



INDIAN INSTITUTE OF TECHNOLOGY MADRAS

ENGINEERING UNIT

CHENNAI – 600 036

Tender No: 36 / 2012 – 13 / Civil.

| | |
|---|--|
| Name of work | Construction of Public Toilet Block and Septic tank near in gate security Booth at IITM Campus. |
| Approximate Value put to Tender (for reference only) | Rs. 3.52 Lakhs. |
| Earnest Money Deposit | Rs. 7100/-. |
| Cost of Tender Schedule | Rs. 500.00 |
| Vat @ 5% | Rs. 25.00 |
| | Rs. 525.00 |
| Last date and Time of Receipt | Date 18-07-2012 Time 3.00 PM. |
| Date and Time of Opening | Date 18-07-2012 Time 3.10 PM. |

Certified that the tender document contains **38 (Thirty eight pages)** only and no alterations and additions have been made by me / us in the tender document.

Signature of the Contractor

Executive Engineer (Civil)

INDIAN INSTITUTE OF TECHNOLOGY MADRAS

ENGINEERING UNIT
CHENNAI – 600 036

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Certified that the tender document contains 38 (Thirty eight pages) only and no alterations and additions have been made by me / us in the tender document.

Signature of the Contractor

**INDIAN INSTITUTE OF TECHNOLOGY MADRAS
CHENNAI – 600 036**

TENDER NOTICE NO.:- 36 / 2012 - 13

Sealed item rate Tenders are invited by the Executive Engineer (Civil), Indian Institute of Technology Madras, Chennai – 600 036, from the **Registered Contractors of IIT Madras (Civil – Class: II to V)** in item rate agreement form up to 3-00 P.M on **18-07-2012** for the work of **“Construction of Public toilet block and septic tank near Ingate security booth at IIT Madras.”**

Approximate value of items put to tender is **Rs. 3.52 Lakhs**. This is only for general guidance. The Tender can be downloaded from the IIT Madras web site (www.iitm.ac.in/tendernotices).

Tenders should be accompanied by two crossed Demand Drafts drawn in favour of IITM Chennai - 600 036 for **Rs. 7,100/- towards Earnest Money Deposit and Rs. 525/- (Non – Refundable) towards cost of tender schedule**. Tenders received without Earnest Money Deposit and cost of tender schedule will be summarily rejected.

Completed Tenders received at Office of Executive Engineer (Civil) in time and will be opened after 3.10 P.M on **18-07-2012** in the presence of Tenderers or their authorized agents.

Executive Engineer (Civil)

**INDIAN INSTITUTE OF TECHNOLOGY MADRAS
ENGINEERING UNIT**

CHENNAI – 600 036

Item Rate Tender & Contract for Works

A) Tender for the work of :**“Construction of Public Toilet block and septic tank near ingate Security booth at IITM Campus.”**

(i) To be submitted by _____ hours on _____
to _____

(ii) To be opened in presence of tenderers who may be present at _____ hours
on _____ in the office of _____

T E N D E R

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 Rates & 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 IIT within the time specified in Schedule 'F', viz., and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

We agree to keep the tender open for Ninety (90) days from the due date of submission thereof and not to make any modifications in its terms and conditions.

A sum of **Rs.7,100/-** has been deposited in cash / receipt treasury challan / deposit at call receipt of a scheduled bank / fixed deposit receipt of a scheduled bank / demand draft of a scheduled bank as earnest money. If I/We, fail to furnish the prescribed performance guarantee within prescribed period, I/we agree that the said 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 IITM or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and 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 therein and to carry out such deviations as may be ordered, upto maximum of the percentage mentioned in Schedule 'F' and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

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.

Date _____

Signature of Contractor

Postal Address

Witness:

Address:

Occupation:

ACCEPTANCE

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

(Rupees _____

_____)

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

- a)
- b)
- c)

For & on behalf of the President of India

Signature _____

Designation _____

Date _____

General Rules and Directions

1. The tender must be signed by the person / persons competent to sign as indicated in Technical bid. Same stipulations will also apply in the case of Receipt for payments made on account of work to the successful Contractor who has signed the Contract Agreement.
2. This form will state the work to be carried out, as well the date for submitting and opening tenders and the time allowed for carrying out the work, also the amount of earnest money to be deposited with the tender, and the amount of the security deposit to be deposited by the successful tenderer and the percentage, if any to be deducted from bills. Copies of the specifications, designs and drawings and any other documents required in connection with the work signed for the purpose of identifications by the officer inviting tender, shall also be open for inspection by the contractor at the office of officer the inviting tender, during office hours.
3. Any person who submits a tender shall fill up the form, stating at what item rate & amount he is willing to undertake the full work. Only one rate shall be given in words & figures for each item. Tenders, which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other condition of any sort including conditional rebates, will be summarily rejected. Tender shall have the name and number of the work to which they refer, written on the envelopes. Amount must be quoted in full rupees by ignoring fifty paise and considering more than fifty paise as rupee one.
4. The officer inviting tender or his duly authorized assistant will open Financial Bids of those Tenderers whose, Technical Bids have been found acceptable, in the presence, of any intending Contractors or their authorized agents who may be present at the time, and will enter the amounts of the several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, a receipt for the Earnest Money forwarded therewith shall thereupon be given to the Contractor. In the event of a tender being rejected, the Earnest Money forwarded with such unaccepted tender shall thereupon be returned to the Contractor remitting the same, without any interest.
5. The officer inviting tenders shall have the right of rejecting all or any of the tenders and will not be bound to accept the lowest or any other tender.
6. The memorandum of work tendered for and the schedule of materials to be supplied by the institute and their issue-rates, shall be filled and completed in the office of the officer inviting tender before the tender form is published. If a form is published to an intending tenderer without having been so filled in and incomplete, he shall request the officer to have this done before he completes and delivers his tender.
7. The tenderers shall sign a declaration under the Official Secret Act, 1923, for maintaining secrecy of the tender documents, drawings or other records connected with the work given to them.
8. In the case of item Rate Tenders, only rates quoted shall be considered. Any tender containing percentage below/above the rates quoted is liable to be rejected. Rates quoted by the contractor in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures and words. However, if a discrepancy is found, the rates which correspond with the amount worked out by the contractor shall unless otherwise proved be taken as correct. If the amount of an item is not worked out by the contractor or it does not correspond with the rates written either in figures or in words, then the rates quoted by the contractor in words shall be taken as correct. Where the rates quoted by the contractor in figures and in words tally but the amount is not worked out correctly, the rates quoted by the contractor, will, unless otherwise proved, be taken as correct and not the amount.

9. In the case of any tender where unit rate of any item/items appear unrealistic, such tender will be considered as unbalanced and in case the tendered is unable to provide satisfactory explanation, such a tender is liable to be disqualified and rejected.
10. All rates shall be quoted on the tender form. The amount for each item should be worked out and the requisite totals given. Special care should be taken to write the rates in figures as well as in words and the amount in figures only in such a way that interpolation is not possible. The total amount should be written both in figures and in words. In case of figures, the word 'Rs' should be written before the figure of 'Rupees' and the work ' P ' after the decimal figures, eg.' Rs 2.15P' and in case of words, the word, "Rupees" should precede and the work 'Paise' should be written at the end. Unless the rate is in whole rupees and followed by the word 'only', it should invariably be up to two decimal places. While quoting each rate in schedule of tender, the word 'only' should be written closely following the rate and it should not be written in the next line.
11. The contractor whose tender is accepted will be required to furnish by way of Security Deposit for the fulfillment of his contract, an amount equal to 5 % of the tendered value of the work. The Security deposit will be collected by deductions from the running bill of the contractor at the rates mentioned above and the earnest money if deposited in cash at the time of tender will be treated as a part of this Security Deposit. The SD amount will also be accepted in cash or in the shape of Government securities. Fixed deposit receipt of a scheduled bank or State bank of India will also be accepted for this purpose. Provided confirmatory advice is enclosed.

On acceptance of the tender, the name of the accredited representative (s) of the Contractor who would be responsible for taking instructions from the Engineer in Charge shall be communicated in writing to the Engineer in Charge.
12. Sales-tax (VAT), service tax, purchase tax, turnover tax, Service tax, works contract tax or any other tax on material, labour and works in respect of this contract shall be payable by the contractor and IITM will not entertain any claim whatsoever in respect of the same.
13. The Contractor shall give a list of both gazetted and non-gazetted IITM employees related to him.
14. The tender for the work shall not be witnessed by a Contractor or Contractors who himself / themselves has/have tendered for the same work. Failure to observe this condition would render tenders of the Contractor tendering, as well as witnessing the tender, liable to summary rejection.
15. The contractor shall comply with the provisions of the Apprentices Act 1961, and the rules and orders issued there under from time. If he fails to do so, his failure will be a breach of the contract and the Executive Engineer (Civil) may in his discretion, without prejudice to any other right or remedy available in law, cancel the contract. The contractor shall also be liable for any pecuniary liability on account of any violation by him of the provisions of the said Act.

Signature of Contractor

Executive Engineer (Civil)

CONDITIONS OF CONTRACT

1. The Contract means the documents forming the tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of the IIT and the Contractor, together with the documents referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Engineer-in-charge and all these documents taken together, shall be deemed to form one contract and shall be complementary to one another.
2. In the contract, the following expressions shall, unless context otherwise requires, have the meanings, hereby respectively assigned to them:-
 - i) The expression works or work shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional.
 - ii) The Site shall mean the land/or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.
 - iii) The contractor shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company.
 - iv) The Engineer-in-charge means the Engineer officer who shall supervise and be in-charge of the work and who shall sign the contract on behalf of IIT as mentioned in Schedule 'F' hereunder.
 - v) Accepting Authority shall mean the authority mentioned in Schedule 'F'.
 - vi) Excepted Risk are risks due to riots (other than those on account of contractor's employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, any acts of IITM, damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority or causes solely due to use or occupation by IITM of the part of the works in respect of which a certificate of completion has been issued or a caused solely due to IITM faulty design of works.
 - vii) Market Rate shall be the rate as decided by the Engineer-in-charge on the basis of the cost of materials and labour at the site where the work is to be executed plus the percentage mentioned in Schedule 'F' to cover, all overheads and profits.
 - viii) Schedules(s) referred to in these conditions shall mean the relevant schedule(s) annexed to the tender papers or the standard schedule of Rates of the CPWD mentioned is schedule 'F' hereunder, with the amendments thereto issued upto the date of receipt of the tender.
 - ix) Department means IITM which invites tenders.
 - x) District specification means the specifications followed by the state of Tamil Nadu in the area where the work is to be executed.
 - xi) Tendered value means the value of the entire work as stipulated in the letter of award.

3. Where the context so requires, words imparting the singular only also include the plural and vice versa. Any reference to masculine gender shall whenever required include feminine gender and vice versa.
4. Headings and marginal notes to these General Conditions of contract shall not be deemed to form part thereof be taken into consideration in the interpretation or construction thereof or of the contract.
5. The contractor shall be furnished, free of cost one certified copy of the contract documents except standard specification, Schedule of Rates and such other printed and published documents, together with all drawings as may be forming part of the tender papers. None of these documents shall be used for any purpose other than that of his contract.
6. The work to be carried out under the contract shall, except as otherwise provided in these conditions, include all labour, materials, tools, plants, equipments and transport which may be required in preparation of and for and in the full and entire execution and completion of the works. The descriptions given in the Schedule of quantities (Schedule-A) shall, unless otherwise states, be held to include wastage on materials, carriage and cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labours necessary in and for the full and entire execution and completion of the work as aforesaid in accordance with good practice and recognized principles.
7. The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the schedule of Quantities, which rates and prices shall except as otherwise provided cover all his obligation under the contract and all matters and things necessary for the proper completion and maintenance of the works.
8. The several documents forming the contract are to be taken as mutually explanatory of one another, detailed drawings being following in preference to small scale drawing and figured dimensions in preference to scale and special conditions in preference to General conditions.
- 8.1 In the case of discrepancy between the schedule of Quantities, the specifications and/or the Drawings, the following order of preference shall be observed.
 - i) Description of Schedule of Quantities.
 - ii) Particular Specification and special condition, if any
 - iii) Drawings.
 - iv) C.P.W.D Specifications
 - v) Indian Standard specifications of B.I.S.
- 8.2 If these are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intention of the documents and his decision shall be final and binding on the contractor.
- 8.3 Any error in description, quantity or rate in schedule of Quantities or any omission there from shall not vitiate the contractor or release the contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from any of his obligations under the contract.
9. The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority, shall within 15 days from the stipulated date of start of the work sign the contract consisting of:-

- i) The notice inviting tender, all the documents including drawings, if any, forming the tender as issued at the time invitation of tender and acceptance thereof together with any correspondence leading thereto.
- ii) Standard C.P.W.D Form as mentioned in Schedule 'F' consisting of:-
 - a) Various standard clauses with corrections upto the date stipulated in schedule 'F' along with annexure thereto.
 - b) C.P.W.D Safety code.
 - c) Model Rules for the protection of health, sanitary arrangements for workers employed by CPWD of its contractors.
 - d) CPWD contractor's Labour Regulations.
 - e) List of Acts omissions for which fines can be imposed.

ADDITIONAL SPECIFICATIONS

The additional specifications given below are not substitute to CPWD specifications or IS specifications. These shall be read along with CPWD specifications or IS specifications.

GENERAL

1. The work shall be carried out using metric dimensions only and shall be measured and paid in metric dimensions. F.P.S. units, if any, mentioned in drawings etc are for guidance only.
2. 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 there to or revision there of if any, up to the date of receipt of tenders.
3. Unless otherwise specified in the schedule of quantities the rates for the various items are for all heights and locations.
4. Unless otherwise specified in the schedule of quantities the rate for the items of the work shall be considered as inclusive of pumping out or bailing out water, if required, for which no extra payments will be made. This will include water encountered from any source, such as rains, floods, sub-soil water table being high or due to any other cause whatsoever.
5. The tender shall study the item description, the relevant drawings and satisfy himself the item of work to be carried

Executive Engineer (Civil)

PROFORMA OF SCHEDULE

SCHEDULE – ‘A’

The Bill of Quantities enclosed separately along with Tender (Financial bid)

SCHEDULE – ‘B’

NO MATERIAL SHALL BE ISSUED TO THE CONTRACTOR BY IITM.

SCHEDULE – ‘C’

Schedule of tools and plants proposed to be hired to the contractor.

NO TOOLS AND PLANTS SHALL BE HIRED TO THE CONTRATOR.

SCHEDULE – ‘D’

Extra schedules for specific requirements / documents for the work, if any.

1. No labour shall be permitted to stay in the campus
2. All debris obtained from dismantling the existing structure should be removed from site of work before start of work.

SCHEDULE – ‘E’

Schedule of component of cement, steel other materials, labour etc for price escalation.

CLAUSE – 10 CC

Clause 10 CC of General Conditions of Contract is not applicable to this work.

SCHEDULE – ‘F’

Reference to General conditions of contract

| | |
|--------------------------|---|
| Name of work | : “Construction of Public Toilet block and septic tank near ingate Security booth at IITM Campus.” |
| Estimated cost of work | : Rs. 3.52 Lakhs. |
| i) Earnest Money Deposit | : Rs.7,100/-. |
| ii) Security Deposit | : 5% of tendered value. (Inclusive of EMD) |

General Rules and Directions:

| | |
|---|------------------------------------|
| Officer inviting tender | : Executive Engineer (Civil), IITM |
| Maximum percentage for quantity of items work to be executed beyond which rates are to be determined in accordance with clause 12.2 and 12.3. | : See below |

Definition

| | |
|--------------------------|-----------------------------|
| 2 (v) Engineer in charge | Executive Engineer (Civil). |
|--------------------------|-----------------------------|

| | | |
|-------------------------------|---|---|
| 2 (viii) | Accepting authority | Director, IIT Madras. |
| 2 (x) | Percentage on cost of material and labour to cover all overheads and profits. | 15%. |
| 2 (xi) | Standard schedule of rates | CPWD DSR 2007. |
| 2 (xii) | Department | IIT Madras. |
| 9 (ii) | Standard CPWD contract form | CPWD 8 as modified and Corrected up to till date. |
| Clause 1 | | |
| | Not applicable | |
| Clause 2 | | |
| | Authority for fixing compensation under clause 2. | Executive Engineer (Civil). |
| Clause 2a | | |
| | Whether clause 2a shall be applicable | Yes applicable. |
| Clause 5 | | |
| | Number of days from the date of issue of letter of acceptance for reckoning date of start | 14 Days. |
| | Time allowed for execution of work | 4 months |
| | Authority to give fair and reasonable Extension of work for completion of work | Executive Engineer (Civil) IITM |
| Clause 7 | | |
| | Gross work to be done together with net payment/ adjustment of advances for material collected, if any, since the last such payments for being eligible to interim payment. | 1,00,000/- |
| Clause 10 CC | | |
| | Clause 10 CC is not applicable to this work | |
| Clause 11 | | |
| | Specification to be followed for execution of work | Particular specifications CPWD Specifications IS codes Manufacturer's specifications General engineering practice |
| Clause 12.2 & 12.3 | | |
| | Deviation limit beyond which clauses 12.2 & 12.3 shall apply for this work | 30% |
| Clause 12.5 | | |
| | Deviation limit beyond which clauses 12.2 & 12.3 shall apply for foundation work | 100% |

Clause 16

Competent Authority for
Deciding reduced rates.

Executive Engineer (Civil)
IITM

Clause 36(i)

| Designation | Minimum qualification and experience required | Discipline | Rate of recovery per month |
|---------------------------|--|-------------------|----------------------------|
| Technical Representatives | Graduate (fresh candidate) or Diploma Engineer with 5 years experience - 1 No. | Civil Engineering | Rs. 15,000/- |

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

Clause 42

- i) (a) Schedule for determining theoretical quantity of cement DSR 2007
Published by CPWD

- ii) Variations permissible on theoretical quantities
 - a) Cement
 - i) to be brought by contractor 3% minus

For material to be brought by contractor

In case of less consumption than the above, necessary recovery shall be made as per rates given below.

However for over consumption no additional payment shall be made.

Recovery rates for quantities beyond permissible variation

For material to be brought by contractor

| Sl No | Description of item | Rates in figures and words at which recovery shall be made from the contractor's | |
|-------|---------------------|--|--|
| | | Excess beyond permissible variation | Less use beyond the permissible variation |
| 1 | Cement | No extra payment or deduction shall be made | Market rate at the time of execution of work plus 10% as decided by the Engineer in Charge |

**CLAUSES OF CONTRACT
ADDENDA & CORRIGENDA (A & C)**

Settlement of Disputes & Arbitration

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

i) If the Contractor considers any work demanded of him to be outside the requirements of the contract, or disputed any drawings, record or decision given in writing by the Engineer-in-charge or any matter in connection with or arising out of the Contract or carrying out of the work, to be unacceptable, he shall promptly within 15 days request the Executive Engineer (Civil) in writing for written instruction or decision. Thereupon, the Executive Engineer (Civil) shall give his written instructions or decisions within a period of one month from the receipt of the contractor's letter.

If the Executive Engineer (Civil) fails to give his instructions or decisions in writing within the aforesaid period or if the Contractor is dissatisfied with the instructions or decision of the Executive Engineer (Civil), the Contractor may, within 15 days of the receipt of Executive Engineer (Civil)'s decision appeal to the Chairman (Engineering Unit), IITM who shall afford an opportunity to the Contractor to be heard, if the mater so desires and to offer evidence in support of his appeal. The Chairman (Engineering Unit), IITM shall give his decision within 30 days of receipt of Contractor's appeal.

ii) If the Contractor is dissatisfied with the decision of the Chairman (Engineering Unit), the Contractor shall within a period of 15 days of the receipt of the Chairman's decision appeal to the Director , IITM who shall afford an opportunity to the Contractor to be heard, if the mater so desires and to offer evidence in support of his appeal. The Director, IITM shall give his decision within 30 days of receipt of Contractor's appeal.

iii) If the contractor is dissatisfied with the decision of the Director IITM, he shall, with in 30 days of the receipt of the decision shall give notice to the Director IITM for appointment of an arbitrator to adjudicate his claims, failing which the said decision of the Director, IITM shall be final and binding on the contractor.

iv) Except where the decision has become final, binding and conclusive in terms of Sub para (iii) above, disputes or difference shall be referred for adjudication through a sole arbitrator appointed by the Director, IITM. If the arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever another sole

arbitrator shall be appointed in the manner aforesaid. Such person shall proceed with the reference from the stage at which it was left by his predecessor.

It is a term of this contract that the party invoking arbitration shall give list of disputes with amounts claimed in respect of each such dispute along with the notice for appointment of arbitrator and giving reference to the rejection by the Director, IITM of the appeal.

It is also a term of this contract that no person other than a person appointed by such Director, IITM, as aforesaid should act as arbitrator.

It is also a term of this Contract that if the Contractor does not make any demand for appointment of arbitrator in respect of any claims in writing as aforesaid within 120 days of receiving the intimation from the Engineer-in-charge that the final bill is ready for payment, the claim of the Contractor shall be deemed to have been waived and absolutely barred and IITM shall be discharged and released of all liabilities under the Contract in respect of these claims.

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

It is also term of this Contract that the arbitrator shall adjudicate on only such disputed as are referred to him by the Director, IITM and give separate award against each dispute and claim referred to him and in all cases where the total amount of the claims by any party exceeds Rs.1,00,000/- the arbitrator shall give reasons for the award.

It is also a term of the Contract that if any fees are payable to the arbitrator, these shall be paid equally by both the parties.

It is also a term of the Contract that the arbitrator shall be deemed to have entered on the reference on the date of issues notice to both the parties calling them to submit their statement of claims and counter statement of claims. The venue of the arbitration shall be such place as may be fixed by the arbitrator in his sole discretion. The fees, if any, of the arbitrator shall, if required to be paid before the award is made and published, be paid half and half by each of the parties. The cost of the reference and of the award (including the fees, if any, of the arbitrator) shall be in the discretion of the arbitrator who may direct to any by whom and in what manner, such costs or any part thereof shall be paid and fix or settle the amount of costs to be so paid.

v) Page 55 – Claus 37 "Levy / Taxes Payable by Contractor"

Para (i) shall be substituted as under

“Sales tax including VAT if any or any other tax on materials as well as on Labour and Works in respect of this Contract shall be payable by the Contractor and IITM shall not entertain any claim whatsoever in this respect.”

FORM OF GUARANTEE BOND FOR EMD

In consideration of the Indian Institute of Technology Madras (hereinafter called "The Institute") Having offered to accept the terms and conditions of the proposed tender for the work of
having agreed to production of a irrevocable bank Guarantee for Rs.....(Rupees.....only) as security from the contractor (s) for compliance of his obligations in accordance with the terms and condition in the tender.

1) We..... (Indicate the name of the Bank).....(hereinafter referred to as "the Bank") hereby undertake to pay to the Institute an amount not exceeding Rs.....
(Rupees.....only) on demand by the Institute.

2) We.....do hereby undertake to pay the amounts due and payable under this Guarantee without any demure, merely on a demand from the Institute stating that the amount claimed is required to that recoveries due or likely to be due from the contractor (s). Any such demand on the Bank shall be conclusive as regard the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs..... (Rupees.....only)

3) We, the said bank further undertake to pay to IITM any money so demanded notwithstanding any dispute or disputes raised by the contractor (s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present guarantee being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability payment therein under and the contractor (s) shall have no claim against us for making such payment.

4) We..... (indicate the name of the bank).....further agree that the guarantee herein Contained shall remain in full force during the **SIX months period**.

5) We.....(indicate the name of the bank).....further agree with the Institute that the Institute shall have the fullest liberty without our consent without effecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor (s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Institute against the said contractor (s) and to forebear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said contractor (s) or for any forbearance, act of omission on the part of the Institute on any indulgence by the Institute to the said contractor (s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6) This guarantee will not be discharged due to the change in the constitution of the bank or the contractor (s).

7) We..... (indicate the name of the bank).....lastly undertake not to revoke this Guarantee except with the previous consent of the Institute in writing.

8) This guarantee shall be valid up to **SIX months** unless extended on demand by Institute. Notwithstanding anything mentioned above, our liabilities under this guarantee is restricted to Rs ... (Rupees) and unless a claim of writing is lodged with us within six month of the date of expiry or extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharge.

Dated the.....day of.....for..... (Indicate the name of the Bank)

ADDITIONAL CONDITIONS - I

1. The contractor shall make arrangement for obtaining electric connections if required and make necessary payments for the same as per rules
2. Other agencies doing works related with this project will also simultaneously execute the works and the contractor shall afford necessary facilities for the same. The contractor shall leave such necessary holes, openings etc, for laying/burying in the work of pipes, cable, conduits, clamps, boxes and hooks for fan clamps etc. as may be required for other agencies. Conduits for electrical wiring/cables will be laid in a way that they leave enough space for concreting and do not adversely affect the structural members. Nothing extra over the agreement rates shall be paid for the same.
3. Some restrictions may be imposed by the security staff etc. on the working and on movement of labour, materials etc. The contractor shall be bound to follow all such restrictions/instructions and nothing extra shall be payable on this account. The contractor shall comply with proper and legal orders and directions of the local or public authority or municipality and abide by their rule and regulations and pay all fees and charge, which he may be liable
4.
 - (a) The building work will be carried out in the manner complying in all respects with the requirements of relevant bye-laws of the local body under the jurisdiction of which the work is to be executed or as directed by the Engineer-in-Charge and nothing extra will be paid of this account.
 - (b) The work of water supply, internal sanitary installations and drainage work etc. shall be carried out as per local Municipal Corporation or such local body-bye-laws and the contractor shall produce necessary completion certificate from such authorities after completion of the work, if required.
 - (c) Water tanks, taps sanitary, water supply and drainage pipes, fitting and accessories should conform to bye-laws and specification of the 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.
 - (d) The contractor shall comply with proper and legal orders and directions of the local or public authority or municipality and abide by their rule and regulations and pay all fees and charge, which he may be liable.
5. The contractor shall take instructions from the Engineer-in-Charge for stacking of materials in any place. No excavated earth or building materials shall be stacked on areas where other buildings, roads, services compound walls are to be constructed.
6. Construction labour shall not be permitted (except staff for watch and ward) to stay inside the campus. The contractor has to arrange for necessary photo identity passes for the labour for entry in to the campus. The labour movement should be restricted to the areas where work is carried out.

ADDITIONAL CONDITIONS - II

2.0 AGREEMENT

Agreement shall be drawn with the successful Tenderer as per General Conditions of Contract for CPWD works. This document is a priced publication and interested tenderers may purchase and study the various clauses before submitting the tender.

3.0 TIME FOR COMPLETION OF WORK

The time allowed for carrying out the work will be **4 months** from the 14th day after the date of written order to commence the work or from the first day of handing over the site, whichever is later, in accordance with the phasing if any indicated in the Tender documents.

4.0 AVAILABILITY OF SITE

The site for the work is available.

6.0 CLARIFICATIONS ON TENDER DOCUMENTS

A prospective Tenderer requiring any clarification on the Tender Document may notify Executive Engineer (Civil), IITM at Chennai. The Executive Engineer (Civil) will respond to any request for clarification which he receives earlier than 15 days prior to the deadline for submission of Tenders. Copies of the response shall be forwarded who have attended the meeting.

9. EARNEST MONEY

The Tender should be accompanied by Earnest Money for an amount of **Rs. 7,100/- (Rupees Seven Thousand and One hundred only)**. The EMD shall be paid in the form of Demand Draft drawn in favour of IITM Chennai – 600 036 on any Scheduled Bank payable at Chennai.

Any Tender not accompanied by Earnest Money in an acceptable form shall be rejected by the Employer as non-responsive.

The Earnest Money of the successful Tenderer will be taken as part of the Security Deposit as stipulated in Clause 1A of "General conditions of Contract".

The Earnest Money will be forfeited to an extent of 50%, if during the period of Tender Validity, the tenderer

(a) Withdraws his Tender

or

(b) Makes any modifications in the terms and conditions of the Tender which are not acceptable to the Employer.

The Earnest Money will be forfeited in full if the successful Tenderer.

- (i) Fails to commence the work on 14th day after the date on which the Employer issues written order to commence the work/ handing over the site which ever is later.

10. ALTERNATIVE PROPOSALS BY THE TENDERERS

The Tenderers shall submit offers, which comply strictly with the requirements of the Tender Document. Alternatives or any modification shall render the Tender invalid.

11. AUTHORITY TO SIGN

- (a) If the Applicant is an individual, he should sign above his full type written name and current address.
- (b) If the Applicant is a proprietary firm, the Proprietor should sign above his full type written name and the full name of his firm with its current address.
- (c) If the Applicant is a firm in partnership, the Documents should be signed by all the Partners of the firm above their full type written names and current addresses. Alternatively the Documents should be signed by a Partner holding Power of Attorney for the firm and in this case a certified copy of the Power of Attorney should accompany the Documents. In both cases a certified copy of the Partnership Deed and current address of all the partners of the firms should be furnished.
- (d) If the Applicant is a limited Company, or a Corporation, the Documents shall be signed by a duly authorized person holding Power of Attorney for signing the Documents, accompanied by a copy of the Power of Attorney. The Applicant should also furnish a copy of the Memorandum of Articles of Association duly attested by a Public Notary.

LATE TENDER

Any Tender received after the deadline prescribed will be returned unopened to the Tenderer.

**NOTE ON
GENERAL CONDITION OF CONTRACT AND
SCHEDULES A TO F**

1. The general condition of contract Clauses of Contract and Schedules A to F should be read in conjunction with Correction Slip (C.S.) issued by the DG (Works), CPWD, New Delhi up to till date
2. Wherever the expression “The President of India” or “The Government” or “The CPWD” appears in the clauses it should be substituted by the expression “IITM” representing “Indian Institute of Technology Madras”.
3. Wherever the expression “divisional Officer” appears in the Clauses, it should be substituted by the expression “Executive Engineer (Civil)”.
4. “Engineer in Charge” means Executive Engineer (Civil), IITM, and the Engineer means the officer representing the Engineer-in-Charge of the Project.

SPECIAL CONDITIONS

1. No plot rent shall be charged for materials stocked in the institute land during the course of construction with the prior approval the engineer provided all such materials are removed within one month after the works are completed.
2. Royalty or charges due for use of private quarries and private land shall be paid by the Contractor.
3. No labour camps shall be permitted in side the IIT campus. Workers should be made to confine themselves to the work areas and should not wander in to the near by areas / buildings/ forests.
4. If night work is required to be carried out to fulfill the agreed rate of progress all arrangement shall be made by the Contractor inclusive of lighting the area without any claim for extra rate. To the extent possible engaging women labour in the night shift should be avoided.
5. The works shall be carried as per C.P.W.D specifications with Addenda and Corrigenda issued up o the date of receipt of tender and as per best Engineering practice.
- 6 No variations from, additions to and omissions from in the items of work shall vitiate the contract. All such variations, additions, substitutions etc shall be decided as per the terms of the contract agreement.
7. Child Labour is strictly prohibited.
8. Water will be supplied by I.I.T Madras and the contractors will be charged @ 1.5% of the total value of work done.
9. Holes and chasis for water supply and drainage, etc, shall be provided as directed during progress of work without any claim for extra for finishing.
10. The work shall be carried out with least hindrance to the adjoining building and offices and the contractors will be responsible for any damages, caused to the existing fixtures, electric fitting, etc. in the course of execution and the contractor shall make good any such, damages without any claim for extra.

11. The power connection will be provided to the contractor at a specified location and rate of Rs10.50 per unit will be charged for the same. The contractor should make their own arrangement to distribute the power to the various locations required for execution of the work.. Distribution of power should be using proper armored required for execution of the responsible for power interruptions / failures, the contractor should make their own arrangement (generators) in case of power failure without any additional cost.

SPECIAL CONDITON FOR SAFETY AT THE SITE

- The contractor must appoint a qualified person (full time) for taking care of implementation of Safety systems
- The Contractor shall submit the Project Safety Plan stating the methodology of implementation of systems to ensure the safe and environment friendly work place.

The Safety Plan must include the following:

- Organization Chart
- Reporting relationship of the safety function in a flow chart
- Safety Committee
- Structure – Chairman, secretary and committee members – Roles & Responsibilities
- Applicable Statutory requirements, standards and codes related to safety and its adherence
- General safety rules and regulations concerning
 - Use of personal protective equipment and safety devices relevant to site activities
 - Awareness and Training Programs
 - Motivational schemes and programs
 - Access, Egress and workstation safety
 - Safe use of construction power supply and upkeep / maintenance of installations
 - Work permit systems
 - Use, maintenance and inspection of Plant & machinery
 - Scaffold & formwork norms
 - Use, maintenance and inspection of Lifting Tools
 - Fire Protection and prevention
 - Emergency preparedness

Status of Safety implementation at site will be discussed in the Weekly Review meeting. Contractor must submit the safety statistics every month in the enclosed format.

The General Guidelines governing the safety implementation shall include the following Rules while preparing the safety plan.

1. No workmen below 18 years and above 58 years of age shall be engaged for a job.
2. All the workmen shall undergo Safety Induction, screening before engaging them on the job. Physical fitness of the person to certain critical jobs like working at height or other dangerous locations to be ensured before engaging the person on work.
3. Smoking is strictly prohibited at workplace.
4. Sub-contractors shall ensure adequate supervision at workplace. They shall ensure that all persons working under them shall not create any hazard to self or to co-workers.
5. Nobody is allowed to work without wearing safety helmet. Chinstrap of safety helmet shall be always on. Drivers, helpers and operators are no exception.
6. No one is allowed to work at or more than three meters height without wearing safety belt and anchoring the lanyard of safety belt to firm support preferably at shoulder level.
7. No one is allowed to enter into workplace and work at site without adequate foot protection.
8. Usage of eye protection equipment shall be ensured when workmen are engaged for demolition, grinding, chipping, welding and gas-cutting. For other jobs as and when site safety co-coordinator insists eye protection has to be provided.
9. All PPE like Safety shoes, Safety helmet, Safety belt, Safety goggles etc. shall be arranged before starting the job.
10. All excavated pits shall be barricaded & barricading to be maintained till the backfilling is done. Safe approach to be ensured into every excavation.
11. Adequate illumination at workplace shall be ensured before starting the job at night.
12. All the dangerous moving parts of the portable / fixed machinery being used shall be adequately guarded.
13. Ladders being used at site shall be adequately secured at bottom and top. Ladders shall not be used as work platforms.
14. Dismantling zone shall be barricaded and nobody will be allowed to stand under suspended loads.
15. Contractors should spray water using Water browser periodically in the site to reduce the dust rising due to wind.
16. Horseplay is completely prohibited at workplace. Running at the site is completely prohibited, except in the case of emergency.
17. Material shall not be thrown from the height. If required, the area shall be barricaded and one person shall be posted outside the barricading for preventing the tre-passers from entering the area.
18. Other than electricians with red helmet no one is allowed to carry out electrical connections, repairs on electrical equipment or other jobs related thereto.
19. All electrical connections shall be made using 3 or 4 core cables, having a earth wire.
20. Proper Earthing pits at site to be constructed. And the sensitivity must be maintained less than 1 ohm
21. Main panel boards should have MCB's and RCCB / ELCB's (30 mA sensitivity).
22. Inserting of bare wires for tapping the power from electrical sockets is completely prohibited.

23. All major, minor accidents and near misses to be recorded and reported to the IITM and the management must take necessary steps to avoid the recurrence.
24. Scaffoldings used should be of proper construction. No Casuarina pole / bamboo scaffolding is permitted. It should be inspected by competent person(s) before use
25. All tools and tackles shall be inspected before use. Defects to be rectified immediately. No lifting tackle to be used unless it is certified by the competent authority.
26. All tools and tackles shall be tested and have a Identification no., SWL and date of next test marked on them.
27. A tools and tackles inspection register must be maintained and updated regularly.
28. Good housekeeping to be maintained. Passages shall not be blocked with materials. Materials like bricks shall not be stacked to the dangerous height at workplace.
29. Must have a reverse horn on all the Earth moving vehicles and Equipments used at site.
30. Debris, scrap and other materials to be cleared from time to time from the workplace and at the time of closing of work every day.
31. Adequate firefighting equipment shall be made available at workplace and persons are to be trained in fire fighting techniques with the co-ordination of site safety coordinator.
32. All the unsafe conditions, unsafe acts identified by contractors, reported by site supervisors and or safety personnel to be corrected on priority basis.
33. No children shall be allowed to enter the workplace.
34. Other than the Driver / operator, no one shall travel in a tractor / tough rider etc.
35. All the lifting tools and tackles shall be stored properly when not in use.
36. Clamps shall be used on Return cables to ensure proper earthing for welding works.
37. Return cables shall be used for earthing.
38. All the pressure gauges used in gas cutting apparatus shall be in good working condition.
39. Proper eye washing facilities shall be made in areas where chemicals are handled.
40. Connectors and hose clamps are used for making welding hose connections.
41. Proper warning boards and caution notices to be displayed at required areas inside the site.
42. All cranes must have a trained signal man for signaling.
43. All underground cables for supplying construction power shall be routed using conduit pipes.
44. Spill trays shall be used to contain the oil spills while transferring / storing them.
44. Tapping of power by cutting electric cables in between must be avoided. Proper junction boxes must be used.

MONTHLY SITE SAFETY STATISTICS

TOTAL MANHOURS WORKED DURING THE MONTH

| Sl. No. | Description | Number | Man-hours worked | OT Performed | Total |
|---|---|--------|------------------|--------------|-------|
| 1 | Company Staff | | | | |
| 2 | Subcontractor's Workmen (including security personnel) | | | | |
| GRAND TOTAL OF MANHOURS WORKED DURING THE MONTH | | | | | |

Total Man-hours worked since inception : _____

Safe man hours from last reportable Lost time injury : _____

Details of Reportable Lost Time Injury

| Sl No | Name of Injured | Date of Accident | Resumed duty on | Man days lost | | | Claim Status |
|-------|-----------------|------------------|-----------------|----------------------|----------------|-------------|--------------|
| | | | | Up to last month (1) | This month (2) | Total (1+2) | |
| | | | | | | | |

Man days Lost during the month (Cumulative of 2)

Number of Dangerous Occurrences : _____

No of Near Miss Cases : _____

Routed through Site In charge

Signature: _____

Date: _____

Site Safety Coordinator/Time Keeper

Signature: _____

Date: _____

Special condition for Protection for Environment

1. The debris / construction waste and other waste generated from the work spot should not be thrown inside the campus. All waste material should be taken out of the campus or should be dumped at a place earmarked by the Engineer in charge.
2. All construction material should be stored only at places earmarked by the engineer in charge. Material like cement, aggregate, steel etc should not be stored in buildings that are in use. If any material stored in unauthorized location the same shall got removed at the cost of contractor and necessary rent shall be levied for the area used for storage.
3. For Intercarting of various materials animal drawn vehicles are strictly prohibited.
4. Preparation of concrete, mortars in the roads, pavements, under the building bare floors is strictly prohibited.
5. While transporting the materials along the road, spillage of material should be avoided. If any spillage occurs the same should be got cleaned immediately.
6. No vegetation inside the campus should be damaged.
7. Drinking water requirement of the labour should be arranged by the contractor and they should be instruct no to misuse the facilities available in the various buildings.
8. All labour should be dressed properly attending to work wearing dhotis, lungies should be avoided to the extend possible.
9. The workmen shall wear suitable protection devices like mask, gloves, shows etc,

Any violation of above will attract levy of compensation by the engineer in charge on the contractor.

INSURANCE TO BE TAKEN BY THE CONTRACTOR AND EMPLOYER TO BE INDEMNIFIED

Third Party Insurance

Before commencing the execution of the Works, the contractor shall insure against the liability for any material or physical damage, loss or injury which may occur to any property or life including that of the Employer or to any person, including any employee of the Employer, by or arising out of the execution of the works or in the carrying out of the Contract. The cum insured will be for Rs. 5 lakhs,

Such insurance shall be effected with an insurer and in terms approved by the Employer. The Contractor shall, whenever required, produce before the Engineer-in-charge the policy or policies of insurance and the receipts of payment of the current premiums.

Workmen's Insurance

The Employer's shall not be liable for any payment in respect of any damages or compensation payable according to law in respect or in consequence of any accident or injury or loss of life to any workman or other person in the employment of the Contractor or any sub-contractor, except an accident or injury resulting from any act or default of the Employer, his agents or servants. The Contractor shall insure against such liability with an insurer approved by the Employer for sum of the established norms during the entire period till completion of Period of Maintenance.

Recovery from the Contractor

Without prejudice for the other rights of the Employer against the Contractor in respect of such default, the Employer shall be entitled to deduct from any sums payable to the Contractor the amount of any damages, compensation costs, charges and other expenses paid by the Employer and which are payable by the Contractor under this clause.

Period of Policies

All the insurance covers mentioned above shall be kept alive during the complete period of the contract. Remedy on Contractor's Failure to Insure. If the Contractor shall fail to effect and keep in force the insurance referred to above, or any other insurance which he may be required to effect under the terms of the Contract, then and in any such case the Employer on advice of the Engineer-in-Charge may effect and keep in force any such insurance and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by the Employer as aforesaid from any moneys due or which may become due to the Contractor, or recover the same as debt due from the Contractor.

Damage to Persons and Property – Employer to be Indemnify

The Contractor shall indemnify the Employer against all losses and claims in respect of injuries or damages to any person or material or physical damage to any property whatsoever which may arise out of or in consequence of the execution and maintenance of the works and against all claims, proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto, except any compensation or damages for or with respect to:

- (a) The permanent use or occupation of land by the works or any part thereof.
- (b) The right of the Employer to execute the works or any part thereof on, over, under, in or through any land.
- (c) Injuries or damage to persons or property resulting from any act or neglect of the Employer, his agents, servants or other contractors, not being employed by the Contractor or for or in respect of any claims, proceedings, damages, costs, charges and expenses in respect thereof or in relation thereto or where the injury or damage was contributed to by the contractor, his servants or agents, such part of the compensations as may be just and equitable having regard to the extent of the responsibility of the Employer, his servant or agent or other Contractors, for the damage or injury.

Signature of Contractor

Executive Engineer (Civil)

CONDITIONS FOR CEMENT AND STEEL BROUGHT BY THE CONTRACTOR FOR USE IN THE WORK

1. The contractor shall procure 43grade (conforming to IS 8112)ordinary Portland cement or PPC as decided by the Engineer in Charge from reputed manufactures of cement having a production capacity of one million tones per annum or more ,such as ACC, Ultratech (L & T), Ramco, Chettinadu, Birla Cement Corporation of India, etc or any approved by the Ministry of Industry, Government of India and holding license to use ISI Certification mark for their product whose name shall be got approved from the Engineer-in -Charge. The tenderer may submit a list of names of cement manufactures whose product they propose to use. The Engineer incharge has right to accept or reject the names of the manufactures which the tenderer propose to use in the work. No change in tendered rates will be accepted if the tendered accepting authority does not accepting the list of cement manufactures given by the tenderer with fully or partly. Supply of cement shall be taken in 50 kg bags bearing manufacture's name and ISI marking Samples of cement arranged by the contractor shall be got tested in accordance with provisions of relevant BIS codes. In case test results indicate that the cement arranged by the contractor do not confirm to the relevant BIS codes, the same shall stand rejected and shall be removed from the site by the contractor at his own cost with in a week's time of written order form the Engineer-in-charge to do so.
2. The cement shall be brought at site in bulk supply of approximately 50 tonnes or as decided by the Engineer- in- charge The cement go-down of the capacity to store a maximum of 2000 bags of cement shall be constructed by the contractor at site or work for which no extra payment shall be more. Double lock provision shall be made in the door of the cement go-down, the keys of one lock shall remain with the engineer-in-charge or his authorized representative and the key of the other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of the cement go-down. The contractor shall facilitate the inspection of the cement go-down by the Engineer-in-Charge or his authorized representative at any time
3. The contractor shall supply free of charge the cement required for testing, at the frequency and the details of the test shall be decided by the Engineer-in-Charge depending on the quantum of supply in each batch. The cost of tests shall be born by the contractor/Institute in the manner indicated below
 - 3.1. by the contractor, if the results show that the cement does not conform to the relevant BIS Codes.
 - 3.2. by the Institute, if the results show that the cement conforms to relevant BIS Codes
4. The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in the contract and shall be governed by conditions laid there in. Items for which standard coefficients of cement consumption are not available in DSR 2002,the same shall be decided by the Engineer-in-charge.
5. Cement brought to site and cement remaining unused after completion of work shall not be removed from site without written permission of the Engineer-in-charge.
6. The cement bags shall be stacked on proper floors consisting of two layers of dry bricks laid on well consolidated earth at a level of at least one foot above ground level. The stacks shall be in rows of two and 10 bags high with a minimum of 0.6 m clear space all round. The bags should be placed horizontally continuous in each line. actual size/shape of go-down shall be as per site requirements and nothing shall be paid on this account. The decision of Engineer-in-charge regarding the capacity of the godown shall be final.
7. Cement register for the cement shall be maintained at site. The account of daily receipt and issue of cement shall be maintained in register in the proforma prescribed and signed daily by the contractor or this authorized agent.

MEASUREMENT & PREPARATION OF BILL

14.1 Computerized Bill to be submitted by the Contractor

Conventional measurement book shall be replaced by a bound volume of computerized measurements to be furnished by the contractor, duly machine numbered for the pages, and with MB number given by the Institute. The pages of these measurements books shall be of A4 size. All these measurements books shall be serially numbered and a record of these computerized measurements book shall be maintained in a separate register. The same format as in existing measurement books shall be used for the computerized measurement books. The measurements shall be carried forward from the previous recorded measurement as per the existing procedure.

14.2 Mode of measurements

The measurements shall be recorded and entered in the computerized format in the first instance by the contractor and a hard copy shall be submitted to the Institute. All entries shall be made as per the existing procedure. This measurements shall then be 100% checked by the Junior Engineer/ Assistant Engineer, and test checked by the Asst. Executive Engineer and Executive Engineer/ Executive Engineer (Civil) as per the existing procedure. If Junior Engineer is not available, then the Asst Executive Engineer shall perform 100% check of the measurements.

The contractor shall incorporate all such changes or corrections, as may be done during the checks / test checks, to his draft computerized measurements and submit the final computerized measurements in the form of a book, duly hard bound in red colour on the lines of the conventional measurements books now in use with its pages machine numbered.

The Junior Engineer / Asst. Engineer, Assistant Executive Engineer, Executive Engineer/ Executive Engineer (Civil) shall check the computerized measurements to ensure that all the changes or corrections made by them earlier in the draft measurements are correctly incorporated in the final measurements. This book shall be treated as computerized measurement.

The Junior Engineer/ Asst. Engineer, Assistant Executive Engineer and Executive Engineer shall record the necessary certificate for their checks and test checks as per the existing procedure in this computerized measurement books. The computerized measurements book shall be allotted a serial number as per the register of computerized measurement books maintained by IITM.

14.3 Cuttings / over writing/ insertions in the computerized measurements books are not allowed.

The computerized measurements books given by the contractor, duly bound, with its pages numbered, shall have no cutting or over writing. In case of any error, computerized misprints shall be canceled and the contractor shall re submit a fresh computerized measurements books.

This should be done before submission of corresponding computerized billing. The contractor shall submit as many copies of computerized measurement books as may be required and as specified in the NIT / contract for the purpose of reference and recording the various office of the department.

14.4 Computerized bill to be submitted by the contractor

The contractor shall submit his running and final bill in a computerized form in the same format as the existing conventional bills with all the pages machine numbered and hard bound made and with all the entries as per the existing procedure. The contractor shall submit as many copies of the computerized bills as may be required for the purpose of reference and record. The bill shall be carried forward from the previous running account bill as per the existing procedure. The computerized bill may be processed as per the existing procedure.

Computerized bill to be submitted by the contractor

The contractor shall submit his running and final bill in a computerized form in the same format as the existing conventional bills with all the pages machine numbered and hard bound made and with all the entries as per the existing procedure. The contractor shall submit as many copies of the computerized bills as may required for the purpose of reference and record. The bill shall be carried forward from the previous running account bill as per the existing procedure.

The computerized bill as may be processed as per the existing procedure.

Signature of the Contractor

Executive Engineer (Civil)

Bill of Quantities

Name of the work: **“Construction of Public Toilet block and septic tank near ingate Security booth at IITM Campus.”**

Tender No : **36 / 2012 - 13 / Civil.**

Schedule -A

| S. No | Qty | Description of Item | Unit | Rate Rs in words & figures | Amount |
|--------------|------------|--|-------------|---------------------------------------|---------------|
| 1 | 13.50 | Earth work in excavation by mechanical means (Hydraulic excavator) /manual means over areas (exceeding 30cm in depth. 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be leveled and neatly dressed. (All kinds of soil) | Cum | | |
| 2 | 2.60 | Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete. | Cum | | |
| 3 | 3.50 | Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level. 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40mm nominal size) | Cum | | |
| 4 | 3.80 | Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5 m. | Cum | | |
| 5 | 35.00 | Centering and shuttering with film coated ply wood including rutting, propping etc. and removal of form for : (Foundations, footings, bases of columns, lintels, roof slab etc. for mass concrete) | Sqm | | |
| 6 | 6.50 | Providing and laying in position machine batched and machine mixed design mix M-35 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. (Note :- Cement content considered in this item is @ 428 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). | Cum | | |

| S. No | Qty | Description of Item | Unit | Rate Rs in words & figures | Amount |
|-------|--------|---|------|----------------------------|--------|
| 7 | 800 | Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.(Thermo-Mechanically Treated bars) | Kg | | |
| 8 | 14.00 | Masonry work using cement concrete blocks of class designation 100 in all levels using Cement Mortar 1:6 (1 cement : 6 coarse sand) | Cum | | |
| 9 | 12.50 | Half brick masonry using cement concrete blocks of class designation 100 in foundations and plinth in :(cement mortar 1:4)(1 cement : 4 coarse sand) | Sqm | | |
| 10 | 11.00 | 6 mm cement plaster of mix :1:3 (1 cement : 3 fine sand) | Sqm | | |
| 11 | 160.00 | 15 mm cement plaster on the rough side of single or half brick wall of mix 1:4 (1 cement: 4 fine sand) | Sqm | | |
| 12 | 0.08 | Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately). (Second class teak wood) | Cum | | |
| 13 | 12.00 | Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embedding in cement concrete block 30x10x15cm 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size). | Each | | |
| 14 | 12.00 | Providing and fixing ISI marked aluminium butt hinges anodized (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete:(125x75x4 mm) | Each | | |
| 15 | 8.00 | Providing and fixing aluminium tower bolts, ISI marked, anodized (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete :(150x10 mm) | Each | | |

| S. No | Qty | Description of Item | Unit | Rate Rs in words & figures | Amount |
|-------|------|---|------|----------------------------|--------|
| 16 | 2.00 | Providing and fixing aluminium sliding door bolts, ISI marked anodized (anodic coating not less than grade AC 10 as per IS : 1868), transparent or dyed to required colour or shade, with nuts and screws etc. complete :(300x16 mm) | Each | | |
| 17 | 8.00 | Providing and fixing aluminium handles, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete :(125 mm) | Each | | |
| 18 | 3.10 | Providing and fixing paneled or paneled and glazed shutters for doors, windows and clerestory windows, including ISI marked M.S. pressed butt hinges bright finished of required size with necessary screws, excluding paneling which will be paid for separately, all complete as per direction of Engineer-in-charge.(35 mm thick shutters) | Sqm | | |
| 19 | 3.10 | Extra if louvers (not exceeding 0.2 sqm) are provided partly and teak wood pannels12mm thick in paneled door shutters(overall area of door shutters to be measured).(Decorative type door) | Sqm | | |
| 20 | 9.50 | Providing and fixing factory made door frame (single rebate) made out of single piece extruded solid PVC foam profile with homogenous fine cellular structure having smooth outer integral skin having 62 mm width & 32 mm thickness, frame will be mitred & Jointed with self driven self tapping screws of size 38 mm x 4 mm & PVC solvent cement, including fixing the frame to wall with suitable dia & length anchor fastener as per manufacturer's specification and direction of Engineer-in-charge. | Rm | | |
| 21 | 3.10 | Providing and fixing to existing door frames.(30 mm thick Glass Fabre Reinforced Plastic (FRP) paneled door shutter of required colour and approved brand and manufacture, made with fire - retardant grade unsaturated polyester resin, moulded to 3 mm thick FRP laminate for forming hollow rails and styles, with wooden frame and suitable blocks of seasoned wood inside at required places for fixing of fittings, cast monolithically with 5 mm thick FRP laminate for panels conforming to IS: 14856, including fixing to frames). | Sqm | | |

| S. No | Qty | Description of Item | Unit | Rate Rs in words & figures | Amount |
|-------|--------|---|------|----------------------------|--------|
| 22 | 0.80 | Providing Aluminium Louvered Ventilators of size 0.60m x0.60m using aluminium standard sections and louvers with pin head glass 5mm thick with exhaust fan provision | Sqm | | |
| 23 | 8.50 | Providing and fixing 1st quality ceramic anti-skid floor tiles (Johnson / Kajaria) (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete. | Sqm | | |
| 24 | 37.00 | Providing and fixing wall tile (Johnson/Kajaria) work in dado up to 2 m height over 12mm thick bed of cement mortar 1:3 (1 cement :3 coarse sand) and jointed with grey cement slurry @ 3.3 kg/sqm, including pointing in white cement mixed with pigment of matching shade complete. | Sqm | | |
| 25 | 5.00 | Providing and fixing 18 mm thick gang saw cut, mirror polished, pre-moulded and pre-polished, machine cut for kitchen platforms, vanity counters, window sills , fascias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. Granite of any colour and shade(Area of slab over 0.50 sqm) | Sqm | | |
| 26 | 11.00 | White washing with cement paint (Birla / JK white) to give an even shade :(New work (three or more coats)) | Sqm | | |
| 27 | 115.00 | Wall painting with acrylic emulsion paint (Asian / Berger / ICI)of approved brand and manufacture to give an even shade : Two or more coats on new work over a coat of primer. | Sqm | | |
| 28 | 6.00 | Painting with synthetic enamel paint (Asian / Berger / ICI) of approved brand and manufacture to give an even shade :(Two or more coats on new work) | Sqm | | |

| S. No | Qty | Description of Item | Unit | Rate Rs in words & figures | Amount |
|-------|-------|--|------|----------------------------|--------|
| 29 | 1.10 | Lime brick jelly concrete of mix 1:2 (1 lime : 2 brick jelly) on roof for weathering coarse with required slope. | Cum | | |
| 30 | 14.50 | Providing and laying pressed clay tiles (as per approved pattern 20mm nominal thickness of approved size) on roofs jointed with cement mortar 1:4 (1 cement : 4 coarse sand) mixed with 2% integral water proofing compound, laid over a bed of 20 mm thick cement mortar1:4 (1 cement : 4 coarse sand) and finished neat complete. | Sqm | | |
| 31 | 1.00 | Making khurras 45x45 cm with average minimum thickness of 5cm cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet1 m x1 m x 400 micron, finished with 12 mm cement plaster 1:3(1 cement: 3 coarse sand) and a coat of neat cement, rounding the edges and making and finishing the outlet complete. | Each | | |
| 32 | 3.50 | Providing and fixing on wall face unplasticised rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion. (110 mm diameter) (Finolex / Supreme) | Rm | | |
| 33 | | Providing and fixing on wall face unplasticized - PVC moulded fittings/accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion (Finolex / Supreme) | | | |
| a | 1.00 | 110 mm dia bend | Each | | |
| b | 1.00 | 110mm dia shoe | Each | | |
| 34 | 2.00 | Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required : White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests (Parryware / Hindware) | Each | | |

| S. No | Qty | Description of Item | Unit | Rate Rs in words & figures | Amount |
|-------|-------|---|------|----------------------------|--------|
| 35 | 2.00 | Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require : White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps. (Parryware / Hindware) | Each | | |
| 36 | 2.00 | Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete. | Each | | |
| 37 | 2.00 | Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fittings arrangement of approved quality and colour.(600 mm long towel rail with total length of 645 mm, width 78 mm and effective height of 88 mm, weighing not less than 190 gms) | Each | | |
| 38 | 2.00 | Providing and fixing PTMT towel ring trapezoidal shape 215 mm long, 200 mm wide with minimum distances of 37 mm from wall face with concealed fittings arrangement of approved quality and colour, weighing not less than 88 gms. (Saint Gobain or Modiguard) | Each | | |
| 39 | 1.00 | Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm and 340x410x265 mm sizes respectively with automatic flushing cistern with standard flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required (Parryware / Hindware) | Each | | |
| 40 | 2.00 | Supplying and fixing of Nahni trap 100mm dia including fixing of stainless steel grating and finishing the same etc, complete. | Each | | |
| 41 | 30.00 | Supplying and fixing of 110mm dia 6kg/cm2 PVC pipe including specials | Rm | | |

| S. No | Qty | Description of Item | Unit | Rate Rs in words & figures | Amount |
|-------|---------|--|--------|----------------------------|--------|
| 42 | 10.00 | Supplying and fixing of 75mm dia 6kg/cm ² PVC pipe including specials (Finolex / Supreme) | Rm | | |
| 43 | 2.00 | Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design :(100x100 mm size P type) | Each | | |
| 44 | 5.00 | Constructing masonry chamber bricks in cement mortar 1:4 (1 cement : 4 coarse sand) SFRC Cover 455x610 mm internal dimensions, with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design (Inside dimensions 455x610 mm and 45 cm deep for single pipe line :) | Each | | |
| 45 | 2.00 | Extra for depth beyond 45 cm of masonry chamber: For 455x610 mm size . | Rm | | |
| 46 | 2000.00 | Providing and placing on terrace (at all floor levels) polyethylene water storage tank, ISI : 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank. | Litres | | |
| 47 | | Providing and fixing G.I. pipes complete with G.I. fittings and clamps, cutting and making good the walls etc. | | | |
| a | 20.00 | 25mm dia nominal bore | Rm | | |
| b | 6.00 | 15mm dia nominal bore | Rm | | |
| 48 | | Painting G.I. pipes and fittings with synthetic enamel white paint with two coats over a ready mixed priming coat, both of approved quality for new work : | | | |
| a | 20.00 | 25mm dia nominal bore | Rm | | |
| b | 6.00 | 15mm dia nominal bore | Rm | | |

| S. No | Qty | Description of Item | Unit | Rate Rs in words & figures | Amount |
|--|-------|--|------|----------------------------|--------|
| 49 | 4.00 | Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.(15 mm nominal bore) (Metro / Johnson) | Each | | |
| 50 | 5.00 | Cutting holes up to 30x30 cm in walls including making good the same: (With common burnt clay F.P.S. (non modular) bricks) | Each | | |
| 51 | 3.00 | Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete. | Each | | |
| 52 | 20.00 | Excavating trenches of required width for pipes, cables, etc, including excavation for sockets, depth upto 1.5 m, including getting out the excavated materials, returning the soil as required in layers not exceeding 20 cm in depth, including consolidating each deposited layers by ramming, watering etc., stacking serviceable material for measurements and disposal of unserviceable material as directed, within a lead of 50 m :(Pipes, cables etc. exceeding 80 mm dia but not exceeding 300 mm dia) | Rm | | |
| Schedule - A Total Amount in Rs | | | | | |

Schedule - B

| S. No | Qty | Description of Item | Unit | Rate Rs in words & figures | Amount |
|--------------|------------|--|-------------|---------------------------------------|---------------|
| 1 | 65.00 | Earth work in excavation by mechanical means (Hydraulic excavator) /manual means over areas (exceeding 30cm in depth. 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be leveled and neatly dressed. (All kinds of soil) | Cum | | |
| 2 | 27.00 | Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5 m. | Cum | | |
| 3 | 3.50 | Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete. | Cum | | |
| 4 | 3.50 | Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level. 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40mm nominal size) | Cum | | |
| 5 | 13.00 | Masonry work using cement concrete blocks of class designation 100 in foundation and plinth in:(Cement Mortar 1:4 (1 cement : 4 coarse sand) | Cum | | |
| 6 | 4.50 | Half brick masonry using cement concrete blocks of class designation 100 in foundations and plinth in :(cement mortar 1:4)(1 cement : 4 coarse sand) | Sqm | | |
| 7 | 90.00 | 15 mm cement plaster on the rough side of single or half brick wall of mix 1:4 (1 cement: 4 fine sand) | Sqm | | |
| 8 | 1.20 | Providing, hoisting and fixing up to floor five level precast reinforced cement concrete in small lintels not exceeding 1.5 m clear span up to floor five level, including the cost of required centering, shuttering but excluding the cost of reinforcement, with 1:2:4 (1 cement : 2 coarse sand : 4graded stone aggregate 20 mm nominal size). | Cum | | |
| 9 | 120.00 | Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.(Thermo-Mechanically Treated bars) | Kg | | |

| S. No | Qty | Description of Item | Unit | Rate Rs in words & figures | Amount |
|--|-------|---|------|----------------------------|---------------|
| 10 | 12.00 | Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910, on 12 mm dia steel bar conforming to IS : 1786, having minimum cross section as 23 mmx25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design. | Each | | |
| 11 | 3.00 | Supplying and fixing of SFRC Cover of size 0.60 x 0.60m (MD) fixed in cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 20mmGraded stone aggregate) including finishing the same etc, complete | Each | | |
| 12 | 3.00 | Supplying and fixing of 75mm dia 6kg/cm2 PVC pipe including specials (Finolex / Supreme) | Rm | | |
| 13 | 1.00 | Making soak pit 2.5 m diameter 3.0 metre deep with 45 x 45 cm dry brick honey comb shaft with bricks and S.W. drain pipe 100 mm diameter, 1.8 m long complete as per standard design. (With common burnt clay F.P.S. (non modular) bricks of class designation 7.5) | Each | | |
| Schedule B - Total Amount in Rs | | | | | |
| | | General Abstract | | Description of Work | Amount |
| | | Toilet Work | | Schedule – A | |
| | | Septic Tank & Soak pit | | Schedule - B | |
| | | | | Grand Total | |

Total Amount in Rs. (In words)

Signature of the Contractor

Executive Engineer (Civil)