

**INDIAN INSTITUTE OF TECHNOLOGY BOMBAY  
ESTATE OFFICE****TENDER DOCUMENT****INDEX**

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## ABOUT CONTRACT

1. This is a percentage rate tender in two cover system (Eligibility and Financial bid) under an Umbrella contract for entire campus of IIT Bombay.
2. Superintending Engineer is the Head of the Estate Office and Engineer-in-Charge.
3. The works in entire campus under Estate Office are divided into two Divisions. Executive Engineer is the divisional Head. Further each Divisions are divided into three Sub-divisions as under and Assistant Engineer / Assistant Executive Engineers are Sub-divisional Head.
4. The entire Campus under Estate Office is divided as under;
  - a. Academic Sub-Division
  - b. Workshop & Infrastructure Sub-Division
  - c. Central & Lake side Residential Sub-Division
  - d. Hostel Area Sub-Division
  - e. Hill side, Hospital & Guest House Sub-Division
5. The tenderers are requested to enter their percentage above / below in the prescribed cell in the BOQ.
6. The percentage rate quoted by the tenderers shall be the same for all the five Sub-Divisions and quoted as a single percentage in the prescribed cell.
7. If the lowest percentage quoted is not within the justified limit, negotiation will be conducted with the Lowest (L1) tenderer.
8. The work will be awarded to the L1 contractor. After the award of work, work will be executed with separate Agreements for each Sub-Division. Agreements will be drawn with the contractor for the following Sub-Divisions:
 

Division-I

  - a. Academic Sub-Division
  - b. Workshop, Infrastructure Sub-Division
  - c. Central & Lake side Residential areas Sub-Division

Division-II

  - d. Hostel Area Sub-Division
  - e. Hill side, Hospital & Guest House Sub-Division

Under the Sub Divisional agreements, the works would be executed through separate Work Order as per the requirement. The work would be certified by the respective Junior Engineers, Assistant Engineers/ Assistant Executive Engineer and put up for final certification of the Executive Engineer.
9. The rate quoted shall be inclusive of all applicable taxes including GST prevailing on the date of tender. However, the rate of tax prevailing at the date of billing will only be paid based on submission of tax invoice as per GST rules.
10. The rates considered by IIT Bombay is inclusive of 18% GST. Any reduction in the rates of GST from the quoted rates in the BOQ during the currency of the contract commensurate reduction in the quoted rates in BOQ will be effected and payment will be made accordingly.

11. All the tenderers should ensure that they are GST compliant and the quoted rates are as per GST Law. The Tenderer should submit their GST registration certificate while uploading the tender document.
12. If the tenderer fails to upload GST Registration certificate, the tender will be summarily rejected.
13. Construction labour shall **not be permitted** to stay inside the campus and no labour camp shall be allowed to be set up inside the campus.
14. The work should be executed during day time only. If the work is required to be carried out in the night, necessary permission of the Engineer-in-charge shall be obtained. Contractor will make his own arrangement for lighting the area and no extra amount for carrying out the work during night is payable. To the extent possible engaging women labour in the night shift should be avoided.
15. Any error in description, quantity or rate in schedule of Quantities or any omission there from shall not vitiate the contract 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. All such variations, errors, additions, substitutions etc shall be decided as per the terms of the contract.
16. The building work shall be carried out 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 on this account.
17. Where CPWD specifications are not available for fittings and fixtures, the same should conform to bye-laws and specification of the local Body. The contractor should engage licensed plumbers for the work.
18. The tenderer shall comply with all legal orders and directions of the local or public authority or municipality and abide by them.
19. The tenderer shall give a performance test of the installation(s) as per specifications before the work is finally accepted and nothing extra whatsoever shall be payable to the tenderer for the test.
20. Any cement slurry added over base surface (or) for continuation of concreting to obtain better bond between old and new concrete is deemed to have been included in the items and nothing extra shall be payable or extra cement considered in consumption on this account.
21. The rate for Centering & shuttering under concrete items will be the same for Centering & shuttering in curves & arches also unless specified otherwise in the BOQ.
22. The contractor should construct proper mortar bands of lean mix with adequate depth & size over the roof for flooding with water & proper curing. In case of Arches, wet gunny bags shall be used for a period of two weeks.
23. Holes and chase for water supply and drainage, etc, shall be provided as directed during progress of work without any claim for extra for finishing.
24. The rate quoted for tiling on walls shall include providing the bevel edges for the corners or the PVC corner strips. No additional payment shall be payable on this account.
25. Sample of all materials, fixtures, flooring tiles, wall tiles, doors, windows, sanitary fittings, roofing sheets, fittings etc, shall be got approved in advance from the Engineer-in- Charge before taking up the respective work. The contractor shall produce all the materials in advance so that there is sufficient time for testing and approving the materials and clearance of the same before their use in work.

26. The contractor shall be furnished, free of cost one certified copy of the contract documents except Standard Specifications, 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 this contract.
27. For any dispute arising out of this agreement, the legal jurisdiction will be at Mumbai in Maharashtra only.
28. Other agencies related to this contract will also simultaneously execute their part of works and the contractor shall cooperate and allow smooth working of all such agencies. The contractor shall leave such holes, openings etc, for laying / burying of pipes, cable, conduits, clamps, boxes and hooks for fans etc. as may be required for other agencies. The rates quoted for the items of work are deemed to include charges for coordinating with all such agencies and nothing extra is payable on this account.
29. The few events/ activities will take place in the Campus which may hinder the progress of work.
30. The completion time stipulated in the contract is deemed to have included the above, if they happen during the duration of the contract with additional provisions and resources.
31. The work is to be carried out by skilled workers conversant with existing system in the campus. If the contractor is associating any sub-contractor for execution, the sub contractor so associated shall have the full knowledge of the existing system in the campus and such association shall be got approved by IIT Bombay.
32. The contractor has to bring the container for site office as well as the storage of materials at his own cost. The location for site office will be identified by the Engineer-in-charge.
33. Help desk to be provided with sufficient man power to receive all the request through IVRS, Phone call, oral, etc by the contractor. Proper record and registrar shall be maintained and follow ups by the efficient staffs from the Contractor side under this contract.
34. In clause 25, a Dispute Redressal Committee has been constituted by IIT Bombay. The procedure for inviting Dispute Redressal Committee is to be done as per Clause 25.
35. Any reduction in the rates of GST from the quoted rates in the BOQ during the currency of the contract, commensurate reduction in the quoted rates in BOQ will be effected and payment will be made accordingly. The market rate analysis adopted by IIT Bombay for calculating the reduction in GST will be final and binding on the contractor.

Sd/-  
**Superintending Engineer**

# TENDERS

I / We have read and examined the notice inviting tender, schedule of items specification applicable, Drawings & Designs, General Rules and Directions, Conditions of contract, clauses of contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender documents for the work.

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

We agree to keep the tender open for One Hundred Eighty (180) days from the due date of its opening / ninety days from the date of opening of financial bid in case tenders are invited on 2/3 envelop system ( Strike out as the case may be) and not to make any modification in its terms and conditions.

A sum equal to 2% estimated value of work is hereby forwarded in demand draft of a scheduled bank / Pay Order issued by a scheduled bank as earnest money.

EMD submitted by the bidders will be released after preparation of comparative statement except for the bidder who stood lowest. EMD of lowest / selected bidder will be released on application from the bidder after the commencement of work.

I / We agree that IIT Bombay 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 IIT Bombay shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money 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 12.2 of the tender form. Further, I/We agree that in case of forfeiture of Earnest money 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 works(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/We shall be debarred for tendering in IIT Bombay in future forever. Also, if such a violation comes to the notice of the Institute before date of start of work, the Engineer-in-charge shall be free to forfeit the entire amount of Earnest Money Deposit.

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 letter mentioned hereunder) is accepted by Director for and on behalf of the Indian Institute of Technology, Bombay

for a sum of Rs .....

(Rupees.....)

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

- a)
- b)
- c)

Signature.....

Designation.....

Dated :

# GENERAL RULES & DIRECTIONS

1) All work proposed for execution by contract will be notified in a form of invitation to tender to enlisted contractors of IIT Bombay or by publication in News papers as the case may be.

This form will state the work to be carried out, as well as 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 tender 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 identification by the officer inviting tender shall also be open for inspection by the contractor at the office of officer inviting tender during office hours.

2. In the event of the tender being submitted by a firm, it must be signed separately by each partner there of or in the event of the absence of any partner, it must be signed on this behalf by a person holding a power of attorney authorizing him to do so, such power of attorney to be produced with the tender, and it must disclose that the firm is duly registered under the Indian Partnership Act, 1932.

3. Receipt for payment made on account of work, when executed by a firm must also be signed by all the partners, except where contractor are described in their tender as a firm, in which case the receipts must be signed in the name of the firm by one of the partners, or by some other person having due authority to give effectual receipts for the firm.

## 4 Applicable For Item Rate Tender

Any person who submits a tender shall fill up the usual printed form stating at what rate he is willing to undertake each item of the work. Tenders, which proposed 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 conditions of any sort, including conditional rebates, will be summarily rejected. No single tender shall include more than one work, but contractors who wish to tender for two or more works shall submit separate tender for each. Tender shall have the name and number of the works to which they refer, written on the envelopes.

The rate(s) must be quoted in decimal coinage. Amounts must be quoted in full rupees by ignoring fifty paisa and considering more than fifty paisa as rupee one.

## 5.Applicable for Percentage Rate Tender Only

In case of Percentage Rate Tenders, tenderer shall fill up the usual printed form, stating at what percentage below / above ( in figures as well as in words) the total estimated cost given in schedule of Quantities at schedule-A, he will be willing to execute the work. **The tender submitted shall be treated as invalid if :**

- (i) The Contractor does not quote percentage above / below / at par on the total amount of tender or any section / sub head of the tender.

- (ii) The percentage above /below is not quoted in figures & words both on the total amount or any section / sub head of the tender.
- (iii) The percentage quoted above / below is different in figures & words on the total amount of tender or any section / sub head of the tender :

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 conditions of any sort including conditional rebates, will be summarily rejected. No single tender shall include more than one work, but contractors who wish to tender for two or more works shall submit separate tender for each. Tender shall have the name and number of the works to which they refer, written on the envelopes.

6) In case the lowest tendered amount (estimated cost + amount worked on the basis of percentage above / below ) of two or more contractors is same, such lowest contractors will be asked to submit rebate over the quoted amount in sealed envelope. The lowest tender shall be decided on the basis of rebate offered.

If the revised amount of two more contractors after the rebate offer is again found to be equal, the lowest tender, among such contractors, shall be decided by draw of lots in the presence of Superintending Engineer/Executive Engineer.

7) The officer inviting tender or his duly authorized assistance will open tenders in the presence of any intending contractors who may be present at the time, and will enter the amounts of the several tenders in a comparative statements in a suitable form. In the event of a tender being rejected, the earnest money shall thereupon be returned to the contractor remitting the same, without any interest.

8) 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.

9) The tenders shall sign a declaration under the officials secret Act 1923, for maintaining secrecy of the tender documents drawings or other records connected with the work given to them.

10) Use of correcting fluid, anywhere in tender document is not permitted. Such tender is liable for rejection.

**11) (Applicable for item rate tender only)**

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 figure 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. In event no rate has been quoted for any item(s), leaving space both in figure(s), words(s), and amount blank, it will be presumed that the contractor has included the cost of this / these item(s) in other items and rate for such item(s) will be considered as zero and work will be required to be executed accordingly.

12) In case of Percentage rate tenders only percentage quoted shall be considered. Any tender containing item rates is liable to be rejected. Percentage quoted by the contractor in percentage rate tender shall be accurately filled in figures and words, so that there is no discrepancy

13) 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 tenderer is unable to provide satisfactory explanation, such a tender is liable to be disqualified and rejected.

**14. (Applicable for item rate tender only )**

All rates shall be quoted on the tender form. The amount for each item should be worked out and 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 figure and in words. In case of figures, the word 'Rs.' should be written before the figure of rupees and word 'P' after the decimal figures, e.g 'Rs'. 2.15P' and in case of words, the word, 'Rupees' should precede and the word 'Paise' should be written at the end. Unless the rate is in whole rupees and followed by the word 'only' it should in variably be upto two decimal places. While quoting the rate in schedule of quantities, the word 'only' should be written closely following the amount and it should not be written in the next line.

**15. (Applicable for percentage rate tender only )**

In percentage Rate Tender, the tenderer shall quote percentage below / above ( in figures as well as in words) at which he will be willing to execute the work. He shall also work out the total amount of his offer and the same should be written in figures as well as in words in such a way that no interpolation is possible. In case of figures, the word 'Rs' should be written before the figure of rupees and word 'P' after the decimal figures, e/e Rs. 2.15p and in case of words, the word 'Rupees' should precede and the word 'Paisa' would be written at the end.

16. Completed tenders along with all the specified documents in a sealed cover, superscribed with the name of work and work number shall be put in the tender box kept in Estate Office within the prescribed time.

17. On acceptance of the tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instruction from the Engineer-in-charges shall be communicated in writing to the Engineer-in-charge.

18. GST (except service tax), purchase tax, turnover tax or any other tax applicable in respect of this contract shall be payable by the Contractor and IIT Bombay will not entertain any claim whatsoever in respect of the same. However, in respect of service tax, same shall be paid by the contractor to the

concerned department on demand and it will be reimbursed to him by the Engineer-in-Charge after satisfying that it has been actually and genuinely paid by the contractor.

19. The contractor shall comply with the provisions of the **Apprentices Act 1961**, and the rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the Superintending Engineer / Executive Engineer may in his discretion, without prejudice to any other right or remedy available in law, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.

20. The particular specification for certain items in the Financial bid – Volume – II – Part 1 – Civil work - Bill of Quantity (BOQ) is enclosed as Annexure 1 and the same shall be read in conjunction with the corresponding specification given in the BOQ.

21. Necessary site barricading details and material yard layout may be obtained from Engineer-in-charge.

22. Spillover of any construction materials / earth on the road surface should be cleared immediately.

23. No trees and vegetation shall be cut by the tenderer.

24. All construction activities and labour movements should be restricted within the area earmarked for these purpose.

25. No labour camp is allowed inside IIT Bombay campus.

26. Firewood collection is strictly prohibited.

27. All debris generated in the site premises / material yard should be removed and disposed outside IIT Bombay campus. Necessary approval from local authority shall be obtained by the tenderer. No additional charges will be paid for the same.

28. IIT Bombay traffic regulation and speed limit should be followed without any violation.

29. In case of violation of any rules by the tenderer, penalty will be levied by IIT Bombay at the following rate:

<b>Sr. No.</b>	<b>Operations</b>	<b>Penalty per day</b>
1	Construction labour shed without approval from Engineer-in-charge	Rs.5000/- per shed per day
2	Labour wander in to the nearby areas / buildings / forests.	Rs.500/-per person
3	Thrown food items / waste / package item inside or outside the site premises.	Rs.1000/- per day
4	If water stagnation inside the construction site.	Rs.500/- per day
5	Dumping of debris and storage of materials outside the barricaded area.	Rs.25000/- per day

6	Improper maintenance of barricade.	Rs.5000/- per day
7	Improper sanitation of labour toilets	Rs.1000/- per day
8	Collection of firewood	Rs.2500/- per day
9	Work without safety barricading / Signage	Rs.5000/- per day
10	Execution of work without any safety precaution	Rs.5000/- per day

### 30. Emergency complaints:

Attending to any safety related issues, clearing garbage, pipe line leakage, broken pipe line, damaged plumbing / sanitary fittings, drainage blockages, over flow of water / drainage, easing of door and lock repair etc. and specified by Engineer-in charge as per the emergency requirements are classified as emergency complaints. The contractor shall complete the emergency complaints within 12 hours from actual date of complaint / issue of job card or through any other communication.

If any unjustified delay occurs beyond this period penalty will be imposed and the same will be deducted from the subsequent running account bill as per the following.

- 1) If the number of emergency complaints attended with unjustified delay is less than 2% of the total number of emergency complaints for the particular month, no penalty will be imposed.
- 2) For each unjustifiably delayed emergency complaint attended beyond this limit of 2%, penalty of Rs5000 will be imposed.

### 31. Routine Maintenance complaints:

Penalty for unjustified delay in completion of day-to-day routine maintenance and minor complaints including preventive maintenance (other than emergency complaints):

The contractor shall complete the day-to-day routine maintenance and minor complaints including preventive maintenance (other than emergency complaints) within 7 days from actual date of complaint / issue of job card or through any other communication.

For unjustified delay in attending to and completing the day-to-day routine maintenance and minor complaints including preventive maintenance (other than emergency complaints) penalty will be imposed and the same will be deducted from the subsequent running account bill as per the following.

- 1) If the number of unjustified delays in attending to day-to-day routine maintenance and minor complaints including preventive maintenance (other than emergency complaints) is less than 3% of the total number of routine complaints for the particular month, no penalty will be imposed.
- 2) For each unjustifiably delayed complaint beyond this limit of 3%, penalty at the rate of Rs5000 will be levied.
- 3) Penalty for preventive maintenance will be calculated based on number of individual delayed jobs indicated in the preventive maintenance list.

Sd/-  
Superintending Engineer

# CONDITIONS OF CONTRACT

## Definitions

1. The contract means the documents forming the tender and acceptance thereof and the formal the contractor, together with the documents referred to there in 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 the 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) Institute means Indian Institute Of Technology, Bombay.
  - v) The Engineer-in-charge means the Engineer Officer who shall supervise and be in charge of the work.
  - vi) Accepting Authority shall mean the authorized authority of the Institute.
  - vii) 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 Government, 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 Institute of the part of the works in respect of which a certificate of completion has been issued or a cause solely due to Institute faulty design of works.
  - viii) 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 all overheads and profits.

- ix) Schedule(s) referred to in these conditions shall mean the relevant schedule(s) annexed to the tender papers, with the amendments thereto issued upto the date of receipt of the tender.
- x) Tendered value means the value of the entire work as stipulated in the letter of award.
- xi) Date of commencement of work : The date of commencement of work shall be 15<sup>th</sup> day from date of issue of work order or the first date of handing over of the site or as mentioned in the work order, whichever is later, in accordance with the phasing if any, as indicated in the tender document.
- xii) 'Department' means Estate Office, IIT Bombay which invites the tenders.
- xiii) 'District specification' means the specifications followed by the state of Maharashtra in the area where the work is to be executed.
- xiv) 'Tendered value' means the value of the entire work as stipulated in the letter of award.
- xv) Employer means IIT Bombay.
- xvi) Wherever the expression "Divisional Officer" appears in the Clauses, it should be substituted by the expression "Executive Engineer (Civil)"

### **Scope And Performance**

- 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 or 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, 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.

### **Works to be carried out**

- 6) The work to be carried out under the contract shall, except as otherwise provided in these conditions, include all labour, materials, tools, plants, equipment 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 stated, 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.

### **Sufficiency of Tender**

- 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 obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the works.

### **Discrepancies and Adjustment of Errors**

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

8.1 In the case of discrepancy between the schedule of Quantities, the Specification 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) CPWD Specification.
- v) Indian Standard Specification of B.I.S

8.2 If there 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 document 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 therefrom shall not vitiate the contract or release the contractor from the execution of the whole or any part of the works comprised therein according to drawings and specification or from any of his obligations under the contract.

### **Signing of 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 of invitation of tender and acceptance thereof together with any correspondence leading thereto.
- ii) Standard form consisting of:

- a) Various standard clauses with correction up to the date stipulated along with annexures thereto.
- b) Special Conditions
- c) Safety Code.
- d) Model Rules for the protection of health, sanitary arrangement for workers employed by Contractors.
- e) Signed Article of agreement (given as Annexure-I) on Rs. 100/- stamp paper for work costing more than Rs.20.00 lakhs.

iii) No payment for the work done will be made unless contract is signed by the contractor.

10. Agreement for each work costing more than Rs. 20.00 Lakhs will be executed on stamp paper of Rs. 100/- for the works valuing less than Rs. 20.00 Lakhs, the tender document and the work order will be treated as the agreement.

11. The notice inviting e-tender, the financial bid and all other the documents including drawings, if any, forming the tender as issued at the time of invitation of e-tender and acceptance thereof together with any correspondence leading thereto.

12. Decisions taken in the Pre-bid meeting if conducted.

13. IIT Bombay reserves its right to verify all the credentials, quality, quantity, workmanship, other required details etc. of the contractors with his clients along with ongoing projects and other sources before finalization and award of work. IIT Bombay reserve its right to award any quantity of works to any other contractor/agencies at his own risk and cost.

Signature of Contractor

Sd/-  
**Superintending Engineer**

# CLAUSES OF CONTRACT

## CLAUSE 1

### **Recovery of Security Deposit**

The person / persons whose tender(s) may be accepted ( hereinafter called the contractor) shall permit Institute at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 05% of the gross amount of each running bill till the sum along with the sum already deposited as earnest money, will amount to security deposit of 5% of the actual value of work. Such deductions will be made and held the Institute by way of Security Deposit unless he / they has / have deposited the amount of security at the rate mentioned above in cash or in the form of Government Securities.

The Security deposit thus recovered will be released after a period of 24 months ( Defect liability period ) from the date of completion of work subject to the condition that no defects are noticed and reported during this period .Defect liability period will be rectified by the Contractor through their own cost and arrangement. In case the Contractor failed to do the rectification within the prescribed time frame, penal actions including cancellation of empanelment and black listing of the Contractor will be initiated.

All compensation or the other sums of money payable by the contractor under the terms of this contract may be deducted from, or paid by the sale of a sufficient part of his security deposit or from the interest arising there from, or from any sums which may be due to or may become due to the contractor by Government on any account whatsoever and in the event of his security deposit being reduced by reason of any such deductions or sale as aforesaid, the contractor shall within 10 days make good in cash any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof. The security deposit shall be collected from the running bills of the contractor at the rates mentioned above.

The security deposit as deducted above can be released against bank guarantee issued by a schedule bank, on its accumulations to a minimum of Rs. 5 Lakh subject to the condition that amount of such bank guarantee, except last one, shall not be less than Rs. 5 Lakh. Provided further that the validity of bank guarantee including the one given against the earnest money shall be in conformity with provisions contained in Clause 17 which shall be extended from time to time depending upon extension of contract granted under provision of clause 2 and 5.

## CLAUSE 2

### **Compensation for delay**

If the contractor fails to maintain the required progress in terms of clause 5 or to complete the work and clear the site on or before the contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the Government on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below may decide on the amount of balance value of the work remains incomplete on stipulated / extended date of completion.

This will also apply to items or group of items for which a separate period of completion has been specified.

- i) Compensation for delay of work : @1.00% per month of delay to be computed on per day basis.

Provided always that the total amount of compensation for delay to be paid under this condition shall not exceed 10% of the Actual value of work or of the actual value of the item or group of items of work for which a separate period of completion is originally given. The amount of compensation may be adjusted or set-off against any sum payable to the contractor under this or any other contract with the Institute.

### CLAUSE 3

Subject to other provisions contained in this clause, the Engineer-in-charge may, without prejudice to his any other rights or remedy against the contractor in respect of any delay, inferior workmanship, any claims for damages and / or any other provisions of this contract or otherwise, and whether the date of completion has or has not elapsed, by notice in writing absolutely determine the contract in any of the following cases :

- i) If the contractor having been given by the Engineer-in-Charge a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper or unworkman like manner shall omit to comply with the requirement of such notice for a period of seven days thereafter.
- ii) If the contractor has, without reasonable cause, suspended the progress of the work or has failed to proceed with the work with due diligence so that in the opinion of the Engineer-in-Charge ( Which shall be final and binding) he will be unable to secure completion of the work by the date for completion and continuous to so after a notice in writing of seven days from the Engineer-in-charge.
- iii) If the contractor fails to complete the work withing the stipulated date or items of work with individual date of completion, if any stipulated, on or before such date(s) of completion and does not complete them within the period specified in a notice given in writing in that behalf by the Engineer-in-charge.
- iv) If the contractor persistently neglects to carry out his obligation under the contract and / or commits default in complying with any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by Engineer-in-Charge.
- v) If the contractor shall offer or given or agree to give to any person in the Institute service or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract for Government.

- vi) If the contractor shall enter into a contract with Institute in connection with which commission has been paid or agreed to be paid by him or to his knowledge, unless the particulars of any such commission and the terms of payment thereof have been previously disclosed in writing to the Engineer-in-Charge.
- vii) If the contractor shall obtain a contract with the Institute as a result of wrong tendering or other non- bonafide methods of competitive tendering.
- viii) If the contractor being an individual, or if a firm, any partner thereof shall at any time be adjudged insolvent or have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition ( other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any insolvency Act for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any insolvency Act for the time being in force for the sequestration of his estate or if a trust deed be executed by him for benefit of his creditors.
- ix) If the contractor being a company shall pass a resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager on behalf of a creditor shall be appointed or if circumstances shall arise which entitle the court or the creditor to appoint a receiver or a manager or which entitle the court to make a winding up order.
- x) If the contractor shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 Days.
- xi) If the contractor assigns, transfers, sublets ( engagement of labour on a piece-work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer, sublet or otherwise parts with the entire works or any portion thereof without the prior written approval of the Engineer-in-Charge.

When the contractor has made himself liable for action under any of the cases aforesaid, the Engineer-in-Charge on behalf of the Institute shall have powers :

- a) To determine the contract as aforesaid ( of which termination notice in writing to the contractor under the hand of the Engineer-in-charge shall be conclusive evidence). Upon such determination, the Earnest Money Deposit, Security Deposit already recovered and performance Guarantee under the contract shall be liable to be forfeited and shall be absolutely at the disposal of the Government.
- b) After giving notice to the contractor to measure up the work of the contractor and to take such whole, or the balance or part thereof, as shall be un-executed out of his hands and to give it to another contractor to complete the work. The contractor, whose contract is determined as above, shall not be allowed to participate in the tendering process for the balance work.

In the event of above course being adopted by the Engineer-in-charge, the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the

execution of the work or the performance of the contract. And in case action is taken under any of the provision aforesaid, the contractor shall not be entitled to recover or be paid any sum for any work thereof or actually performed under this contract unless and until the Engineer-in-Charge has certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified.

### **CLAUSE 3A**

In Case, the work cannot be started due to reasons not within the control of the contractor within the stipulated time for completion of work, either party may close the contract. In such eventuality, the Earnest Money Deposit of the contractor shall be refunded, but no payment on account of interest, loss of profit or damages etc shall be payable at all.

### **CLAUSE 4**

#### **Contractor liable to pay Compensation even if action not taken under Clause 3**

In any case in which any of the power conferred upon the Engineer-in-charge by Clause – 3 thereof, shall have become exercisable and the same are not exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any future case of default by the contractor and the liability of contractor for compensation shall remain unaffected. In event of the Engineer-in-charge putting in force all or any of the powers vested in him under the preceding clause he may, if he so desires after giving a notice in writing to the contractor, take possession of ( or at the sole discretion of the Engineer-in-Charge which shall be final and binding on the contractor) use as on hire( the amount of the hire money being also in the final determination of the Engineer-in-charge) all or any tools, plant, materials and stores, in or upon the works, or the site thereof belonging to the contractor, or procured by the contractor and intended to be used for the execution of the work / or any part thereof, paying or allowing for the same in account at the contract rates, or, in the case of these not being applicable, at current market rates to be certified by the Engineer-in-Charge, whose certificate thereof shall be final, and binding on the contractor, clerk of the works, foreman or other authorized agent to remove such tools, plant, materials, or stores form the premises ( within a time to be specified in such notice) in the event of the contractor failing to comply with any such requisition, the Engineer-in-charge may remove them at the contractors expense or sell them by auction or private sale on account of the contractor and his risk in all respects and the certificate of the Engineer-in-Charge as to the expenses of any such removal and the amount of the proceed and expense of any such sale shall be final and conclusive against the contractor.

### **CLAUSE 5**

#### **Time and Extension for Delay**

The time allowed for execution of the works as specified in work order or the extended time in accordance with these conditions shall be the essence of the contract. The execution of the works shall commence from such time period as mentioned in work order or from the date of handing over of the site whichever is later. If the contractor commits default in commencing the execution of the work as aforesaid, Government shall without prejudice to any other right or remedy available in law, be at

liberty to forfeit the earnest money & performance guarantee absolutely.

5.1 As soon as possible after the contract is concluded, the contractor shall submit a Time and Progress chart for each mile stone and get it approved by the Department. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the work.

5.2 If the work(s) be delayed by :-

- i) force majeure, or
- ii) abnormally bad weather, or
- iii) serious loss or damage by fire, or
- iv) civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or
- v) delay on the part of other contractors or tradesmen engaged by Engineer-in-charge in executing work not forming part of the contract, or
- vi) non-availability of stores, which are the responsibility of Government to supply or
- vii) non-availability or break down of tools and plant to be supplied or supplied by Government or
- viii) any other cause which, in the absolute discretion of the Engineer-in-charge is beyond the contractor's control.

Then upon the happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the authority as indicated in the work order but shall nevertheless use constantly his best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-charge to proceed with the works.

5.3 Request for rescheduling of Mile stone and extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen days of the happening of the event causing delay on the prescribed form to the Institute. The contractor may also, if practicable, indicate in such a request the period for which extension is desired.

5.4 In any such case the Institute may give a fair and reasonable extension of time and reschedule the mile stones for completion of work. Non application by the contractor for extension of time shall not be a bar for giving a fair and reasonable extension by the Institute and this shall be binding on the contractor.

## **CLAUSE 6**

### **Computerized Measurement Book**

Engineer-in-Charge shall, except as otherwise provided, ascertain and determine by measurement the

value of work done in accordance with the contract. All measurement of all items having financial value shall be entered by the contractor and compile in the shape of the Computerized Measurement Book having pages of A-4 size as per the format of the department so that a complete record is obtained of all the items of works performed under the contract.

All such measurement and levels recorded by the contractor or his authorized representative from time to time, during the progress of the work, shall be got checked by the contractor from the Engineer-in-charge or his authorized representative as per interval or program fixed in consultation with Engineer-in-Charge, or his authorized representative. After the necessary correction made by Engineer-In-Charge, the measurement sheets shall be returned to the contractor for incorporating the corrections and for resubmission to the Engineer -in-Charge for the dated signatures by the Engineer-in-charge and the contractor or their representatives in token of their acceptance.

Whenever bill is due for payment, the contractor would initially submit draft computerized measurement sheets and these measurements would be got checked / test checked from the Engineer-in-Charge and / or his authorized representative. The contractor will, thereafter, incorporate such changes as may be done during these checks / test checks in his draft computerized measurement, and submit to the department a computerized measurement book, with its pages numbered. The Engineer-in-charge and / or his authorized representative would thereafter check this MB, and record the necessary certificates for their checks / test checks.

The contractor shall also submit to the department separately his computerized abstract of cost and the bill based on these measurements, duly bound, and its pages numbered along with two spare copies of the "bill". Thereafter, this bill will be processed.

The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for checking of measurements / levels by the Engineer-in-Charge or his representative.

Except where any general or detailed description of the work expressly shows to the contrary, measurement shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant standard Method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of India standards and if for any item no such standard is available then a mutually agreed method shall be followed.

The Contractor shall give not less than seven days' notice to the Engineer-in-charge or his authorized representative in charge of the work before covering up or otherwise placing beyond the reach of checking and / or test checking the measurement of any work in order that the same may be checked and / or test checked and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of checking and / or test checking measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer-in-Charge or his authorized representative in charge of the work who shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of checking and / or test checking measurements without such notice having been given or the Engineer-in-Charge's consent being obtained in writing the same shall be uncovered at the contractor's expense, or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

Engineer-in-Charge or his authorized representative may cause either themselves or through another officer of the department to check the measurements recorded by contractor and all provision stipulated herein above shall be applicable to such checking of measurements or levels.

It is also a term of this contract that checking and / or test checking the measurement of any item of work in the measurement book and / or its payment in the interim, on account of final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

## **CLAUSE 7**

### **Payment on Intermediate Certificate to be Regarded as Advance**

No payment shall be made for work, estimated to cost Rs. Twenty thousand or less till after the whole of the work shall have been completed. For works estimated to cost over Rs. Twenty Thousand, the interim or running account bills shall be submitted by the contractor for the work executed on the basis of such recorded measurements on the format of the Institute in triplicate on or before the date of every month fixed for the same by the Engineer-in-Charge. The contractor shall not be entitled to be paid any such interim payment if the gross work done together with net payment / adjustment of advances for material collected, if any, since the last such payment is less than the amount specified in Project Schedule, if any, in which case the interim bill shall be prepared on the appointed date of the month after the requisite progress is achieved. Engineer-in-charge shall arrange to have the bill verified by taking or causing to be taken, where necessary, the requisite measurement of the work. In the event of the failure of the contractor to submit the bills, Engineer – Incharge shall prepared or cause to be prepared such bills in which event no claims, whatsoever due to delays on payment including that of interest shall be payable to the contractor. Payment on account of amount admissible shall be made by the Engineer-in-Charge certifying the sum to which the contractor is considered entitled by way of interim payment at such rates as decided by the Engineer-in-Charge.

All such interim payments shall be regarded as payment by way of advances against final payment only and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be rejected, remove, taken away and reconstructed or re-erected. Any certificate given by the Engineer-in-Charge relating to the work done or materials delivered forming part of such payment, may be modified or corrected by any subsequent such certificate (s) or by the final certificate and shall not by itself be conclusive evidence that any work or materials to which it relates is / are in accordance with the contract and specification. Any such interim payment, or any part thereof shall not in any respect conclude, determine or affect in any way powers of the Engineer-in-Charge under the contract or any of such payments be treated as final settlement and adjustment of accounts or in any way vary or affect the contract.

Pending consideration of extension of date of completion, interim payment shall continue to be made as herein provided without prejudice to the right of the department to take action under the terms of this contract for delay in the completion of work, if the extension of date of completion is not granted by the competent authority.

### **Payment in Composite Contracts**

In case of composite tenders, running payment for the major component shall be made by EE of major discipline to the main contractor. Running payment for minor component shall be made by the Engineer-in-Charge of the discipline of minor component directly to the main contractor.

In case main contractor fails to make the payment to the contractor associated by him within 15 days of receipt of each running account payment, then on the written complaint of contractor associated for such minor component, Engineer-in-Charge of minor component shall serve the show cause to the main contractor and if reply of main contractor either not received or found unsatisfactory, he may make the payment directly to the contractor associated for minor component as per the terms and conditions of the agreement drawn between main contractor and associate contractor fixed by him. Such payment made to the associate contractor shall be recovered by Engineer-in-Charge of major or minor component from the next R/A/ Final bill due to main contractor as the case may be.

### **CLAUSE 8**

#### **Completion Certificate and Completion Plans**

Within ten days of the completion of the work, the contractor shall give notice of such completion to the Engineer-in-Charge and within thirty days of the receipt of such notice, the Engineer-in-charge shall inspect the work and if there is no defect in the work, shall process the final bill other wise the defects are to be rectified by the contractor and / or for which payment will be made at reduced rates. But no final certificate of completion shall be issued, nor shall the work be considered to be complete until the contractor shall have removed from the premises on which the work shall be executed all scaffolding, surplus material, rubbish and all huts and sanitary arrangement required for his / their work people on the site in connection with the execution of the works as shall have been erected or constructed by the Contractor(s) and cleaned off the dirt from all wood work, doors, windows, walls, floor or other parts of the building, in, upon, or about which the work is to be executed or of which he may have had possession for the purpose of the execution; thereof, and not until the work shall have been measured by the Engineer-in-Charge. If the contractor shall fail to comply with the requirement of this clause as to removal of scaffolding, surplus materials and rubbish and all huts and sanitary arrangements as aforesaid and cleaning off dirt on or before the date fixed for the completion of work, the Engineer-in-Charge may at the expense of the contractor remove such scaffolding, surplus materials and rubbish etc., and dispose of the same as he thinks fit and clean off such dirt as aforesaid, and the contractor shall have no claim in respect of scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof.

### **CLAUSE 8A**

#### **Contractor to Keep Site Clean**

When the annual repairs and maintenance of works are carried out, the splashes and droppings from white washing, colour washing, painting etc., on walls, floor, windows, etc shall be removed and the surface cleaned simultaneously with the completion of these items of work in the individual rooms, quarters or premises etc. where the work is done without waiting for the actual completion of all the

other items of work in the contract. In case the contractor fails to comply with the requirements of this clause, the Engineer-in-Charge shall have the right to get this work done at the cost of the contractor either departmentally or through any other agency. If the contractor fails to remove debris from the work site within 72 hrs of its generation, penalty as decided by Engineer-In-Charge upto a maximum of 10% of contract sum will be recovered and the final bill will not be processed and repeated offenders name will be removed from enlistment without giving any further notice. Contractors shall not throw out debris any where in the campus. They shall take out the debris as per schedule of items and contract conditions. If the contractor fails to hand over the site neat and clean, a penalty of minimum Rs. 1,000/- and 4 times actual cleaning charges will be recovered.

## **CLAUSE 9**

### **Payment of Final Bill**

The final bill shall be submitted by the contractor in the same manner as specified in interim bills within three months of physical completion of the work. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished.

## **CLAUSE 10**

### **Material to be provided by the contractor**

The contractor shall, at his own expense, provide all materials, required for the works other than those which are stipulated to be supplied by the Government.

The contractor shall, at his own expense and without delay, supply to the Engineer-in-Charge samples of materials to be used on the work and shall get these approved in advance. All such materials to be provided by the contractor shall be in conformity with the specification laid down or referred to in the contract. The contractor shall, if requested by the Engineer-in-Charge furnish proof, to the satisfaction of the Engineer-in-Charge, that the materials so comply. The Engineer-in-Charge shall within fifteen days of supply of samples or within such further period as he may require intimate to the contractor in writing whether samples are approved by him or not. If samples are not approved, the contractor shall forthwith arrange to supply to the Engineer-in-Charge for his approval, fresh samples complying with the specifications laid down in the contract. When materials are required to be tested in accordance with specification, approval of the Engineer-in-Charge shall be issued after the test results are received.

The contractor shall at his risk and cost submit the samples of materials to be tested or analyzed and shall not make use of or incorporate in the work any materials represented by the samples until the required tests or analysis have been made and materials finally accepted by Engineer – In- charge. The contractor shall not be eligible for any claim or compensation either arising out of any delay in the work or due to any corrective measures required to be taken on account of and as a result of testing of materials.

The contractor shall, at his risk and cost, make all arrangements and shall provide all facilities as the Engineer-in-Charge may require for collecting, and preparing the required number of samples for such

tests at such time and arrange to get it tested and obtaining test certificate from Labs mentioned below and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications. The Engineer-in-Charge or his authorized representative shall at all times have access to the works and to all workshops and places where work is being prepared or from where materials, manufactured articles or machinery are being obtained for the works and the contractor shall afford every facility and every assistance in obtaining the right to such access.

i) Labs of IIT Bombay (ii) Labs of VJTI (iii) Labs of SPCE (iv) Labs of Structwell Consultant & Engineers.

The Engineer-in-Charge shall have full powers to require the removal from the premises of all materials which in his opinion are not in accordance with the specifications and in case of default, the Engineer-in-Charge shall be at liberty to employ at the expense of the contractor, other persons to remove the same without being answerable or accountable for any loss or damage that may happen or arise to such materials. The Engineer-in-Charge shall also have full powers to require other proper material to be substituted thereof and in case of default, the Engineer-in-Charge may cause the same to be supplied and all costs which may attend such removal and substitution shall be borne by the contractor.

## **CLAUSE 10 A**

### **Secured Advance on Non-perishable Material**

The contractor, on signing an indenture in the form to be specified by the Engineer-in-charge, shall be entitled to be paid during the progress of the execution of the work up to 90% of the assessed value of any materials which are in the opinion of the Engineer-in-Charge non perishable, non fragile and non-combustible and are in accordance with the contract and which have been brought on the site in connection therewith and are adequately stored and / or protected against damage by weather or other causes but which have not at the time of advance been incorporated in the works. When materials on account of which an advance has been made under this sub-clause are incorporated in the work, the amount of such advance shall be recovered / deducted from the next payment made under any of the clause or clauses of this contract.

## **CLAUSE 10 B**

### **Dismantled Material Govt Property**

The contractor shall treat all materials obtained during dismantling of a structure, excavation of the site for a work, etc as Institute's property and such materials shall be disposed off to the best advantage of the Institute according to the instructions in writing issued by Engineer-in-Charge.

## **CLAUSE 11**

### **Work to be Executed in Accordance with Specifications, Drawings, Orders etc.**

The contractor shall execute the whole and every part of the work in the most substantial and workman

like manner both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractor shall also conform exactly, fully and faithfully to the design, drawings and instructions in writing in respect of the work signed by the Engineer-in-Charge and the contractor shall be furnished free of charge one copy of the contract documents together with specifications, designs, drawings and instructions.

The contractor shall comply with the provisions of the contract and with the care and diligence execute and maintain the works and provide all labour and materials, tools and plants including for measurements and supervision of all works, structural plans and other things of temporary or permanent nature required for such execution and maintenance in so far as the necessity for providing these, is specified or is reasonably inferred from the contract. The contractor shall take full responsibility for adequacy, suitability and safety of all the works and methods of construction.

## **CLAUSE 12**

### **Deviations / Variations Extent and Pricing**

The Engineer-in-Charge shall have power (i) to make alteration in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and (ii) to omit a part of the works in case of non-availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Engineer-in-charge and such alterations, omissions, additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.

The Contractor shall bound to do execute additional quantities upto 25 % of work order quantity in the same rate agreed up on as per tender if required as per site condition and as decided by Engineer Incharge. In exceptional cases, if the item of work to be executed needs to be exceeded beyond 25% of work order quantity, a mutually agreeable rate, either the work order rate or rate derived by the Engineer Incharge based on current market rate or CPWD schedule rate shall be considered.

12.1 The time for completion of the works shall, in the event of any deviations resulting in additional cost over the tendered value sum being ordered, be extended, if requested by the contractor, as follows :

- i) In the proportion which the additional cost of the altered, additional or substituted work, bears to the original tendered value plus.
- ii) 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Engineer-in-Charge.

### **Deviation, Extra Items and Pricing**

12.2 In the case of extra item(s) (items) that are completely new, and are in addition to the items

contained in the contract), the contractor may within fifteen days of receipt of order or occurrence of the item (s) claim rates, supported by proper analysis, for the work and the engineer-in-charge shall within 15 days of the receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

In the case of substituted items ( items that are taken up with partial substitution or in lieu of items of work in the contract), the rate for the agreement item ( to be substituted) and substituted item shall also be determined in the manner as mentioned in the following para.

**Deviation, Substitute Items and Pricing.**

(a) If the market rate for the substituted item so determined is more than the market rate of the agreement item ( to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item ( to be substituted) so increased to the extent of the difference between the market rates of substituted item and the agreement item ( to be substituted).

(b) If the market rate for the substituted item so determined is less than the market rate of the agreement item ( to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item( to be substituted) so decreased to the extent of the difference between the market rates of substituted item and the agreement items ( to be substituted).

**CLAUSE 13**

**Foreclosure of contract due to abandonment or reduction in scope of work.**

If at any time after acceptance of the tender, Institute shall decide to abandon or reduce the scope of the works for any reason whatsoever and hence not required the whole or any part of the works to be carried out, the Engineer-in-Charge shall give notice in writing to that effect to the contractor and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the works in full but which he did not derive in consequence of the foreclosure of the whole or part of the works.

The contractor shall be paid at contract rates, full amount for works executed at site and, in addition, the cost of material arranged by the Contractor for the work as certified by the Engineer-in-Charge which could not be utilized on the work to the full extent in view of the foreclosure will be paid as mentioned below;

(i) Institute shall have the option to take over contractor's materials or any part thereof either brought to site or of which the contractor is legally bound to accept delivery from suppliers ( for incorporation in or incidental to the work) provided, however Institute shall be bound to take over the materials or such portions thereof as the contractor does not desire to retain. For materials taken over or to be taken over by Institute, cost of such materials as detailed by Engineer-in-Charge shall be paid. The cost shall, however, take into account purchase price and cost of transportation.

**CLAUSE 14****Carrying out part work at risk & cost of contractor**

If Contractor :

- (i) At any time makes default during currency of work or does not execute any part of the work with due diligence and continues to do so even after a notice in writing of 7 days in this respect from the Engineer-in-Charge; or
- (ii) Commits default in complying with any of the terms and conditions of the contract and does not remedy it or takes effective steps to remedy it within 7 days even after a notice in writing is given in that behalf by the Engineer-in-Charge; or

Fails to complete the work(s) or items of work with individual dates of completion, on or before the date(s) so determined, and does not complete them within the period specified in the notice given in writing in that behalf by the Engineer-in-Charge.

The Engineer-in-charge without invoking action under clause 3 may, without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to the Institute, by a notice in writing to take the part work / part in complete work of any item(s) out of his hands and shall have powers to ;

- (a) Take possession of the site and any materials, constructional plant, implements, stores, etc, thereon; and /or
- (b) Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the contractor.

The Engineer-in-Charge shall determine the amount, if any, is recoverable from the contractor for completion of the part work / part incomplete work of any item(s) taken out of his hands and execute at the risk and cost of the contractor, the liability of contractor on account of loss or damage suffered by the Institute because of action under this clause shall not exceed 10% of the tendered value of the work.

In determining the amount, credit shall be given to the contractor with the value of work done in all respect in the same manner and at the same rate as if it had been carried out by the original contractor under the terms of his contract, the value of contractor's materials taken over and incorporated in the work and use of plant and machinery belonging to the contractor. The certificate of the Engineer-in-charge as to the value of work done shall be final and conclusive against the contractor provided always that action under this clause shall only be taken after giving notice in writing to the contractor. Provided also that if the expenses incurred by the department are less than the amount payable to the contractor at his agreement rates, the difference shall not be payable to the contractor.

Any excess expenditure incurred or to be incurred by the Institute in completing the part work / part incomplete work of any item(s) or the excess loss of damages suffered or may be suffered by the Institute as aforesaid after allowing such credit shall without prejudice to any other right or remedy

available to the Institute in law or per as agreement be recovered from any money due to the contractor on any account, and if such money is insufficient, the contractor shall be called upon in writing and shall be liable to pay the same within 30 days.

If the contractor fails to pay the required sum within the aforesaid period of 30 days, the Engineer-in-charge shall have the right to sell any or all of the contractors unused materials, constructional plant, implements, temporary building at site etc and adjust the proceeds of sale thereof towards the dues recoverable from the contractor under the contract and if thereafter there remains any balance outstanding, it shall be recovered in accordance with the provisions of the contract.

In the event of above course being adopted by the Engineer-in-charge, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagement or made any advance on any account or with a view to the execution of the work or the performance of the contract.

## **CLAUSE 15**

### **Suspension of Work**

(i) The contractor shall, on receipt of the order in writing of the Engineer-in-Charge, (whose decision shall be final and binding on the contractor) suspend the progress of the works or any part thereof for such time and in such manner as the Engineer-in-Charge may consider necessary so as not to cause any damage or injury to the work already done or endanger the safety thereof for any of the following reason :

(a) on account of any default on the part of the contractor or;

(b) for proper execution of the works or part thereof for reasons other than the default of the contractor ; or

(c) for safety of the works or part thereof.

The contractor shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Engineer-in-Charge.

(ii) If the suspension is ordered for reasons ( b) and (c) in Sub-para (i) above, the contractor shall be entitled to an extension of time equal to the period of every such suspension PLUS 25% for completion of the item or group of items of work for which a separate period of completion is specified in the contract and of which the suspended work forms a part, and ;

## **CLAUSE 16**

### **Action in case work not done as per Specification**

All works under or in course of execution or executed in pursuance of the contract, shall at all times be open and accessible to the inspection and supervision of the Engineer-in-Charge, his authorized subordinates in charge of the work and all the superior officers, or any organization engaged by the

Institute for quality assurance and the contractor shall, at all times, during the usual working hours and at all the other times at which reasonable notice of the visit of such officers has been given to the contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the contractor's agent shall be considered to have the same force as if they had been given to the contractor himself.

If It shall appear to the Engineer-in-Charge or his authorized subordinates incharge of the work or officers of the organization engaged by the department for quality assurance, that any work has been executed with unsound, imperfect, or unskillful workmanship, or with materials or articles provided by him for the execution of the work which are unsound or of a quality inferior to that contracted or otherwise not in accordance with the contract, the contractor shall, on demand from the Engineer-in-Charge specifying the work, materials or articles, complained of notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of the failing to do so within a period specified by the Engineer-in-Charge in his demand aforesaid, then the contractor shall be liable to pay compensation at the same rate as under clause 2 of the contract ( for non-completion of the work in time) for this default. In such case the Engineer-in-Charge may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates as the Institute may consider reasonable and as approved by SE/Dean(IPS) during the preparation of on account bills or final bill if the item is so acceptable without detriment to the safety and utility of the item and the structure or he may reject the work outright without any payment and / or get it and other connected and incidental items rectified, or removed and re-executed at the risk and cost of the contractor. Decision of the Engineer-in-Charge to be conveyed in writing in respect of the same will be final and binding on the contractor.

## **CLAUSE 17**

### **Contractor Liable for Damages defects during maintenance period**

Contractor is Liable for Damages and defects in the work during maintenance period of 24 months from date of completion of the work.

If the contractor or his working people or servant shall break, deface, injure or destroy any part of building in which they may be working, or any building, road, road, kerb, fence enclosure, water pipe, cables, drains, electric or telephone post or wires, trees grass or grassland, or cultivated ground contiguous to the premises on which the work or any part is being executed, or if any damage shall happen to the work while in progress, from any cause whatever or if any defect, shrinkage or other faults appear in the work within twenty four months for all works except the work mentioned below after a certificate final or otherwise of its completion shall have been given by the engineer-in-charge as aforesaid arising out of defect or improper materials or workmanship the contractor shall upon receipt of a notice in writing on that behalf make the same good at his own expense or in default the Engineer-in-Charge cause the same to be made good by other workmen and deduct the expense from any sums that may be due or at any time thereafter may become due to the contractor, or from his security deposit or the proceeds of sale thereof or of a sufficient portion thereof. The balance 5% security deposit with Institute after payment of final bill shall not be refunded before the expiry of Twelve months or as

mentioned in (a) below. After the issue of the certificate final or otherwise, of completion of work, or till the final bill has been prepared and passed whichever is later.

(a) In case of labour supply work Defect Liability Period will be 12 months and Security Deposit will be released after this period. For waterproofing work the Defect Liability Period ( Guarantee period) will be mentioned in schedule of item of that work and SD will be released on completion of 24 months after obtaining guarantee bond on non- judicial stamp paper from the contractor. There shall be no Defect Liability Period for grass cutting work, drain desilting works, rental services of machineries , temporary sheds, pandal, decoration, tank cleaning etc. and the SD will be released along with finalbill

## **CLAUSE 18**

### **Contractor to supply tools & plants etc.**

The contractor shall provide at his own cost all materials (except such special materials, if any, as may in accordance with the contract be supplied from the Engineer-in-charge's stores), machinery, tools & plants as specified in schedule of item. In addition to this, appliances, implements, other plants, ladders, cordage, tackle, scaffolding and temporary works required for the proper execution of the work, whether original, altered or substituted and whether included in the specifications or other documents forming part of the contract or referred to in these conditions or not, or which may be necessary for the purpose of satisfying or complying with the requirements of Engineer-in-Charge as to any matter as to which under these conditions he is entitled to be satisfied or which he is entitled to require together with carriage therefore to and from the work. The contractor shall also supply without charge the requisite number of persons with the means and materials, necessary for the purpose of setting out works, and counting, weighing and assisting the measurement for examination at any time and from time to time of the work or materials. Failing his so doing, the same may be provided by the Engineer-in-charge at the expense of the contractor and the expenses may be deducted, from any money due to the contractor, under this contract or otherwise and / or from his security deposit or the proceeds of sale thereof, or of a sufficient portions thereof.

## **CLAUSE 18 A**

### **Recovery of Compensation paid to workmen**

In every case in which by virtue of the provisions sub-section (1) of section 12, of the workmen's compensation Act, 1923, the Institute is obliged to pay compensation to a workman employed by the contractor, in execution of the works, the Institute will recover from the contractor, the amount of the compensation so paid; and, without prejudice to the rights of the Institute under sub-section(2) of section 12, of the said Act, the Institute shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by the Institute to the contractor whether under this contract or other wise. The Institute shall not be bound to contest any claim made against it under sub-section (1) of section 12, of the said Act, except on the written request of the contractor and upon his giving to the Institute full security for all costs for which the Institute might become liable in consequence of contesting such claim.

**CLAUSE 18 B****Ensuring Payment and Amenities to workers if contractor fails**

In every case in which by virtue of the provision of the Contract labour ( Regulation and Abolition), Act, 1970 and of the Contract Labour ( Regulation and Abolition) Central Rules, 1971, the Institute is obliged to pay any amounts of wages to a workman employed by the contractor in execution of the works, or to incur any expenditure in providing welfare and health amenities required to be provided under the above said Act and the rules under clause **19G**, or under the Rules framed by Government from time to time for the protection of health and sanitary arrangements for workers employed by IIT Bombay, Contractors, the Institute will recover from the contractor, the amount of wages so paid or the amount of expenditure so incurred ; and without prejudice to the rights of the Institute under sub-section (2) of section 20, and sub-section (4) of Section 21, of the contract labour (Regulation and Abolition) Act, 1970, the Institute shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by the Institute to the contractor whether under this contract or otherwise the Institute shall not be bound to contest any claim made against it under sub- section (1) of Section 20, sub – section (4) of Section 21, of the said Act, except on the written request of the contractor and upon his giving to the Institute full security for all costs for which the Institute might become liable in contesting such claim.

**CLAUSE 19****Labour Laws to be complied by the Contractor**

The contractor shall obtain a valid license under the Contract Labour ( R & A), Act 1970, and the contract labour ( Regulation and Abolition) Central Rules, 1971, before the commencement of the work, and continue to have a valid license until the completion of the work. The contractor shall also abide by the provisions of the Child Labour ( Prohibition and Regulation ) Act, 1986.

The contractor shall also comply with the provisions of the building and other Construction Workers ( Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1996.

Any failure to fulfill these requirements shall attract the penal provisions of this contract arising out of the resultant non-execution of the work.

**CLAUSE 19 A**

**No Labour below the age of eighteen years shall be employed on the work.**

**CLAUSE 19 B****Payment of Wages : -**

- (i) The contractor shall pay to labour employed by him either directly or through sub-contractors, wages not less than fair wages as per the provision of the Contract Labour ( Regulation and

Abolition) Act, 1970 and the contract labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.

- (ii) The contractor shall, notwithstanding the provisions of any contract to the contrary, cause to be paid fair wage to labour indirectly engaged on the work, including any labour engaged by his sub-contractors in connection with the said work, as if the labour had been immediately employed by him.
- (iii) In respect of all labour directly or indirectly employed in the works for performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied Labour Regulations and minimum wages Act made by Government from time to time in regard to payment of wages, wage period, deductions from wages recovery of wages not paid and deductions unauthorizedly made, maintenance of wage books or wage slips, publication of scale of wages and other terms of employment, inspection and submission of periodical returns and all other matters of the like nature or as per the provision of the Contract Labour ( Regulation and Abolition) Act, 1970, and the Contract Labour ( Regulation and Abolition) Central Rules, 1971, wherever applicable.
- (iv) (a) The Engineer-in-charge concerned shall have the right to deduct from the moneys due to the contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfillment of the conditions of the contract for the benefit of the workers, non-payment of wages or of deductions made from his or their wages which are not justified by their terms of the contract or non-observance of the Regulations.  
  
(b) Under the provision of Minimum Wages ( Central) Rules, 1950, the contractor is bound to allow to he labour directly or indirectly employed in the works one day rest for 6 days continuous work and pay wages at the same rate as for duty. In the event of default, the Engineer-in-Charge shall have the right to deduct the sum or sums not paid on account of wages for weekly holidays to any labours and pay the same to the person entitled thereto from any money due to the contractor by the Engineer-in-Charge concerned.
- (v) The contractor shall comply with the provisions of the payment of Wages Act, 1936, Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947, Factories Act, 1948, Shop & establishment Act, 1960, ESIC Act 1948, Maternity Benefits Act, 1961 amended in 2017, the Contractor's Labour (Regulation and Abolition) Act 1970 and Payment of Gratuity Act, 1972.  
The Indian Parliament passed 04 labour codes in 2019 and 2020 sessions. These four codes will consolidate 44 existing labour laws. They are: The Industrial Relations Code,2020, The code on Social Security,2020, The Occupational Safety, Health and Working Conditions Code, 2020 and The code on Wages, 2019. The contractors should follow the modifications/notifications thereof or any other laws relating thereto and the rules made there under from time to time.
- (vi) The contractor shall indemnify and keep indemnified the Institute against payments to be made under and for the observance of laws aforesaid without prejudice to his right to claim indemnity from his sub-contractors.

- (vii) The laws aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a breach of this contract.
- (viii) Whatever is the minimum wage for the time being, or if the wage payable is higher than such wage, such wage shall be paid by the contractor to the workmen directly without the intervention of Jamadar and that Jamadar shall not be entitled to deduct or recover any amount from the minimum wage payable to the workmen as and by way of commission or otherwise.
- (ix) The contractor shall ensure that no amount by way of commission or otherwise is deducted or recovered by the Jamadar from the wage of workmen.
- (x) The Contractor has to follow all labour laws, Govt of India & Govt of Maharashtra Labour Acts which are in force at present and introduced from time to time, such as Acts, enforced by Regional Provident Fund Commissioner, Directorate of E.S.I.C. and enforcement officer of Contract Labour Act, and all necessary arrangement for labour security insurance will have to be made by the contractor at his own cost including paying minimum wages, gratuity, etc. declared by competent authority from time to time.

#### **CLAUSE 19 C**

In respect of all labour directly or indirectly employed in the work for the performance of the contractor's part of this contract, the contractor shall at his own expense arrange for the safety provision as per safety code framed from time to time and shall at his own expense provide for all facilities in connection therewith. In case the contractor fails to make arrangement and provide necessary facilities as aforesaid, he shall be liable to pay a penalty of Rs. 200/- for each default and in addition, the Engineer-in-Charge shall be at liberty to make arrangement and provide facilities as aforesaid and recover the costs incurred in that behalf from the contractor.

#### **CLAUSE 19 D**

In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with all the rules framed by Government from time to time for the protection of health and sanitary arrangements for workers employed by the Institute and its contractors.

#### **CLAUSE 19 E**

Leave and pay during leave shall be regulated as follows : -

1. Leave :

- (i) in the case of delivery – maternity leave not exceeding 8 weeks, 4 weeks up to and including the day of delivery and 4 weeks following that day,
- (ii) in the case of miscarriage – upto 3 weeks from the date of miscarriage.

2. Pay :

- (i) In the case of delivery-leave pay during maternity leave will be at the rate of the women's

average daily earning, calculated on total wages earned on the days when full time work was done during a period of three months immediately preceding the date on which she gives notice that she expects to be confined or at the rate of Rupee one only a day whichever is greater.

- (ii) In the case of miscarriage – leave pay at the rate of average daily earning calculated on the total wages earned on the days when full time work was done during a period of three months immediately preceding the date of such miscarriage.

### 3. Condition for the grant on Maternity Leave :

No maternity leave benefit shall be admissible to a woman unless she has been employed for a total period of not less than six months immediately preceding the date on which she proceeds on leave.

4. The Contractor shall maintain a register of Maternity ( Benefit) in the Prescribed form as shown in appendix – I and II, and the same shall be kept at the place of work.

## CLAUSE 19 F

If it appear to the Engineer-in-Charge that the contractor(s) is/are not properly observing and complying with the provisions of the contract labour ( Regulation and Abolition) Act 1970, and the Contract labour ( R & A) Central Rules 1971, for the protection of health and sanitary arrangements for work-people employed by the contractor (s) ( hereinafter referred as “ the said Rules”) the Engineer-in-Charge shall have power to give notice in writing to the contractor(s) requiring that the said Rules be complied with and the amenities prescribed therein be provided to the work-people within a reasonable time to be specified in the notice. If the contractor(s) shall fail within the period specified in the notice to comply with and / observe the said Rules and to provide the amenities to the work-people as aforesaid, the Engineer-in-Charge shall have the power to provide the amenities hereinbefore mentioned at the cost of the contractor(s). The contractor (s) shall erect, make and maintain at his / their own expense and to approved standards all necessary huts and sanitary arrangement required for his/their work-people on the site in connection with the execution of the works, and if the same shall not have been erected or constructed, according to approved standards, the Engineer-in-Charge shall have power to give notice in writing to the contractor(s) requiring that the said huts and sanitary arrangement be remodelled and /or reconstructed according to approved standards, and if the contractor(s) shall fail to remodel or reconstruct such huts and sanitary arrangement according to approved standards within the period specified in the notice, the Engineer-in-Charge shall have the power to remodel or reconstruct such huts and sanitary arrangement according to approved standards at the cost of contractor(s).

## CLAUSE 19 G

**In case the Institutes competent authority allows and permits the contractor to construct labour camp in the Campus as a special case.**

The conditions are as follows;

The contractor(s) shall at his / their own cost provide his/ their labour with a sufficient number of huts (hereinafter referred to as the camp) of the following specification on the plot of land approved by the Engineer-in-Charge.

- (i) (a) The minimum height of each hut at the eaves level shall be 2.10m ( 7 ft.) and the floor area to be provided will be at the rate of 2.7 Sqm ( 30 Sq. Ft) for each member of the worker's family staying with the labourer.
- (b) The contractor(s) shall in addition construct suitable cooking places having a minimum area of 1.80m x 1.50m (6' x 5') adjacent to the hut for each family.
- (c) The contractor(s) shall also construct temporary latrines and urinal for the use of the labourers each on the scale of not less than four per each one hundred of the total strength, separate latrines and urinals being provided for women.
- (d) The contractor(s) shall construct sufficient number of bathing and washing places, one unit for every 25 persons residing in the camp. These bathing and washing places shall be suitable screened.
- (ii) (a) All the huts shall have walls of sun-dried or burnt-bricks laid in mud mortar or other suitable local materials as may be approved by the Engineer-in-Charge. In case of sun-dried bricks, the walls should be plastered with mud gobi on both sides. The floor may be kutchra but plastered with mud gobi and shall be at least 15cm (6") above the surrounding ground. The roofs shall be laid with thatch or any other materials as may be approved by the Engineer-in-Charge and the contractor shall ensure that throughout the period of their occupation, the roofs remain water-tight.
- (b) The contractor(s) shall provide each hut with proper ventilation.
- (c) All doors, windows, and ventilators shall be provided with suitable leaves for security purposes.
- (iii) Water supply – The Contractor(s) shall provide adequate supply of water for the use of labourers. The provisions shall not be less than two gallons of pure and wholesome water per head per day for drinking purposes and three gallons of clean water per head per day for bathing and washing purposes. Where piped water supply is available, supply shall be at stand posts and where the supply is from wells or river, tanks which may be of metal or masonry, shall be provided. The contractor(s) shall also at his / their own cost make arrangement for laying pipe lines for water supply to his / their labour camp from the existing mains wherever available, and shall pay all fees and charges therefore.
- (iv) Disposal of Excreta – The contractor(s) shall make necessary arrangement for the disposal of excreta from the latrines by trenching or incineration which shall be according to the requirements laid down by the PHO and local health authorities. If trenching or incineration is not allowed, the contractor(s) shall make arrangements for the removal of excreta through the Municipal Committee / authority and inform it about the number of labourers employed so that arrangements may be made by such committee / authority for the removal of excreta. All charges on this account shall be borne by the contractor and paid direct by him to the Municipality / Authority. The contractor shall provide one sweeper for every eight seats in case

of dry system.

- (v) Drainage – The contractor(s) shall provide efficient arrangement for draining away sullage water so as to keep the camp neat and tidy.
- (vi) The contractor(s) shall make necessary arrangement for keeping the camp area sufficiently lighted to avoid accidents to the workers.
- (vii) Sanitation – The contractor(s) shall make arrangements for conservancy and sanitation in the labour camps according to the rules of the Public Health and Medical Authorities.

#### **CLAUSE 19 H**

The Engineer-in-Charge may require the contractor to dismiss or remove from the site of the work any person or persons in the contractors employ upon the work who may be incompetent or misconduct himself and the contractor shall forthwith comply with such requirement. In respect of maintenance / repair or renovation works etc where the labour have an easy access to the individual houses, departments, the contractor shall issue identity cards to the labourers, whether temporary or permanent and he shall be responsible for any untoward action on the part of such labour.

#### **CLAUSE 19 I**

It shall be the responsibility of the contractor to see that the building under construction or repair is not occupied by any body unauthorizedly during construction and repair and is handed over to the Engineer-in-Charge with vacant possession.

#### **CLAUSE 19 J**

##### **Employment of Skilled / Semiskilled workers**

The contractor shall, at all stages of work, deploy skilled / Semi skilled tradesmen who are qualified and possess certificate in particular trade from CPWD Training Institute / Industrial Training Institute/ National Institute of Construction Management and Research (NICMAR) / National Academy of Construction, CIDC or any similar reputed and recognized Institute managed / certified by State / Central Government.

#### **CLAUSE 20**

##### **Minimum Wages Act to be Complied with**

The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, and Contract labour (Regulation and Abolition) Act, 1970, amended from time to time and rules framed thereunder and other labour laws affecting contract labour that any be brought into force from time to time.

**CLAUSE 20 A****LABOUR LICENSE**

If the contractor needs to engage more than 20 workers per day they shall get labour license from competent authority by completing the certain formalities. Wages to the labourers shall be paid by the contractor as per the minimum wages act and circular issued by the Regional Labour Commissioner, Mumbai. If any accident takes place contractor will be held fully responsible for that and they shall make arrangement to get workman compensation. If the contractor engaging more than 10 labourers they shall compile the provision of building and construction act.

**CLAUSE 21****Work not to be sublet. Action in case of insolvency**

The contract shall not be assigned or sublet without the written approval of the Institute. And if the contractor shall assign or sublet his contract, or attempt to do so, or become insolvent or commence any insolvency proceedings or make any composition with his creditors or attempt to do so, or if any bribe, gratuity, gift, loan, perquisite, reward or advantage pecuniary or otherwise, shall either directly or indirectly, be given, promised or offered by the contractor, or any of his servants or agent to any public officer or person in the employ of the Institute in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Institute shall have power to adopt the course specified in Clause 3 hereof in the interest of the Institute and in the event of such course being adopted, the consequences specified in the said Clause 3 shall ensue.

**CLAUSE 22**

All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of the Institute without reference to the actual loss or damage sustained and whether or not any damage shall have been sustained.

**CLAUSE 23****Changes in firm's Constitution to be intimated**

Where the contractor is a partnership firm, the previous approval in writing of the Engineer-in-Charge shall be obtained before any change is made in the constitution of the firm. Where the contractor is an individual or a Hindu undivided family business concern, such approval as aforesaid shall likewise be obtained before the contractor enters into any partnership agreement where under the partnership firm would have the right to carry out the works hereby undertaken by the contractor. If previous approval as aforesaid is not obtained, the contract shall be deemed to have been assigned in contravention of Clause 21 hereof and the same action may be taken, and the same consequences shall ensue as provided in the said Clause 21.

**CLAUSE 24**

All works to be executed under the contract shall be executed under the direction and subject to the approval in all respect of the Engineer-in-Charge who shall be entitled to direct at what point or points and in what manner they are to be commenced, and from time to time carried on.

**CLAUSE 25****Settlement of Disputes & Arbitration**

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

(i) If the contractor considers any work demanded of him to be outside the requirements of the contract, or disputes any drawings, record or decision given in writing by the Engineer-in-Charge on any matter in connection with or arising out of the contract or carrying out of the work, to be unacceptable, he shall promptly within 5 days request the Superintending Engineer/Executive Engineer in writing for written instruction or decision. Thereupon, the Superintending Engineer/Executive Engineer shall give his written instruction or decision within a period of 10 days from the receipt of the contractor's letter.

If The Superintending Engineer/Executive Engineer fails to give his instructions or decision in writing within the aforesaid period or if the contractor is dissatisfied with the instructions or decision of the Superintending Engineer/Executive Engineer, the contractor may, within 5 days of the receipt of Superintending Engineer/Executive Engineer's decision, appeal to the Dean (IPS) who shall afford an opportunity to the contractor to be heard, if the latter so desires, and to offer evidence in support of his appeal. The Dean (IPS) shall give his decision within 30 days of receipt of contractor's appeal. If the contractor is dissatisfied with this decision, the contractor shall within a period of 30 days from receipt of the decision, give notice to the Dean (IPS) for appointed of arbitrator failing which the said decision shall be final binding and conclusive and not referable to adjudication by the arbitrator.

(ii) Except where the decision has become final, binding and conclusive in terms of sub para (i) above, disputes or difference shall be referred for adjudication through arbitration by a sole arbitrator appointed by the Deputy Director (AIA) of IIT Bombay. 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 be entitled to proceed with the reference from the stage at which it was left by his predecessor.

It is a term of this contract that the partly invoking arbitration shall give a 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 Dean (IPS) of the appeal.

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

It is also a term of this contract that if the contractor does not make any demand for appointment of arbitrator in respect of any claims in writing as aforesaid within 30 Days of receiving the intimation from the 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 the Institute shall be discharged and release of all liabilities under the contract in respect of these claims.

The arbitration shall be conducted in accordance with the provision of the Arbitration and Conciliation Act, 1996 (26 of 1996) or any statutory modifications or re-enactment 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 a term of this contract that the arbitrator shall adjudicate on only such disputes as are referred to him by the appointing authority and give separate award against each dispute and claim referred to him and in all cases, 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 he 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.

## **CLAUSE 26**

### **Contractor to Indemnify Govt against Patent Rights**

The contractor shall fully indemnify and keep indemnified IIT Bombay against any action, claim or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties which may be payable in respect of any article or part thereof included in the contract. In the event of any claims made under or action brought against the Institute in respect of any such matters as aforesaid, the contractor shall be immediately notified thereof and the contractor shall be at liberty, at his own expense, to settle any dispute or to conduct any litigation that may arise there from, provided that the contractor shall not be liable to indemnify the Institute infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Engineer-in-Charge in this behalf.

**CLAUSE 27****Lumpsum Provisions in Tender**

When the estimate on which a tender is made includes lump sum in respect of parts of the work, the contractor shall be entitled to payment in respect of the items of work involved or the part of the work in question at the same rates as are payable under this contract for such items, or if the part of the work in question is not, in the opinion of the Engineer-in-Charge payable of measurement, the Engineer-in-Charge may at his discretion pay the lump-sum amount entered in the estimate, and the certificate in writing of the Engineer-in-Charge shall be final and conclusive against the contractor with regard to any sum or sums payable to him under the provisions of the clause.

**CLAUSE 28****Action where no specification are specified**

In the case of any class of work for which there is no such specification as referred to in Clause 11, such work shall be carried out in accordance with the Bureau of Indian Standards Specifications. In case there are no such specifications in Bureau of Indian Standards, the work shall be carried out as per CPWD specifications, and if not available work shall be carried out as per manufacturers specifications & if this also not available then as per District Specifications. In case there are no such specification as required above, the work shall be carried out in all respects in accordance with the instructions and requirement of the Engineer-in-Charge.

**CLAUSE 29****Withholding and lien in respect of sum due from contractor**

(i) Whenever any claim or claims for payment of a sum of money arises out of or under the contract or against the contractor, the Engineer-in-Charge or the Institute shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security, if any deposited by the contractor and for the purpose aforesaid, the Engineer-in-Charge or the Government shall be entitled to withhold the security deposit, if any, furnished as the case may be and also have a lien over the same pending finalization or adjudication of any such claim. In the event of the security being insufficient to cover the claimed amount or amounts or if no security has been taken from the contractor, the Engineer-in-Charge or the Institute shall be entitled to withhold and have a lien to retain to the extent of such claimed amount or amounts referred to above, from any sum or sums found payable or which may at any time thereafter become payable to the contractor under the same contract or any other contract with the Engineer-in-Charge or Institute or any contracting person through the Engineer-in-Charge pending finalization of adjudication of any such claim.

It is an agreed term of the contract that the sum of money or moneys so withheld or retained under the lien referred to above by the Engineer-in-Charge or Institute will be kept withheld or retained as such by the Engineer-in-Charge or Institute till the claim arising out of or under the contract is determined by the arbitrator ( if contract is governed by the arbitration clause) by the competent court, as the case may be and that the contractor will have no claim for interest or damages whatsoever on any account in

respect of such withholding or retention under the lien referred to above and duly notified as such to the contractor. For the purpose of this clause, where the contractor is partnership firm or a limited company, the Engineer-in-Charge or the Institute shall be entitled to withhold and also have a lien to retain towards such claimed amount or amounts in whole or in part form any sum found payable to any partner / limited company as the case may be, whether in his individual capacity or otherwise.

(ii) IIT Bombay shall have the right to cause an audit and technical examination of the work and the final bills of the contractor including all supporting vouchers, abstract, etc., to be made after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the contractor under the contract or any work claimed to have been done by him under the contract and found not to have been executed, the contractor shall be liable to refund the amount of over-payment and it shall be lawful for IIT Bombay to recover the same from him in the manner prescribed in sub-clause (i) of this clause or in any other manner legally permissible; and if it is found that the contractor was paid less than what was due to him under the contract in respect of any work executed by him under it, the amount of such under payment shall be duly paid by IIT Bombay to the contractor, without any interest thereon whatsoever.

Provided that IIT Bombay shall not be entitled to recover any sum overpaid, nor the contractor shall be entitled to payment of any sum paid short where such payment has been agreed upon between the Superintending Engineer or Executive Engineer on the one hand and the contractor on the other under any term of the contract permitting payment for work after assessment by the Superintending Engineer or the Executive Engineer.

## **CLAUSE 29A**

### **Lien in respect of claims in other contracts**

Any sum of money due and payable to the contractor ( including the security deposit returnable to him) under the contract may be withheld or retained by way of lien by the Engineer-in-Charge or the Government or any other contracting person or persons through Engineer- In- Charge against any claim of the Engineer-in-Charge or Government or such other person or persons in respect of payment of a sum of money arising out of or under any other contract made by the contractor with Engineer-in-Charge or the Government or with such other person or persons.

It is an agree term of the contract that the sum of money so withheld or retained under this clause by the Engineer-in-Charge or the Government will be kept withheld or retained as such by the Engineer-in-Charge or the Government or till his claim arising out of the same contract or any other contract is either mutually settled or determined by the arbitration clause or by the competent court, as the case may be and that the contractor shall have no claim for interest or damages whatsoever on this account or on any other ground in respect of any sum of money withheld or retained under this clause and duly notified as such to the contractor.

## **CLAUSE 30**

### **Unfiltered Water Supply**

The contractor(s) shall make his/ their own arrangements for water required for the work and nothing

extra will be paid for the same. This will be subject to the following conditions.

- (i) That the water used by the contractor(s) shall be fit for construction purpose to the satisfaction of the Engineer-in-Charge.
- (ii) The Engineer-in-Charge shall make alternative arrangement for supply of water at the risk and cost of contractor(s) if the arrangement made by the contractor(s) for procurement of water are in the opinion of the Engineer-in-Charge, unsatisfactory.

### **CLAUSE 31**

#### **a. Departmental Water Supply, if available**

Water **if** available may be supplied to the contractor by the department as per actual/applicable cost subject to the following conditions :-

- (i) The contractor(s) shall make his / their own arrangement of water connection and laying of pipelines from existing main of source of supply.
- (ii) The Department do not guarantee to maintain uninterrupted supply of water and it will be incumbent on the contractor(s) to make alternative arrangement for water at his/ their own cost in the event of any temporary break down in the Institute water main so that the progress of his / their work is not held up for want of water. No claim of damage or refund of water charges will be entertained on account of such break down.

#### **b. Departmental Power Supply.**

Based on Contractors application to Executive Engineer (Electrical), Power will be supplied by Institute at nearest available location and the charges will be recovered from the bills payable to the Contractors in the following manner-

- i. 1% cost of electricity required items of work, if power connection is given from Institute.  
OR
- ii. If the Contractor arrange approved Energy meter, metered connection will be provided and charges as per actual consumption will be recovered.

### **CLAUSE 32**

#### **Return of Surplus Materials**

Notwithstanding anything contained to the contrary in this contract, where any materials for the execution of the contract are procured with the assistance of Institute either by issue from IIT Bombay stocks or purchase made under orders or permits or licenses issued by IIT Bombay, the contractor shall hold the said materials economically and solely for the purpose of the contract and not dispose of them without the written permission of IIT Bombay and return, if required by the Engineer-in-Charge, all surplus or unserviceable materials that may be left with him after the completion of the contract or at its

termination for any reason whatsoever on being paid or credited such price as the Engineer-in-Charge shall determine having due regard to the condition of the materials. The price allowed to the contractor however shall not exceed the amount charged to him excluding the element of storage charges. The decision of the Engineer-in-Charge shall be final and conclusive. In the event of breach of the aforesaid condition, the contractor shall in addition to throwing himself open to action for contravention of the terms of the license or permit and / or for criminal breach of trust, be liable to IIT Bombay for all moneys, advantages or profits resulting or which in the usual course would have resulted to him by reason of such breach.

### CLAUSE 33

#### Employment of Technical Staff and employees

<b>Designation</b>	<b>Minimum qualification and experience required</b>	<b>Scope of Work</b>	<b>Personal to be deployed</b>	<b>Rate of recovery per month per person for non Employment</b>
Sr. Project Engineer	Graduate Engineer in Civil Engineering with minimum 5 years, or Diploma in Civil Engineering with minimum 10 years of experience	Engineer-in-charge for project execution	1	Rs. 80,000/-
Jr.Project Engineer	Graduate Engineer(Civil) with minimum 2 years or Diploma Engineer with minimum 5 years of experience	Monitor the work at Site	3	Rs. 50,000/-
Supervisors	Experience of 10 years with related field. Building maintenance & Civil works	Site Supervision	7	Rs. 30,000/-

Contractor Superintendence, Supervision, Technical staff & Employees

(i) The contractor shall provide all necessary superintendence during execution of the work and all along thereafter as may be necessary for proper fulfilling of the obligations under the contract.

The contractor shall immediately after receiving letter of acceptance of the tender and before

commencement of the work, intimate in writing to the Engineer-in-Charge, the name(s), qualifications, experience, age, address(s) and other particulars along with certificate, of principal technical representative to be in charge of the work and other technical representative(s) who will be supervising the work.

The principal technical representative and other technical representative(s) shall be present at the site of work for supervision at all times when any construction activity is in progress and also present himself / themselves, as required, to the Engineer-in-charge and / or his designated representative to take instructions. Instruction given to the principal technical representative or other technical representative(s) shall be deemed to have the same force as if these have been given to the contractor. The principal technical representative and other technical representative(s) shall be actually available the decision of the Engineer-in-Charge as recorded in the site order book and measurement recorded checked / test checked in Measurement Books shall be final and binding on the contractor. Further if the contractor fails to appoint suitable technical Principal technical representative and / or other technical representative(s) and if such appointed persons are not effectively present or are absent by more than two days without duly approved substitute or do not discharge their responsibilities satisfactorily, the Engineer-in-Charge shall have full powers to suspend the execution of the work until such date as suitable other technical representative(s) is / are appointed and the contractor shall be held responsible for the delay so cause to the work. The contractor shall submit a certificate of employment of the technical representative(s) along with every on account bill / final bill and shall produce evidence if at any time so required by the Engineer-in-Charge at site fully during all stages of execution of work, during recording / checking /test checking of measurement of works and whenever so required by the Engineer-in-Charge or his designated representative(s) in the site order book and shall affix his / their signature in token of noting down the instructions and in token of acceptance of measurements / checked measurements / test checked measurements. The representative(s) shall not look after any other work. Substitute, duly approved by Engineer-in-Charge of the work in similar manner as aforesaid shall be provided in event of absence of any of the representative(s) by more than two days.

(ii) The contractor shall provide and employ on the site only such technical assistants as are skilled and experienced in their respective fields and such foremen and supervisory staff as are competent to give proper supervision to the work.

The contractor shall provide and employ skilled, semiskilled and unskilled labour as is necessary for proper and timely execution of the work.

The Engineer-in-Charge shall be at liberty to object to and require the contractor to remove from the works any person who in his opinion misconducts himself, or is incompetent or negligent in the performance of his duties or whose employment is otherwise considered by the Engineer-in-Charge to be undesirable. Such person shall not be employed again at works site without the written permission of the Engineer-in-Charge and the persons so removed shall be replaced as soon as possible by competent substitutes.

**CLAUSE 34****Levy / Taxes payable by Contractor**

- (i) Sales Tax / Vat ( except Service Tax), Building and other Construction Workers Welfare Cess or any other tax or Cess in respect of this contract shall be payable by the contractor and IIT Bombay shall not entertain any claim whatsoever in this respect. However, in respect of service tax, same shall be paid by the contractor to the concerned department on demand and it will be reimbursed to him by the Engineer-in-Charge after satisfying that it has been actually and genuinely paid by the contractor.
- (ii) The contractor shall deposit royalty and obtain necessary permit for supply of the red earth, Murum, Stone, Kankar, etc from local authorities.

If pursuant to or under any law, notification or order any royalty, cess or the like becomes payable by IIT Bombay and does not any time become payable by the contractor to the State Government, Local authorities in respect of any material used by the contractor in the works, then in such a case, it shall be lawful to IIT Bombay and it will have the right and be entitled to recover the amount paid in the circumstances as aforesaid from dues of the contractor.

**CLAUSE 35****Condition for reimbursement of levy / taxes if levied after receipt of tenders**

- (i) All tendered rates shall be inclusive of all taxes and levies ( except Service Tax) payable under respective statutes. However, if any further tax or levy or cess is imposed by Statute, after the last stipulated date for the receipt of tender including extensions if any and the contractor thereupon necessarily and properly pays such taxes / levies /cess, the contractor shall be reimbursed the amount so paid, provided such payments, if any, is not, in the opinion of the Dean IPS ( whose decision shall be final and binding on the contractor) attributable to delay in execution of work within the control of the contractor.
- (ii) The contractor shall keep necessary books of accounts and other documents for the purpose of this condition as may be necessary and shall allow inspection of the same by a duly authorized representative of IIT Bombay and /or the Engineer-in-Charge and shall also furnish such other information / document as the Engineer-in-Charge may require from time to time.
- (iii) The contractor shall, within a period of 30 days of the imposition of any such further tax or levy or cess, give a written notice thereof to the Engineer-in-Charge that the same is given pursuant to this condition, together with all necessary information relating thereto.

**CLAUSE 36****Termination of contract on death of contractor**

Without prejudice to any of the rights or remedies under this contract, if the contractor dies, IIT

Bombay shall have the option of terminating the contract without compensation to the contractor.

**CLAUSE 37**

**If relative working in IIT Bombay then the contractor not allowed to tender**

The contractor shall not be permitted to tender for works in IIT Bombay, if his near relative is posted as Accountant or as an officer in any capacity between the grades of the Superintending Engineer and Junior Engineer (both inclusive).

**Note : By the term “ near relatives” is meant wife, husband, parents and grand parents, children and grand children, brothers and sisters, uncles, aunts and cousins and their corresponding in laws.**

**CLAUSE 38**

**No Officer / Staff to work as contractor within one year of retirement**

No Engineer or other staff employed in engineering or administrative duties in IIT Bombay shall work as a contractor or employee of a contractor for a period of one year after his retirement from the Institute service without the permission of IIT Bombay in writing. This contract is liable to be canceled if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission of IIT Bombay as aforesaid, before submission of the tender or engagement in the contractor's service, as the case may be.

**Note : In case of difference or ambiguity in Hindi and English version, the English Version will prevail.**

Signature of Contractor

**Sd/-**

Superintending Engineer

# SPECIAL CONDITIONS

## 1) Construction Plant and Machinery

Applicant should furnish the list of construction plant and equipment including shuttering, centering and scaffolding likely to be used for carrying out the work (in form F). Details of any other equipment not mentioned in form F but available with the applicant and likely to be used in this work may also be indicated.

2) The contractor shall abide by all security regulations issued by the security staff from time to time and as per rules amended herewith.

3) Unless otherwise provision is made, the contractor will have to make his own arrangement of articles like cement and steel etc.

4) The rates quoted by the tenderer shall include all taxes, duties excise and no extra shall be paid on this account. Similarly, no price escalation during the tenure of the contract or for the extended period permitted by the Institute shall be allowed and the rates quoted in the contract shall be firm for the contract.

5) Sufficient care should be taken by the contractor to brick walls floor, glass windows, etc. while carrying out the work, any damage done to the departmental property shall be rectified at contractor's expenses.

6) The contractor shall remove all surplus materials, debris except cement etc. out of the IIT Campus from the site of work on completion of work and will handover the site clean before the bill is processed for final bill. In case of dismantled material such as pans urinals, flush tanks, M.S. windows etc. which generally cannot be re-used should be removed and taken away by the winning contractor on rebate basis. Concerned contractor should be allowed to remove all such dismantled materials after completion of the relevant contract. The collected debris should be properly covered by sheets enclosed at specified location with proper signage.

7) The contractor shall not be permitted to construct labour hutment anywhere in the Campus. However, in case of the work necessitates the construction of temporary stores for storing the cement or any other material, the same shall be permitted to be constructed by the contractor at his cost with prior permission of the Engineer-in-Charge. The site, however, will have to be vacated including the encumbrances immediately after completion of work and before the payment of the final bill.

8) No cement will be issued from Estate store. Contractor's are instructed to procure OPC grade 43/53 as per requirement or otherwise PPC bag Manufactured by ACC. Testing of cement is required to be carried out either in IIT/ VJTI/SP College Labs / Structural Laboratory on his own cost & report may be submitted to Assistant Engineer / Junior Engineer.

9) No cement will be issued from Estate Store and final bill will not be accepted without test report of IIT / VJTI/ SP College labs/ Structural laboratory.

**10) Visit to site within the restricted area**

Permission to enter the restricted area at the time of submission of tenders can be obtained through the Executive Engineer (Civil / Electrical) concerned. Tenders are advised to send prior information to the Executive Engineer concerned about the particulars of their agents, representative etc. so that necessary arrangements may be made by him to secure admission. Whether a tenderer visits the site or not he shall be deemed to have full knowledge of restrictions on entering, existing, form and working within the restricted areas.

**11) Entry and Exit**

The contractor, his agents, representatives, workman, etc. and his materials, carts, trucks, or other means of transport, etc. will be allowed to enter through and leave from only such gate or gates and at such times as the Executive Engineer concerned or authorized In-charge of the restricted areas may bear at their sole discretion permit to be used. Contractor's authorized representative if required are to be present at the places of entry and exit for the purpose of identifying his carts, trucks, etc. to the personnel In-charges of the security of the restricted area.

**12) Temporary Identity Permits**

The contractor or his representative / site In-charge overseers and other regular staff are required individually to be in possession of the temporary entry permit which will be issued by the Security on the recommendation of the Engineer-In-Charge. Regarding casual labourers skilled workers to be engaged in the execution of the work, the following procedure shall be followed.

The casual / skilled workers who will be engaged by the contractor shall be allowed to enter IIT premises through gates on production of Daily Attendance Card which will be marked by the authorized representative of the contractor before entering at the Security Gate.

The Security Officer shall have the authority not to allow any labourers who do not possess the "Marked muster roll cards". The labourers working and moving in the Campus areas should always carry the muster roll card with them for identification. Contractor shall be responsible for the conduct and action of his / workmen / agent or representative at all times.

In case of any concreting program which involves temporary engagement of more labourers, the contractor concerned shall apply to the site engineer for temporary permission for the day and intimate the same to the security prior to such engagement.

**13) Movement of Contractor's Materials**

Any materials which are removed from the site of works are required to be taken out from the IIT premises, the contractor should follow the following procedure.

The contractor shall supply in writing to the Engineer-in-charge the details of the materials to be removed including the material which are rejected etc. This application shall be endorsed by the Engineer-in-charge, or his authorized representative. These materials shall only be allowed to go out of

IIT premises after counter signature of the Security Officer an checked at the gate.

#### **14) Search**

Thorough search of all persons and transport shall be carried out each gate and for as many times as gate is used for entry or exist and may also be carried out at any time or any number of times at the works site within the restricted area.

#### **15) Working Hours**

The unit controlling restricted areas, usually work during five days in the week and remain closed on Saturdays and Sundays. Working hours available to contractor's labour and staff are however, appreciable reduced because of the time of entry and exist during working hours. The exact working hours, working days and non-working days observed for the restricted area, where work are to be carried out shall be deemed to have been ascertained by the contractor before submitting this tender. The tenderers attentions invited to the fact that the total number of working hours for the units are prescribed in regulation and no work beyond the prescribed working hours shall be permitted.

The contractor shall not carry out any work on declared holidays of IIT, weekly holidays and other non-working days unless he is expressly authorized in writing to do so by the Executive Engineer (Estate / Civil / Electrical) concerned.

#### **16) Access to restricted area after completion of work.**

After the works are completed and surplus stores etc. removed the contractor his agents, representatives or workmen etc. may not be allowed any access to the restricted area except for attending to and rectification defects pointed out to him by the Executive Engineer ( Estate / Civil / Electrical) concerned or his representative.

#### **17) Fire precaution**

The contractor, his agents, representative, workmen etc. shall be strictly observed the orders pertaining to fire precautions prevailing within the restricted areas.

#### **18) Work on Holidays Saturdays / Sundays**

The contractor shall not carry out any work on declared holiday of IIT, weekly holiday and other non-working days unless he is expressly authorized in writing to do so by the Executive Engineer ( Estate / Civil / Electrical) concerned. Contractors can execute the work on holiday, Saturday and Sundays with prior permission of the office under the supervision of the office staff. The overtime charges as per the rates of IIT will be recovered from the contractor. The necessary recovery will be done through bills. The record of materials brought by the contractor inside the IIT Campus should be verified through the concern Assistant Engineer and Junior Engineer before commencing the work.

**19) If any material is to issued by IIT Bombay the same will be issued as per requisition.**

20) Any scaffolding or ladder required for access to the location of work for inspection shall be made by the contractor at his own cost and the same shall be removed on his own cost after completion of work.

21) The contractor shall carry out work in close co-ordination with the respective Department / Hostel without causing any inconvenience to all concerned. However, the job has to be completed within the stipulated time limit.

22) The contractor has to obtain CAR policy before commencement of the work and he should pay ESI and PF contribution against the workers engaged by him and challan are to be submitted along with the final bill.

23) The indemnity bond and promissory note shall required to be submitted by the contractor for secured advance if any.

24) No mobilization advance will be given to the contractor.

25) **Consumption** of chemicals has to be recorded daily by the contractor and it should be got verified / certified by the concerned Assistant Engineer / Junior Engineer of the Institute.

26) Shifting of debris's from any place, any height to any place in the IIT Campus/**outside** the Campus will be done by the contractor as per the item specification and contract condition.

27) The contractor has to carry out the structural repair work as per specification of construction, chemical manufacture.

## 28) **The testing Charges**

“The testing of material which will be used by the contractor for construction / maintenance job shall be carried out as per the relevant IS specification / standard procedure at the Institute own / recommended laboratory as per the decision of Engineer-in-Charge and contractor will bear the testing charges incurred if any unless otherwise mentioned in the schedule of items. The sample of material will be taken by the Engineer-in-Charge or his representative and it shall be sent to the laboratory in sealed manner as decided by the Engineer-In-Charge through contractors cost and arrangement.

## 29) **Indication of Tests for Materials**

a) Necessary gate pass will be issued by the concerned Engineer-in-Charge if the samples of material which will be taken out from IIT Campus for testing to be done in the recommended lab outside the campus.

b) Although concerned labs are expected to send the test report timely to the Engineer-in-Charges and if any delay occurred regarding the receipt of test report, no claim of the contractor will be entertained regarding the delay, loss of time etc.

30) If any problem arises about the application / workmanship, the contractor has to arrange visit of

representative of manufacturer of chemicals and under their guidance they will have to carry out work.

- 31)** The contractor shall be required to give performance guarantee of structural repair work carried out by them for 10 years and guarantee for 10 years for water - proofing work carried out by them on Rs. 100/- Non Judicial stamp paper.
- 32)** No escalation will be entertained for material, labour of any type during the period of contract including extended period if any.
- 33)** It was decided that the contractors will procure construction chemicals from the respective manufacturers and it should be ensured by them that the date of receipt at site should be not later than two months from date of manufacturer i.e the expiry date should be more than ten months.
- 34)** The concerned contractors shall work in co-ordination with Electrical Maintenance Division for smooth execution and for maintaining continuous power supply to the concerned Hostels / Departments. They shall co-ordinate with the concerned electrical contractor, department persons to execute repair / rehabilitation of electrical lines hand in hand with Civil structural / rehabilitation.
- 35)** Contractor shall cover entire floor while carrying out work of plastering, applying polymer modified mortar, Trawling etc.
- 36)** Contractor shall provide plastic sheets for covering the affected area.
- 37)** Contractor shall provide Jute / plastic sheet to cover external face of building.
- 38)** Contractor shall cover all electrical fittings / wire by plastic sheets / jute bags.
- 39)** Contractor should not use departmental furniture's, equipment's or any other materials belonging to IIT Bombay. In case any furniture is inadvertently damaged / affected those should be made good by the contractor at his own cost.
- 40)** Any wire, cable, removed will be re-fixed after plastering work by the contractor as directed by the Engineer- In-Charge.
- 41)** Special conditions will be superseded to General Conditions.
- 42)** Work has to be carried out in consultation with the Head of the department of concern building and other Committee members of the Departments as per their convenience or as directed by Engineer In Charge.
- 43)** If the contractor violates security rules and regulations of the Institute or damages the Institute property as penalty of 0.5% of the work order amount will be recovered from their dues.
- 44)** No service charges will be paid separately by IIT Bombay.
- 45)** No escalation will be paid by IIT Bombay.

**46)** Electricity will be supplied on payment basis for work site from the nearest available supply point if available.

**47)** Junior Engineer of IIT Bombay will be the controlling in-charge of assigned work.

**48)** Arrangement of daily manpower for execution of the work under this contract:

a) Ample number of labours would be required under the contract for executing the various activities and work inside the campus.

b) The contractor has all necessary responsibilities for accommodation and welfare of the labour as per the various labour related act.

c) The contractors should make all necessary arrangements for labours within the premises of the campus to avoid any delay for transportation of labour. (not beyond distance of 7 KM)

d) No permission for accommodation of labour inside the campus shall be permitted.

**49)** The contractor has to arrange full fledged and fully furnished office of minimum 40 staff (30 staff as per clause no 33 table plus 10 staff as per contractor's wish) at his own cost to execute the work and perform the contract.

**50)** The space for the office shall be provided to the contractor by the Institution on nominal leave rent a) Godown License fees of Rs. 20.00 per square meter of footprint, b) Labour hutment license fees charge Rs. 250 per hutment and c) water charges Rs. 170 per hutment on monthly basis. All necessary equipment are to be installed/purchase/hired by the contractor at his own expenses.

**51)** The contractor has to provide the mobiles to its staffs and engineers for the execution of the work under this contract at his own cost nothing shall be paid in this regard. The respective mobile numbers, emails and contact details shall be submitted to the institution for the execution and follow up of the work.

**52)** The contractor has no right to reject/refuse the scope of work as assigned by the Section In-Charge / Engineer In-Charge.

**53)** The bamboo scaffolding should not be used on site unless otherwise approved by Section In-Charge / Engineer In-Charge.

Signature of Contractor

Sd/-  
Superintending Engineer

# STRUCTURAL REPAIRS METHODOLOGY

Following are the repair methodology specifically addressed for distresses in your building. The chemicals referred in following methodologies are of Dr. Fixit, Roff, M C Bouchmey, Sunanda Construction Chemicals, BASF, Anuvi, Chembond. However similar chemical of any brand can be used for repairs.

Steps to be followed for Structural Repairs.

**Step 1 :** Carefully removing the internal/external existing cement plaster damaged of any thickness from RCC members like columns, beams, slabs, chajjas, paradis,walls fins, staircase etc. in patches or any length by using electrical cutting tools/manually means up to any depth without damaging brickwork, plaster in the vicinity, cleaning, stacking the debris at suitable location, cleaning the site etc. including covering the furniture with plastic sheet including scaffolding / step ladder etc. all complete as directed. Note: Proper tools to be used for removal of plaster.

**Step 2 :** Exposing the existing damaged RCC members like columns, beams, slabs, chajjas, etc in patches or any length by using electrical cutting tools up to any depth till the corroded reinforcement will be opened allround without damaging brickwork, plaster in the vicinity, cleaning, stacking the debris, cleaning the site etc. complete, including covering the furniture with plastic sheet while exposing concrete including scaffolding/ step ladder. Note: Proper tools to be used for removal of concrete.

**Step 3 :** Providing and applying reinforcement treatment, comprising of following operations. Cleaning the reinforcement from all sides by using wire brush, tools etc. Application of rust converter such as Alkaline base as per manufacturers specification, cleaning if required as directed including scaffolding etc. all complete as directed. Actual consumption of Alkaline base converter shall be measured for payment on weight basis. Original bills/challans of authorized dealer will be verified before processing the bills.

**Step 4 :** Providing and applying an effective bond coat of Polymer (SBR) approved by IITB and cement in the proportion of 1:1 using brush in multiple coats as required to accommodate the whole thickness of polymer modified mortar wherever required on the surface of old concrete or repaired concrete. Polymer (SBR) of approved manufacturer should have the following properties: Suspended solid particle should not be less than 40%-specific gravity should not be more than 1.01-PH should not be less than 8.5.Note : The actual consumption of polymer shall be measured for payment on weight basis. Original bills/challans of authorized dealer will be verified before processing the bills.

**Step 5 :** Providing and Placing in position readymix polymer mortar manufacture by Dr. Fixit, Sunanda, Roff, MC Bouchmey, Chembond and approved and adding water in the proportion of 1:0.14 (polymer mortar : water) in prepared grooves / cracks/concrete surface in layers as directed including scaffolding mixing the polymer mortar with water etc all complete as directed. (Payment will be paid for the actual quantity of polymer mortar PX used on weight basis. Original bills/challans of authorized dealer will be verified before processing the bills.

**Step 6 :** Providing and laying super fluid micro concrete of approved manufacturer at any floor after reinforcement treatment coat including mixing with 5mm to 10mm size quartz aggregate in the ratio of

1 part ACC shrikomp to 0.75 part of quartz aggregate by weight providing marine plywood formwork in line and level, cleaning, curing and scaffolding, etc. complete. the compressive strength of super fluid micro concrete should not be less than 20N / mm<sup>2</sup> etc. All complete as directed. Original bills/challans of authorized dealer will be verified before processing the bills.

**Step 7 :** Providing & fixing in position mild steel / tor steel / TMT bar reinforcement (Fe 500) of various diameters for RCC lintels, beams, slabs, column etc as per details given including cutting, hooking the bars, binding with wires or tack welding & supporting as required including scaffolding etc. all complete as directed.

**Step 8 :** Providing & fabricating structural steel works in rolled sections like joists, channels, angles, tees, plates, round pipes etc. as per site requirement including fixing in position with connection plates, braces, and welding, riveting, bolting as necessary including scaffolding and painting with one coat of metal primer and two coats of synthetic enamel paint etc. all complete as directed.

**Step 9 :** Providing and laying plain cement concrete M-20 of trap metal for leveling/bedding, flooring, plinth protection, etc. including bailing out water (dewatering), formwork, compacting and curing etc. all complete as directed.

**Step 10 :** Providing and casting in situ cement concrete in M-25 of trap metal for R.C.C footings / slab / columns / beam as per detailed designs and drawings or as directed including scaffolding, centering, formwork, cover blocks, compaction and finishing the surface, curing etc. all complete as directed.

**Step 11 :** Drilling straight and inclined holes upto 300mm depth and upto 20mm dia in concrete / masonry using electrically operated drilling machine and fixing PVC nipple for grouting, including scaffolding, conducting water test, etc. all complete as directed.

**Step 12 :** Grouting existing RCC structural members & tile work as per following operations including scaffolding, sealing leak paths with cement mortar & polymer, removing nipple, plugging the hole with neat cement paste by ram packing, cleaning etc. complete. 1) Add Sunflex powder 1.00 kg in one bag of cement of 50 kg with adequate water. 2) Using mechanical means of pressure grouting with the above mix. The pressure shall be 5-10 psi. 3) The grouting to be done into the cracks of ceiling, walls, columns, & beam wherever required. 4) After through grouting sealing the holes with cement slurry.

**Step 13 :** Providing temporary steel supports such as tubular steel props 50mm dia, as required for supporting system till the repaired work of the beam, column, slab, chajja, etc. work completed in all respects as directed and when required in any floor of any height inside and outside of the building and removing the supporting system as directed without damaging the structure etc. all complete as directed.

**Step 14 :** Providing internal cement plaster 12mm thick in single coats in cement mortar 1:4 without neeru finish to concrete or brick surfaces in all positions including scaffolding and curing etc. all complete as directed.

**Step 15 :** Providing internal cement plaster 20mm thick in single coat in cement mortar 1:4 without neeru finish to concrete or brick surfaces in all positions including scaffolding and curing etc. all complete as directed.

**Step 16** : Providing sand face cement plaster externally using approved screened sand in all positions including base coat of 15mm thick in cement mortar 1:4 using water proofing compound @ 2% by weight of cement and curing the same for not less than two days and keeping the surface of base coat rough to receive the sand faced treatment 6 to 8mm thick in cement mortar 1:4, finishing the surface by taking out grains and curing for 14 days, scaffolding etc all complete as directed.

**Step 17** : Providing and applying white cement based Birla make wall care putty with uniform thickness over the existing internal cement plaster in proper line / level including preparing the wall surface including scaffolding etc. all complete as directed.

Signature of Contractor

Sd/-  
Superintending Engineer

# WATERPROOFING METHODOLOGY

## Part – A : Cement Based Waterproofing:

Steps to be followed for Cement Based Waterproofing.

**Step 1 :** Carefully removing the internal/external existing cement plaster damaged of any thickness from RCC members like beams, slabs, chajjas, walls etc. in patches or any length by using electrical cutting tools/manually means up to any depth without damaging brickwork, plaster in the vicinity, cleaning, stacking the debris at suitable location, cleaning the site etc. including covering the furniture with plastic sheet including scaffolding / step ladder etc. all complete as directed. Note: Proper tools to be used for removal of plaster. (The area in vertical/horizontal plane shall be measured for payment only).

**Step 2 :** Carefully removing top coat of IPS water proofing layer/kotah stone/ any type of tiled flooring without causing any damages to brickbat coba from terrace including cleaning, levelling the surface, lowering down debris without causing dust nuisance including stacking the debris upto a distance of 50 metres or at suitable location to take away outside IIT campus as directed etc. all complete as directed.

**Step 3 :** Carefully removing the existing loose and damaged brickbat coba waterproofing treatment from the top of terrace up to any thickness without making any damages to the roof slab with the use of sharp chisels, levelling and cleaning the roof surface for providing new specialised waterproofing treatment, lowering down debris without causing dust nuisance and stacking the same upto a distance of 50 metres or at suitable location to take away outside IIT campus as directed etc. all complete as directed.

**Step 4 :** Providing and laying cement concrete flooring to terrace to average 50mm thick with 1:2:3 cement concrete laid to proper level and slope using silt free clear river sand finished with a floating coat of neat cement including compaction, filling joints, adding recommended waterproofing admixtures @ 2% by weight of cement, cement slurry, curing, marking lines to give appearances of tiles as directed, including all lead and lift and covering the whole treatment with 07 years' guarantee on requisite (Rs.100/-) non-judicial stamp paper etc. all complete as directed.

**Step 5 :** Providing & laying cement based waterproofing treatment of 115mm average thickness consisting of 12mm thick layer in cement mortar 1:3 with waterproofing compound 2% by weight of cement as base, constructing and laying brick bat coba in cement mortar 1:5 with waterproofing compound at the rate of 2% by weight of cement and having average thickness of 80mm and finishing with 20mm thick cement plaster layer in cement mortar 1:3 with water proofing compound 2% by weight of cement including fixing china mosaic tiles, all leads, lifts and laid to proper slope to drain off water entirely including watta at the junction of parapet and work upto a height of 300mm or as directed and including finishing the top layer of water proofing treatment with false marking of 30cm x 30cm or as directed and covering the whole treatment with 10 years' guarantee on requisite (Rs.500/-) non-judicial stamp paper etc. all complete as directed.

**Step 6 :** Providing second class burnt brick masonry with conventional type bricks in cement mortar 1:6 in superstructure including scaffolding, racking out joints and watering etc. all complete as directed.

**Step 7 :** Providing and fixing P.V.C Rain Water Pipes of 150mm outer dia. conforming to I.S. 13592-1992 including proper rain water receiving recess with P.V.C. plug bend, necessary fittings such as offsets, shoes including fixing the pipe on wall using approved MS frame supports projecting 25mm to 40mm from face of wall and fixing with clamps/clips of approved quality and number, filling the joints using rubber gasket with solvent cement including necessary scaffolding, screwing, cleaning the surface and maintenance for 3 years for any leakages or dislocation of pipes. All the P.V.C. Fittings shall be got approved from Engineer In-charge etc. all complete as directed. (Make- Supreme, Prince, Finolex)

**Step 8 :** Providing and fixing P.V.C. Rain Water Pipes 100mm outer dia. conforming to I.S. including proper rain water receiving recess with P.V.C. plug bend, necessary fittings such as offsets, shoes including fixing the pipe on wall using approved M.S brackets projecting 25mm to 40mm from face of wall & fixing with heavy duty PVC clips of approved quality & number, filling the joints using rubber gasket with solvent cement and properly resting the shoe of pipes on C.C. or masonry blocks, including necessary scaffolding, and maintenance for 3 years for any leakages or dislocation of pipes. All the PVC fittings and additional two piece socket clips shall be got approved from Engineer In-charge etc. all complete as directed. (Make- Supreme, Prince, Finolex)

**Step 9 :** Providing sand face cement plaster externally / internally using approved screened sand in all positions including base coat of 15mm thick in cement mortar 1:4 using water proofing compound @ 2% by weight of cement and curing the same for not less than two days and keeping the surface of base coat rough to receive the sand faced treatment 6 to 8mm thick in cement mortar 1:4, finishing the surface by taking out grains and curing for 14 days, scaffolding etc. all complete as directed.

**Part - B :** APP (Atactic Polypropylene Polymer) Membrane Waterproofing:

Steps to be followed for APP Membrane Waterproofing.

**Step 1 :** Carefully removing top coat of IPS water proofing layer/kotah stone without causing any damages to brickbat coba from terrace including cleaning, levelling the surface, lowering down debris without causing dust nuisance including stacking the debris upto a distance of 50 metres or at suitable location to take away outside IIT campus as directed etc. all complete as directed.

**Step 2 :** Removing the existing old cement plaster of any thickness without causing dust nuisance including stepladder/scaffolding and stacking the debris for taking away out of IIT campus etc. all complete as directed.

**Step 3 :** Providing second class burnt brick masonry with conventional type bricks in cement mortar 1:6 in superstructure including scaffolding, racking out joints and watering etc. all complete as directed.

**Step 4 :** Providing and laying cement concrete flooring to terrace to average 40mm thick with 1:2:3 cement concrete laid to proper level and slope using clear river sand finished with a floating coat of neat cement including compaction, filling joints, adding recommended waterproofing admixtures @ 2% by weight of cement, cement slurry, curing, marking lines to give appearances of tiles or as directed including all lead and lift etc. all complete as directed.

**Step 5 :** Providing and laying plain cement concrete M-20 of trap metal for leveling/bedding, flooring, plinth protection, etc. including bailing out water (dewatering), formwork, compacting and curing etc. all complete as directed.

**Step 6 :** Providing sand face cement plaster externally using approved screened sand in all positions including base coat of 15mm thick in cement mortar 1:4 using water proofing compound @ 2% by weight of cement and curing the same for not less than two days and keeping the surface of base coat rough to receive the sand faced treatment 6 to 8mm thick in cement mortar 1:4, finishing the surface by taking out grains and curing for 14 days, scaffolding etc. all complete as directed.

**Step 7 :** Providing and fixing P.V.C. rain water pipes 160mm outer dia. conforming to I.S. including proper rain water receiving recess with P.V.C. plug bend, necessary fittings such as offsets, shoes including fixing the pipe on wall using approved M.S brackets projecting 25mm to 40mm from face of wall , filling the joints using rubber gasket with solvent cement and properly resting the shoe of pipes on C.C. or masonry blocks, including removing the old damaged pipes, necessary scaffolding, and maintenance for 3 years for any type of leakages or dislocation of pipes. All the PVC fittings and additional two piece socket clips shall be got approved from Engineer In-charge etc. all complete as directed. (Make - Finolex/Kissan/Prince)

**Step 8 :** Providing and laying waterproofing treatment to terrace surface with 3mm thick APP modified bitumen membrane with polymer reinforcement with overlapping of 75mm along length and 100mm along width of any height including removing the existing waterproofing treatment such as tarfelt, chemical coating etc. without causing damages to the structure, cleaning the surface neatly, removing the dust and loose mortar from the terrace surface and repairing the same with 1:3 cement mortar mixed with waterproofing compound, including applying bitumen based primer @ 0.20Ltr/Sqm and laying the 3mm thick APP modified bitumen membrane, coating with torching method and finishing surface with heat reflective bitumen based silver @ 0.10Ltr /Sqm and covering the whole treatment with five years guarantee on requisite stamp paper of Rs.500.00 including scaffolding wherever required etc. all complete as directed. (Make - Nilobit/STP/Asian Paint Ltd/Chryso India Pvt. Ltd.)

**Part - C :** Chemical Waterproofing Treatment (Dr. Fixit) :

Steps to be followed for Chemical Waterproofing Treatment (Dr. Fixit).

**Step 1 :** Providing and applying two coat of Prime seal of Dr. Fixit over plaster, masonry or RCC surface as per manufacturer specification including preparing the surface by thoroughly cleaning laitance, loose material, oil, grease and other foreign matter with wire brush and vacuum cleaning, including filling the cracks using appropriate exterior putty with use of scaffolding and covering the floor, window glass with plastic sheet during work and cleaning after work etc. all complete as directed by Engineer In-charge & as per manufactures specifications. (For vertical surface).

**Step 2 :** Providing and applying two coat of Prime seal of Dr. Fixit over plaster, masonry or RCC surface as per manufacturer specification including preparing the surface by thoroughly cleaning laitance, loose material, oil, grease and other foreign matter with wire brush and vacuum cleaning, including filling the cracks using appropriate exterior putty without scaffolding and covering the floor, window glass with plastic sheet during work and cleaning after work etc. all complete as directed by Engineer In-charge & as per manufactures specifications. (For horizontal surface).

**Step 3 :** Providing and applying two coats of Dr. Fixit Raincoat as per manufacturer's specification on plastered surface over concrete / brickwork including scaffolding and cleaning the surface thoroughly, watering the surface etc. complete including covering the floor, window glass with plastic sheet and cleaning after work as directed by Engineer In-charge (for vertical wall surface). (Warranty for three years on non judicial stamp paper of Rs.100/-)

**Step 4 :** Providing and applying three coats of Dr. Fixit New coat as per manufacturer's specification on plastered surface over concrete/brickwork including cleaning the surface thoroughly, watering the surface etc. complete including covering the floor, window glass with plastic sheet and as directed by Engineer In-charge (for horizontal surface / terrace). (Warranty for three years on non judicial stamp paper of Rs.100/-)

Signature of Contractor

Sd/-  
Superintending Engineer

## Special Conditions for Protection of 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. All construction material should be stored only at places earmarked by the engineer in charge.
2. 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 penalty/ rent shall be levied for the area used for storage.
3. For Intercarting of various materials use of animal drawn vehicles are strictly prohibited.
4. Preparation of concrete, mortars in the roads, pavements, bare floors under the building 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. Smoking is strictly prohibited at workplace.

Signature of Contractor

Sd/-  
Superintending Engineer

## SAFETY CODE

1. Suitable scaffolds should be provided for workmen for all works that cannot safely be done from the ground, or from solid construction except such short period work as can be done safely from ladders. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well suitable footholds and hand-hold shall be provided on the ladder and the ladder shall be given an inclination not steeper than  $\frac{1}{4}$  to 1 ( $\frac{1}{4}$  horizontal and 1 vertical).
2. Scaffolding of staging more than 3.6m ( 12ft) above the ground or floor, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached or bolted, braced and otherwise secured at least 90cm. (3ft) high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends there of with only such opening as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
3. Working platforms, gangways and stairways should be so constructed that they should not sag unduly or unequally, and if the height of the platform or the gangway or the stairway is more than 3.6m ( 12ft) above ground level or floor level, they should be closely boarded, should have adequate width and should be suitably fastened as described in (2) above.
4. Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of person or materials by providing suitable fencing or railing whose minimum height shall be 90cm (3ft).
5. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9m (30ft) in length while the width between side rails in rung ladder shall in no case be less than 29cm. (11  $\frac{1}{2}$ " ) for ladder upto and including 3m (10 ft) in length. For longer ladders, this width should be increased at least  $\frac{1}{4}$ " for each additional 30cm. (1 foot) of length. Uniform step spacing of not more than 30cm shall be kept. Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites or work shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The contractor shall provide all necessary fencing and lights to protect the public from accident and shall be bound to bear the expenses of defense of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit; action or proceedings to any such person or which may, with the consent of the contractor, be paid to compensate any claim by any such person.
6. Excavation and trenching – All trenches 1.2m ( 4ft) or more in depth, shall at all times be supplied with at least one ladder for each 30m. (100ft) in length or fraction thereof, Ladder shall extend from bottom of the trench to at least 90cm (3ft) above the surface of the ground. The side of the trenches which are 1.5m (5ft) or more in depth shall be stepped back to give suitable slope or securely held by timber bracing, so as to avoid the danger of sides collapsing. The excavated materials shall not be placed within 1.5m. (5ft) of the edges of the trench or half of

the depth of the trench whichever is more. Cutting shall be done from top to bottom. Under no circumstances, undermining or undercutting shall be done.

7. Demolition – Before any demolition work is commenced and also during the progress of the work,

(i) All roads and open areas adjacent to the work site shall either be closed or suitably protected.

(ii) No electric cable or apparatus which is liable to be a source of danger or a cable or apparatus used by the operator shall remain electrically charged.

(iii) All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding, No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.

8. All necessary personal safety equipment as considered adequate by the Engineer-in-Charge should be kept available for the use of the person employed on the site and maintained in a condition suitable for immediate use, and the contractor should take adequate steps to ensure proper use of equipment by those concerned : - The following safety equipment shall invariably be provided.

(i) Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.

(ii) Those engaged in white washing and mixing or stacking of cement bags or any material which is injurious to the eyes, shall be provided with protective goggles.

(iii) Those engaged in welding works shall be provided with welder's protective eye shields.

(iv) Stone breaker shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.

(v) When workers are employed in sewers and manholes, which are in active use, the contractors shall ensure that the manhole covers are opened and ventilated at least for an hour before the workers are allowed to get into the manholes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to the public. In addition, the contractor shall ensure that the following safety measures are adhered to :

a) Entry for workers into the line shall not be allowed except under supervision of the JE or any other higher officer.

b) At least 5 to 6 manholes upstream and down stream should be kept open for at least 2 to 3 hours before any man is allowed to enter into the manhole for working inside.

c) Before entry, presence of Toxic gases should be tested by inserting wet lead acetate paper which changes colour in the presence of such gases and gives indication of their presence.

d) Presence of Oxygen should be verified by lowering a detector lamp into the manhole. In case, no

Oxygen is found inside the sewer line, workers should be sent only with oxygen kit.

e) Safety belt with rope should be provided to the workers. While working inside the manholes, such rope should be handled by two men standing outside to enable him to be pulled out during emergency.

f) The area should be barricaded or cordoned off by suitable means to avoid mishaps of any kind. Proper warning signs should be displayed for the safety of the public whenever cleaning works are undertaken during night or day.

g) No smoking or open flames shall be allowed near the blocked manhole being cleaned.

h) The malba obtained on account of cleaning of blocked manholes and sewer line should be immediately removed to avoid accidents on account of slippery nature of the malba.

i) Workers should not be allowed to work inside the manhole continuously. He should be given rest intermittently. The Engineer-in-Charge may decide the time up to which a worker may be allowed to work continuously inside the manhole.

j) Gas masks with Oxygen Cylinder should be kept at site for use in emergency.

k) Air-blowers should be used for flow of fresh air through the manholes. Whenever called for, portable air blowers are recommended for ventilating the manholes. The Motors for these shall be vapour proof and of totally enclosed type. Non sparking gas engines also could be used but they should be placed at least 2 meters away from the opening and on the leeward side protected from wind so that they will not be a source of friction on any inflammable gas that might be present.

l) The workers engaged for cleaning the manholes / sewers should be properly trained before allowing to work in the manhole.

m) The workers shall be provided with Gumboots or non sparking shoes bump helmets and gloves non sparking tools safety lights and gas masks and portable air blowers ( when necessary). They must be supplied with barrier cream for anointing the limbs before working inside the sewer lines.

n) Workmen descending a manhole shall try each ladder stop or rung carefully before putting his full weight on it to guard against insecure fastening due to corrosion of the rung fixed to manhole well.

o) If a man has received a physical injury, he should be brought out of the sewer immediately and adequate medical aid should be provided to him.

p) The extent to which these precautions are to be taken depend on individual situation but the decision of the Engineer-in-Charge regarding the steps to be taken in this regard in an individual case will be final.

vi) The contractor shall not employ men and women below the age of 18 years on the work of painting with products containing lead in any form. Wherever men above the age of 18 are employed on the work of lead painting, the following precaution should be taken : -

- a) No paint containing lead or lead products shall be used except in the form of paste or ready made paint.
- b) Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint is dry rubbed and scrapped.
- c) Overalls shall be supplied by the contractors to the workmen and adequate facilities shall be provided to enable the working painters to wash during and on the cessation of work.

9) The contractor shall not employ women and men below the age of 18 on the work of painting with product containing lead in any form, wherever the men above the age of 18 are employed on the work of lead painting, the following principles must be observed for such use :

- i) White lead, sulphate of lead or product containing these pigment, shall not be used in painting operation except in the form of pastes or paint ready for use.
- ii) Measures shall be taken, wherever required in order to prevent danger arising from the application of a paint in the form of spray.
- iii) Measures shall be taken, wherever practicable, to prevent danger arising out of from dust caused by dry rubbing down and scraping.
- iv) Adequate facilities shall be provided to enable working painters to wash during and on cessation of work.
- v) Overall shall be worn by working painters during the whole of working period.
- vi) Suitable arrangement shall be made to prevent clothing put off during working hours being spoiled by painting materials.
- vii) Instructions with regard to special hygienic precautions to be taken in the painting trade shall be distributed to working painters.

10) When the work is done near any place where there is risk of drowning, all necessary equipments should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision, should be made for prompt first aid treatment of all injuries likely to be obtained during the course of the work.

11) Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following standards or conditions : -

- (i) (a) These shall be of good mechanical construction, sound materials and adequate.  
(b) Every rope used in hoisting or lowering material or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.
- (ii) Every crane driver or hoisting appliance operator, shall be properly qualified and no person

under the age of 21 years should be in charge of any hoisting machine including any scaffolding winch or give signals to operator.

(iii) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or as means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of a hoisting machine having a variable safe working load each safe working load and the condition under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.

(iv) In case of departmental machine, the safe working load shall be notified by the Electrical Engineer-in-Charge. As regards contractor's machines the contractors shall notify the safe working load of the machine to the Engineer-in-Charge whenever he brings any machinery to site of work and get it verified by the Electrical Engineer concerned.

12. Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards. Hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load. Adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energized, insulating mask, wearing apparel, such as gloves, sleeves and boots as may be necessary should be provided. The worker should not wear any rings, watches and carry keys or other materials which are good conduction of electricity.

13. All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near places of work.

14. These safety provisions should be brought to the notice of all concerned by display on a notice boards at a prominent place at work spot. The person responsible for compliance of the safety code shall be named therein by the contractor.

15. To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangements made by the contractor shall be open to inspection by the Labour Officer or Engineer-in-Charge of the department or their representatives.

16. Notwithstanding the above clauses from (1) to (15), there is nothing in these to exempt the contractor from the operations of any other Act or Rule in force in the Republic of India.

Signature of Contractor

Sd/-  
Superintending Engineer

# MODEL RULES FOR THE PROTECTION OF HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS

## 1. APPLICATION

These rules shall apply to all buildings and construction / maintenance works in IIT Bombay in which twenty or more workers are ordinarily employed or are proposed to be employed in any day during the period during which the contract work is in progress.

## 2. DEFINITION

Work place means a place where twenty or more workers are ordinarily employed in connection with construction work or maintenance work on any day during the period during which the contract work is in progress.

## 3. FIRST-AID FACILITIES

- (i) At every work place, there shall be provided and maintained, so as to be easily accessible during working hours, first-aid boxes at the rate of not less than one box for 150 contract labour or part thereof ordinarily employed.
- (ii) The first-aid box shall be distinctly marked with a red cross on white background and shall contain

a) For work places in which the number of contract labour employed does not exceed 50- the following equipment : -

Each first-aid box shall contain the following equipments : -

1. 6 small sterilized dressings.
2. 3 medium size sterilized dressings.
3. 3 large size sterilized dressings.
4. 3 large sterilized burn dressings.
5. 1 (30ml.) bottle containing a two per cent alcoholic solution of iodine.
6. 1 (30ml.) bottle containing salvolatile having the dose and mode of administration indicated on the label.
7. 1 snakebite lancet.
8. 1(30 gms) bottle of potassium permanganate crystals.
9. 1 pair scissors.
10. 1 copy of the first-aid leaflet issued by the Director General, Factory Advice service and Labour Institute, Government of India.
11. 1 bottle containing 100 tablets ( each of 5 gms) of aspirin.  
Ointment for burns.
12. A bottle of suitable surgical antiseptic solution.

b) For work places in which the number of contract labour exceed 50. Each first-aid box shall contain the following equipments.

- 1) 12 small sterilized dressings.
- 2) 6 medium size sterilized dressings.
- 3) 6 large size sterilized dressings.
- 4) 6 large size sterilized burn dressings.
- 5) 6 ( 15 gms) packets sterilized cotton wool
- 6) 1 (60 ml.) bottle containing a two per cent alcoholic solution iodine.
- 7) 1 (60 ml) bottle containing salvolatile having the dose and mode of administration indicated on the label.
- 8) 1 roll of adhesive plaster.
- 9) 1 snake bite lancet.
- 10) 1 (30 gms) bottle of potassium permanganate crystals.
- 11) 1 pair scissors.
- 12) 1 copy of the first-aid leaflet issued by the Director General Factory Advice Service and Labour Institutes / Government of India.
- 13) A bottle containing 100 tablets ( each of 5 gms) of aspirin.
- 14) Ointment for burns.
- 15) A bottle of suitable surgical antiseptic solution.

(iii) Adequate arrangement shall be made for immediate recoupment of the equipment when necessary.

(iv) Nothing except the prescribed contents shall be kept in the First-aid box.

(v) The first-aid box shall be kept in charge of a responsible person who shall always be readily available during the working hours of the work place.

(vi) A person in charge of the First-aid box shall be a person trained in First-aid treatment in the work places where the number of contract labour employed is 150 or more.

(vii) In work places where the number of contract labour employed is 500 or more and hospital facilities are not available within easy distance from the works. First-aid posts shall be established and run by a trained compounder. The compounder shall be on duty and shall be available at all hours when the workers are at work.

(viii) Where work places are situated in places which are not towns or cities, a suitable motor transport shall be kept readily available to carry injured person or person suddenly taken ill to the nearest hospital.

#### **4. LATRINES AND URINALS**

- (i) Latrines shall be provided in every work place on the following scale namely : -
- (a) Where female are employed, there shall be at least one latrine for every 25 females.
  - (b) Where males are employed, there shall be at least one latrine for every 25 males

provided that, where the number of males or females exceeds 100, it shall be sufficient if there is one latrine for 25 males or females as the case may be upto the first 100, and one for every 50 thereafter.

- (ii) Every latrine shall be under cover and so partitioned off as to secure privacy, and shall have a proper door and fastenings.
- (iii) Construction of latrines : The inside walls shall be constructed of masonry or some suitable heat-resisting nonabsorbent materials and shall be cement washed inside and outside at least once a year, Latrines shall not be of a standard lower than boreholes system.
- (iv) (a) Where workers of both sexes are employed, there shall be displayed outside each block of latrine and urinal, a notice in the language understood by the majority of the workers “For Men only” or “ For Women Only” as the case may be.  
 (b) The notice shall also bear the figure of a man or of a woman, as the case may be.
- (v) There shall be at least one urinal for male workers upto 50 and one for female workers upto 50 employed at a time, provided that where the number of male or female workmen, as the case may be exceeds 500, it shall be sufficient if there is one urinal for every 50 males or females upto the first 500 and one for every 100 or part thereafter.
- (vi) (a) The latrines and urinals shall be adequately lighted and shall be maintained in a clean and sanitary condition at all times.  
 (b) Latrines and urinals other than those connected with a flush sewage system shall comply with the requirements of the Public Health Authorities.
- (vii) Water shall be provided by means of tap or otherwise so as to be conveniently accessible in or near the latrines and urinals.
- (viii) Disposal of excreta : - Unless otherwise arranged for by the local sanitary authority, arrangements for proper disposal of excreta by incineration at the work place shall be made by means of a suitable incinerator. Alternately excreta may be disposed of by putting a layer of night soil at the bottom of a pucca tank prepared for the purpose and covering it with a 15 cm. Layer of waste or refuse and then covering it with a layer of earth for a fortnight ( when it will turn to manure).
- (ix) The contractor shall at his own expense, carry out all instruction issued to him by the Engineer-in-Charge to effect proper disposal of night soil and other conservancy work in respect of the contractor's workmen or employees on the site. The contractor shall be responsible for payment of any charges which may be levied by Municipal or Cantonment Authority for execution of such on his behalf.

## **5. ANTI-MALARIAL PRECAUTIONS**

The contractor shall at his own expense, conform to all anti-malarial instruction given to him by the

Engineer-in-Charge including the filling up of any borrow pits which may have been dug by him.

**6.** The above rules shall be incorporated in the contracts and in notices inviting tenders and shall form an integral part of the contracts.

## **7. AMENDMENTS**

IIT Bombay may, from time to time, add to or amend these rules and issue directions – it may consider necessary for the purpose of removing any difficulty which may arise in the administration thereof.

Signature of Contractor

Sd/-  
Superintending Engineer

**ANNEXURE – I****LIST OF BUREAU OF INDIAN STANDARD CODES  
For Reference**

Sr.No.	Item of work and subject	IS No.
1	Method of Measurement of Earth work	IS 1200(Part-1)
2.	Method of Measurement of Earth work By Mechanical Appliances	IS 1200 (Part-27)
3.	Excavators	IS 4988 (Part IV)
4.	Pre Constructional Anti termite treatment	IS 6313 (Part II)
5.	Anti termite treatment in existing building	IS 6313 (Part III)
6.	Methods of test for pesticides and their formulations	IS 6940
7.	Earth moving equipments	IS 12138
8.	33 grade ordinary Portland Cement	IS 269
9.	43 grade ordinary Portland Cement	IS 8112
10.	53 grade ordinary Portland Cement	IS 1269
11.	Portland slag Cement	IS 455
12.	Portland Pozzolana Cement	IS 1489

13.	Coarse and fine aggregates	IS 383
14.	Sand for plastering	IS 1542
15.	Sand for masonry mortar	IS 2116
16.	Test for concrete aggregates (Particle size and shape)	IS 2386 (Part-I, II & III)
17.	Masonry mortar-preparation and use	IS 2250
18.	Testing of water for concrete work	IS 3025
19	Masonry cement	IS 3406
20.	White Cement	IS 8042
21.	Fly ash for cement concrete and mortar	IS 3812 (Part I & II)
22.	Plain and reinforced Concrete	IS 456
23.	Structural Steel work	IS 226 & IS 800
24.	Concrete Reinforcement Steel	IS 432 (Part I & II)
25.	Test for strength of Concrete	IS 516
26.	Sampling and analysis of concrete	IS 1199
27.	Measurement of Concrete work	IS 1200 (Part II & V)

28.	Hard drawn Steel wire Fabric for concrete	IS 1566
29.	Tensile testing of Steel products	IS 1608
30.	High Strength deformed steel and wires	IS 1786
31.	Bending and fixing of reinforcement steel	IS 2502
32.	Welding of Reinforced steel	IS 2751
33.	Ready-Mixed Concrete	IS 4926
34.	Concrete Mix design Guidelines	IS 10262
35.	Common burnt clay building bricks	IS 1077
36.	Brick masonry work	IS 2212
37.	Method of measurement of Brick works	IS 1200 (Part 3)
38.	Method of test for Burnt clay building bricks	IS 3495
39.	Method of sampling of clay building bricks	IS 5454
40.	Non Load bearing Gypsum partition blocks	IS 2849
41.	Determination of Properties and strength of natural building stones	IS 1121 (Part I)
42.	Determination of specific gravity of natural building stone	IS 1122

43.	Determination of water absorption, apparent specific gravity and porosity of natural building stones	IS 1124
44.	Identification of natural building stones	IS 1123
45.	Determination of weathering of natural building stone	IS 1125
46.	Determination of durability of natural building stone	IS 1126
47.	Lime Stone (Slab & Tiles)	IS 1128
48.	Dressing of natural building stone	IS 1129
49.	Method of measurement for stone masonry work	IS 1200 (Part IV)
50.	Construction of rubble stone masonry	IS 1197
51.	External facings and veneers (Stone facing)	IS 4104
52.	Sand stone (Slab & Tiles)	IS 3622
53.	Tower bolts	IS 204 (Part I & II)
54.	Non-Ferrous metal Butt Hinges	IS 205
55.	Tee & Strap Hinges	IS 206
56.	Gate and Shutter Hook & eye	IS 207
57.	Door Handles	IS 208

58.	Parliament Hinges	IS 362
59.	Hasps & Stapple	IS 363
60.	Fan Light Catch	IS 364
61.	Door Spring rat tail type	IS 452
62.	Double acting Spring Hinge	IS 453
63.	Steel Butt Hinges	IS 1341
64.	Floor Door stopper	IS 1823
65.	Door Closer (Hydraulic)	IS 3564
66.	Piano (Continuous) Hinges	IS 3818
67.	Night Latch	IS 3847
68.	Mortice Latch	IS 5930
69.	Mortice Lock	IS 4992
70.	Mortice Lock (Vertical Type)	IS 2209
71.	Rebated Mortice Lock (Vertical Type)	IS 6607
72.	Mortice Ball Catch	IS 8756

73.	Hold Fast	IS 7196
74.	S.S Butt Hinges	IS 12817
75.	FRP Panel type Door	IS 14856
76.	Coir Veneer board	IS 14842
77.	Laminated Veneer Lumber	IS 14616
78.	Pre-laminated Particle Boards	IS 12823
79.	Permissible moisture content of Timber	IS 287
80.	Ply wood	IS 303
81.	Marine Plywood	IS 710
82.	Veneered Decorative Plywood	IS 1328
83.	Block Boards	IS 1659
84.	Gypsum Plaster Board	IS 2095
85.	Asbestos Cement Flat Sheet	IS 2096
86.	Flush Door Shutter	IS 2202 (Part I & II)
87.	Wood particle boards (Medium density)	IS 3087
88.	Veneered Particle Board	IS 3097

89.	Fire Retardant Ply wood	IS 5509
90.	Medium Density Fibre Board	IS 12406
91.	Putty for use on window frames	IS 419
92.	Steel Counter sunk steel wire nails	IS 723
93.	Drawer Lock, Cupboard Lock & Box Locks	IS 729
94.	Synthetic resin Adhesive for Plywood	IS 848
95.	Timber paneled and Glazed shutters	IS 1003 (Part I & II)
96.	Measurement of wood work & Joinery	IS 1200 (Part XII)
97.	Measurement of Civil Engineering glazing work	IS 1200 (Part XIV)
98.	Oxidized Copper finishes	IS 1378
99.	Determination of Density & Moisture content of wood	IS 1734 & IS 11215
100.	Anodic coating on Aluminum & Alloys	IS 1868
101.	Gypsum Plaster	IS 2547
102.	Transparent Float glass	IS 14900

103.	Galvanized Steel sheets	IS 277
104.	Use of Structural Steel in Construction	IS 800
105.	Use of Steel Tube in Construction	IS 806
106.	Dimensions of Hot Rolled Steel Sections	IS 808
107.	Scheme of Symbols for Welding	IS 813
108.	Use of Metal Arc Welding to Mild Steel in Construction	IS 816
109.	Procedure for inspection of Welds	IS 822
110.	Manual for metal Arc Welding in Mild Steel	IS 823
111.	Steel door, windows & Ventilators	IS 1038
112.	Steel Tubes for Structural purpose	IS 1161
113.	Measurements of Steel and Iron works	IS 1200 (Part VIII)
114.	Method of Bend test	IS 1599
115.	Method of Tensile Testing of Steel tubes	IS 1894
116.	Dimensions for clearance holes for bolts and screws	IS 1821
117.	Rolling and cutting tolerance for hot rolled sections	IS 1852
118.	Steel Door Frames	IS 4351

119.	Hot Rolled High, Medium and Low tensile structural steel	IS 2062
120.	Hot-dip zinc coating on mild steel tubes	IS 4736
121.	Hollow Steel Sections for Structural use	IS 4923
122.	Metal Rolling Shutters and Rolling Grills	IS 6248
123.	Hot Rolled Steel Sections for Doors, Windows & Ventilators	IS 7452
124.	Industrial Bitumen	IS 702
125.	Marble	IS 1130
126.	Measurement of Paving, Floor finishes, skirting & dado	IS 1200 (Part XI)
127.	Cement concrete Flooring tiles	IS 1237
128.	Bitumen Felts for water proofing	IS 1322
129.	Laying and finishing Cement Concrete Flooring Tiles	IS 1443
130.	In Situ Terrazzo Floor Finish	IS 2114
131.	In Situ Cement concrete flooring	IS 2571
132.	Bituminous compounds for water proofing	IS 1580

133.	Timber Floors	IS 3670
134.	Acid and/or Alkali Resistant Tiles	IS 4457
135.	Testing of Ceramic Tiles	IS 13630 (Part 1 to 15)
136.	Ceramic Tiles	IS 13712
137.	Pressed Ceramic tiles	IS 15622
138.	Paving Bitumen	IS 73
139.	Stone ware pipes & Fittings	IS 651
140.	Method of measurement of Roof covering, ceiling & Lining	IS 1200 (Part IX & X)
141.	Cast iron rain water pipe & Fittings	IS 1230
142.	Integrated water proofing compounds for cement mortar & Concrete	IS 2645
143.	Laying of A.C sheets	IS 3007 (Part-I & II)
144.	Fiber Insulation boards	IS 3348
145.	Bitumen primer for water proofing	IS 3384
146.	Rubber sealing ring for water mains and Sewer mains	IS 5382
147.	Glass fiber base coal tarpitch & bitumen felts	IS 7193

148.	UPVC pipe for soil and waste discharge	IS 13592
149.	White washing and Colour washing	IS 6278
150.	Plastic Emulsion	IS 5411
151.	Cement paint	IS 5410
152.	Enamel paint	IS 2932
153.	Aluminum paint	IS 2339
154.	Distemper, Oil Emulsion, Colour as required	IS 428
155.	Distemper Dry colour as required	IS 427
156.	French Polish	IS 348
157.	Varnish, Shellac for general purpose	IS 347
158.	Varnish, finishing interior	IS 337
159.	Coal tar black paint	IS 290
160.	Black Japan	IS 341
161.	Method of measurement- Plastering and pointing	IS 1200 (Part XII)
162.	Method of measurement- Painting, Polishing, varnishing etc.	IS 1200 (Part XV)

163.	Method of measurement-white washing, colour washing, distempering	IS 1200 (Part XIII)
164.	Road marking paint (ready mix)	IS 164
165.	Cut Back bitumen	IS 217
166.	Galvanized Steel barbed wire	IS 278
167.	Test sieves	IS 460
168.	Bitumen mastic	IS 1195
169.	Penetration testing of Bitumen	IS 1203
170.	Softening point testing of bitumen	IS 1205
171.	Ductility test for bitumen	IS 1208
172.	Hot applied sealing compound for concrete joints	IS 1834
173.	Performed fillers for expansion joints in concrete structures	IS 1838
174.	Determination of Liquid and plastic limit of soil	IS 2720 (Part V)
175.	Bituminous Concrete for road pavement	IRC 29
176.	Construction of earth embankment for road work.	IRC 36
177.	Bitumen mastic wearing courses	IRC 107

178.	Glazed Fire clay Sanitary appliances	IS 771 (Part I & II)
179.	Enameled C.I sanitary appliances	IS 772
180.	Flushing Cisterns (Other than plastic)	IS 774
181.	Copper alloy Float valve	IS 1703
182.	C.I. & D.I drainage pipes	IS 1729
183.	Pillar Taps	IS 1795
184.	Automatic Flushing Cistern (other than Plastic cistern)	IS 2326
185.	Plastic Seats and Covers for Water Closets	IS 2548 (Part 1 & 2)
186.	Vitreous Sanitary appliances	IS 2556
187.	Wash down water closets	IS 2556(Part 2)
188.	Squatting pans	IS 2556(Part 3)
189.	Wash basins	IS 2556(Part 4)
190.	Laboratory Sinks	IS 2556(Part 5)
191.	Urinals & partition plates	IS 2556(Part 6)
192.	Accessories for sanitary Appliances	IS 2556(Part 7)

193.	Integrated Squatting Pans	IS 2556(Part 14)
194.	Universal water Closets	IS 2556(Part 15)
195.	Copper Alloy waste fittings for Wash basins and sink	IS 2963
196.	Low density Polyethylene pipes for water supply	IS 3076
197.	Centrifugally cast (Spun) iron spigot & Socket soil, waste and vent pipes	IS 3989
198.	High density Polyethylene pipes for water supply	IS 4984
199.	Unplasticised PVC pipes for water supply	IS 4985
200.	Plastic Flushing Cistern	IS 7231
201.	Stainless Steel tanks	IS 13983
202.	Pipe threads for pressure tight joints	IS 554
203.	Copper alloy gate and check valves	IS 778
204.	Water meter (Domestic type)	IS 779
205.	Sluice Valves for water works (50 mm to 300mm size)	IS 780
206.	Cast Copper alloy screw down bib taps and stop valves	IS 781
207.	Caulking Lead	IS 782

208.	Underground Fire Hydrant, sluice valve type	IS 909
209.	Centrifugally cast (Spun) iron pressure pipes	IS 1536
210.	Vertically cast iron pressure pipe	IS 1537
211.	Cast iron fittings for pressure pipes	IS 1538
212.	Ferrules	IS 2692
213.	Hot dip zinc coating on MS tubes	IS 4736
214.	Swing type Reflux (Non-Return) valves	IS 5312 (Part I & II)
215.	Polyethylene spherical floats for float valves	IS 9762
216.	Plastic Bib taps and stop valves for cold water	IS 9763
217.	Chlorinated Polyvinyl Chloride (CPVC) pipes	IS 15778
218.	Pre-cast Concrete pipes	IS 458
219.	Laying Concrete Pipes	IS 783
220.	Cast iron Manhole covers and frames	IS 1726
221.	Laying glazed Stoneware pipes	IS 4127
222.	Pre cast Concrete Manhole covers and frames	IS 12592

223.	Concrete Structures for storage of Liquid	IS 3370
224.	Road marking	IRC 35
225.	Road Signs	IRC 67
226.	Precast Concrete blocks for paving	IS 15658
227.	Speed Breakers	IRC 99
228.	WBM Road	IRC 19
229.	F R P Door	IS 14856
230	Construction of Concrete Roads	IRC 15
231	Road Bridges	IRC 21
232	Road construction in Water logged Area	IRC 34
233	Earth embankment for road work	IRC 36

Items of works, if any, for which Code Number is not mentioned in the above list, the available relevant IS/IRC/ASTM Codes are to be referred.

Signature of Contractor

Sd/-

Superintending Engineer

## ANNEXURE-II

**TECHNICAL SPECIFICATIONS FOR REFERENCE**

Sr.No	Item Name	Reference
1.	Earthwork, mortars, Concrete (PCC & RCC), Masonry (Brick & Stone), flooring, Woodwork, Steel work and Roofing	CPWD Specifications Vol-I
2.	Plastering, painting, Building repairs, Demolition work, Sanitary and Water supply work, drainage, Aluminum work, horticulture and landscaping work.	CPWD Specifications Vol-II
3.	Road works	MCGM Standard - Specification for Road work
4.	Paver block pavement	MCGM Guidelines for Interlocking Concrete block pavements (July 2008) & IRC: SP-63-2004
5.	Quality control for construction of roads	IRC-SP-11

The Specification mentioned in schedule of items will supersede the specifications mentioned above.

Signature of Contractor

Sd/-  
Superintending Engineer

## ANNEXURE-III

## LIST OF APPROVED MAKES OF MATERIALS

	Materials	Make/Manufacturer
1	Cement	ACC, Ultratech, Ambuja, Vasavadatta, Grasim
2	Steel Reinforcement(TMT & TOR)	SAIL, TATA, ESSAR, ISPAT, ,VIZAG, JRINL, IISCO
3	Bricks	KBK, GBK, RAM
4	Sand	Vaitarna, Tansa
5	Ceramic & Vitrified Tiles	Somani, Kajaria, Regency, Bell, H.R.Jhonson, Nitco, Euro,
6	Indian WC Pan, European WC pan & Orissa WC Pan	Hindware, Parryware, CERA, Jhonson-Peddar, Hindustan, Euro, Nycer
7	PVC Flushing Cistern	Hindware, CERA, Slimline, Hindustan, Nycer
8	Wash basin, Ceramic sink, Urinal	Hindware, Parryware, CERA, Jhonson-Peddar, Hindustan, Euro, Nycer
9	Bib tap & Stop tap	Jaquar, Seiko, Techno, Crystal, Hindware
10	Pillar Tap	Jaquar, Seiko, Techno, Crystal, Hindware
11	Waste Coupling	Jaquar, Parryware, Maxbrass,
12	C.I.Soil Pipes	NECO, ALCO, Bombay Iron Works,RIF
13	Mirror	Modiguard, Saint-Gobain, Parryware
14	Plastic Water tank	Syntex, Infra, Sharp
15	PVC.Pipe, Fittins & Fixtures	Supreme, Prince, Finolex
16	Manhole & Inspection Chamber Cover & frame (SFRC)	Bharat, KK, Moonlite, S.K.Precast, Pragati
17	RCC Hume Pipe	Indian Hume Pipe, Bharat, Akshay
18	G.I.Pipe & Fixtures	TATA, Jindal, Zenith
19	Three way tap	Asha
20	Plywood	Century, Anchor, Prince, Kitply
21	Prelaminated particle board	Novapan, Nepal Board, Butan Board, Eco Board, Deco Board, Turatuf
22	Sunmica	Royal touch
23	Veneer	Century, Anchor, Kitply
24	Glass	Modiguard, Saint-Gobain, Pilkington,Asahi Float
25	Aluminum Section	Jindal, Hindalco, Mahavir, Indal
26	Poly carbonate sheet	Danpolan, Sabic, Tofflit, Palram
27	Night Latch	Godrej, EUROPA
28	Mortice Lock	Godrej
29	Door Closer	Hyper, Everite, Hardwyn
30	Paints	Asian, Berger, ICI, Jenson Nicholson, Goodless Nerolac, Killick Nixon, Godavari, Shalimar
31	Polymer	Dr.Fixit, Roff, M C Bouchmey, Sunanda, BASF, Anuvi
32	Rust Passivator, Rust Inhibitor	BASF,Sunanda, M C Bouchmey, Dynamic enter-

		prises,
33	PVC Flooring	Marvel, Wonderfloor, Veekay
34	Plastic Door	Syntex
35	Flush Valve	Nelson,Jaquar,Parryware
36	Paver blocks	Vitco, Nitco, Continental, Supertiles
37	Waterproofing Compound	Impermo, Pidiproof, Aqua proof, CICO,Sunanda,
38	W.C. Connectors	Prince, Supreme
39	C.P.Fittings	Gem, Parko, Jaguar, Kingstone, ESS-ESS
40	C.P. Grating / Floor Trap	GMGR, Chilly
41	Ball valves	Zoloto, AM, Leader
42	CI “LA Class” Pipe	Electrosteel, Kesoram, IISCO
43	Stoneware pipe	Perfect, Burn
44	FRP Door	Advance, Rawji
45	CPVC Pipes	Ajay, Ashirwad, Astral
46	UPVC Pipe & Fittings	Supreme, Finolex, Polypack, Prince, Astral
47	Pipe clamp & Supports	Chilly, Euroclamp
48	Structural Steel	SAIL, TATA, JRINL, IISCO
49	Flush Door	Duraboard, Kitply, Merino Ply
50	Stainless Steel	Jindal, SAIL, Golden
51	Paint/Primer/OBD/Acrylic paint	Asian, Berger, Nerolac, ICI, Jenson-Nicolson (1 <sup>st</sup> Quality)
52	Waterproof paint	Snowcem, Asian, Berger
53	Aluminum Fittings	Crown, ALANS, Classic, Bharat, Argent
54	Block Board/Ply	Merino, Dyro, Samrat, KitPly
55	Dead Lock	Vision, Godrej, Dorma
56	HDPE Pipe	Arham engs, berlia, Nocil, PIL, Suprime
57	Fire rated door	Tata Parvesh, sukriti, navair, hormann, Bhavani
58	FRP Cover, Grating	Everlast, KK
59	DI grating	NECO
60	Toilet cubicle	Green lam, merino, polo international
61	Polymer Morter	Dr. Fixit, ACC

The make mentioned, if any, in schedule of items will supersede this list.  
Any other make can also be used with prior approval of engineer Incharge.

Signature of Contractor

Sd/-  
Superintending Engineer

ANNEXURE-IV

**ARTICLE OF AGREEMENT**

CONTRACTOR AGREEMENT for all work orders issued to the contract by Institute

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Article of agreement made at \_\_\_\_\_ this \_\_\_\_\_ day  
of the Two Thousand\_\_\_\_\_, between Indian Institute Of Technology, Bombay under Institute  
of Technology Act 1961, and having its Administrative Office in the Main Building 1<sup>st</sup> Floor, Powai,  
Mumbai – 400 076 ( hereinafter called the Institute of Technology Bombay) of the one part  
and \_\_\_\_\_ whose Registered office is situated  
at \_\_\_\_\_ (herein after called “the  
contractor”) of the other part.

WHEREAS

The IIT Bombay being desirous of having provided and executed certain works mentioned enumerated or referred to in the Tender Notice, General Tender Notice, Instructions to Tendered, Conditions of Contract, Special Condition, Specification, Technical Report, Schedule of Quantities for Works, Drawing and Other documents constituting the tender and acceptance thereof, copy to be annexed all of which are designed to form part of this contract and are included in the term 'CONTRACT' herein used.

ANDWHEREAS

The II Bombay accepted the tender of the contractor for the provisions and the execution of the said work at the rate stated in the schedule of quantities of works ( Herein after called ' Schedule Of Rates') upon the terms and subject to the conditions of contract.

**NOW THIS AGREEMENT AND WITNESS AND IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES AND AS FOLLOWS.**

- 1) The documents which form part of the contract will be the tender notice, Instructions to tenders, conditions of contract, special conditions of contract, schedule of quantities of work, specifications, drawings and other documents, constituting the 'Tender' and acceptance thereof. It is further agreed that the work order No. \_\_\_\_\_ dated \_\_\_\_\_ shall constitute the contract between the parties.
- 2) In consideration of the payments to be made to the contractor for the works to be executed by him, the contractor shall and will duly provide, execute and complete the work on or before \_\_\_\_\_ as per the time limit mentioned in the tender documents and shall maintain the same at his own cost for the defect liability period thereafter, perform all such acts and things in the contract mentioned or described or which are to be implied there from or may be reasonably necessary for the completion of the said work and at the times and the manner and subject to the terms and conditions or stipulations mentioned in the contract.
- 3) In consideration of the due provision, execution and completion of the said work, the IIT Bombay, do hereby agree with the contractor that IIT Bombay, will pay to the contractor in the respective amount for the work actually done by him at the 'Schedule rate' quoted and accepted by IIT Bombay such other sums as may become payable to the contractor under the provisions of the contract such payment to be made at such time and in such manner as provided for in the agreement.
- 4) In consideration of the due provision, execution and completion of the said work and contractor does hereby agree to pay to the IIT Bombay the sum as may be due to the IIT Bombay for the services if any rendered by the IIT Bombay to the contractor and such other sum or sums as may become payable to the IIT Bombay towards loss, damage to the IIT Bombay's equipment, material, plant and machinery including these hired to the contractor if any as set forth in the said conditions of contract, such payment to be made at such time and in such manner as provided in the contract.
- 5) The contractor has to deposit with the IIT Bombay the sum of 1% equal value of financial limit as the fixed Earnest Money Deposit and remaining part will be recovered from contractor by allowing the IIT Bombay to deduct from the bills payable to them at the rate of 5%, 8%, 10% of amount payable to the contractor. This security deposit will be retained until the expire of the Defect Liability Period for the due observance and performance of this contract.
- 6) All disputes arising out of or any in connection with this agreement or concerning thereto shall be deemed to have arisen in Bombay and the same will be referred to the sole arbitrator of Deputy Director or anybody nominated by the Deputy Director, I.I.T Bombay for his decision and his decision will be final.
- 7) The several parts of this contract have been read by me / us and fully understood by me / us.

**IN WITNESS WHEREAS THE PARTIES HAVE ACCEPTED THESE PRESENT IN DUPLICATE THE DAY AND THE YEAR FIRST AS MENTIONED ABOVE.**

**SIGNED AND DELIVERED FOR AND ON BEHALF OF THE  
INDIAN INSTITUTE OF TECHNOLOGY BOMBAY.**

**SIGNATURE** : \_\_\_\_\_

**DESIGNATION** : \_\_\_\_\_

\_\_\_\_\_

**In the presence of witness**

1) \_\_\_\_\_ ( Address )

2) \_\_\_\_\_ ( Address )

**SIGNED AND DELIVERED FOR ON BEHALF OF** \_\_\_\_\_

\_\_\_\_\_ **in the presence of**

**Witness**

1) \_\_\_\_\_ ( Address )

2) \_\_\_\_\_ ( Address )

**ANNEXURE – V****FORM OF PERFORMANCE SECURITY (GUARANTEE)****BANK GUARANTEE BOND**

In consideration of Indian Institute of Technology Bombay (hereinafter called "IIT Bombay") having offered to accept the terms and conditions of the proposed agreement between. IIT Bombay and.....(hereinafter called "the said Contractor(s)")for the work.....(Hereafter called "the said agreement") having agreed to production of a irrevocable Bank Guarantee for Rs.....(Rupees .....only) as a security/guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement.

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

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

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

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

4. We .....(Indicate the name of the bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of IIT Bombay under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer-in-Charge on behalf of IIT Bombay certified that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor(s) and accordingly discharges this guarantee.

5. We .....(Indicate the name of the bank) further agree with IIT Bombay that IIT Bombay shall have the fullest liberty without our consent and without effecting in any manner our obligations hereunder to vary any of other 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 IIT Bombay against the said contractor(s) and to forbear or

enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said contractor(s) or for any forbearance, act of omission on the part of IIT Bombay or any indulgence by IIT Bombay 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 .....lastly undertake not to revoke this guarantee except with the previous consent of IIT Bombay in writing.

8. This guarantee shall be valid upto ..... Unless extended on demand by IIT Bombay. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs.....(Rupees.....only) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged.

Dated the.....day of.....for.....(indicate the name of bank)

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## ANNEXURE – VI

### GUARANTEE TO BE EXECUTED BY CONTRACTORS FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF WATER PROOFING WORKS.

The Agreement made this..... day of .....Two thousand and ..... between .....son of ..... of ( hereinafter called the Guarantor of the one part ) and Indian Institute of Technology, Bombay ( hereinafter called the Institute of the other part).

WHEREAS THIS agreement is supplementary to a contract (hereinafter called the Contract) dated ..... and made between the GUARANTOR OF THE ONE part and the Institute of the other part, whereby the Contractor, inter-alia, undertook to render the buildings and structures in the said contract recited completely water and leak – proof.

AND WHEREAS GUARANTOR agreed to give a guarantee to the effect that the said structures will remain water and leak-proof for ten years from the date of giving of water proofing treatment.

NOW THE GUARANTOR hereby guarantees that water proofing treatment given by him will render the structures completely leak-proof and the minimum life of such water proofing treatment shall be ten years to be reckoned from the date after the maintenance period prescribed in the contract.

Provided that the guarantor will not be responsible for leakage caused by earthquake or structural defects or misuse of roof or alteration and for such purpose :

- (a) misuse of roof shall mean any operation which will damage proofing treatment, like chopping of firewood and things of the same nature which might cause damage to the roof ;
- (b) alteration shall mean construction of additional storey or a part of the roof or construction adjoining to existing roof whereby proofing treatment is removed in parts;
- (c) the decision of the Engineer-in- Charge with regard to cause of leakage shall be final.

During this period of guarantee the guarantor shall make good all defects and in case of any defect being found render the building water proof to the satisfaction of the Engineer-in-Charge at his cost and shall commence the work for such rectification within seven days from the date of issue of the notice from the Engineer-in-Charge calling upon him to rectify the defects failing which the work shall be got done by the Department by some other contractor at the GUARANTOR'S cost and risk. The decision of the Engineer-in-Charge as to the cost, payable by the Guarantor shall be final and binding.

That if Guarantor fails to execute the water proofing or commits breach there under then the Guarantor will indemnify the Principal and his successors against all loss, damage, cost, expense or otherwise which may be incurred by him by reason of any default on the part of the GUARANTOR in performance and observance of this supplementary agreement as to the amount of loss and / or damage and / or cost incurred by the Institute and the decision of the Engineer-in-Charge will be final and

binding on the parties.

IN WITNESS WHEREOF these present have been executed by the Obligor the day, month and year first above written.

SIGNED, SEALED and delivered by OBLIGOR in the presence of -

1) .....

2) .....

SIGNED for and behalf of INSTITUTE by ..... in the presence of -

1).....

## ANNEXURE – VII

### INDEMNITY BOND FOR MATERIAL ADVANCE

In consideration of Indian Institute of Technology Bombay (hereinafter called "IIT Bombay") having offered to accept the terms and conditions of the proposed agreement between IIT Bombay and M/s. .... office at.....(hereinafter called "the Contractor(s)") for the work.....(Hereafter called "the Contract") and Work order No.EO/A/..... The Contractor signed herein below hereby agree with IIT Bombay and declare as follows.

1. That, the contractor has sought secured advance against material bought at site by the contractor @ ...% of the actual purchase amount of the material, the quantities and other particulars of which are obtained in the relevant Running Account Bill for the said contract.
2. That, the said advance amount as per the relevant Running Account Bill so advanced by IIT BOMBAY to the Contractor as aforesaid shall be employed by the contractor in or towards expediting the execution of the said works and no other purpose whatsoever.
3. That, the material detailed in the said Running Account Bill which have been offered to and accepted by IIT BOMBAY as security are absolutely the contractor's own property and free from encumbrances of any kind and the contractor will not make any application for or receives a further advance on the security of materials which are not absolutely his own property and free from encumbrances if any kind and contractor indemnifies IIT BOMBAY against all claims to any materials in respect of which as advance has been made to him as aforesaid.
4. That, the contractor shall make at his own cost all necessary and adequate arrangements for the proper watch, safe-custody and protection against risk of the said materials and that until used in construction, as aforesaid, materials shall remain at the site of the said works in the contractor's custody and his own responsibility and shall at all times be available to inspection by IIT BOMBAY or any officer authorized by him. In the custody, materials or any part thereof being stolen, destroyed or damage or deteriorates in greater degree than is due to reasonable use and thereof the contractor will forthwith replace the same with other materials of like quality or repair and made good the same as required by IIT BOMBAY.
5. That, the said material shall not on any account be removed from the site of works except with the written permission of the IIT BOMBAY or officer authorized by him on that behalf.
6. That, the advance shall be recovered in the next Running Account Bill as per consumption of such material actually used in the construction.
7. This Agreement of Indemnity Bond will be binding on me as well as my successors

legal heirs and I hereby solemnly affirm to that effect in the presence of witness and the day and year written below.

Place : Powai, Mumbai – 400 076.

Date : \_\_\_\_\_

Name : M/s \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Witness : 1)

Signed by :

Witness : 2)

Signed by

Sd/-

Superintending Engineer