts and bed-cum-passenger lifts

i. For speed upto 1.5 mps sliding guide shoes shall be used. Sliding guide shoes

For car shall be always flexible and for counterweight solid guide shoes can be Used upto 1.0 mps.

ii. For speeds more than 1.5 mps roller guide shoes shall be used for car and Counter weight.

13. Rope fastenings:

The ends of lift ropes shall be properly secured to the car and counter weight hitch plates as the case may be with adjustable rope shackles having individual tapers babbitt sockets, or any other suitable arrangement. Each lift rope shackle shall be fitted with a suitable shackle spring, seat washer, shackle nut & shackle nut split pin.

14. Guards for lift ropes:

Where lift ropes run round a sheave or sheaves on the car and/ or counterweight of gearless machine suitable guards shall be provided to prevent injury to maintenance personnel.

15. Number & size of ropes:

The contractor must indicate the number and size of lift ropes and governor ropes proposed to be used, their origin, type, ultimate strength and factor of safety. The contractor should furnish certificate of ropes from the rope from the rope manufacturers issued by competent authority.

16. Safety Equipments:

Every lift installation shall necessarily be provided with the following safety features:

The safety gear shall be provided in accordance with IS (part-4-Sec.4):2001, each type of car safety shall be actuated by a speed governor.

17. Governor:

The car safety shall be operated by speed governor located overhead and driven by governor rope suitable connected to the car and mounted on its own pulleys. The rope shall be maintained in tension by means of weighted or spring loaded tension sheaves located in the pit. Governor shall be provided for lifts with a travel of more than 5.5 meters. The governor rope shall be not less than 6mm in dia and shall be made of steel or phosphorbronze. These shall be in accordance with IS 14665 (part 4/sec-4):2001. Governor for car safety gears shall be adjusted to actuate the safety gear at the following speeds: -

- i. For rated speeds upto 1m/s maximum governor tripping speed shall be either 140 percent of rated speed or 0.88 m/s, whichever is higher. For rated speed above 1m/s maximum governor tripping speed shall be 115 per cent of the rated speed plus 0.25 m/s.
- ii. Minimum governor tripping speed shall be 115 per cent of the rated speed.

18. The governor shall be of “V” groove wheel design and only wheel is stopped to actuate the car safety upon a pre-determined over speed downward without damaging the rope.

19. The governor, rope and sheave shall be so located so as to minimize danger of accidental injury to the equipment.

20. The governor sheave and tension sheave shall be according to clause 2.4 and the sheave bearing shall be according to clause 2.7 of this chapter.

21. The requirements for field tests on car safety and governor and for drop tests to sliding type can safeties shall be as specified in section IV of this specifications.

22. Buffers –

Buffers shall be oil resistant rubber pad type for speeds upto 0.25 mps and spring/ oil type for speeds upto 1.5 mps and only oil type for speeds higher than 1.5 mps.

Buffers shall be suitable for installation in the space available. Buffers anchorage at pit floors shall be installed avoiding puncturing of water proofing.

Oil buffers of the car and counter weight shall be of the spring return type of gravity type.

The partial compression of spring return oil buffers when the car is in level with terminal landing will not be acceptable.

All buffers shall be tested at manufacturer’s works and a copy of the test report shall be submitted.

When the lift car rests on fully compressed buffers there shall be at least 60 cms clearance between the lowest point in its car frame and any obstruction in the pit exclusive of buffers and their supports. Similarly when the lift cars cross head is 60cm from the nearest obstruction above it, no projection on the car shall strike any part of overhead structure.

The contractor must indicate the name of buffer manufacturers, buffer stroke & certified maximum loads.

23. Door Locks:

Electro-mechanical door lock shall be provided for all the landing doors and they shall be such that the doors cannot open unless the car is at rest at the particular landing. It shall not be possible to move the car unless all the landing doors and the car door are closed and locked. This requirement however does not apply when the lift car is provided with automatic leveling devices and in such cases, it shall be permitted to move the car with both the doors open in the leveling zone for the purpose of leveling.

24. Automatic- cum-attendant operation:

i. Single automatic Push Button with/ without attendant – The operating devices for this operation shall incorporate in the car control panel, car buttons corresponding to the various landings served and single landing button at each landing, all electrically connected to controller governing floor selection, direction of travel, acceleration, retardation etc.

This system shall be so arranged that when the car is not in use, on pressing a landing call button the car shall start automatically provided all the doors are closed. During the movement of the car and also when car tops at floor landing, other landing call buttons are in-operative for a predetermined time. The pressing of a car button shall automatically start the car and sent it to the desired landing. In all the cases, the starting of the car is contingent on the establishment of landing door and car inter-lock circuits. To indicate the availability, or 'in use' light shall be place in the landing call button panel. When light shall be 'OFF' the passenger shall be able to call the car. In case of manual operated door if the lift is standing at any landing with doors open (when not in use), the pressing of the landing call button shall ring a bell, fitted at the top of car to attract the attention of the people soliciting their help for closing the lift door if any one of the them happens to be near the lift incase of power operated doors, the landing and car doors shall be arranged to open automatically when the car is parked at landing after all the calls are served and the lift is parked at any landing. The doors can remain open or alternatively if desired, the car shall be arranged to close after a pre-determined time unless closing is prevented or interpreted by the car doors re-opening device or the door open button.

The lift shall be suitable for dual operation with or without attendant by the provision of key operated transfer switch indicating 'attendant' and 'automatic' positions. During 'attendant' operations the landing call shall be disconnected from the control system and shall be connected to an annunciator in the lift car. The attendant shall then operate the car to answer the registered calls. This operation is recommended for single speed control lift for low rising building having a single lift installation.

25. Simplex Selective-Collective operation with/ without attendant:

Automatic operation by means of one button in the car for each landing level served and by up and down buttons at the landings, wherein all stops registered by the momentary actuation of the car made defined under non-selective Automatic Operation but where in the stops registered by the momentary actuation of the landing buttons are made in the order in which the landing are reached in each direction of travel (irrespective of the sequence in which the buttons have been actuated). With this type of operation, all 'up' landing calls are answered when the car is traveling in the up direction and all 'down' landing calls are answered when the car is traveling in the down direction, except in the case of the uppermost or lowermost calls which are answered as soon as they are reached in-respective if the direction of travel of the car.

26. Duplex Collective Selective Operation with/ without attendant:

The control system for this operation shall be similar to the one described under simplex selective-collective operation except that in this system there shall be tow lift car adjacent wells. It shall be arranged to co-ordinate both cars for efficient service and prevent them from answering the same calls by the provision of only one set of landing call button fixtures. It shall automatically assign each call to the car that will be in the best position to answer promptly. The system shall be so arranged that when the cars are idle, normally one car will be parked at the lower main landing with its doors closed or open and the other car shall be free car parked with the doors closed or open to the landing where it answered its last call, and shall be the one to attend to the nearest call.

Each car shall always respond to calls registered by its own car call buttons. When either car is parked out of service for any reasons the other car shall function as single car (simplex) selective collective. Besides the control system shall also arranged for independent service from inside the car.

A by-pass button (non-stop button) shall also be provided inside the car to enable the attendant to by-pass any landing if the car is full or if otherwise so required.

The two lifts shall be arranged with or without attendant operation and shall function as described using single car selective-collective operation. When the transfer switch is in the attendant position the operation of the cars shall be identical with that described for automatic operations except that:

- i. Closing of doors and starting of cars shall be initiated by the car buttons only.
- ii. Buzzers and directional lights in the car are operative, and
- iii. Landing by-pass shall be effective.

The pressing of an up or down landing call shall illuminate appropriate direction indicator in the car panel, which is to answer that call and if the doors are open shall also sound buzzers as a signal to the attendant. If both cars are parked at the lower landing the above signals shall be given to the car which has been at the floor for longest time.

27. Automatic selection of traffic programme:

The group supervisory control continuously examines traffic conditions in the building and automatically puts into operation the programme which can best cope with the demand at any particular time. This is fully automatic and requires no supervision or attendant. To suit the traffic demand in the building, suitable traffic programmes can be selected for inclusion in this control.

28. Controlling Equipment:

The movement of the car shall be electrically controlled by means of a controller located in the machine room.

29. Control circuits:

The control circuit shall be designed to the type of lift specified for safety operation. It shall not be possible to start the car unless all the car and landing doors are fully closed and landing doors locked. The circuit shall have an independent fuse protection for fault and over loads and be arranged so that earth fault or an open circuit shall not create unsafe condition. The circuit shall be so arranged that for the stoppage of the car at specified landing or for actuation of a contactor by emergency switches or operation of safety gears the system shall not depend upon the completion or maintenance of an electrical circuit to cut off power supply and apply the brakes. This requirement is not applicable to dynamic braking and speed control devices.

30. Terminal Boards:

All wiring for external control circuits shall be brought to a terminal board with means of identification of each wire. Metallic/plastic identification tags shall invariably be provided. All connections of wires to terminal boards shall be adequately clamped or screwed.

31. Auxiliary Switches:

- i. Emergency stop switches:

On top of the lift car an emergency stop switch shall be provided for use by maintenance personnel. Stop switch shall be provided in the machine room. Operation of these switches/buttons shall cancel all the registered calls and landing calls for that particular lift.

ii. Maintenance switch on top of the car

For purpose of inspection and maintenance, maintenance switch shall be provided on top of the car. The control circuitry shall be so arranged that in the event of the operation of this switch:

- a. The car speed shall be less than the rated speed not exceeding 0.85 meters/sec.
- b. The car movement shall be possible only on the application of the continuous pressure on a button. It shall be so mounted to prevent any inadvertent operation.

iii. Fireman Switch:

Fireman switch with glass to break for access shall be provided at ground or main floor for all the lifts. The operation of this switch shall isolate/ or cancel all calls to all the lifts and the lifts will stop at the next nearest landing if traveling upward. The doors will not open at this landing and the lifts will start traveling to ground floor. If these were already traveling down, they will go straight to ground floor direct without stopping enroute.

iv. Inspection facility:

An inspector's change over switch and set of test buttons shall be provided in the controller. Operation of the inspector's change over switch shall make both the car and landing buttons inoperative and permit the lift to be worked in either direction from machine room for test purposes by pressing corresponding test buttons in the controller. It shall not however interfere with the emergency stop switches inside the car or on the top of the car.

v. Safety line indicators:

If specified visual tell tale lights may be provided to monitor the conditions of faults in the safety line of the lift for easier fault finding. These indicators will remain lit when safety circuits are normal.

One indicator shall be provided for each safety on the controller. If any indicators fail to light up as the lift proceeds in its sequence of operation, there shall be visual indication of the safety line open circuit and also its location for easier fault finding.

32. Control Wiring:

i. Wiring in machine room:

Power wiring between the controller and main board controller to various landings shall be done in heavy gauge conduit or metal duct & shall conform to I.E. Rules 1956 and CPWD Specifications for electrical works. Following general principles shall be followed in wiring:

- a. i) Control cables carrying DC and power cable carrying AC shall not be run in the same conduit or metal duct and they shall be laid as per I.E. rules.
ii) Metal duct with removable inspection cover shall be preferred.
iii) in case of control cables also the harness shall be separate as far as feasible for separate functions and laid separately in suitably dimensioned metal duct or in a separate conduit such as the signaling, locking, lamp indication and safeties. Control cables for different voltages in the lift installation works should be laid as per IE. Rules.
- b. At least 5 percent with a minimum of 5 unconnected spare wires shall be available out of all the lines to be provided in the wiring harness from the midway junction box to the machine room.
- c. There shall be a master isolating switch Fuse associated with the controller heavy duty load break, quick make quick break type TP&N preferably interlocked with controller cabinet door. Isolator handle shall have provision for external locking in off position.

All relays shall be suitable for lift service and shall incorporate adequate

Contact wipe for reliable operation. Relays shall operate satisfactorily between 80 percent to 110 percent of their voltage.

Main motor contactors shall be suitable for A.C. duty. Tenderer shall be required to furnish full details of make, type, applicable standard, voltage and current rating, duty class, type

and routine tests done etc., on contactors and relays. Copies of type test certificates and other test certificates shall also be furnished by the successful tenderer.

All cables shall be with copper conductors and flame retardant or PVC insulated of appropriate size. The cables feeding motor and in heavy current flow paths shall be so selected that the size matches the protecting fuses and will not result in more than 2 percent voltage drop from the main board to the terminals of motor. Control cables shall not be less than 0.5 sq. mm. or equivalent if stranded; where installation of heavy gauge conduits present difficulties, short lengths of flexible conduits will be permitted but effective electrical continuity and earth bonding shall be ensured. Ferrules shall be slipped at the ends of all cables as per standard control wiring practice. All terminal blocks shall be suitably marked.

33. Trailing Cables:

A single trailing cable for lighting control and signal circuit is permitted, if all the conductors of this trailing cable are insulated for maximum voltage running through any one conductor of this cable. The lengths of the cables shall be adequate to prevent any strain due to movement of the car. All cables shall be properly tagged by metallic/plastic tags for identification.

Trailing cables shall run from a junction box on the top of the car to a junction box located in the shaft near mid point of travel and from these junction boxes conductors shall be run to the various locations

Trailing cables exceeding 30 meters in length shall run so that the strain on individual cable conductors will be reduced to a minimum and the cables are free from contact with the car counterweight, shaft walls or other equipment.

Trailing cables exceeding 30 meters in length shall have steel supporting fillers and shall be suspended directly by them without rubbing over other supports.

Cables less than 30 meters in length shall have no – metallic fillers and shall be suspended by looping cables around supports of porcelain spools type or equivalent.

13 per cent of the total capacity subject to a minimum of 5 wires shall be available unutilized in the trailing cable everywhere suitably distributed between various functions.

34. Earthing:

Metal frames and all metal work of the lift controller frame etc., shall be earthed with double earth leads taken to the earth bar. Looping shall be permitted if such routing is feasible. All other individual metallic frame work of components etc., shall be loop earthed.

35. Lift Rope Compensation:

The lift rope compensation for lift travel shall be provided for lift travels beyond 40m in all cases.

36. Automatic Rescue Devices (ARD):

The automatic rescue devices (ARD) meant for the purpose of bringing the lift car to the nearest landing doors are being used selectively and is generally restricted to commercial buildings having heavy traffic. However, frequent power failures being the common phenomenon, the provision of ARD shall be made in all the lifts in public buildings. The ARD shall have the following specifications:

- i. ARD should move the elevator to the nearest landing in case of power failure during normal operation of elevator.
- ii. ARD should monitor the normal power supply in the main controller and shall activate rescue operation within 10 seconds of normal power supply failure. It should bring the

elevator to the nearest floor at a slower speed than the normal run. While proceeding to the nearest floor the elevator will detect the zone and stop. After the operation is completed by the ARD the elevator is automatically switched over to normal operation as soon as normal power supply resumes.

- iii. In case the normal supply resumes during ARD in operation the elevator will continue to run in ARD mode until it reaches the nearest landing and the doors are fully opened. If normal power supply resumes when the elevator is at the landing. It will automatically be switched to normal power operation.
- iv. All the lift safeties shall remain active during the ARD mode of operation.
- v. The battery capacity should be adequate so as to operate the ARD at least seven times a day provided the duration between usages are at least 30 minutes.

Appendix-I

LIST OF APPROVED MAKES

SL.NO.	DETAILS OF EQUIPMENT AND MATERIALS	Make
1.	ELEVATORS	National/International

Appendix-II			
Technical Specification for Passenger Lift			
S. No.	Features	Technical Detail	Offered by the Bidder
1	Number of passengers	08 Passenger	
2	Rated speed (m/sec)	01 M/Sec.	
3	Rated capacity (kg)	544 kgs (for 08 passenger)	
4	Entrance	05 floors(G+4)	
5	Interior	Hairline finish Stainless Steel 304(1.5mm)	
6	Flooring	Granite Flooring (color shall be as per Institute approval)	
7	Light & Fan	LED light / fan 300mm with grill	
8	Hall position indicators and buttons	Segment LED Indicators, Tactile button along with additional Braille inscriptions	
9	Floor	G,1,2,3,4	
10	Handrail system	SS Hand railing one side at rear wall at least 30mm dia.	
11	Travel	As per site.	
12	Stops & Opening	05 floors(G+4), In front only.	
13	Lift well size	2100mm(W)x1850mm(D)(without plaster)	
14	Car size	1300mm(W)x1100mm(D)x2200mm(H)	
15	Clear opening of doors	800mm(W)x2000mm(H) Lintel2200mm	
16	Ventilation	As per manufacturer	
17	Operation	Microprocessor based Simplex Collective Selective Control with/without Attendant.	
18	Power Supply	415 Volts \pm 10%, 3 Phase, 50 Hz AC systems.	
19	Controller type	V3F (Variable Voltage Variable Frequency)	
20	Type of Machine	Gearless / Machine Room Less.	
21	Car Enclosure	Stainless steel 304(1.5mm) scratches proof (Hairline Finish) on all sides.	
22	Car door enclosure	Power operated centre opening sliding door stainless steel 304(1.5mm) hairline finish	
23	Landing door enclosure	Power operated centre opening sliding door stainless steel 304(1.5mm) hairline finish	
24	Indicators (Car Landing)	Digital Direction & Position Indicator	
25	Type of Doors	Car: Fire rated upto 120mins Centre Opening	
		Landing doors: Fire rated upto 120mins Centre Opening	
26	Construction type	Machine Room Less	
27	Emergency Car	Car lighting which turns on immediately when power fails,	

	Lighting	providing a minimum level of lighting within the car.	
28	Fire Emergency Return	Upon activation of a key switch or a building's fire alarm, all calls are canceled, all cars immediately return to a specified evacuation floor and the doors open to facilitate the safe evacuation of passengers.	
29	Emergency Landing Device (Automatic rescue Device) with audio announcer	Upon power failure, a car equipped with this function automatically moves and stops at the nearest floor using a rechargeable battery, and the doors open to facilitate the safe evacuation of passengers with audio announcer. Dry type Battery (Maintenance Free) should be used for power backup.	
30	Automatic Door Speed Control	Door load on each floor, which can depend on the type of hall doors, is monitored to adjust the door speed, thereby making the door speed consistent throughout all floors.	
31	Door Load Detector	When excessive door load has been detected while opening or closing, the doors Door Load Detector immediately reverse.	
32	Door Nudging Feature — With Buzzer	A buzzer sounds and the doors slowly close when they have remained open for longer than the preset period.	
33	Multi-beam Door Sensor	Multiple infrared-light beams cover at least 2/3 of the door height of the doors to detect passengers or objects as the doors close.	
34	Reopen with Hall Button	Closing doors can be reopened by pressing the hall button corresponding to the traveling direction of the car.	
35	Repeated Door-close	Should an obstacle prevent the doors from closing, the doors will repeatedly open and close until the obstacle is cleared from the doorway.	
36	Safety Door Edge	The sensitive door edge detects passengers or objects during door closing.	
37	Automatic Bypass	A fully-loaded car bypasses hall calls in order to maintain maximum operational efficiency.	
38	Car Fan Shut Off — Automatic	If there are no calls for a specified period, the car ventilation fan will automatically turn off to conserve energy.	

39	Car Light Shut Off — Automatic	If there are no calls for a specified period, the car lighting will automatically turn off to Conserve energy.	
40	False Call Canceling— Automatic	If the number of registered car calls does not Correspond to the car load, all calls are canceled to avoid unnecessary stops.	
41	False Call Canceling— Car Button Type Automatic	If a wrong car button is pressed, it can be canceled by quickly pressing the same button again twice.	
42	Overload Holding Stop	A buzzer sounds to alert the passengers that the car is overloaded. The doors remain open and the car will not leave that floor until enough passengers exit the car.	
43	Safe Landing	Service If a car has stopped between floors due to some equipment malfunction, the controller checks the cause, and if it is considered safe to move the car, the car will move to the nearest floor at a low speed and the doors will open.	
44	Basic Announcement Electronic	A synthetic voice (and/or buzzer) alerts Passengers inside a car that elevator operation has been temporarily interrupted by overloading or a similar cause. (Should be in Hindi & English language.)	
45	LCD / LED Position Indicator	5-7-inch LCD / LED for car operating panels shows the date and time, car position, travel direction and elevator status messages.	
46	Hall LCD / LED Position Indicator	Display 5-7-inch LCD / LED for elevator halls shows the date and time, car position, travel direction and elevator status messages.	
47	Provision of CCTV including wiring	Yes	
48	Provision of Intercom including wiring with centralized features.	Yes	
49	Make	National/International OEM*	
50	Confirming to Quality Standard	IS/ISO-9001:2015	
51	Provision of Floor announcement with all time music.	Yes	
52	Provision of Single Phase/ phase failure	Yes	

	sensing for ARD.		
53	Provision of auto-correction of Phase reversal.	Yes	

(* The bidders have to specify the make of the lift.)

APPENDIX III

Undertaking from Lift OEM's (Original Equipment Manufacturer)

The lowest tenderer shall submit alongwith the performance guarantee after the acceptance of tender, an undertaking from OEM's as at Annexure-1 regarding lift/elevator as mentioned below:

ANNEXURE – 1

Original Equipment Manufacturers (OEM) undertaking for providing **5 years of Comprehensive Maintenance services of the lift proposed to be supplied to IIT Kanpur under the above tender No..... by M/s.....**

1. We, OEM for lift/elevator do hereby give undertaking to IIT Kanpur for the 5 years of Comprehensive Annual Maintenance support through M/s.....,..... or self (OEM) lowest tenderer for the work, **“Supplying, installation, testing & commissioning of 01 Nos. 08 passenger gearless & Machine room less Elevator and its AMC for 05 years at (G+4) Faculty Building Vertical Extension IIT Kanpur”.**

1. We also give undertaking to provide maintenance/service support and all the spares to IIT Kanpur throughout the useful life of the equipment's for the passenger lift.

M/s.....

Authorized signatory with stamp.

APPENDIX IV

CONTRACT AGREEMENT FORMAT

AGREEMENT made this _____ day of _____, _____ between the Indian Institute of Technology, Kanpur incorporated as a body corporate under the Institute of technology Act 1961 (No.59 of 1961) through its Director Kanpur (hereinafter referred to as 'The Institute' "M/s....." (hereinafter referred to as 'the contractor') which expression shall include his/their respective heirs, executors, administrators and assigns of the other part.

WHEREAS _____ the _____ Institute _____ is _____ desirous _____ for "....." at Institute Campus and has caused drawings and specifications describing the work to be done and WHEREAS the said drawings as per list attached, the specifications, the Priced Schedule of Quantities, the conditions of Tender and the conditions of contract have been signed by or on behalf of the parties hereto AND WHEREAS the contractor has agreed to execute upon and subject to the conditions set fourth herein (hereinafter referred to as 'the said conditions') the work shown upon 'the said drawings' and described in 'the said specification' and 'the said Priced Schedule of Quantities at the respective rates mentioned in the Priced Schedule of Quantities.

AND WHEREAS the contractor has deposited by FDR/BG a sum of **Rs.**/- (Rupees Only) with the Institute for the due performance of this agreement.

NOW IT IS HEREBY AGREED AS FOLLOWS

1. In consideration of the payments to be made to the contractor as hereinafter provided the contractor shall upon and subject to the said conditions execute and complete the works shown upon the said drawings and such further detailed drawings as may be furnished to him by the said Institute and described in the said specification, and the said Priced Schedule of Quantities.
2. The Institute shall pay the contractor such sums as shall become payable hereunder at the times and in the manner specified in the said conditions.
3. Time is the essence of the agreement. In the event of the contractor failing to comply with this conditions he shall be liable to pay compensation as per clause 9 of the conditions of the

contract as decided by the Director of the Institute in writing which shall be final and binding on the contractor.

4. The drawings, specifications and Priced Schedule of Quantities above mentioned shall form the basis of this contract and the decision of the Director or Arbitrator or Umpire as mentioned in the conditions of contract in reference to all matters of dispute as to material, workmanship or account and as to the intended interpretation of the clause of this agreement or any other document attached here to shall be final and binding on both parties and may be made a Rule of Court.
5. The said contract comprises the work above-mentioned and all the subsidiary works connected therewith within the same site all may be ordered to be done from time to time by the said Institute even though such works may not be shown on the drawings or described in the said specifications or the Priced Schedule of Quantities.
6. The Institute reserves the right of altering the drawings and nature of the work and of adding to or omitting any items of work or of having portions of the same carried-out departmentally or otherwise and such alterations or variations shall not vitiate this contract.
7. The said conditions and Appendix thereto shall be read and construed as forming part of this Agreement and the parties hereto will respectively abide by and submit themselves to the conditions and stipulations and perform the Agreement on their parts respectively in such conditions contained.
8. All other disputes and differences except as excluded by clause 10 shall be referred to Arbitrations as per clause 55 of the said conditions of contract. The provision of the Arbitrations Act 1940 or any statutory modifications or reenactment thereof and of the rules made there under for the time being enforce shall apply to Arbitration proceedings under this clause.
9. All disputes arising out of or in any way connected with this Agreement shall be deemed to have arisen in Kanpur and only courts in Kanpur shall have jurisdiction to determine the same.
10. The several parts of this contract have been read to us and fully understood by us. IN WITNESS WHEREOF the parties hereto have set their respective hands the day and the year herein above written.

In the presence of

1.

DIRECTOR

2.

CONTRACTOR.

To be signed by the bidder and authorized signatory on behalf of IIT Kanpur

INTEGRITY AGREEMENT

This Integrity Agreement is made at _____ on this _____ day of 2022.

BETWEEN

The Director IIT Kanpur represented through the Superintending Engineer, **IWD, IIT, KANPUR** (hereinafter referred as the Principal / Owner, which expression shall unless repugnant to the meaning or context hereof include its successors and Permitted assigns) AND

..... (Name and Address of the Individual firm Company)

through (Hereinafter referred to as the

(Details of duly authorized signatory)

“Bidder/Contractor” and which expression shall unless repugnant to the meaning or Context hereof include its successors and permitted assigns)

Preamble

WHEREAS the Principal /Owner has floated the Tender (NIT No. **90/Lift/2021-22/796**) (hereafter referred to as “Tender / Bid”) and intends to award, under laid down Organization procedure, contract for **“Supplying, installation, testing & commissioning of 01 Nos. 08 passenger gearless & Machine room less Elevator and its AMC for 05 years at (G+4) Faculty Building Vertical Extension IIT Kanpur.** “hereinafter referred to as the “Contract”. AND WHEREAS the principal Owner values full compliance with all relevant laws Of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as “Integrity Pact” or “Pact”). The terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties. NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1 : Commitment of the Principal /Owner

- 1) The principal/Owner commits itself to take all measure necessary to prevent corruption and to observe the following principles:
 - (a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the tender, or the execution of the contract, demand, take a promise for or accept , for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - (b) The Principal/Owner will, during the tender process, treat all bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential additional information through which the Bidder(s) could obtain an advantage in relation to the Tender

process of the Contract execution.

- (c) The Principal/Owner shall endeavor to exclude from the tender process any person, whose conduct in the past has been of biased nature.
- 1) If the principal/owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act. 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures .

Article 2 : Commitment of the Bidder(s) /Contractor(s)

- 1) It is required that each Bidder/Contractor including their respective officers. Employees and agents) adhere to the highest ethical standards, and report to the Government/ Department all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.
- 2) The Bidder(s)/Contractor(s) commit himself to take measures necessary to prevent corruption, He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:
 - a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.
 - b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.
 - c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contractor(s) will not use improperly. (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and address of agents representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and address of foreign agents representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign or principal directly could bid in a tender but not both. Further in cases where an agent participate in a tender on behalf of one manufacture, he shall not be allowed to quote on

behalf of another manufacture along with the first manufacture in a subsequent/parallel tender for the same item.

- e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.
- 3) The Bidders(s)/Contractor(s) will not instigate third person to commit offences outlined above or be an accessory to such offences.
- 4) The Bidder(s)/Contractor(s) will not directly or through any other person or firm indulge in fraudulent practice means a willful misrepresentation or omission of facts or submission of fake /forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and or to influence the procurement process to the detriment of the government interests.
- 5) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the principle/Owner under law or the Contract or its established policies and laid down procedures, the Principle/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder Contractor accepts and undertakes to respect and uphold Principal/Owner's absolute right:

- 1) If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the contract, if already executed or exclude the Bidder/contractor from contract, award process. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. Such exclusion may be forever or for a limited period as decided by the Principal/Owner.
- 2) Forfeiture of EMD/Performance Guarantee/security Deposit: If the Principal/Owner has disqualified the Bidder(s) From the Tender process prior to the Award of the contract or terminated/determined the contract or has accrued the right to terminate/determine the contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the

Bidder/Contractor.

- 3) Criminal Liability: If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitute corruption within the meaning of IPC Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4 : Previous Transgression

- 1) The Bidder declares that no previous transgression occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
- 2) If the Bidder makes incorrect statement on this subject ,he can be disqualified from the Tender Process or action can be taken for banning of business dealing holiday listing of the Bidder/Contractor as deemed fit by the Principal/Owner.
- 3) If the Bidder Contractor can prove that he has resorted recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion revoke the exclusion prematurely.

Article 5 : Equal Treatment of all Bidders/Contractors/Subcontractors

- 1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this Agreement/Pact by any of its subcontractor's sub-vendors.
- 2) The Principal/Owner will enter into pacts on identical terms as this one with all bidders and Contactors.
- 3) The Principal/Owner will disqualify Bidders, who do not submit the duly signed Pact between the Principal/Owner and the Bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 6 : Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contract/Vendor 12 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the contract has been awarded.

If any claim is made / lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged / determined by the Competent Authority, IIT Kanpur.

Article 7 : Other Provision

- 1) This Pact is subject to Indian law, place of performance and jurisdiction is the Head quarters of the division of the Principal/Owner, who floated the Tender.
- 2) Changes and supplements need to be made in writing. Side agreements have not been made.
- 3) If the contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a company, the Pact must be signed by a representative duly authorized by board resolution.
- 4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this pact remains valid. In this case, the parties will strive to come to an agreement to their original intension.
- 5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this integrity agreement/Pact or interpretation thereof shall not be subject to arbitration.

Article 8 : LEGAL AND PRIOR RIGHTS

All right and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contract documents with regard any of the provision covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presences of following witness:

.....
 (For and behalf of Principle/Owner)

.....
 (For and on behalf of Bidder/Contractor)

WITNESSES:

1.

 (Signature, name and address)

2.

 (Signature, name and address)

Place:

Dated:

TENDER ACCEPTANCE LETTER
(To be given on Company Letter Head)

Date:

To,

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: _____

Name of Tender / Work: -

Dear Sir,

1. I / We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely:

as per your advertisement, given in the above mentioned website(s).

2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc .), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.

3. The corrigendum(s) issued from time to time by your department/ organisation too have also been taken into consideration, while submitting this acceptance letter.

4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.

5. I / We do hereby declare that our Firm has not been blacklisted/ debarred/ terminated/ banned by any Govt. Department/Public sector undertaking.

6. I / We certify that all information furnished by our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organisation shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,
(Signature of the Bidder, with Official Seal)