भारतीय प्रौघोगिकी संस्थान गांधीनगर

Indian Institute of Technology Gandhinagar

Notice Inviting Tender

Name of Work: Site Preparation for Installation of TEM Equipment at AB-6/110 at IIT Gandhinagar, Palaj. (SH: Civil works)

NIT No. 06/IITGN/IWD-II /2018-19

OFFICE MEMORANDUM

No. 06 /IITGN/IWD-II/2018-19

Notice Inviting Tender for the following work has been approved for Rs. 13,27,459/-

1.	Name of Work	:	Site Preparation for Installation of TEM Equipment at AB-6/110 at IIT Gandhinagar, Palaj. (SH : Civil works)
2.	N. I. T. No	:	06 /IITGN/IWD-II/2018-19
3.	Head of Account	:	Minor Civil Work : Academic Block

Superintending Engineer
Indian Institute of Technology Gandhinagar

Copy along with NIT forwarded to:

1. Director, IIT Gandhinagar
2. Notice Board, IIT Gandhinagar.

Superintending Engineer
Indian Institute of Technology Gandhinagar

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Tender Notice

The Superintending Engineer, IIT Gandhinagar, Palaj, Gandhinagar invites item rate bids on behalf of Director, IITGN in two bid system for the following work:

NIT No.	**06/IITGN/IWD-II/2018-19/**
Name of Work	Site Preparation for Installation of TEM Equipment at AB-6/110 at IIT Gandhinagar, Palaj. (SH : Civil works)
Eligibility	
Estimated Cost	Rs. 13,27,459/-
Earnest Money	Rs 26550/-
Period of completion	2 Months
Last time and date of submission of bid	**Up to 15:00 hrs on 05.03.2019**

भारतीय प्रौघोगिकी संस्थान गांधीनगर

INDIAN INSTITUTE OF TECHNOLOGY GANDHINAGAR

INFORMATION & INSTRUCTIONS FOR BIDDERS FOR TENDERING

The Superintending Engineer, Indian Institute of Technology Gandhinagar (IITGN), Academic Block No. 03/306C, IIT Gandhinagar, Palaj, Gandhinagar, Gujarat 382355 on behalf of the Director, IIT Gandhinagar invites the item rate bid, in two bid system from CPWD enlisted contractors of appropriate class in composite category in two bid system for the following work:

Sl. No.	NIT No.	Name of Work	Estimated Cost	Earnest Money	Period of Completion	Last date & Time of Submission of Tender	Sale period of Tender	Time & date of opening of Tender (First Bid)
1	06/IITGN/IWD-II/2018-19	Site Preparation for Installation of TEM Equipment at AB-6/110 at IIT Gandhinagar, Palaj. (SH : Civil works)	Rs. 1327459/-	Rs 26550/-	02 (Two) Months	05.03.2019 Upto 15:00 hrs	Downloaded from http://www.iitgn.ac.in/tender_bwd.htm	05.03.2019 at 15:30 hrs

1. The firm/Contractors who fulfilled the following requirement shall be eligible to apply :
   a. Copies of GST Tax registration, PAN card, Bank Account details.
2. The tenderers are required to submit tenders in two parts. Each part is to be submitted in separate envelops and duly sealed. All the two envelops may be stapled together.

Part-I Shall contain EMD, Documents, and supporting eligibility criteria. Please note that the other parts will be opened only if EMD and eligibility criterion is approved by the competent authority. Experience Certificates will be signed by the officers of not below the rank of Executive Engineer in case of Government departments/ Government Undertakings. In case of Private organizations, certificates should be accompanied with respective TDS certificates.

Part-II Shall contain Price Bids and NIT document signed.

(i) Eligibility documents to be opened in presence of tenderers who may be present at **15.30 hours on 05.03.2019 in office of the Superintending Engineer, Building & Works Department, Indian Institute of Technology Gandhinagar, Academic Block-3/306C, Palaj ,Gandhinagar- Gujarat- 382355**. (Phone No.079-2395-1152)

1. The intending bidder must read the terms and conditions of CPWD-6 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
2. Information and Instructions for bidders posted on the website shall form part of this bid document.
3. Bid documents, consisting of plans, specifications, the schedule of quantities of items to be executed and set of terms and conditions of the contract can be seen and down loaded from website http://www.iitgn.ac.in/tender_bwd.htm
4. Any downloading from the website will be at the sole risk and responsibility of the user. IIT Gandhinagar will not be responsible for delay / difficulty / inaccessibility of downloading facility for any reason whatsoever. Any clarification on the content of NIT/ Tender document can be referred to the Superintending Engineer, IIT Gandhinagar by making a written requested within 4 days of start date after publication of tender in website. Effort will be made to issue clarification in this connection in writing in next days by IIT Gandhinagar.
5. Corrigendum / Addendum to this tender if any will be uploaded on website mentioned above. This may kindly be noted by bidders / prospective bidders.
6. IIT Gandhinagar reserves the right to reject any or all the tenders, in part or full, without assigning reason thereof.
7. Contractor must ensure to quote rate of each item in the column meant for quoting rate both in figures and words.

List of Documents to be submitted within the period of bid submission:

1. **EMD** in form of Demand Draft or Pay order or Banker's Cheque or Deposit at call Receipt of any Scheduled Bank towards cost of bid document and EMD in favour of **IIT Gandhinagar.**
2. **Copy of Registration in CPWD.**
3. Certificates of **Work Experience(s)**.
4. Certificate of Registration for **GST, PAN card, Bank account Details.**

Superintending Engineer

IIT Gandhinagar

CPWD-6 FOR TENDERING

1. Item rate bids are invited on behalf of the Director, IIT Gandhinagar from Reputed CPWD enlisted contractors of appropriate class in composite category and firms / contractors of repute in two bid system for the work of the following work:

NAME OK WORK: Site Preparation for Installation of TEM Equipment at AB-6/110 at IIT Gandhinagar, Palaj. (SH : Civil works)

2. The work is estimated to cost **Rs. 13,27,459/-.** This estimated cost, however, is given merely as a rough guide.
3. Agreement shall be drawn with the successful bidders on prescribed Form No. CPWD-8 (or other Standard Form as mentioned), which is available as a Govt. of India Publication (and also available on website www.cpwd.govt.in. Bidders shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
4. The time allowed for carrying out the work will be **02 (Two) 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 bid documents.
5. The site for the work is available.
6. The bid 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 the website www.cpwd.govt.in
7. **Earnest Money** shall be paid in the form of Demand Draft drawn in favour of IIT, Gandhinagar payable at Gandhinagar.
8. Copy of Enlistment Order, certificate(s) of work experience, DD for earnest money, DD for cost of bid document and other documents as specified in the press notice shall be deposited in a separate envelopes marked as "Other Documents" within the specified bid period. The tender document with financial quote shall be placed in another envelope marked as "Tender Document".

Both the envelopes shall be placed in another envelope with due mention of Name of work, date & time of opening of bids and to be submitted in the office of Superintending Engineer on or

before last date & time of submission of bid. The last date of submission is and up to **15:00 hrs. on 05.03.2019.** The documents submitted shall be opened at **15:30 hrs on 05.03.2019.**

9. The bid submitted shall become invalid and cost of bid processing fee shall not be refunded if :

   (i) The bidders are found ineligible.

   (ii) The bidders do not submit all the documents (including GST tax registration as stipulated in the bid document.

   (iii) The bidder does not submit requisite documents.

10. The contractor, whose bid is accepted, will be required to furnish **performance guarantee of 5% (Five Percent)** of the bid amount within the period specified in Schedule-F. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs.10000/-) or Deposit at Call receipt of any scheduled bank/Banker's cheque of any scheduled bank/ Demand Draft of any scheduled bank/Pay order of any Scheduled Bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F' including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor.

11. Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidders shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidder shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to

him by IIT Gandhinagar and local conditions and other factors having a bearing on the execution of the work.

12. The competent authority on behalf of the Director of IITGN, Gandhinagar does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.The competent authority on behalf of Director of IITGN, Gandhinagar reserves to himself the right of accepting the whole or any part of the bid and the bidders shall be bound to perform the same at the rate quoted.

13. No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.

14. The bid for the works shall remain open for acceptance for a period of 30 days from the date of opening of bid. If any bidders withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then the IIT shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further, the bidders shall not be allowed to participate in the re-bidding process of the work.

15. This notice inviting bid shall form a part of the contract document. The successful bidders/ contractor, on acceptance of his bid by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:

    a) The Notice Inviting Tender, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.

    b) Standard CPWD Form-8 or other Standard CPWD Form as applicable.

18. The contractors shall quote same rates for the identical items which may inadvertently appear in more than one place if different rates are quoted by the tenderers for such identical items, the same shall be rationalized by considering the lowest quoted rate for such items, for evaluation and acceptance of tender.

19. If a tenderer quotes Nil rates against each item in item rate tender or does not quote any percentage above/below on the total amount of the tender or any section / sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.

20. Rate quoted should be net and inclusive of all taxes, Nothing extra shall be payable.

To,

……..,

……..,

……..

Sub: NIT No.……for the work ……

Dear Sir,

It is hereby declared that IITGN is committed to follow the principle of transparency, equity and competitiveness in public procurement.

The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the integrity Agreement, which is an integral part of tender/bid documents, failing which the tenderer / bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the IITGN.

Yours faithfully,

Superintending Engineer

To

The Superintending Engineer

IIT Gandhinagar

Sub: Submission of Tender for the work of _____

Dear Sir,

I / We acknowledge that IITGN is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender / bid document.

I / We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I / We will sign the enclosed Integrity Agreement, which is an integral part of tender documents, failing which I / We will stand disqualified from the tendering process. I / We acknowledge that THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE of this condition of the NIT.

I / We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender / bid is finally accepted by department. I / We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article-1 of the enclosed Integrity Agreement.

I / We acknowledge that in the event of my / our failure to sign and accept the Integrity Agreement, while submitting the tender / bid, IITGN shall have unqualified, absolute and unfettered right to disqualify the tenderer / bidder and reject the tender / bid is accordance with terms and conditions of the tender / bid.

Yours faithfully,

(Duly authorized signatory of the Tenderer / Bidder)

To be signed by the bidder and same signatory competent / authorised to sign the relevant contract on behalf of IIT Gandhinagar

INTEGRITY AGREEMENT

This Integrity Agreement is made at ..... on this.....day of.....20...

BETWEEN

Director IITGN, Gandhinagar represented through Superintending Engineer, IITGN, (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 ..... (here-in-after 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.....) (here-in-after referred to as "Tender/Bid") and intends to award, under laid down organizational procedure, contract for.....

(Name of work) Here-in-after 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 measures 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 or the Contract execution.

   (c) The Principal / Owner shall endeavour to exclude from the Tender process any person, whose conduct in the past has been of biased nature.

2) 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 all 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) / Contract(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 addresses of agents/representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

e) The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose (with each tender as per Performa enclosed) 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 Bidder(s) / Contractor(s) will not instigate third persons 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 wilful 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 Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal / 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 the 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 future contract award processes. 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 constitutes corruption within the meaning of Indian Penal code (IPC) / Prevention of Corruption 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 transgressions 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 dealings/ 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 Sub- contractors/sub-vendors.
2) The Principal / Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.
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 Contractor / 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, CPWD.

Article 7- Other Provisions

1) This Pact is subject to Indian Law, place of performance and jurisdiction is the Headquarters of the Division of the Principal / Owner, who has floated the Tender.
2) Changes and supplements need to be made in writing. Side agreements have not been made. 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.
3) 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 intensions.
4) 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 there of shall not be subject to arbitration.

Article 8- LEGAL AND PRIOR RIGHTS

All rights 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 / Contact documents with regard any of the provisions 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 presence of following witnesses:

.....

(For and on behalf of Principal/Owner)

.....

(For and on behalf of Bidder/Contractor)

WITNESSES:

1. ..... (Signature, name and address)
2. ..... (Signature, name and address)

Place: -

Dated: -

BANK GUARANTEE BOND	IITGN

Form of Earnest Money Deposit

Bank Guarantee Bond

WHEREAS, contractor ……. (Name of contractor) (here in after called "the contractor") has submitted his tender dated …….. (Date) for the construction of ……. (Name of work) (here in after called "the Tender")

KNOW ALL PEOPLE by these presents that we ……. (Name of bank) having our registered office at ……. (here in after called "the Bank") are bound unto …….. (Name and Division of Superintending Engineer) (here in after called "the Engineer-in-charge") in the sum of Rs. ……. (Rs. in words ……..) for which payment well and truly to be made to the said Engineer-in-charge the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank thus ……..day of ……..20…..

THE CONDITIONS of this obligation are:

(1) If after tender opening the contractor withdraws, his tender during the period of validity of tender (including extended validity of tender) specified in the Form of Tender;

(2) If the contractor having been notified of the acceptance of his tender by the Engineer-in-Charge:

(a) fails or refuses to execute the Form of Agreement in accordance with the instructions to contractor, if required;

OR

(b) fails or refuses to furnish the Performance Guarantee, in accordance with the provisions of tender document and instructions to contractor.

OR

(c) fails or refuses to start the work, in accordance with the provisions of the contract and instructions to contractor,

OR

(d) fails or refuses to submit fresh Bank Guarantee on an equal amount of this Bank Guarantee, against Security Deposit after award of contract.

We undertake to pay to the Engineer-in-charge up to the above amount upon receipt of his first written demand, without the Engineer-in-Charge having to substantiates his demand, provided that in his demand the Engineer-in-Charge will note that the amount claimed by his is due to him owing to the occurrence of one or any of the above conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date* …….. after the deadline for submission of tender as such deadline is stated in the instructions to contractor or as it may be extended by the Engineer-in-Charge, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

DATE…….. SIGNATURE OF THE BANK

WITNESS …… SEAL

(SIGNATURE, NAME AND ADDRESS)

*Date to be worked out on the basis of validity period of 6 months from last date of receipt of tender.

INDIAN INSTITUTE OF TECHNOLOGY, GANDHINAGAR

Item Rate Tender & Contract for Works

(A) Tender for the work of:

NAME OK WORK: Site Preparation for Installation of TEM Equipment at AB-6/110 at IIT Gandhinagar, Palaj. (SH : Civil works)

To be submitted by **15:00 Hrs on 05.03.2019** to **The Superintending Engineer, Academic Block no 3/306C, Building and Works, IIT Gandhinagar, Palaj Gandhinagar-382355. (Gujarat).**

(i) To be opened in presence of tenderers who may be present at **15:30 Hrs on 05.03.2019** in the office of the **Superintending Engineer, Building and Works Unit, IITGN, Gandhinagar.**

(ii) Issued to Downloaded from www.iitgn.ac.in

Signature of officer issuing the documents: - .....

Designation: - .....

Date of Issue: …….

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 President of India within the time specified in Schedule ‘F’ viz., schedule of quantities and in accordance in all respect with the specifications, designs, drawing and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respect of accordance with, such conditions so far as applicable.

A sum of Rs.26550-is hereby forwarded in Demand Draft in favour of IIT, Gandhinagar payable at Gandhinagar as earnest money. If I/We, fail to furnish the prescribed performance guarantee within prescribed period. I/We agree that the Director IITGN or his representative, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that Director IITGN or his representative in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in **Clause 12.2and 12.3** of the tender form. Further, I/We agree that in case of forfeiture of Earnest Money & Performance Guarantee as aforesaid. I/We shall be debarred for participation in the re-tendering process of the work.

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

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**

Witness: - **Postal Address**

Address: -

Occupation: -

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for an on behalf of the Director IIT Gandhinagar (Director IITGN) 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 Director IITGN

Signature: -……

Dated: -Designation: - ……...

Estimated Cost of work : Rs 1327459/-

i) Earnest Money : Rs26550/-

(To be Returned after receiving of Performance Guarantee)

(ii) Performance Guarantee : 5% of tendered value

(iii) Security Deposit : 2.5% of tendered value

SCHEDULE 'A'

Schedule of quantities (attached)

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 be contractor	Place of issue
1	2	3	4	5
		NIL		

SCHEDULE 'C'

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: - Nil

SCHEDULE 'E'

Reference to General Conditions of contract: - GCC-2014, Corrected up to date.

SCHEDULE 'F'

GENERAL RULES & DIRECTIONS:

(i) Officer inviting tender: The Superintending Engineer, IITGN

Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3:

DEFINITIONS:

2(v)	Engineer -in- Charge	:	As appointed by Superintending Engineer, IITGN.
2(viii)	Accepting Authority	:	Superintending Engineer, IITGN.
2(x)	Percentage on cost of materials and Labour to cover all overheads and profits	:	15%
2(xi)	Standard Schedule of Rates	:	Delhi Schedule of Rates-2016 (Civil Works) with correction slips up to date and Market rate.
2(xii)	Department	:	Building and Works Unit, IITGN
9(ii)	Standard CPWD Contract Form	:	GCC-2014 CPWD Form-8 modified& Corrected up to date.

Clause 1

(i)	Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance	:	07 days
(ii)	Maximum allowable extension with late fee @0.1% per day of performance guarantee amount beyond the period provided in (i) above	:	05 days

Clause 2

Authority for fixing compensation under Clause- 2	:	Director, IIT, Gandhinagar.

Clause 2A

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

Clause 5

Mile stone(s) as per Table given below:

S. No.	Description of Milestone (Financial)	Time allowed in days (from date of start)	Amount to be withheld in case of non-achievement of mile stone
In the event of not achieving the necessary progress as assessed from the running payment, 1.25% of the tender value of work will be withheld for failure of each mile stone.			

Time allowed for execution of work: 02 (Two) Months.

Authority to decide:

(i) Extension of Time: **Superintending Engineer, IITGN**

(ii) Rescheduling of Mile-stones: **Superintending Engineer, IITGN**

Clause 5.2

Nature of Hindrance Register : Physical

Clause 5.2 : Not Applicable

Clause 6, 6A

Clause applicable - (6 or 6A) : **6A.**

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 is Rs. 10 Lakh

Clause 10A

List of testing equipment to be provided by the contractor at site lab: Not Applicable

Clause 10B (ii)

Whether **Clause 10 B (ii)** shall be applicable : **No**

Clause 10C

Component of labour expressed as percent of value of work : **40 %**

Clause 10CA - NA

S. No.	Material covered under this clause	Nearest Materials (other than cement, reinforcement bars and the structural steel)	Base price of all materials covered

		for which All India Wholesale Price Index to be followed	under clause 10 CA*
1	Cement		
2.	Steel reinforcement (TMT bars FE-500D) from primary producers.		

Clause 10 CC

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

Schedule of component of other Materials, Labour, POL etc. for price escalation.

Component of Civil (except materials covered under **Clause 10CA)**/ Electrical construction Materials

Expressed as percentage of total value of work: X m (Not applicable)….%

Component of Labour:

Expressed as percentage of total value of work: Y (Not applicable) ....%

Component of P.O.L.:

Expressed as percentage of total value of work: Z (Not applicable) ....%

Clause 11

Specifications to be followed for execution of work:

CPWD General Specification for electrical work Part-1 (Internal)-2013 & CPWD specification 2009

Clause 12

Type of Work : Original Work

12.2. & 12.3: Deviation Limit beyond which clauses12.2 & 12.3 shall apply for building work: **50% (Fifty) Percentage**

12.5: Deviation Limit beyond which Clause-12.2 & 12.3 shall apply for Foundation Work : **Not Applicable**

Clause 16

Competent Authority for deciding reduced rates: **Superintending Engineer, IIT Gandhinagar**

Clause 18

List of mandatory machinery, tools & plants to be deployed by the contractor at site:

Not Applicable

Clause25

Constitution of Dispute Redressal Committee (DRC)	**Competent Authority to appoint DRC**
DRC shall constitute one Chairman and two members.	Director, IITGN, Gandhinagar

Clause 36 (i)

Requirement of Technical Representative(s) and recovery Rate:

Sr. No	Minimum Qualification of Technical Representative	Discipline	Designation (Principal/ 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.	Diploma Holder	Civil	P. T. R.	2 years	1	15000/- Per month	(Fifteen thousand only.)

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

Clause 42

(i) (a) Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of **Delhi Schedule of Rates- 2016** printed by C.P.W.D.

(ii) Variations permissible on theoretical quantities:

(a) Cement:

For works with estimated cost put to tender not more than Rs. 5 lakhs: 3% plus/minus.

For works with estimated cost put to tender more than Rs.5 lakhs: 2% plus/minus.

(b) Bitumen All Works: 2.5% **plus & only &**

		Nil on minus side.
(c)	Steel Reinforcement and structural Steel Sections for each diameter, section and Category	2% plus/minus
(d)	All other materials	Nil

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

Sr. No.	Description of Item	Rates in figures and words at which recovery shall be made from the contractor	
		Excess beyond permissible variation	Less use beyond permissible variation
1.	Cement	Nil	*Rs. 4730/MT
2.	Steel Reinforcement	Nil	*Rs.51700/MT
*Subject to acceptance of quality of work by the Competent Authority .			

GENERAL SPECIFICATIONS

1.0 Unless otherwise specified, CPWD Specifications-2009, Vol-I & II (Civil) CPWD Specifications-2013 (Electrical) with up to date correction slips shall be parts of this tender. Any additional item of work if taken up subsequently shall also conform to the relevant CPWD Specifications mentioned above.

2.0 1.1 Wherever any reference to any Indian Standard Specification occurs in the documents relating to this contract, the same shall be inclusive of all amendments, issued thereto or revision thereof, if any, up to the date of receipt of tenders.

1.2 All the Material used shall be of Approved Make.

1.3 The work shall be executed and measured as per metric dimensions given in the schedule of quantities, drawing etc. (FPS units wherever indicated are for guidance only).

ADDITIONAL CONDITIONS

2.1 GENERAL

2.1.1 In case of any difference or discrepancy between the description of items as given in the schedule of quantities, particular specifications for individual items of work (including special conditions) and I.S. Codes etc., the following order of preference shall be observed :

2.1.1.1 Description of items as given in Schedule of quantities

2.1.1.2 Particular specifications

2.1.1.3 Special conditions

2.1.1.4 Additional Conditions

2.1.1.5 Working drawings

2.1.1.6 CPWD Specifications 2009 Vol-1 & 2 including correction slips issued up to the last date of uploading/submission of tender.

2.1.1.7 General Conditions of Contract for CPWD works

2.1.1.8 I.S. Codes

2.1.1.9 ASTM, BS, or other foreign origin code mentioned in tender document

2.1.1.10 Decision of Engineer-in-Charge

2.1.1.11 Sound Engineering practices or well established local construction practices

Note: Unless otherwise specified, CPWD Specifications 2009 Volume I & II with corrections slips till the last date of tender submission shall be followed in general. Any additional item of work, if taken up subsequently, shall also conform to the relevant CPWD Specifications mentioned above.

2.1.2 The work shall be carried out in accordance with the Architectural drawings and structural drawings, to be issued from time to time, by the Engineer-in-Charge. Before commencement of any item of work, the contractor shall correlate all the relevant architectural and structural drawings issued for the work and satisfy himself that the information available from there is complete and unambiguous. The discrepancy, if any, shall be brought to the notice of the Engineer-in-Charge before execution of the work. The contractor alone shall be responsible for any loss or damage occurring by the commencement of work on the basis of any erroneous and

or incomplete information.

2.1.3 The contractor shall be responsible for the watch and ward / guard of the buildings, safety of all fittings and fixtures including sanitary and water supply fittings and fixtures provided by him against pilferage and breakage during the period of installations and thereafter till the building is physically handed over to the IITGN. No extra payment shall be made on this account.

2.1.4 For works below ground level the contractor shall keep that area free from water. If dewatering or bailing out of water is required the contractor shall do it at his cost and nothing extra shall be paid except otherwise provided in the items of schedule of quantities.

2.1.5 Results of sub-surface investigations conducted at site are indicated in extracts of the soil investigation report attached. This information about the soil and sub-soil water conditions is being made available to the tenderer, in good faith, for guidance only and the tenderer is advised to obtain details directly as may be considered necessary by him before quoting rates in the tender. No claim whatsoever on account of any discrepancy between the sub- surface strata conditions that may be actually encountered at the time of execution of the work and those given in these tender documents, in-accuracy or interpretation thereof shall be entertained from the Contractor under any circumstances. The ground water table is a variable condition and the information given in the report is only indicative and it may vary from time to time.

2.1.6 Excavated earth shall be property of IITGN and shall not be disposed off without approval of Engineer in charge. Any legal or financial implications resulting out of disposal of earth shall be sole responsibility of the contractor.

2.1.7 The Contractor shall make all necessary arrangements for protecting from rains, fog or likewise extreme weather conditions, the work already executed and for carrying out the further work, during monsoon including providing and fixing temporary shelters, protections etc. Nothing extra shall be payable on this account. Also, no claims for hindrance shall be entertained on this account.

2.1.8 In case of flooding of site on account of rain or any other cause and any consequent damage, whatsoever, no claim financially or otherwise shall be entertained not withstanding any other provisions elsewhere in the contract agreement. Also, the Contractor shall make good, at his own cost, the damages caused, if any. Further, no claims for hindrance shall be entertained on this account.

2.1.9 The contractor will take reasonable precaution to prevent his workmen and employees from removing and damaging any flora (plant/vegetation) from the project area.

2.2 Tools and Plants

2.2.1 The bidder should own constructions equipment as per clause 18 of Schedule-F required for the proper and timely execution of the work. Nothing extra shall be paid on this account.

2.2.2 No tools and plants including any special T&P etc. shall be supplied by the Department and the contractor shall have to make his own arrangements at his own cost. No claim of hindrance (or any other claim) shall be entertained on this account.

2.2.3 The contractor shall do proper sequencing of the various activities by suitably staggering the activities within various pockets in the plot so as to achieve early completion. The agency may deploy adequate equipment, machinery and labour as required for the completion of the entire work within the stipulated period specified. Also ancillary facilities shall be provided by contractor commensurate with requirement to complete the entire work within the stipulated period. Nothing extra shall be payable on this account. Adequate number/sets of equipment in working condition, along with adequate stand-by arrangements, shall be deployed during entire construction period. It shall be ensured by the Contractor that all the equipment, Tools & Plants, machineries etc. provided by him are maintained in proper working conditions at all times during the progress of the work and till the completion of the work. Further, all the constructional tools, plants, equipment and machineries provided by the contractor, on site of work or his work shop for this work, shall be exclusively intended for use in the construction of this work and they shall not be shifted / removed from site without the permission of the Engineer-in-Charge.

2.3 Royalty

2.3.1 Royalty at the prevalent rates shall be paid by the contractor or the RMC supplier as per the terms of supply between them, on all materials such as boulders, metals, all sizes stone aggregates, brick aggregates, coarse and fine sand, moorum, river sand, gravels and bajri etc. collected by him for the execution of the work, directly to the revenue authority of the state government concerned. Further, contractor needs to submit proof of submission of full royalty to the state government or local authority. Nothing extra shall be payable on this account.

2.3.2 Preservation and Conservation Measures

Existing drains, pipes, cables, over-head wires, sewer lines, water lines and similar services encountered in the course of the execution of work shall be protected against the damage by the contractor, at his own expense, for which nothing is payable. The contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services.

All fossils, coins, articles of value of antiquity, structures and other remains or things of geological or archaeological interest discovered on project location during excavation/construction shall be the property of the Government, and shall be dealt with as per provisions of the relevant legislation. The contractor will take reasonable precaution to prevent his workmen or any other persons from removing and damaging any such article or thing. He will, immediately upon discovery thereof and before removal acquaint the Engineer-in-charge of such discovery and carry out the official instructions of Engineer-in- charge for dealing with the same, till then all work shall be carried out in a way so as not to disturb/ damage such article or thing.

2.4 RESPONSIBILITY

2.4.1 The Contractor shall keep himself fully informed of all relevant acts and laws of the Central & State Governments, orders, decrees of statutory bodies, tribunals having any jurisdiction or authority, which in any manner may affect those engaged or employed and anything related to carrying out the work. All the rules & regulations and bye-laws laid down by District Collector / Gandhinagar Municipal Corporation / Gandhinagar Urban Development Authority and any other statutory bodies shall be adhered to, by the contractor, during the execution of work. The Contractor shall also adhere to all traffic restrictions notified by the local authorities. The water charges (for municipal water connection as well as tanker water) shall be borne by the contractor. Also, if the contractor obtains water connection for the drinking purposes from the municipal authorities or any other statutory body, the consequent sewerage charges shall be borne by the contractor. All statutory taxes, levies, charges (including water and sewerage charges, charges for temporary service connections and / or any other charges) payable to such authorities for carrying out the work, shall be borne by the Contractor. The Contractor shall arrange to give all notices as required by any statutory / regulatory authority and shall pay to such authority all the fees that is required to be paid for the execution of work. He shall protect and indemnify the Department/ IITGN and its officials & employees against any claim and /or liability arising out of violations of any such laws, ordinances, orders, decrees, by himself or by his employees or his authorized representatives. Nothing extra shall be payable on these accounts.

2.4.2 The fee payable to statutory authorities for obtaining the various permanent service connections and Building Use Certificate for the building shall be borne by the Department/ IITGN.

2.4.3 The contractor shall assume all liability, financial or otherwise in connection with this contract and shall protect and indemnify the Department from any and all damages and claims that may arise on any account. The Contractor shall indemnify the Department

against all claims in respect of patent rights, royalties, design, trademarks of name or other protected rights, damages to adjacent buildings, roads or members of public, in course of execution of work or any other reasons whatsoever, and shall himself defend all actions arising from such claims and shall indemnify the Department in all respect from such actions, costs and expenses. Nothing extra shall be payable on this account.

2.4.4 The contractor shall keep himself fully informed of all acts and laws of the Central Government and Government of Gujarat, all local bye laws, ordinances, rules and regulations and all orders and decree of bodies or, tribunals having any jurisdiction or authority which in any manner affect those engaged or employed on the work or which in any way affect the conduct of the works. Contractor shall at all times, observe and comply with all such laws, ordinances, rules, regulations, orders and decrees, and shall give all notices and pay out of his own money any fees or charges to which he may be liable. He shall protect and indemnify the Department/ IITGN and its officers and employees against any claim or liability arising out of violations of any such law, ordinances, legislations, order or decree, whether by himself or by his employees & authorized representatives.

2.5 CO-OPERATION WITH OTHER CONTRACTORS/SPECIALIZED AGENCIES/SUB-CONTRACTORS

2.5.1 The contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants or occupants of the adjacent properties and to the public in general .The Contractor shall take all care, as not to damage any other adjacent property or other services running adjacent to the plot. If any damage is done, the same shall be made good by the contractor at his own cost and to the entire satisfaction of the Engineer-in-Charge. The contractor shall use such methodology and equipments for execution of the work, so as to cause minimum environmental pollution of any kind during construction, to have minimum construction time and minimum inconvenience to road users and to the occupants of the buildings on the adjacent plot and public in general, etc. He shall make good at his own cost and to the entire satisfaction of the Engineer-in-Charge any damage to roads, paths, cross drainage works or public or private property whatsoever caused, due to the execution of the work or by traffic brought thereon, by the Contractor. Further, the contractor shall take all precautions to abide by the environmental related restrictions imposed by Gujarat state Pollution control board, Govt. of Gujarat as well as prevent any pollution of streams, ravines, river bed and waterways. All waste orsuperfluous materials shall be transported by the Contractor, entirely to the satisfaction of the Engineer-in-Charge. Utmost care shall be taken to keep the noise level to the barest minimum so that no disturbance as far as possible is caused to the occupants / users of adjoining buildings. No claim what so ever on account of site constraints mentioned above or any other site constraints, such

as distance from Gandhinagar city as approximately 6 km, lack of public transport, 6 km distance from Fast Moving Consumer Goods (FMCG) market, inadequate availability of skilled, semi-skilled or unskilled workers in the near vicinity, non-availability of construction machinery spare parts and any other constraints not specifically stated here, shall be entertained from the contractor. Therefore, the Tenderers are advised to visit site and get first-hand information of site constraints. Accordingly, they should quote their tenders. Nothing extra shall be payable on this account.

2.5.2 The contractor shall cooperate with and provide the facilities to the sub-contractors and other agencies working at site for smooth execution of the work. The contractor shall indemnify the Department/ IITGN against any claim(s) arising out of such disputes. The contractor shall :

2.5.2.1 Allow use of scaffolding, toilets, sheds etc.

2.5.2.2 Properly co-ordinate their work with the work of other Contractors.

2.5.2.3 Provide control lines and benchmarks to his Sub-Contractors and the other Contractors.

2.5.2.4 Provide electricity and water at mutually agreed rates.

2.5.2.5 Provide hoist and crane facilities for lifting material at mutually agreed rates.

2.5.2.6 Co-ordinate with other contractors for leaving inserts, making chases, alignment of services etc. at site.

2.5.2.7 Adjust work schedule and site activities in consultation with the Engineer-in- Charge and other contractors to suit the overall schedule completion.

2.5.2.8 Resolve the disputes with other contractors / sub-contractors amicably and the Engineer-in-Charge shall not be made intermediary or arbitrator.

2.5.3 The work should be planned in a systematic manner so as to ensure proper co-ordination of various disciplines viz. sanitary & water supply, drainage, rain water harvesting, electrical, fire fighting, information technology, communication & electronics and any other services.

2.5.4 Other agencies will also simultaneously execute and install the works of air-conditioning, , Electrical equipment Installation etc. for the work and the contractor shall afford necessary facilities for the same. The contractor shall leave such recesses, holes, openings

trenches etc. as may be required for such related works (for which inserts, sleeves, brackets, conduits, base plates, clamps etc. shall be supplied free of cost by the department unless

otherwise specifically mentioned) and the contractor shall fix the same at time of casting of concrete, stone work and brick work, if required, and nothing extra shall be payable on this account.

2.5.5 The contractor shall conduct his work, so as not to interfere with or hinder the progress or completion of the work being performed by other contractor(s) or by the Engineer-in-Charge and shall as far as possible arrange his work and shall place and dispose off the materials being used or removed so as not to interfere with the operations of other contractor or he shall arrange his work with that of the others in an acceptable and in a proper –o -ordination manner and shall perform it in proper sequence to the complete satisfaction of others.

2.5.6 Specialized Agencies

2.5.6.1 The tenderer must associate with himself, agencies of the appropriate eligibility to tender for each of specialized nature of items / work listed below individually. Such works shall be got executed only through associated agencies specialized in these fields. The tenderer whose tender is accepted shall indicate the name(s) of his associated specialized agencies those fulfilling the eligibility criteria laid down below after award of work and atleast 30 days before commencement of such items / work for the approval of the Engineer in charge whose decision shall be final and binding. If the tenderer himself fulfils the eligibility criteria laid down for associated specialized agencies, then the tenderer shall not require to associate with himself the associated specialized agency.

2.5.6.2 It shall be the responsibility of main contractor to sort out any dispute / litigation with the Specialized Agencies without any time & cost overrun to the Department. The main contractor shall be solely responsible for settling any dispute / litigation arising out of his agreement with the Specialized Agencies. The contractor shall ensure that the work shall not suffer on account of litigation/ dispute between him and the specialized agencies / sub- contractor(s). No claim of hindrance in the work shall be entertained from the Contractor on this account. No extension of time shall be granted and no claim what so ever, of any kind, shall be entertained from the Contractor on account of delay attributable to the selection/rejection of the Specialized Agencies.

2.6 RATES

2.6.1 The rates quoted by the contractor are deemed to be inclusive of site clearance, setting out work, profile, setting lay out on ground, establishment of reference bench mark(s), installing various signage, taking spot levels, survey with total station, construction of all safety

and protection devices, compulsory use of helmet and safety shoes, and other appropriate safety gadgets by workers, imparting continuous training for all the workers, barriers, preparatory works, construction of clean, hygienic and well ventilated workers housings in sufficient numbers as per drawing supplied by Engineer in charge, working during monsoon or odd season, working beyond normal hours, working at all depths, height, lead, lift, levels and location etc. and any other unforeseen but essential incidental works required to complete this work. Nothing extra shall be payable on this account and no extension of time for completion of work shall be granted on these accounts.

2.6.2 The rates quoted by the tenderer shall be firm and inclusive of all taxes and levies including GST.

2.6.3 No foreign exchange shall be made available by the Department for importing (purchase) of equipment, plants, machinery, materials of any kind or any other items required to be carried out during execution of the work. No delay and no claim of any kind shall be entertained from the Contractor, on account of variation in the foreign exchange rate.

2.6.4 All ancillary and incidental facilities required for execution of work like labour camp, stores, fabrication yard, offices for Contractor, watch and ward, temporary ramp required to be made for working at the basement level, temporary structure for plants and machineries, water storage tanks, installation and consumption charges of temporary electricity, telephone, water etc. required for execution of the work, liaison and pursuing for obtaining various No Objection Certificates, completion certificates from local bodies etc., protection works, testing facilities / laboratory at site of work, facilities for all field tests and for taking samples etc. during execution or any other activity which is necessary (for execution of work and as directed by Engineer-in-Charge), shall be deemed to be included in rates quoted by the Contractor, for various items in the schedule of quantities. Nothing extra shall be payable on these accounts. Before start of the work, the Contractor shall submit to the Engineer-in-Charge, a site / construction yard layout, specifying areas for construction, site office, positioning of machinery, material yard, cement and other storage, steel fabrication yard, site laboratory, water tank, etc. IITGN shall provide rent free piece of land for construction of these facilities at Palaj campus for the duration of this work.

2.6.5 For completing the work in time, the contractor might be required to work in two or more shifts (including night shifts). No claim whatsoever shall be entertained on this account, not with-standing the fact that the contractor may have to pay extra amounts for any reason, to the labourers and other staff engaged directly or indirectly on the work according to the provisions of the labour and other statutory bodies regulations and the agreement entered upon by the contractor with them.

2.6.6 All material shall only be brought at site as per program finalized with the Engineer-in- Charge. Any pre-delivery of the material not required for immediate consumption shall not be accepted and thus not paid for.

2.6.7 DEALING WITH INCONSISTENT RATES

The contractors shall quote same rates for the identical items which may inadvertently appear in more than one place if different rates are quoted by the tenderers for such identical items, the same shall be rationalized by considering the lowest quoted rate for such items, for evaluation and acceptance of tender.

2.7 SAFETY PRACTICES

2.7.1 **WARNING/ CAUTION BOARDS**: All temporary warning / caution boards / glow signage display such as "Construction Work in Progress“, "Keep Away", “No Parking”, Diversions & protective Barricades etc. shall be provided and displayed during day time by the Contractor, wherever required and as directed by the Engineer-in-Charge. These glow signage and red lights shall be suitably illuminated during night also. The Contractor shall be solely responsible for damage and accident caused, if any, due to negligence on his part. Also he shall ensure that no hindrance, as far as possible, is caused to general traffic during execution of the work. This signage shall be dismantled & taken away by the Contractor after the completion of work, only after approval of the Engineer-in-Charge. Nothing extra shall be payable on this account.

2.7.2 **SIGN BOARDS**: The contractor shall provide and erect a display board of size and shape as required and paint over it, in a legible and workman like manner, the details about the salient features of the project, as required by the Engineer-in-Charge. The Contractor shall fabricate and put up a sign board in an approved location and to an approved design indicating name of the project, client / owner, architects, structural consultants, Department etc. besides providing space for names of other Contractors, Sub-Contractors and specialized agencies. Nothing extra shall be payable on this account.

2.7.3 Necessary protective and safety equipment shall be provided to the Site Engineer, Supervisory staff, labour and technical staff of the contractor by the contractor at his own cost and to be used at site.

2.7.4 No inflammable materials including P.O.L shall be allowed to be stored in huge quantity at site. Only limited quantity of P.O.L may be allowed to be stored at site subject to the compliance of all rules / instructions issued by the relevant authorities and as per the direction of Engineer-in-Charge in this regard. Also all precautions and safety measures shall be taken by the contractor for safe handling of the P.O.L products stored at site. All consequences on account of

unsafe handling of P.O.L shall be borne by the Contractor.

2.8 QUALITY ASSURANCE

2.8.1 The proposed building is a prestigious project and quality of work is of paramount importance. Contractor shall have to engage well-experienced skilled labour and deploy modern T&P and other equipment to execute the work. Many items like exposed finish form work, specialized flooring work, Polysulphide / P.U. sealant and backer rod fixing in expansion joints, factory made door- window shutters, proper slope maintaining in toilet units, sanitary- water supply installation, textured finishing, grit plastering with aluminium channel insertions, water proofing treatment with APP, Extruded Polystyrene insulation boards, china mosaic on terrace and chemical treatment in toilet drops will specially require engagement of skilled workers having experience particularly in execution of such items.

2.8.2 The contractor shall ensure quality construction in a planned and time bound manner. Any sub-standard material / work beyond set out tolerance limit shall be summarily rejected by the Engineer-in-charge & contractor shall be bound to replace / remove such sub-standard / defective work immediately. If any material, even though approved by Engineer-In-Charge is found defective or not conforming to specifications shall be replaced / removed by the contractor at his own risk & cost.

2.8.3 In addition to the supervision of work by IITGN engineers, the Architects deployed by the IITGN shall also be carrying out regular and periodic inspection of the ongoing activities in the work and deficiencies, shortcomings, inferior workmanship pointed out by them shall be communicated by IITGN engineers to the contractor. Upon receipt of instructions from Engineer-in-Charge these are also to be made good by necessary improvement, rectification, replacement upto his complete satisfaction. Special attention shall be paid towards line and level of internal and external plastering, exposed smooth surface of RCC members by providing fresh shuttering plates, rubberized linings to all the shuttering joints, accurate joinery work in wooden doors and windows, thinnest joints in stone / tiling / cladding work, non-hollowness in floor and dado tiles work, protection of scratches over flooring by impounding layer of plaster of Paris, water tight pipe linings, absence of hollow

Vertical joints in brick masonry, proper compaction of filled up earth etc to achieve an Institution of International standard and up keeping of quality assurance shall be of paramount importance, as such.

2.8.4 The contractor shall submit, within 07 days after the date of award of work, a detailed and complete method statement for the execution, testing and Quality Assurance, of

such items of works, as directed by the Engineer-in-Charge. All the materials to be used in the work, to give the finished work complete in all respects, shall comply with the requirements of the specifications and shall pass all the tests required as per specifications as applicable or such specifications / standards as directed by the Engineer-in-Charge. However, keeping the Quality Assurance in mind, the Contractor shall submit, on request from the Engineer-in- Charge, his own Quality Assurance procedures for basic materials and such items, to be followed during the execution of the work, for approval of the Engineer-in-Charge.

2.8.5 All materials and fittings brought by the contractor to the site for use shall conform to the samples approved by the Engineer-in-charge which shall be preserved till the completion of the work. If a particular brand of material is specified in the item of work in Schedule of Quantity, the same shall be used after getting the same approved from Engineer-in-Charge. Wherever brand / quality of material is not specified in the item of work, the contractor shall submit the samples as per suggested list of brand names given in the tender document / particular specifications for approval of Engineer-in-Charge. For all other items, materials and fittings of ISI Marked shall be used with the approval of Engineer-in-Charge. Wherever ISI Marked material / fittings are not available, the contractor shall submit samples of materials / fittings manufactured by firms of repute conforming to relevant specifications or IS codes and use the same only after getting the approval of Engineer-in-Charge.

2.8.6 The contractor shall procure and provide all the materials from the manufacturers / suppliers as per the list attached with the tender documents, as per the item description and particular specifications for the work. The equivalent brand for any item shall be permitted to be used in the work, only when the specified make is not available. This is, however, subject to documentary evidence produced by the contactor for non-availability of the brand specified and also subject to independent verification by the Engineer-in-Charge. In exceptional cases, where such approval is required, the decision of Engineer-in-Charge as regards equivalent make of the material shall be final and binding on the Contractor. No claim, whatsoever, of any kind shall be entertained from the contractor on this account. Nothing extra shall be payable on this account. Also, the material shall be procured only after written approval of the Engineer-in-Charge.

2.8.7 All materials whether obtained from Govt. stores or otherwise shall be got checked by the Engineer-in-Charge or his authorized supervisory staff on receipt of the same at site before use.

2.8.8 The tests, as necessary, shall be conducted in the laboratory approved by the Engineer-in- Charge. The samples shall be taken for carrying out all or any of the tests stipulated in the particular specifications and as directed by the Engineer-in-Charge or his authorized

representative.

2.8.9 All the registers of tests carried out at Construction Site or in outside laboratories and all material at site (MAS) registers including cement register shall be maintained by the contractor which shall be issued to the contractor by Engineer-in-Charge. All the entries in the registers will be made by the designated Engineering Staff of the contractor and same should be regularly reviewed by JE/AE/AEE/EE. Contractor shall be responsible for safe custody of all the test registers.

2.8.10 The contractor shall at his own risk and cost make all arrangements and shall provide all such facilities including material and labour, the Engineer-in-Charge may require for collecting, preparing, forwarding the required number of samples for testing as per the frequency of test stipulated in the contract specifications or as considered necessary by the Engineer-in-Charge, at such time and to such places, as directed by the Engineer-in- Charge. Nothing extra shall be payable for the above.

2.8.11 The contractor or his authorized representative shall associate in collection, preparation, forwarding and testing of such samples. In case he or his authorized representative is not present or does not associate him, the result of such tests and consequences thereon shall be binding on the contractor .The contractor or his authorized representative shall remain in contact with the Engineer-in-Charge or his authorized representative associated for all such operations. No claim of payment or claim of any other kind, whatsoever, shall be entertained from the contractor.

2.8.12 All the testing charges shall be borne by the contractor.

2.8.13 All the hidden items such as water supply lines, drainage pipes, conduits, sewers etc. are to be properly tested as per the design conditions before covering and their measurements in computerized measurement book duly test checked shall be deposited with Engineer in charge or his authorized representative, prior to hiding these items.

2.8.14 Water tanks, taps, sanitary, water supply and drainage pipes, fittings and accessories should conform to byelaws and municipal body / corporation where CPWD Specifications are not available. The contractor should engage licensed plumbers for the work and get the materials (fixtures/fittings) tested by the Municipal Body/Corporation authorities wherever required at his own cost.

2.8.15 The contractor shall give performance test of the entire installation(s) as per the

standing specifications before the work is finally accepted and nothing extra whatsoever shall be payable to the contractor for the test.

2.8.16 The contractor shall have to execute guarantee bonds in respect of water proofing / anti termite treatment works as per Proforma enclosed.

2.8.17 The contractor shall depute Site Engineer & skilled workers as required for the work. He shall submit organization chart along with details of Engineers and supervisory staff. It shall be ensured that all decision making powers shall be available to the representatives of the contractor at Gandhinagar itself to avoid any likely delays on this account. The contractor shall also furnish list of persons for specialized works to be executed for various items of work. The contractor shall identify and deploy key persons having qualifications and experience in the similar and other major works, as per the field of their expertise. If during the course of execution of work, the Engineer-in-Charge is of the opinion that the deployed staff is not sufficient or not well experienced; the Contractor shall deploy more staff or better-experienced staff at site to complete the work with quality and in stipulated time limit.

2.8.18 The contractor shall maintain all the work in good condition till the completion of entire work. The contractor shall be responsible for and shall make good, all damages and repairs, rendered necessary due to fire, rain, traffic, floods or any other causes. The Engineer-in-Charge shall not be responsible for any claims for injuries to person/workmen or for structural damage to property happening from any neglect, default, want of proper care or misconduct on the part of the contractor or of any other of his representatives, in his employment during the execution of the work. The compensation, if any, shall be paid directly to the Department / authority / persons concerned, by the Contractor at his own cost.

2.8.19 The contractor shall arrange electricity at his own cost for testing of the various electrical installations as directed by Engineer-in-Charge and for the consumption by the contractor for executing the work. Also all the water required for testing various electrical installations, testing water supply, sanitary and drainage lines, water proofing of underground sump, overhead tanks, water proofing treatment etc. shall be arranged by the contractor at his own cost. Nothing extra shall be payable on this account.

2.9 SUBMISSION AND DOCUMENTATION

2.9.1 The contractor shall display all permissions, licenses, registration certificates, bar charts, other statements etc under various labour laws and other regulations applicable to the works, at his site office.

2.9.2 The contractor shall make available four (04) sets of completed Building Drawings, “As Built Drawings” along with literatures, manuals, warranty certificates etc. of various installed fittings, fixtures and equipment for the completed projects. This shall be the prerequisite for payment of final bill.

2.9.3 The contractor shall make available three (03) sets of all drawings of internal and external services i.e. Water Supply, Sanitary line and Drainage lines. This shall be the prerequisite for payment of final bill. These drawings shall have the following information:

2.9.3.1 Run off for all piping and their diameters including soil, waste pipes and vertical stacks.

2.9.3.2 Ground and invert level of all drainage pipes together with locations of all manholes and connections, up to outfall.

2.9.3.3 Run off for all water supply lines with diameters location of control valves, access panels etc.

2.9.4 The contractor shall make available four (04) sets of computerized Standard Measurement Books (SMBs) having measurement of all the permanent standing in a building.

2.9.5 The Performance Guarantee shall not be released to the contractor until the aforesaid drawings are submitted to the Engineer-in-Charge

2.9.6 The contractor will submit computerized measurement sheet for the work carried out by him for making payment as per Clause-6A of the CPWD General Conditions of Contract 2010(with correction slips upto the last date of submission of tender). For casting of RCC members and other hidden items the corrected and duly test checked measurement sheets of reinforcement or that of other hidden items shall be deposited with Engineer in charge or his authorized representative, before casting of RCC or other hidden items. The delay in submission of corrected and duly checked measurement sheet may, therefore, delay casting of RCC or execution of hidden item for which no hindrance shall be recorded.

2.9.7 To avoid delay, contractor should submit all samples well in advance so as to give timely orders for procurement.

2.9.8 Program Chart:

The contractor shall prepare an integrated program chart including civil as well as E & M activities for the execution of work, showing clearly all activities from the start of work to completion, with details of manpower, equipment and machinery required for the fulfillment of the program within the stipulated period and submit the same for approval of the Engineer-in-Charge within fifteen

days of the award of the work. These shall be submitted by the contractor through electronic media besides forwarding hard copies of the same. The integrated program chart so submitted should not have any discrepancy with the physical milestones attached in the contract agreement. The program chart should include the following: -

2.9.8.1 Descriptive note explaining sequence of various activities.

2.9.8.2 Network (PERT/CPM/BAR CHART) prepared on MS project which will indicate resources in financial terms, manpower and specialized equipment for every important stage.

2.9.8.3 Program for procurement of materials by the contractor.

2.9.8.4 Program for arranging and deployment of manpower both skilled and unskilled so as to achieve targeted progress.

2.9.8.5 Program of procurement of machinery / equipment having adequate capacity, commensurate with the quantum of work to be done within the stipulated period, by the contractor.

2.9.8.6 Program for achieving fortnightly micro milestones and periodic milestones.

2.9.9 If at any time, it appears to the Engineer-in-Charge that the actual progress of work does not conform to the approved program referred above, the contractor shall produce a revised program showing the modifications to the approved program by additional inputs to ensure completion of the work within the stipulated time.

2.9.10 The submission for approval by the Engineer-in-Charge of such program or the furnishing of such particulars shall not relieve the contractor of any of his duties or responsibilities under the contract. This is without prejudice to the right of Engineer-in-Charge to take action against the contractor as per terms and conditions of the agreement.

2.9.11 Apart from the above integrated program chart, the contractor shall be required to submit fortnightly progress report of the work in a computerized form on 1st and 16th of every month. The progress report shall contain the following, apart from whatever else may be required as specified:

2.9.11.1 Construction schedule of the various components of the work through a bar chart for the next two fortnights (or as may be specified), showing the micro-milestone/milestones, targeted tasks (including material and labour requirement) and up to date progress.

2.9.11.2 Progress chart of the various components of the work that are planned and achieved, for the fortnight as well as cumulative up to the fortnight under reckoning, with reason

for deviations, if any in a tabular format.

2.9.11.3 Plant and machinery statement, indicating those deployed in the work.

2.9.11.4 Man-power statement indicating:

2.9.11.4.1 Individually the names of all the staff deployed on the work, along with their designations.

2.9.11.4.2 No. of skilled workers (trade wise) and total no. of unskilled workers deployed on the work and their location of deployment i.e. blocks.

2.9.11.5 Financial statement, indicating the broad details of all the running account payment received up to date, such as gross value of work done, advances taken, recoveries effected, amount withheld, net payments details of cheque payment received, extra/substituted/deviation items if any, etc.

2.10. TEMPORARY WATER/ ELECTRICITY/ TELEPHONE CONNECTION

2.10.1 Arrangement of temporary telephone connection, water and electricity required by contractor, shall be made by him at his own cost and also necessary permissions shall be obtained by him directly from concerned authorities, under intimation to the Department. Also, all initial cost and running charges, and security deposit, if any, in this regard shall be borne by him. The contractor shall abide by all the rules/ bye laws applicable in this regard and he shall be solely responsible for any penalty on account of violation of any of the rules/ byelaws in this regard. Nothing extra shall be payable on this account.

2.10.2 The contractor shall be responsible for maintenance and watch and ward of the complete installation and water / electricity meter and shall also be responsible for any pilferage, theft, damage, penalty etc in this regard. The contractor shall indemnify the Department against any claim arising out of pilferage, theft, damage, penalty etc. whatsoever on this account. Security deposit for the work shall be released only after No Dues Certificates are obtained from the local Authorities from whom temporary electric/ water / telephone connection have been obtained by the contractor. Nothing extra shall be payable on this account.

2.10.3 The Department shall in no way be responsible for either any delay in getting electric and/or water and/or telephone connections for carrying out the work or not getting connections at all. No claim of delay or any other kind, whatsoever, on this account shall be entertained from the contractor. Also contingency arrangement of stand-by water & electric supply shall be made by the contractor for commencement and smooth progress of the work so that work does not suffer on account of power failure or disconnection or not getting connection at all. No claim of any kind whatsoever shall be entertained on this account from the contractor. Nothing extra shall be

payable on this account.

2.11. TRAFFIC ARRANGEMENTS

2.11.1 The whole plot of land designated for IITGN is vast in size wherein certain identified traffic routes need to be followed by contractor to cart materials in the campus. Haphazard plying of vehicles shall be avoided. Horticultural activities, tree plantation, Nursery plantation shall be taken up in the campus along with constructional activities, as such, care shall be taken to avoid damages to these. Certain existing trees, recently planted trees including tree guards and irrigation water supply piping system can be located nearby work site, hence, while taking up excavation activities, trees as well as their root zones be protected and the stacking of excavated earth shall be made in such a way that neither plants are buried nor damaged. The initial survey, demarcation of roads and various buildings have been made in the campus and pickets etc are fixed at locations which shall not be disturbed or damaged by vehicular movement or manual tampering, else the same shall be made good by the contractor at his own. In case of failure to comply with the above requirements the damage caused shall be made good at cost of contractor and the cost so incurred and assessed by Engineer-in-Charge shall be recovered from running account bill of contractor.

2.11.2 In event of any restriction being imposed by the Department, traffic or any other statutory authority having control over the project, on the working or movement of Labour, materials, etc, the contractor shall strictly follow all such restrictions or instructions issued regarding the same and nothing extra shall be payable to the contractor on account of such restrictions or instructions. No delay or claims of any kind shall be entertained from the contractor on this account. The loss of time on this account, if any, shall have to be made up by the contractor by generating and deploying additional resources etc. Nothing extra shall be payable on this account.

2.12. CLEANLINESS OF SITE

2.12.1 The contractor shall not stack building material / malba / muck on the land or road of the local development authority or on the land owned by the others, as the case may be. So the muck, rubbish etc. shall be removed periodically as directed by the Engineer-in-Charge, from the site of work to the approved dumping grounds as per the local byelaws and regulations of the concerned authorities and all necessary permissions in this regard from the local bodies shall be obtained by the contractor. Nothing extra shall be payable on this account. In case, the contractor is found stacking the building material / malba as stated above, the contractor shall be liable to pay the stacking charges / penalty as may be levied by the local body or any other authority and also to face penal action as per the rules, regulations and bye-laws of such body or authority. The

Engineer-in-Charge shall be at liberty to recover, such sums due but not paid to the concerned authorities on the above counts, from any sums due to the contractor including amount of the Security Deposit and performance guarantee in respect of this contract agreement.

2.12.2 The contractor shall take instructions from the Engineer-in-Charge regarding collection and stacking of materials at any place. No excavated earth or building rubbish shall be stacked on areas where other buildings, roads, services and compound walls are to be constructed.

2.12.3 The site of work shall be always kept clean due to constraints of space and to avoid any nuisance to the users of buildings in the adjacent plots. The contractor shall take all care to prevent any water- logging at site. The waste water, slush etc. shall not be allowed to be collected at site. It may be directly pumped into the creek with prior approval of the concerned authorities. For discharge into public drainage system, necessary permission shall be obtained from relevant authorities after paying the necessary charges, if any, directly to the authorities. The work shall be carried out in such a way that the area is kept clean and tidy. All the fees/charges in this regard shall be borne by the Contractor. Nothing extra shall be payable on this account.

2.13. INSPECTION OF WORK

2.13.1 In addition to the provisions of relevant clauses of the contract, the work shall also be open to inspection by the Superintending Engineer, IITGN and other senior officers of IITGN in addition of the Engineer-in-charge and his authorized representative. The contractor shall at times during the usual working hours and at all times at which reasonable notices of the intention of the Engineer-in-charge or other officers as stated above to visit the works shall have been given to the contractor, either himself be present to receive the orders and instructions or have a responsible representative duly accredited in writing, to be present for that purpose.

2.13.1.1 Keep plastic / cloth mounted one sets of building drawings.

2.13.1.2 Set of Helmets and safety shoes for safety.

2.14. SETTING OUT

2.14.1 The contractor shall carry out survey of the work area, at his own cost, setting out the layout of building in consultation with the Engineer-in-Charge & proceed further. Any discrepancy between the architectural drawings and actual layout at site shall be brought to the notice of the Engineer-in-Charge. It shall be responsibility of the contractor to ensure correct setting out of alignment. Total station survey instruments only shall be used for layout, fixing boundaries, and centre lines, etc., along with theodolites. Nothing extra shall be payable

on this account.

2.14.2 The contractor shall establish, maintain and assume responsibility for grades, lines, levels and benchmarks. He shall report any errors or inconsistencies regarding grades, lines, levels, dimensions etc. to the Engineer-in-Charge before commencing work. Commencement of work shall be regarded as the Contractor‟s acceptance of such grades, lines, levels, and dimensions and no claim shall be entertained at a later date e for any errors found.

2.14.3 If at any time, any error appears due to grades, lines, levels and benchmarks during the progress of the work, the contractor shall, at his own expense rectify such error, if so required, to the satisfaction of the Engineer-in-Charge. Nothing extra shall be payable on this account.

2.14.4 Though the site levels are indicated in the drawings the contractor shall ascertain and confirm the site levels with respect to benchmark from the concerned authorities. The contractor shall protect and maintain temporary/permanent benchmarks at the site of work throughout the execution of work. These benchmarks shall be got checked by the Engineer-in-Charge or his authorized representatives. The work at different stages shall be checked with reference to bench marks maintained for the said purpose. Nothing extra shall be payable on this account.

2.14.5 The approval by the Engineer-in-Charge, of the setting out by the contractor, shall not relieve the contractor of any of his responsibilities and obligation to rectify the errors/ defects, if any, which may be found at any stage during the progress of the work or after the completion of the work.

2.14.6 The contractor shall be entirely and exclusively responsible for the horizontal, vertical and other alignments, the level and correctness of every part of the work and shall rectify effectively any errors or imperfections therein. Such rectifications shall be carried out by the contractor at his own cost to the entire satisfaction of the Engineer-in- Charge.

2.15 SCAFFOLDING / SHUTTERING

Wherever required for the execution of work, all the scaffolding shall be provided and suitably fixed by the contractor. It shall be provided strictly with steel double scaffolding system, suitably braced for stability, with all the accessories, gangways, etc. with adjustable suitable working platforms to access the areas with ease for working and inspection. It shall be designed to take all incidental loads. It should cater to the safety features for workmen. Nothing extra shall be

payable on this account. It shall be ensured that no damage is caused to any structure due to the scaffolding.

Only steel shuttering, unless otherwise specified, with suitably designed steel frame supporting system is to be used in the work. The contractor shall ensure that there shall be no leakage at formwork joints and there shall be no movement at joints or bending of the formwork under pressure of the concrete. Nothing extra shall be paid on this account.

2.16 PRODUCT DELIVERY, STORAGE AND HANDLING OF CHEMICALS

2.16.1 The contractor shall construct storage space for Chemicals materials to ensure that the storage conditions are as recommended by the manufactures.

2.16.2 All the materials shall be procured and delivered in sealed containers with labels legible and intact.

2.16.3 All the chemicals {polymers, epoxy, water proofing compound, plasticizer, Polysulphide, SBR based elastomeric, APP (Atactic Polypropylene Polymer), all exterior and interior paints, polish etc.) shall be procured in convenient packs say 20 litres/Kgs.} capacity packing only or as approved by the Engineer-in-Charge, and not in bigger capacity containers, say 200 litre (Kgs.) drums unless otherwise specifically permitted by the Engineer-in-Charge. One sample from each lot of the chemical procured by the contractor shall be tested in a laboratory as approved by the Engineer-in-charge

2.16.4 All material required for the execution of the work shall be got approved, procured and deposited with the Departmental supervisory staff. The materials shall be kept in joint custody of the contractor and the Department. The watch and ward of such material shall, however, remain to be the responsibility of the contractor and no claim, whatsoever, on this account shall be entertained. Different containers of each chemical shall be serially numbered on packing and also consumed in that order. Day- to-Day account of receipt, issue and balance shall be regulated by the Department and proper account shall be maintained at site of work in the prescribed form as per the standard practice.

2.16.5 All the chemicals shall be procured by the contractor directly from the manufacturer. In exceptional circumstances, the contractor may be allowed to procure the materials from the authorized dealers of the manufacturers, if specifically permitted by the Engineer-in-Charge.

2.16.6 The original copies of challan/cash memos towards the quantity of various chemicals procured shall be made available by the contractor at the request from the Engineer-in- Charge and a copy of the same shall be kept in record.

2.16.7 The Name of manufacturers, manufacturer's product identification, and manufacturer's mixing instructions, warning for handling and toxicity and date of manufacturing and shelf life shall be clearly and legibly mentioned on the labels of the each container.

2.16.8 The contractor shall submit for the chemicals procured, manufacturer's and / or authorized dealer's certificate regarding supplying and verifying conformance to the material specifications, as specified.

2.16.9 All filled containers shall be handled in safe manner and in a way to avoid breaking container seals.

2.16.10 Empty containers of the chemicals should not be removed from site till the completion of work and shall be removed only with the written approval of the Engineer-in-Charge.All arrangements for measuring, dosing and mixing of material / chemicals at site have to be made by the contractor.

2.16.11 Contractor shall suitably advise his site Engineer and all the workers as regards safe handling of chemicals. Necessary protective and safety equipments in form of hand gloves, goggles etc. shall be provided by the contractor and be also used at site.

2.16.12 All incidental charges of any kind including cartage, storage and wastage and safe custody of material etc. shall be borne by the contractor and no claim, whatsoever, shall be entertained on this account.

2.16.13 The chemicals shall be tested in an independent laboratory as approved by the Engineer-in-charge at the frequency as specified. If required, more samples may have to be tested as per the directions of the Engineer-in-Charge. Nothing extra shall be payable on this account. However testing charges shall be borne by the department for the samples satisfying the requirements specified in the tender.

2.16.14 Such scheme shall be modified / augmented as the work proceeds based on fresh information discovered during the progress of work, at no extra cost. At all times during the construction work, efficient drainage of the site shall be carried out by the Contractor and especially during the laying of plain cement concrete, taking levels etc. The Contractor shall also ensure that there is no danger to the nearby properties and installations on account of such lowering of water table. If needed, suitable precautionary measures shall be taken by the Contractor. Also the scheme of dewatering adopted shall have adequate built in arrangement to serve as stand-bye to attend to repair of pumps etc. and disruption of power / fuel supply. Nothing extra shall be payable on this account.

2.16.15 In trenches where surface water is likely to get into cut / trench during

monsoons, a ring bund of puddle clay or by any other means shall be formed outside, to the required height, and maintained by the Contractor. Also, suitable steps shall be taken by the Contractor to prevent back flow of pumped water into the trench. Nothing extra shall be payable on this account.

2.16.16 For works below ground level the contractor shall keep that area free from water. If dewatering or bailing out of the water is required, the contractor shall do the same at his own cost and nothing extra shall be paid. It is intimated that the foundation depth and water table below the ground level are approximately at the same level. So most likely the water table will be struck in the excavation of foundation. Nothing extra shall be paid for execution of work in or under water and / or liquid mud including pumping out of water as required.

ADDITIONAL CONDITIONS FOR CEMENT

2.17. Cement

2.17.1. The contractor shall procure Ordinary Portland Cement conforming to IS 2269 and Portland Pozzolana cement conforming to IS: 1489 [Part 1], as required in the work, from reputed manufacturers of cement such as ACC, Ultra Tech, Vikram, Ambuja cement and J.K. cement etc or from any other reputed cement manufacturer having a production capacity not less than one million tonne or more per annum, as approved by the Project Engineer, B&WD, IITGN.

2.17.2. The tenderers may also submit a list of names of cement manufacturers which they propose to use in the work. The tender accepting authority reserves right to accept or reject name(s) of cement manufacturer(s) which the tenderer proposes to use in the work. No change in the tendered rates will be accepted if the tender accepting authority does not accept the list of cement manufacturers, given by the tenderer, fully or partially.

2.17.3. The supply of cement shall be taken in 50 kg bags bearing manufacturer's name and ISI marking or in Bulker. Samples of cement arranged by the contractor shall be taken by the engineer-in-charge and got tested in accordance with provisions of relevant BIS codes. In case the test results indicate that the cement arranged by the contractor does not conform to the relevant BIS codes, the same shall stand rejected, and it shall be removed from the site by the contractor at his own cost within a week's time of written order from the engineer-in-charge to do so.

2.18. Steel

2.18.1. The Contractor shall procure IS marked TMT bars of various grades from the steel manufactures or their authorized dealers (as per following selection criteria) having valid BIS license for IS 1786-2008 (Amendment -1 November 2012)

The procured steel should have following qualities:

2.18..2. Excellent ductility, bend ability and elongation of finished product due to possible refining

technology.

2.18.3. Construction of steel should be accurate as per design.

2.18.4. Steel should have no brittleness problem in finished product.

2.18.5. Steel should carry the quality of corrosion and earthquake resistance.

2.18.6. Quality steel with achievement of proper level of sulphur and phosphorus

as per IS :1786-200b)

2.18.7. Selection Criteria of steel manufacturers

The supply of reinforcement steel for all CPWD works should have following selection criteria of steel manufactures:-

Steel producers of any capacity using iron ore/ processed iron ore as the basic raw material adopting advanced refining technologies as given hereunder,

(i) DRI – EAF = Direct reduced iron – Electric arc furnace.

(ii) BF – BOF = Blast furnace – Basic oxygen furnace

(iii) COREX – BOF = COR–X - Basic oxygen furnace

for production or liquid steel to finish product at single/ multiple locations with NABL or any other similarly placed accrediting Government body which operates in accordance with ISO /IEC17011 and accredits labs as per ISO

/IEC 17025 conforming to IS 1786-2008 (Amendment -1 November 2012). The check list for incorporation any quality steel producer is enclosed for technical assessment is given in Table 1 below.

Chief Engineer CSQ (Civil) unit, Directorate of CPWD shall approve the steel manufactures.

2.18.8. The contractor shall have to obtain and furnish test certificates to the Engineer- in-Charge in respect of all supplies of steel brought by him to the site of work.

2.18.9. Samples shall also be taken and got tested by the Engineer-in-Charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to the specifications, the same shall stand rejected, and it shall be removed from the site of work by the contractor at his cost within a week time on written orders from Engineer-in-Charge to do so.

2.18.10. The steel reinforcement bars shall be brought to the site in bulk supply of 10 tonnes or more or as decided by the Engineer-in-Charge.

2.18.11. The steel reinforcement bars shall be stored by the contractor at site of work in such a way as to prevent their distortion and corrosion, and nothing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.

2.18.12. For checking nominal mass, tensile strength, bend test, re-bend test etc. specimens of sufficient length shall be cut from each size of the bar at random, and at frequency not less than that specified below:

Size of bar	**For Consignment below 100 tonnes**	**For Consignment above 100 tonnes**
Under 10 mm dia bars	One sample for each 25 tonnes or part thereof	One sample for each 40 tonnes or part thereof
10 mm to 16 mm dia bars	One sample for each 35 tonnes or part thereof	One sample for each 45 tonnes or part thereof
Over 16 mm dia bars	One sample for each 45 tonnes or part thereof	One sample for each 60 tonnes or part thereof

2.18.13. The contractor shall supply free of charge the steel required for testing including its transportation to testing laboratories. The cost of tests shall be borne by the contractor.

2.18.14. 7.3.8 The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in Clause 42 of the contract and shall be governed by conditions laid therein. In case the consumption is less than theoretical consumption including permissible variations recovery at the rate so prescribed shall be made. In case of excess consumption, no adjustment need to be made.

2.18.15. 7.3.9 The steel brought to site and the steel remaining unused shall not be removed from site without the written permission of the Engineer-in-Charge.

TECHNICAL SPECIFICATIONS

2.19. GENERAL

2.19.1.Unless otherwise specified in the schedule of quantities, particular specifications or CPWD Specifications (subject to the order or preference) the rates tendered by the tenderer shall be all inclusive and shall apply to all lifts, all heights and all floor including terrace, leads and depths and nothing extra over and above the schedule of quantity shall be payable on this account.

2.19.2.The work shall be carried out in accordance with the Architectural drawings, structural drawings and approved shop drawings. The structural shop and architectural drawings shall have to be properly correlated before executing the work. In case of any difference noticed between architectural and structural drawings, the contractor shall obtain final decision, in writing, of the Engineer-in- Charge. In case of any discrepancy in the item given in the schedule of quantities appended with the tender and architectural drawings related to the relevant items, the former shall prevail unless and otherwise given in writing by the Engineer-in- Charge. Nothing extra shall be payable on this account.

2.19.3.Wherever any reference to any Indian Standards occurs in the documents relating to this contract, the same shall be inclusive of all amendments issued thereto or revisions thereof, if any, up to the date of receipt of tenders.

2.19.4.The work shall be executed and measured as per metric dimensions given in the Schedule of Quantities, Drawings etc. (F.P.S. units wherever indicated are for guidance only).

2.19.5.The rates for all items of work, shall unless clearly specified otherwise, include cost of all operations and all inputs of labour, material, T & P, scaffolding, wastages, watch and ward, other inputs, all incidental charges, all taxes, cess, VAT, duties, levies, GST, etc. required for execution of the work.

2.19.6. The sources of coarse aggregate, fine aggregate, water, admixture & cement to be used in concrete work shall be identified by the contractor & he will satisfy himself regarding their conforming to the relevant specifications & their availability before getting the same approved from the Engineer-In-Charge.

2.19.7. Wall Panels should have embedded conduits for electrical and utilities.

2.19.8. All Electrical wiring should be embedded inside the wall panel

2.19.9. Panel should have a 50 mm thick Polyurethane Foam (PUF) or Expanded Polystyerene (EPS) having a density of 18-20 kg/m3

2.19.10.Panel should be sandwiched in between pre painted galvanized iron (PPGI, not less than 0.8 mm) or pre coated galvanized iron (PCGI, not less than 0.8 mm.) or powder coated galvanized iron (not less than 0.8 mm).

2.19.11.Suitable factory made cutouts wherever required should be provided in the wall panel (for fan filter units, filters, light fixture, return air grills, power sockets, cables.

LIST OF ACCEPTABLE MAKES FOR CIVIL WORKS

1. The contractor shall make a detailed submittal with catalogues and highlighted proposed specifications, as well as full details of the works executed by the specialized agency, as specified.
2. Unless otherwise specified, the brand / make of the material as specified in the item nomenclature, in the particular specifications and in the list of approved materials attached in the tender, shall be used in the work.
3. In case of non-availability of the brand specified in the contract the contractor shall be allowed to use alternate equivalent brand of the material subject to submission of documentary evidence of non availability of the specified brand. The necessary cost adjustments on account of above change shall be made for the material.
4. Sample of all the materials will be used only after approval of the Project Engineer, B&WD, IIT Gandhinagar.

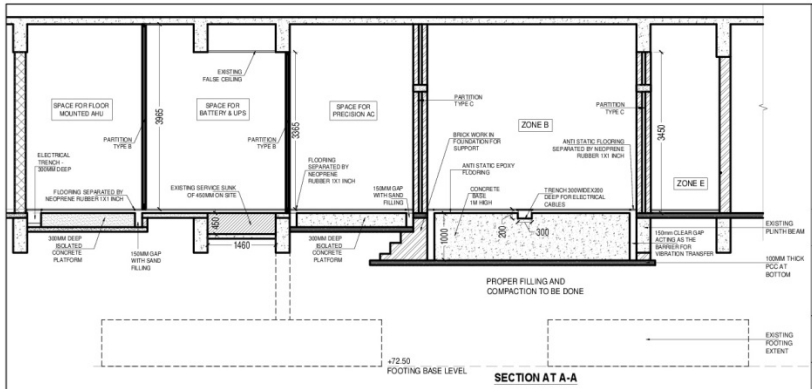
LIST OF APPROVED MAKE MATERIALS

SNo	Material	Manufacturer / Make
1	Epoxy Flooring	ASIAN, ICI, NEROLAC, BERGER
2	Aluminum Section	Jindal, Banco or Hindalco
3	Particle Board	Green Ply, Century Ply or Action Tesa
4	5.5mm floated Glass	Make : Saint Gobain
5	Ordinary Portland Cement / Pozzolona Portland Cement	A.C.C., ULTRATECH CEMENT Ltd., VIKRAM, AMBUJA CEMENT, J.K.CEMENT
6	Door closer, lock and other Fittings	KICH, Godrej or Dorma
7	50mm thick Polyurthene Foam (PUF)	Aircon , LLOYD or Hunsman.

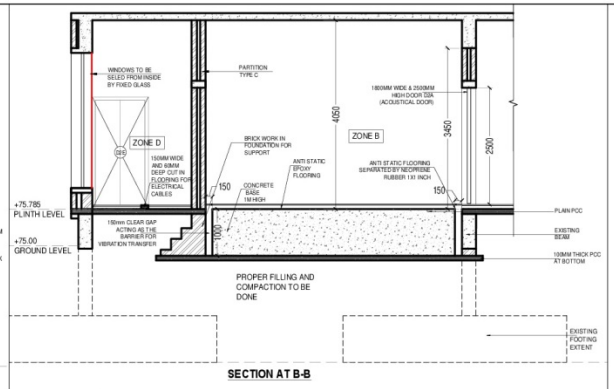
SCHEDULE OF QUANTITES					
Name of work : Civil work for Site Preparation for Installation of TEM Equipment at AB-6 /110 at IIT Gandhinagar , Palaj. (SH: Civil works)					
Sno	**Description of works**	**Unit**	**Qty**	**Rate**	**Total Amount**
1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular ections/appropriate Z sections and other sections of approved makeconforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/neoprene gasket etc. Aluminium sections shall be smooth, rustfree, straight, mitred and jointed mechanically wherever requiredincluding cleat angle, Aluminium snap beading for glazing / paneling,C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :				
1.1	For fixed Portion				
1.1.1	Powder coated aluminum (minimum thickness of powder coating 50 micron)	kg	625		
2	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately)				
2.1	Powder coated aluminium (minimum thickness of powder coating 50 micron)	Kg	400		
3	Providing and fixing 12 mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS:12823 Grade I Type II, in panelling fixed in aluminum doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of Engineer-in-charge.				
3.1	Pre-laminated particle board with decorative lamination on both sides	Sqm	7		
4	Providing and fixing glazing in aluminum door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer-in-charge . (Cost of aluminum snap beading shall be paid in basic item):				

Sno	Description of works	Unit	Qty	Rate	Total Amount
4.1	With float glass panes of 5.50 mm thickness	Sqm	20		
5	Providing and fixing aluminum extruded section body tubular type universal hydraulic door closer (having brand logo with ISI:3564, embossed on the body , door weight upto 36 kg to 80 kg and door width from 701 mm to 1000mm) , with double speed ajustment with necessary accessories and screws etc. complete	Each	12		
6	Providing and fixing aluminium tubular handle bar 32 mm outer dia, 3.0 mm thick & 2100 mm long with SS screws etc .complete as per direction of Engineer-in-Charge.				
6.1	Powder coated minimum thickness 50 micron aluminium tubular handle bar	Each	9		
7	Providing and fixing 100mm brass locks (best make of approved quality) for aluminium doors including necessary cutting and making good etc. complete.	Each	9		
8	Providing and fixing aluminum hanging floor door stopper , ISI marked , anodised (anodic coating not less than grade AC 10 as per IS:1868) transparent or dyed to required colour and shade, with necessary scres etc. complete.				
8.1	Twin rubber stopper	Each	12		
9	Providing & Fixing in position Acoustical Doors along with 150 x 150 mm teak wood frame, doors made from 50mm Sal wood frame 600 x600 c to c filled with 1000 Gsm synthetic wool 50mm thick and 5mm Tecsound from both sides, 12mm waterproof ply & laminate from both sides , including 150mm heavy duty SS hinges (Geze / Dorma or eq.) 4 no each leaf, including fitting cost of Door-closer , Panic-bar and all required hardware, including cost of required Cut-Outs, decorative mouldings / finishing-items / melamine polish & Scaffolding but excluding cost of Door-closer, Panic-bar and other hardware, as per Architectural & Acoustical Design & Instructions & Complete in all aspects	Sqm	4.5		
10	Partition panel with 50mm thick Polyurthene Foam (PUF) or expanded Polystyrene (EPS) having density of 18 - 20 KE/Cum	sqm	81		
11	Earth work in excavation by mechanical means (Hydraulic excavator)/manualmeans over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.				
11.1	All kinds of soil.	cum	39		

Sno	Description of works	Unit	Qty	Rate	Total Amount
	FORM WORK				
12	Centering and shuttering including strutting, propping etc. and removal of form for all heights :				
12.1	Foundations, footings, bases of columns, etc. for mass concrete	sqm	25		
	CAST IN SITU				
13	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
13.1	1:1.5:3 (1 cement : 1.5 coarse sand (zone-III): 3 graded stone aggregate 20 mm nominal size).	cum	39		
14	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.				
14.1	Nominal concrete 1:4:8 or leaner mix (i/c equivalent design mix)	cum	1.36		
15	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundations and plinth in :				
15.1	Cement mortar 1:3 (1 cement : 3 coarse sand)	sqm	75.21		
16	12 mm cement plaster of mix :				
16.1	1:4 (1 cement: 4 coarse sand)	sqm	93		
17	15 mm cement plaster on rough side of single or half brick wall of mix:				
17.1	1:4 (1 cement: 4 coarse sand)	sqm	93		
18	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade :				
18.1	New work (two or more coats) over and including water thinnable priming coat with cement primer	sqm	93		
19	Providing and fixing PVC frosted glass film having 0.10 mm thickness and 75 % opacity with self - adhesive property .All as per approved sample abd as directed by Engineer In Charge	sqm	20		
20	Providing and Fixing Anti Static EPOXY Flooring 3mm and finishing as per direction of Engineer Incharge	**sqm**	**30**		
21	Material and labour for Neoprene Rubber of size 1x1 inch , to be used for separating of epoxy flooring.	Rmt	22		
22	Supplying and fillig in plinth with local sand under floors , including , watering , ramming , consolidating and dressing complete	cum	4		
	Total				



SECTION AT A-A



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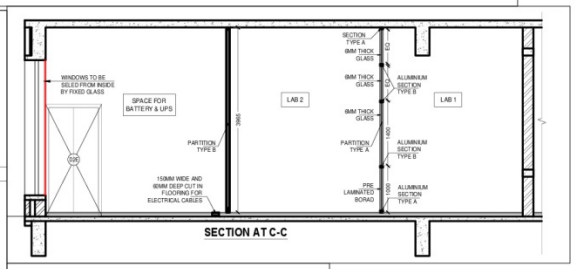

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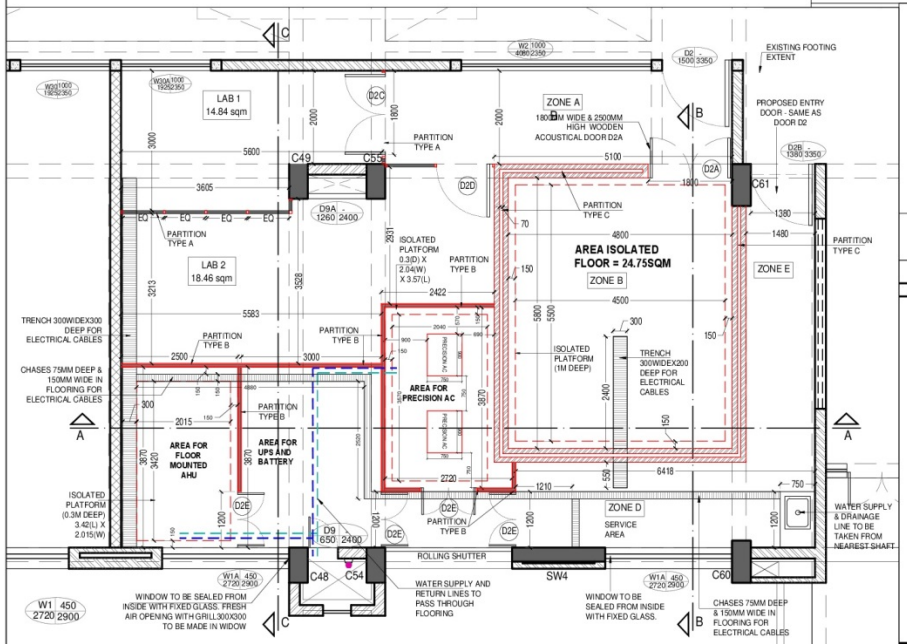
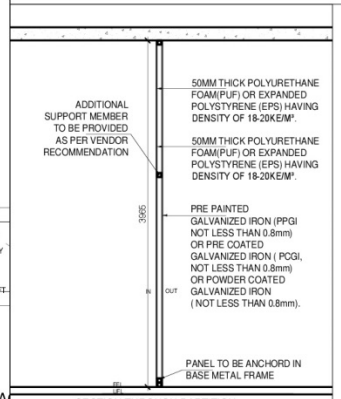
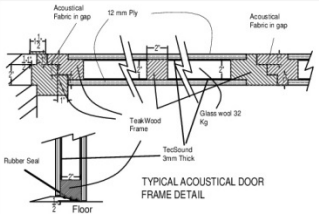


FLOOR PLAN - LAB 110 - BLOCK 6 GROUND FLOOR



SECTION THROUGH PARTITION - 50MM THICK OUF SANDWICHED IN BETWEEN PPGI SHEETS - **(TYPE B)** (SCALE 1:40)



TYPICAL ACOUSTICAL DOOR FRAME DETAIL

NOTES

- **Sleeves 100mm Ø to be left for the inlet of services as required.**
- **Sample preparation platforms with granite top and sink can be purchased and placed as required. Provision for water supply and drainage to be made at the sink location. All the services needs to be taken form near by shaft.**
- **Junction where water line and electrical lines over lap a level difference between both to be provided and it can be achieved at the sunk portion.**
- **Punctures as required for the AC piping to be made in Partition type B.**

DRG NAME :

BLOCK 6_LAB 110 DETAILS

932 R0

NOTES:
1. THIS DRAWING IS ISSUED FOR CONSTRUCTION PURPOSE SHOULD BE USED ONLY FOR THE PURPOSE IT IS ISSUED FOR.
2. ALL DIMENSIONS ARE FROM UNFINISHED TO UNFINISHED SURFACES.
3. DO NOT SCALE THIS DRAWING.
4. ALL DIMENSIONS ARE IN MM.
5. ANY DISCRIPANCY FOUND IN DRAWINGS SHOULD BE BROUGHT TO THE NOTICE OF THE ARCHITECT BEFORE COMMENCING ANY FURTHER WORK.

LEGEND

ROOM NAME | DIMENSIONS | UFL | FFL | FLOOR FINISH | CEILING FINISH | WALL FINISH | DOOR (NAME, WIDTH, HEIGHT) | WINDOW (NAME, SILL, WIDTH, HEIGHT) | LVL DROP | RS: ROLLING SHUTTER WITH GUIDING TRACK & HOOD ON INSIDE BUILDING FACE

COLUMN AT PARTICULAR LVL | GIPOREX WALL FUTURE CONSTRUCTION | RCC MULLION GRADE M 20
REDUCTION IN COLUMN SIZE | COLUMN BELOW FLOOR LVL
WALL HATCH | PLANTER

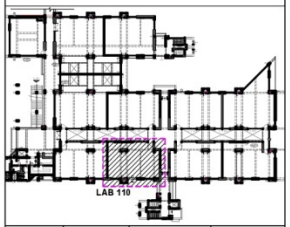
REVISIONS

DATE	REV NO	DETAILS
--	R-	--

DOOR	SIZE	LINTEL LEVEL	TYPE
D2A	1800X2500	2500	ACOUSTICAL (WOODEN) 2 LEAF DOOR
D2B	1380X3350	3350	ALUMINIUM DOOR & GLASS ON HINGES/FLOOR SPRING
D2C	1800X2400	2400	ALUMINIUM & GLASS 2 LEAF DOOR ON HINGES
D2D	1200X2400	2400	ALUMINIUM & GLASS SINGLE LEAF DOOR ON HINGES
D2E	1200X2400	2400	CLEAN ROOM DOOR AS PER STANDARD AND AS REQUIRED

PARTITON TYPE	DETAILS
PARTITION TYPE A	ALUMINIUM AND GLASS PARTITION.
PARTITION TYPE B	PARTITION PANEL WITH 50MM THICK POLYURETHANE FOAM(PUF) OR EXPANDED POLYSTYRENE (EPS) HAVING DENSITY OF 18-20KE/M³. PANEL TO BE SANDWICHED IN BETWEEN PRE PAINTED GALVANIZED IRON (PPGI NOT LESS THA 0.8mm) OR PRE COATED GALVANIZED IRON (PCGI, NOT LESS THAN 0.8mm) OR POWDER COATED GALVANIZED IRON (NOT LESS THAN 0.8mm). SUITABLE CUTOUTS SHOULD BE PROVIDED IN WALL PANEL WHERE EVER REQUIRED.
PARTITION TYPE C	115MM THICK BRICK DOUBLE WALL WITH 70MM CAVITY FILLED WITH INSULATION MATERIAL INSIDE. TOTAL WALL THICKNESS 300MM.

20MM THICK WATER SUPPLY LINE
20MM THICK DRAINAGE LINE



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PROJECT:
PROPOSED ACADEMIC BLOCK PHASE - 1 A FOR PERMANENT CAMPUS OF IIT GANDHINAGAR

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