

**INDIAN INSTITUTE OF MANAGEMENT (IIM)  
UDAIPUR**

**NIT**

**E- Tender**

**Name of work: Construction & CAMC of 3 nos. 100 KLD  
MBBR technology prefabricated Sewage Treatment  
Plant at IIM Udaipur**

**NIT No.: IIMU/Project/Tender/2026-27/01 dated 08.05.2026)**

**(Last date of submission of online bids upto 06:00 PM on 29.05.2026)**

**CAMPUS DEVELOPMENT AND MAINTENANCE OFFICE**

**IIM, Udaipur-313001 (Raj.)**

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# PART -A

**PRESS NOTICE**  
**NOTICE INVITING e-TENDERS**

**The Director, IIM Udaipur** invites **online** percentage rate/item rate composite bids from reputed agencies having valid experience in executing Packaged STP related works in **two** bid system for the following work:

**NIT NO: IIMU/Project/Tender/2026-27/01**

**Name of Work:** Construction & CAMC of 3 nos. 100 KLD MBBR technology prefabricated Sewage Treatment Plant at IIM Udaipur

**Estimated Cost: Rs. 2,96,82,795/- (Construction- Rs. 2,82,44,904/- + Operation & Maintenance- Rs. 14,37,891/-)**

**Earnest Money: Rs. 5,93,656/-**

**Period of completion: 3.5 months (Construction) + 12 months (Operation & Maintenance)**

**Last time & date of submission of Bid:** Up to 05.00 PM on 29.05.2026

The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website [www.iimu.ac.in/tender](http://www.iimu.ac.in/tender) and <https://eprocure.gov.in/epublish/app> free of cost.

Note: - Applicants are advised to keep visiting the above mentioned web-sites from time to time (till the deadline for bid submission) for any updates in respect of the tender documents, if any. Failure to do so shall not absolve the applicant of his liabilities to submit the applications complete in all respect including updated thereof, if any. An incomplete application may be liable for rejection.

## **CHECKLIST FOR CONTRACTOR FOR SUBMISSION OF BID**

1. The bidder should read all the instructions, terms & conditions, contract clauses, nomenclature of items, specifications etc. contained in the tender documents very carefully, before quoting the rates. The Bidders should also read the CPWD General Conditions of Contract 2023 for Construction work (with correction slips up to last date of submission of tender) which will be part of the agreement.
2. The bidder should inspect the site/location before quoting the rates.
3. The agency shall quote the rate for complete scope of work in both words and figures.
4. The contractor shall quote his rates keeping in mind the scope of work, time line, specifications, terms & conditions, additional conditions and special conditions etc. and nothing shall be payable extra whatsoever unless otherwise specified.
5. The contractor shall also furnish Performance Guarantee of 5% of the tendered amount in addition to the other deposits mentioned elsewhere in the contract for proper performance of the agreement. The Performance Guarantee shall be in the shape Fixed Deposit Receipt or Bank Guarantee.
6. The tender, which is not duly signed by authorized signatory or is conditional shall be treated as non-responsive and shall be summarily rejected. It must be signed on his behalf by a person holding a power of attorney authorizing him to do so. Such power of attorney should be produced with the tender and it must be disclosed that the firm is duly registered under the Indian partnership act, 1952.
7. GST/other taxes as applicable shall be paid by the contractor himself. Amount quoted by the bidder shall be inclusive of all taxes & nothing extra shall be payable. The department shall deduct the mandatory deductions at source from the R.A. bills as applicable. However for statutory deduction of income tax & GST, necessary TDS certificate shall be given by department. The contractor shall quote his rates considering all such deductions.
8. Online bid documents submitted by intending bidders shall be opened only of those bidders, whose EMD deposited at IIM Udaipur and other documents scanned and uploaded are found in order.

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

The Director, IIM Udaipur invites online percentage rate/item rate composite bids from reputed agencies having valid experience in executing Packaged STP related works in two bid system for the following work:

—	S. No.
IIMU/Project/Tender/2026-27/01	NIT No.
<b>Construction &amp; CAMC of 3 nos. 100 KLD MBBR technology prefabricated Sewage Treatment Plant at IIM Udaipur</b>	Name of work and location
<b>Rs. 2,96,82,795/- (Construction- Rs. 2,82,44,904/- + Operation &amp; Maintenance- Rs. 14,37,891/-)</b>	Estimated cost put to tender
<b>Rs. 5,93,656/-</b>	Earnest Money
<b>3.5 months (Construction) + 12 months (Operation &amp; Maintenance)</b>	Stipulated Period of completion of work(in month)
<b>Up to 5.00 pm on 29.05.2026</b>	Last date of online submission of bid, copy of receipt of deposition of original EMD and other documents as specified in the bid document
<b>15.05.2026 at 11:00 AM at IIM Udaipur</b>	Date and time of prebid meeting
<b>At 5.30 pm on 29.05.2026</b>	Time & date of Opening of bid

1. The intending bidder must read the terms and conditions of CPWD-6 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
2. Information and Instructions for bidders posted on website shall form part of bid document.
3. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website [www.iimu.ac.in/tender](http://www.iimu.ac.in/tender) and <https://eprocure.gov.in/epublish/app> free of cost.
4. But the bid can only be submitted after deposition of original EMD either in the office of IIM Udaipur inviting bids within the period of bid submission and uploading the mandatory scanned documents such as Account Payee Demand Draft or Fixed Deposit Receipts or/and Bank Guarantee from any of Nationalized/Commercial Bank towards EMD in favour of Director, Indian Institute of Management, Udaipur, Rajasthan as mentioned in NIT, receipt for deposition of original EMD to Director, IIM Udaipur and other documents as specified. , If the scanned copies of all the documents stipulated in the bid document are not uploaded, then bid will become invalid and shall summarily be rejected.
5. The intending bidder must have a valid class digital signature certificate with encryption key (combo type) to perform any operations / transactions on the e-tendering portal / website.
6. On opening date, the contractor can login and see the bid opening process. After opening of bids he will receive the competitor bid sheets.
7. Contractor can upload documents in the form of JPG format and PDF format
8. The contractor must ensure to quote %age above / below / at par of each column and item rate wherever required.

In addition to this, while selecting any of the cells a warning appears that if any cell is left blank the same shall be treated as “0” (ZERO). Therefore, if any cell is left blank and no rate is quoted by the bidder, the rate of such item shall be treated as “0” (ZERO).

**However, if a tenderer quotes nil rates against each item in item rate tender or does not quote any percentage above / below on the total amount of the tender or any section / subhead in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.**

9. Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground, nature of work to be executed, local persons involvement and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra cost consequent on any misunderstanding or otherwise shall be allowed.

The bidders shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

10. GST applicable as per Government norms up to date and future circulars. Contractor should quote the rate including GST as per Govt. norms, nothing to be reimbursed against GST directly.
11. The contractor whose bid is accepted will be required to furnish a performance guarantee at specified percentage of the tendered amount as mentioned in schedule E and within the period specified in Schedule F. This guarantee shall be in the form of Insurance Surety Bonds, Account Payee Demand

Draft, Fixed Deposit Receipt or Bank Guarantee from any of the Commercial Banks in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F', including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. The earnest money deposited along with bid shall be returned after receiving the aforesaid performance guarantee. The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses/registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare Board including Provident Fund Code No. If applicable and also ensure the compliance of aforesaid provisions by the subcontractors, if any engaged by the contractor for the said work within the period specified in Schedule F.

12. The department reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criterion.

Applicants are advised to keep visiting the mentioned websites from time to time (till the deadline for bid submission) for any updates in respect of the tender documents, if any. Failure to do so shall not absolve the applicant of his liabilities to submit the applications complete in all respect including updates thereof, if any. An incomplete application may be liable for rejection.

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

**14. List of Documents to be scanned and uploaded within the period of bid submission:**

- i. Copy of proof for deposition of EMD in the form of bank transfer .
- ii. Integrity agreement.
- iii. Letter of Transmittal
- iv. Certificate of Financial Turnover and Profit / loss statements from Chartered Accountant **- Form 'A'**
- v. Net worth Certificate as per **Form 'B'**
- vi. List of eligible similar nature of work completed during the last seven years ending previous day of last date of submission of bid **-Form 'C'**
  - a. If private works are shown in support of eligibility, certified copy of the tax deducted at source certificate (TDS), G.S.T. deposited in the State where the work is executed, shall be submitted along with the experience certificate and the T.D.S. amount shall tally with the actual amount of work done).
  - b. Works executed outside India shall not be considered as eligible works
- vii. Certificate of completed works duly certified by officer not below the rank of Executive Engineer-Performance report of works referred in Form C- **(Form-D)**
- viii. Structure & Organization - **Form 'E'**
- ix. **Site Visit:** The bidder is advised to visit the site of work, at his own cost, and examine it and its surroundings to himself collect all information that he considers necessary for proper assessment of the prospective assignment.

**Note:** Undertaking regarding visit of site of work to be scanned and uploaded at the time of submission of bid **(Form-G)**

- x. Self-certified copy of **declaration regarding local contents for preference make in India** on the letter head of the company. (Refer notification **(Form H)**).
- xi. Undertaking for GST Registration if not already obtained of Rajasthan State by the bidder (Form-I)
- xii. The agency should not have been blacklisted or banned by any Govt. Department, Government Organization, PSU, University, Autonomous Institute etc. A notarized certificate duly notarized worth **Rs.500/- on Non-Judicial Stamp Paper** to this fact should be executed. **(Form J)**.  
**In case at any stage of work if this certificate is found to be false, action will be taken against the bidder by the IIMU and the same shall be acceptable**
- xiii. Authority for signing the tender document duly notarized to this fact should be executed. **(Form K)**  
Individual signing the bid or other documents connected with the contract shall indicate the full name with full signature and must specify whether he is signing as:
  1. A sole proprietor of the firm or constituted attorney of sole proprietor.
  2. A partner of the firm, in which case he must have authority to represent for arbitration of disputes concerning the business of the partnership firm either by virtue of the partnership agreement or power of attorney.
  3. Constituted attorney of the firm.

Provided that,

- i. In case of (ii), a copy of the partnership agreement or general power of attorney, in either case, attested by a Notary Public, or affidavit on stamp paper of all the partners admitting execution of the partnership agreement or the General Power of attorney should be furnished.
  - ii. In case of partnership firms, where no authority to refer dispute concerning the business of the partnership has been conferred on any partner, the tender offer and all other related documents must be signed by every partner of the firm.
  - iii. A person signing the tender form or any other documents forming the part of the contract on behalf of another shall be deemed to be warranty that he has authority to sign, such documents and if, on enquiry it appears that the person has no authority to do so, the Institute may, without prejudice to other civil and criminal remedies, cancel the contract and make or authorize execution of contract / intended contract at the risk and cost of such person and hold the signatory liable to the Institute for all cost and damages arising from the-cancellation of the contract including any loss which the Institute may have on account of execution of contract / intended contract.
  - iv. Individual signing the tender or other documents connected with the contract shall indicate the full name with full signature and must specify the capacity and authority under which he signs such document marked as Annexure K and shall also submit documentary evidence of his authority duly notarized.
- xiv. Undertaking structural stability & soundness as per prescribed format duly notarized to this fact should be Executed. ( Form L).
- xv. To become eligible to bid, the bidders shall have to furnish an affidavit on non-judicial stamp paper worth Rs.500/- as under:-
- 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 Institute , then i/we shall be debarred for bidding in IIM Udaipur in future forever. Also, suppose such a violation comes to the notice of the Institute Before date of start of work. In that case, the Engineer-in-charge shall be free to forfeit the entire amount of earnest Money deposit / Performance Guarantee. (Scanned copy to be uploaded at the time of Submission of Bid) (Form M).
- xvi. Certificate of registration of **GST**.
- xvii. Latest GST Return
- xviii. Certificate of Registration for **EPF** (irrespective of employee strength)
- xix. Certificate of Registration for **ESIC** (irrespective of employee strength)
- xx. Copy of **PAN** Card issued by Income Tax Department.
- xxi. Latest Solvency certificate for not less than Rs. 1.16 crores issued by Nationalised / Scheduled Bank, which should not be older than 6 months from the last date of bid submission. The Solvency Certificate should have full address of banker for confirmation.
- xxii. Electrical license issued from Electrical Inspectorate in the name of agency or in the name of associating agency. (**Note: Associating agency should meet the eligibility criteria**).
- xxiii. Signed copy of the tender document.
- xxiv. Any other document as specified in the NIT/bid document.
- xxv. If any information furnished by the bidder is found incorrect at a later stage, he/they

shall be liable to be debarred from bidding/taking up works in IIM Udaipur. The department reserves the right to verify the particulars furnished by the bidder independently. This tender notice can also be seen on Institute website [www.iimu.ac.in](http://www.iimu.ac.in) & [www.eprocure.gov.in](http://www.eprocure.gov.in).

**Physical submission of documents by lowest bidder.**

Self-attested copy of all the scanned and uploaded documents as specified in press notice/CPWD-6, anywhere in the NIT shall have to be submitted by the lowest bidder only along with Original receipt of deposition of EMD within a week in the office of tender opening authority. **(The week includes the day of opening of bid).**

- 15
- a) If a tenderer quotes nil rates against each item in item rate tender or does not quote any percentage above/below/item rate on the total amount of the tender or any section/Sub-head in percentage rate tender, the tender shall be treated as invalid and will not be entertained as lowest tenderer.
  - b) It is mandatory to upload scanned copies of all the documents including GST registration. If documents are not uploaded, then bid will become invalid and shall summarily be rejected.
  - c) Please read para – 8 of CPWD-6 for further details.
- 16 Tenders with any condition including that of conditional rebates shall be rejected forthwith.
- 17 The Department reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criteria.

(Annexure-I)

**RECEIPT OF DEPOSITION OF ORIGINAL EMD**

(Receipt No. .... / date..... )

**Name of Work:Construction & CAMC of 3 nos. 100 KLD MBBR technology prefabricated Sewage Treatment Plant at IIM Udaipur**

1. NIT No:IIMU/Project/Tender/2026-27/01
2. Estimated Cost :Rs. 2,96,82,795/- (Construction- Rs. 2,82,44,904/- + Operation & Maintenance- Rs. 14,37,891/-)
3. Amount of Earnest Money Deposit: Rs. 5,93,656/-
4. Last date & Time of submission of Bid:Up to 06:00 PM on 29.05.2026

**EMD shall be drawn in favour of “The Director, Indian Institute of Management Udaipur”**

(\* To be filled by NIT approving authority at the time of issue of NIT and uploaded along with NIT)

Name of Contractor: .....#.....

1. Form of EMD .....#.....
2. Amount of Earnest Money Deposit .....#.....
3. Date of submission of EMD .....#.....

.....

Signature, Name and Designation of EMD  
Receiving officer alongwith Officer Stamp

**(Annexure-II)**

**UNDERTAKING REGARDING GST REGISTRATION IN THE STATE OF  
RAJASTHAN**

**To,  
The Director,  
IIM Udaipur**

**Subject:-Construction & CAMC of 3 nos. 100 KLD MBBR technology prefabricated Sewage  
Treatment Plant at IIM Udaipur**

Having examined the details given in press notice and bid document for the above work,  
I/We hereby submit the following.

“If work is awarded to me, I/We shall obtain GST registration certificate of the state, in which  
work is to be taken up, within one month from the date of receipt of award letter or before  
release of any payment by the Institute, whichever is earlier, failing which I/We shall be  
responsible for any delay in payments which will be due towards me/us on account of the work  
executed and /or for any action taken by Institute or GST department in this regard”.

Seal of bidder.

Date of submission

Signature(s) of bidder(s)

**(Annexure-III)**

**UNDERTAKING REGARDING ELECTRICAL LICENCE**

**To,  
The Director,  
IIM Udaipur**

***Subject:-Construction & CAMC of 3 nos. 100 KLD MBBR technology prefabricated Sewage Treatment Plant at IIM Udaipur***

**Sir,**

Having examined the details given in press notice and bid document for the above work, I/we hereby submit the following.

“I/we hereby certify that I/we will either obtain valid electrical licence at the time of execution of electrical work or associate Contractor having valid electrical licence of eligible class”.

Seal of bidder:

Date of submission:

Signature(s) of Bidder(s)

## CPWD-6 FOR e-Tendering

Online Percentage rate/item rate bids are invited on behalf of the Institute on two bid system from appropriate agency for the work of :

### **Construction & CAMC of 3 nos. 100 KLD MBBR technology prefabricated Sewage Treatment Plant at IIM Udaipur**

*The work is estimated to cost: Rs. 2,96,82,795/-*

1.1. This estimate, however, is given merely as a rough guide.

1.1.1 The authority competent to approve NIT for the combined cost and belonging to the major discipline will consolidate NITs for calling the bids. He will also nominate Division which will deal with all matters relating to the invitation of bids. For composite bid, besides indicating the combined estimated cost put to bid, should clearly indicates the estimated cost of each component separately. The eligibility of bidders will correspond to the combined estimated cost of different components put to bid.

1.1.2 **Criteria of eligibility for contractors:**

Completed three Prefabricated/ packaged STP works not less than 30 KLD or completed two Prefabricated/ packaged STP works not less than 50 KLD **or** Completed one Prefabricated/ packaged STP works not less than 100 KLD.

Similar work shall mean “**Prefabricated/Packaged STP with allied Civil work**”

**Documentary evidence to be submitted from the competent authority. Supply order without installations shall not be considered for the purpose of experience in similar works.”**

"The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to previousday of last date of submission of bids.

- (a) The bidder should have had an average financial turnover (gross) of at least 50% of the estimated cost, during the immediate last three consecutive years ending **31.03.2025**. Balance sheet duly audited by Chartered Accountant (Scanned copy of certificate from CA/Audited Balance Sheet to be uploaded). The year in which no turnover is shown would also be considered for working out the average. The multiplication factor of 7% per annum simple interest is not applicable on the Annual Turnover figures.
  - (b) Should not have **incurred any loss (Profit after tax should be positive)** in more than two years during the last five consecutive years ending **31<sup>st</sup> March 2025, duly audited and Certified by Chartered Accountant.**
  - (c) Should have **Net worth Certificate (Form-B) from Chartered Accountant with UDIN**
2. Agreement shall be drawn with the successful bidders on prescribed Form No. **CPWD 7** which is available as a Govt. of India Publication and also available on website. Bidders shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
3. The time allowed for carrying out the work will be **3.5 months (construction) & 12months (operation & Maintenance)** from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the bid documents.

4. (i) The site for the work is available.

**OR**

~~The site for the work shall be made available in parts as specified below~~

..... \*

~~(ii) The architectural and structural drawings for the work are available.~~

5. After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of bid as notified.
6. While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of bid as notified.
7. Earnest Money in the form of Account Payee Demand Draft, Fixed Deposit Receipt, Bank Guarantee (for balance amount as prescribed) from any of the Commercial Bank's shall bedrawn in favour of "The Director, Indian Institute of Management Udaipur" shall be scanned and uploaded to the e- tendering website within the period of the bid submission. The original EMD should be deposited either in the office of Director, IIM Udaipur within the period of bid submission. The EMD receiving officer shall issue a receipt of deposition of earnest money deposit to the bidder in a prescribed format (enclosed) uploaded by tender inviting authority in the NIT.

A part of earnest money is acceptable in the form of bank guarantee including e-bank guarantee also. In such case, minimum **50% of earnest money or Rs. 20lac**, whichever is less, shall have to be deposited in shape prescribed above, and balance may be deposited in shape of Bank Guarantee including e-bank guarantee of any Commercial Bank having validity for **90 days** for single bid works or more from the last date of receipt of bids which is to be scanned and uploaded by the intending bidders.

**The earnest money given by all the tenderers except the lowest tenderer shall be refunded immediately after the expiry of stipulated bid validity period or immediately after acceptance of the successful bidder, whichever is earlier. However, in case of two/ three bid system earnest money deposit of bidders unsuccessful during technical bid evaluation etc. should be returned within 30 days of declaration of result of technical bid evaluation.**

Certificate of work experience and other documents as specified in the NIT shall be scanned and uploaded to the e-Tendering website within the period of bid submission. Online bid documents submitted by intending bidders shall be opened only of those bidders, whose scanned and uploaded original EMD deposited and other documents are found in order. However, certified copy of all the scanned and uploaded documents as specified in NIT shall have to be submitted within a week in the office of tender opening authority by the lowest bidder only.

The bid submitted shall be opened at 06:30 PM on **29.05.2026**

8. The bid submitted shall become invalid and e-Tender processing fee (if applicable) shall not be refunded if:-

- (i) The bidder is found ineligible.

- (ii) The bidder does not upload scanned copies of deposited original EMD and all the documents stipulated in the bid document.
- (iii) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest bidder in the office of tender opening authority.
- (iv) If a tenderer quotes nil rates against each item in item rate tender or does not quote any percentage above/below on the total amount of the tender or any section/sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.

9. *The contractor whose bid is accepted will be required to furnish performance guarantee of 5% (Five percent) of bid amount as mentioned in schedule E and within the period specified in Schedule F. This guarantee shall be in the form of Fixed Deposit Receipt or Bank Guarantee including e-Bank guarantee including e-Bank guarantee from any of the Commercial Banks in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F', including the extended period if any, the Earnest money deposited by the contractor shall be forfeited automatically without any notice to the contractor. The earnest money deposited along with bid shall be returned after receiving the aforesaid performance guarantee. The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses/ registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare Board including Provident Fund Code No. if applicable and also ensure the compliance of afore said provisions by the sub-contractors, if any engaged by the contractor for the said work and program chart (Time and Progress) within the period specified in Schedule 'F'.*

10. Description of the work is as follows: **Construction & CAMC of 3 nos. 100 KLD MBBR technology prefabricated Sewage Treatment Plant at IIM Udaipur**

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

- 11. The competent authority on behalf of the Institute does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.
- 12. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.

13. The competent authority on behalf of Institute reserves to himself the right of accepting the whole or any part of the bid and the bidders shall be bound to perform the same at the rate quoted.
14. No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.
15. The bid for the works shall remain open for **acceptance for a period of thirty (30) days from the date of opening of bids in case of single bid system and 75 (seventy five) days from the date of opening of technical bids in case bids are invited in 2 or 3 bid system. Further**
  - i) If any tenderer withdraws his tender or makes any modifications in the terms and conditions of the tender which is not acceptable to the department within 7 days after the last date of submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to forfeit 50% of the earnest money absolutely irrespective of letter of acceptance for the work is issued or not.
  - ii) If any tenderer withdraws his tender or makes any modifications in the terms and conditions of the tender which is not acceptable to the department after expiry of 7 days after the last date of submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to forfeit 100% of the earnest money absolutely irrespective of letter of acceptance for the work is issued or not.
  - iii) In case of forfeiture of earnest money as prescribed in para (i) and (ii) above, the bidders shall not be allowed to participate in the rebidding process of the same work.
16. This notice inviting Bid shall form a part of the contract document. The successful bidders/contractor, on acceptance of his bid by the Accepting Authority shall **within 10 days from the stipulated date of start of the work**, sign the contract consisting of:-
  - (a) The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.
  - (b) Standard **C.P.W.D. Form 7/8** or other Standard C.P.W.D. Form as applicable.

#### 17. **Opening and Evaluation of Bids**

e-Tenders can be uploaded in the e-tender website till the stipulated date and time of submission.

Technical Bids of only those Bidders, whose original Bid Security has been received by Authority prior to Bid Due Date will be opened.

Online Bid opening shall be carried out in two stages. Firstly, 'Technical Bid' of all the online Bids received shall be opened on the date and time mentioned. 'Financial Bid' of those bidders whose Technical Bid has been determined to be responsive, satisfy the Conditions of Eligibility, and on evaluation get a Technical Score of 100, shall be opened on a subsequent date, which will be notified to such Bidders.

In the event of specified date of Bid opening being declared a holiday for the Authority, the Bid shall be opened at the appointed time and place on the next working day.

The Authority will subsequently examine and evaluate the Bids in accordance with the provisions set out in this

document.

To facilitate evaluation of Bids, the Authority may, at its sole discretion, seek clarifications in writing from any Bidder regarding its Bid.

i. Tests of responsiveness

Prior to evaluation of Bids, the Authority shall determine whether each Bid is responsive to the requirements of this RFP. A Bid shall be considered responsive only if:

- (a) it is received as per the format at Appendices.
- (b) it is received by the Bid Due Date including any extension thereof;
- (c) Original Bid Security has been received prior to Bid Due Date and a scan copy has been uploaded on e-procurement portal;
- (d) it is accompanied by the Power of Attorney as specified;
- (e) it contains all the information (complete in all respects) as requested in this RFP and/or Bidding Documents (in formats same as those specified);
- (f) it does not contain any condition for qualification; and
- (g) it is not non-responsive in terms hereof.

The Authority reserves the right to reject any Bid that is non-responsive and no request for alteration, modification, substitution or withdrawal shall be entertained by the Authority in respect of such Bid.

ii. Evaluation of Technical Bids

The Authority shall evaluate the Technical Bid of only those Bidders whose Technical Bid has been determined to be substantially responsive and satisfy the Conditions of Eligibility as per the document.

The Financial Bid shall not be opened at this stage.

The Authority reserves the right to reject any Bid which is non-responsive and no request for alteration, modification, substitution, or withdrawal shall be entertained by the Authority in respect of such Bid.

The Authority will subsequently examine and evaluate the Bids in accordance with the provisions set out.

Post opening of the technical bid, a presentation from the bidders will be made to the Authority. The date and time of the presentation will be shared with the bidders accordingly.

To facilitate evaluation of Bids, the Authority may, at its sole discretion, seek clarifications in writing from any Bidder regarding its Bid.

The Technical Bid shall be evaluated based on Conditions of Eligibility as set out in this RFP for qualifying for further evaluation of its Bid in terms herein. The Technical Bids which do not meet the Conditions of Eligibility shall be rejected. The Technical Bids which meets the Conditions of Eligibility shall be evaluated further based on the following scoring criteria:

S.NO.	Category	Maximum Marks	Sub-criterion	Marks	Documents Required
1	Past Experience Beyond Eligibility	15	One project $\geq$ 75% capacity	15	Work Order + Completion Certificate + Capacity Proof
			One project $\geq$ 60% but < 75% capacity	10	
			Two projects $\geq$ 30% capacity each	5	
2	Project Value Beyond Eligibility	10	One project $\geq$ 100% of ECV	10	Final Bill / CA Certificate + Work Order
			One project $\geq$ 75% of ECV	7	
			Only eligibility level (50% ECV)	3	
3	Client Performance Certificates	5	Certificates from $\geq$ 2	5	Client Performance Certificates (2 or

	(From Govt./ PSU/ Autonomous clients) or				more)
			Certificates from 1 client	3	Client Performance Certificate (1)
4	Presentation	25	Project execution plan	10	Presentation Document
			Risk & contingency management	5	
			Quality, safety & environment plan	5	
			Timeline realism & milestone planning, Resource deployment plan	5	
5	Reuse & Discharge Performance	10	Reuse/discharge certificates from $\geq 2$ clients	10	Reuse Certificates (2 or more)
			Reuse/discharge certificates from 1 client	7	Reuse Certificate (1)
			Lab reports showing compliance	5	Lab Test Reports
6	Sustainability & Energy Efficiency	5	Energy-efficient blowers/pumps, Reduced sludge production strategy	5	OEM Brochures / Tech Specifications
7	Technical Personnel	10	Process engineer $\geq 7$ years STP experience	5	CV + Qualification Certificates
			Civil & Electrical engineers with STP experience	5	
8	Empanelment with govt. authorities	20	Technology empanelment with Govt. of India or any State Government of India	20	Certificate by empaneling authority

Note: While awarding marks for the number of Eligible Assignments, the Bidder or Key Personnel, as the case may be, that has undertaken the highest number of Eligible Assignments shall be entitled to the maximum score for the respective category and all other competing Bidders or respective Key Personnel, as the case may be, shall be entitled to a proportionate score.

#### Short-listing of Bidders

The Bidders whose Technical Bid scores at least 60 (sixty) marks shall be short-listed for opening of Financial Bid.

#### iii. Evaluation of Financial Bid

In the second stage, the financial evaluation will be carried out. Each Financial Bid will be assigned a financial score (SF).

For financial evaluation, the total cost indicated in the Financial Bid (BoQ1 & BoQ2) will be considered.

The Authority will determine whether the Financial Bids are complete, unqualified and unconditional. The cost indicated in the Financial Bid shall be deemed as final and reflecting the total cost of services. Omissions, if any, in costing any item shall not entitle the firm to be compensated and the liability to fulfil its obligations as per the TOR within the total quoted price shall be that of the IMA. The lowest Financial Bid (FM) will be given a financial score (SF) of 100 points. The financial scores of other Bids will be computed as follows:

$$SF = 100 \times FM/F$$

(F = amount of Financial Bid)

#### Combined and final evaluation

Bids will finally be ranked according to their combined technical (ST) and financial (SF) scores as follows:

$$S = ST \times Tw + SF \times Fw$$

Where S is the combined score, and Tw and Fw are weights assigned to Technical Bid and Financial Bid,

which shall be 0.70 and 0.30 respectively.

The Selected Bidder shall be the first ranked Bidder (having the highest combined score). The second ranked Bidder shall be kept in reserve and may be invited for negotiations in case the first ranked Bidder withdraws, or fails to comply with the requirements specified, as the case may be.

iv. Contacts during Bid Evaluation

Bids shall be deemed to be under consideration immediately after they are opened and until such time the Authority makes official intimation of award/ rejection to the Bidders. While the Bids are under consideration, Bidders and/ or their representatives or other interested parties are advised to refrain, save and except as required under the Bidding Documents, from contacting by any means, the Authority and/ or their employees/ representatives on matters related to the Bids under consideration

v. Award of Consultancy

After selection, a Letter of Award (the "LOA") shall be issued, in duplicate, by the Authority to the Selected Bidder and the Selected Bidder shall, within 7 (seven) days of the receipt of the LOA, sign and return the duplicate copy of the LOA in acknowledgement thereof. In the event the duplicate copy of the LOA duly signed by the Selected Bidder is not received by the stipulated date, the Authority may, unless it consents to extension of time for submission thereof, appropriate the Bid Security of such Bidder as damages on account of failure of the Selected Bidder to acknowledge the LOA, and the next eligible Bidder may be considered.

After acknowledgement of the LOA as aforesaid by the Selected Bidder, it shall cause the Selected Bidder to execute the Agreement within the period prescribed. The Selected Bidder shall not be entitled to seek any deviation, modification or amendment in the Agreement.

18. The Bidder shall submit the Financial Bid online in the BOQ format available at <https://eprocure.gov.in/eprocure/app>. Bidders need to download the BOQ format and complete the blue-colored (unprotected) cells with their respective financial quotes and other details (such as the name of the bidder) and upload the same. Bidders shall quote percentage for Construction of STP in "BoQ1" sheet of the BOQ format and shall quote item rate for Operation and Maintenance in "BoQ2" sheet of the BOQ. No other cells should be changed. Bidders should quote both BoQ1 and BoQ2. The Financial Bid of any bidder quoting either one of the above shall be rejected. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.

## 19. For Composite Bid

19.1.1 The Engineer in charge of the major component will call bids for the composite work. The cost of bid document and Earnest Money will be fixed with respect to the combined estimated cost put to tender for the composite bid.

19.1.2 The bid document will include following three components:

**Part A:-**CPWD-6, ~~CPWD-7/8~~ including schedule A to F for the major component of the work, Standard General Conditions of Contract for CPWD 2023 (Construction Works) as amended/ modified up to **the last date of submission of tender.**

(Schedule A to E for minor component of the work. (SE/EE in charge of major component shall also be competent authority under clause 2 and clause 5 as mentioned in schedule A to E for major components).

**Part B:-**General / specific conditions, specifications, Additional conditions & Guarantee Bonds & Preferred makes for major component (s) of the work.

**Part C: -**General / specific conditions, specifications& Preferred makes of E & M components for minor component (s) of the work. (Schedule A to F for minor component of the work. (SE/EE in charge of major component shall also be competent authority under clause 2 and clause 5 as mentioned in schedule A to F for major components).

**Part D: -** Schedule of quantities applicable to major & minor component (s) of the work.

**Part E: -** Price Bid Sheet.

- 19.1.3 The bidders must associate himself, with agencies of the appropriate class eligible to bid for each of the minor component individually.
- 19.1.4 The eligible bidders shall quote rates for all items of major component as well as for all items of minor components of work.
- 19.1.5 After acceptance of the bid by competent authority, the EE in charge of major component of the work shall issue letter of award on behalf of the Institute. After the work is awarded, the main contractor will have to enter into one agreement with EE in charge of major component and has also to sign two or more copies of agreement depending upon number of EE's/DDH in charge of minor components. One such signed set of agreement shall be handed over to EE/DDH in charge of minor component(s). EE of major component will operate **Part A, Part B , Part D and Part E** of the agreement. EE in charge of minor component(s) shall operate **Part C , D& E** along with **Part A** of the agreement.
- 19.1.6 Entire work under the scope of composite bid including major and all minor components shall be executed under one agreement.
- 19.1.7 Security Deposit will be worked out separately for each component corresponding to the estimated cost of the respective component of works.
- 19.1.8 The main contractor has to associate agency(s) for specialized component(s) conforming to eligibility criteria as defined in the bid document and has to submit detail of such agency(s) to Engineer-in-charge of minor component(s) within prescribed time. Name of the agency(s) to be associated shall be approved by Engineer-in-charge of relevant component(s).
- 19.1.9 In case the main contractor intends to change any of the above agency/agencies during the operation of the contract, he shall obtain prior approval of Engineer-in-charge of relevant specialized component(s). The new agency/agencies shall also have to satisfy the laid down eligibility criteria. In case Engineer-in-charge is not satisfied with the performance of any agency, he can direct the contractor to change the agency executing such items of work and this shall be binding on the contractor.
- 19.1.10 The main contractor has to enter into MoU with contractor(s) associated by him. Copy of such MoU shall be submitted to Engineer-in-charge in charge of each minor component as well as to EE in charge of major component. In case of change of associate contractor, the main agency(s) has to enter into MoU with the new contractor associated by him.
- 19.1.11 Running payment for the major component shall be made by EE of major discipline to the main contractor. Running payment for minor components shall be made by the Engineer-in-charge of the discipline of minor component directly to the main contractor. The **CMB** shall be maintained independently by Engineer-in-charge of major and minor component.
- 19.1.12A. The composite work shall be treated as complete when all the components of the work are complete. The completion certificate of the composite work shall be recorded by Engineer-in-charge of major component after record of completion certificate of all other components.
- 19.1.12B. Final bill of whole work shall be finalized and paid by the EE of major component. Engineer(s) in charge of minor component(s) will prepare and pass the final bill for their component of work and pass on the same to the EE of major component for including in the final bill for composite contract.
- 19.1.13 In case of any discrepancy is noticed between the documents as uploaded at the time of submission of the bid online and hard copies as submitted physically in the office of Engineer-in-charge, the bid submitted shall become invalid and the Institute shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the tender shall not be allowed to participate in

the retendering process of the works.

**19.1.14 Jurisdiction of courts**

The court of the place from where the letter of award of work has been issued shall have the jurisdiction to decide any dispute arising out of or in respect of the contract.

19.1.15 In case of delay in release of payment of R.A. Bills by the department due to non-availability of funds or other reasons, contractor has to pay all labour/ workers engaged on the work shall be paid on time without any delay, delay in payment to the contractor shall be governed by Clause 7 of GCC, CPWD, 2023.

19.1.16 The bidder must note that there is a limited plot area available and so limited space for installation of T&P and storing other construction material. The bidder has to plan work methodology as per the available site and no extension of time or additional payment shall be payable on this account.

19.1.17 The successful bidder should ensure proper coordination with other agencies executing internal & external finishing and services works in the same building. The contractor should ensure to provide the working site to other agencies as per the agreed completion programme in such a way that the pace of other agencies is not affected. No extension of time or additional payment shall be payable on this account.

**PERCENTAGE RATE TENDER & CONTRACT FOR WORKS**

(A)	Tender for the work of:	<i>Construction &amp; CAMC of 3 nos. 100 KLD MBBR technology prefabricated Sewage Treatment Plant at IIM Udaipur</i>
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- (i) To be uploaded by **06:00 PM on 29.05.2026** at [www.eprocure.gov.in](http://www.eprocure.gov.in). \*
- (ii) To be opened in presence of tenderers who may be present at **06:30 PM on 29.05.2026**. Technical bid To be opened in the presence of tenderers who may be present at the office of Engineer-in-charge, IIM Udaipur.

**TENDER**

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

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

I/We agree to keep the tender open for **Thirty (30) days** from the due date of its opening and not to make any modification in its terms and conditions.

I/We have deposited EMD for the prescribed amount in the office of concerned Notice inviting authority as per the bid document.

A copy of earnest money deposit receipt of prescribed amount deposited in the form of Account payee Demand Draft, Fixed deposit Receipt, Bank Guarantee including e Bank Guarantee (as prescribed) issued by a Commercial bank is scanned and uploaded (**strike out as the case may be**). If I/We, fail to furnish the prescribed performance guarantee within prescribed period, I/We agree that the said President of India or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that President of India or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

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

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

I/We hereby declare that I/We shall treat the tender documents, drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived therefrom 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 & integrity of the State.

Dated

Signature of Contractor

Witness:

Postal Address

Address:

Occupation:

**ACCEPTANCE**

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the IIM Udaipur for a sum of Rs. '.....(Rupees.....)

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

- (a)
- (b)
- (c)

E-in-C Signature

.....

Dated:

Designation .....

## **Brief Particulars of the Work**

**Name of work :Construction & CAMC of 3 nos. 100 KLD MBBR technology prefabricated Sewage Treatment Plant at IIM Udaipur**

### **A -Civil Work:**

The following features of the major componants have been made for Construction of 3 nos. 100 KLD MBBR technology prefabricated Sewage Treatment Plant at IIM Udaipur

- i. Water proofing of all existing civil units to arrest leakage and seepage
- ii. To cut the unwanted trees, shrubs and weeds. Also, to provide approach with steps and pathway for easy operation & maintenance of plant.
- iii. Cut outs to be provided at bottom and at top to connect the tanks.
- iv. Damaged man hole chambers to be replaced
- v. Top slab to be cut open in the first and second chamber for screen installation and also for proper ventilation system
- vi. Existing PGF bed can be used as foundation bed (after required modifications) to place the pre-fabricated capsules. Filter media from the bed to be removed for placing the capsules.
- vii. Painting of existing civil units (Externally)wherever required.
- viii. Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC collection tank.
- ix. Providing and applying 12 mm & 18mm thick (average) premixed formulated ready mix polymer, modified cement plaster for finishing of exposed surface of CC block work.
- x. Providing and laying of 60mm thick Cement concrete paver block of M-35 grade for path way & covering at STP tank area.
- xi. Finishing walls using Ready mix plaster of 18mm thickness for external wall and 12mm thickness for internal walls.

### **Special conditions pertaining to Site Facilities/ Restrictions**

- i. The bidders are required to visit the site and check the feasibility of space required for steel yards, stores, site laboratory etc. and installation of various tools and plants. The contractor shall make his own arrangement for establishment of the above-mentioned facilities and for which nothing extra shall be paid. The Engineer-in-Charge shall in no way be responsible for any delay on this account and no claim, whatsoever, on this account shall be entertained.
- ii. The contractor shall make his own arrangement for erection of labour hutment and for which nothing extra shall be paid. The Engineer-in-Charge shall in no way be responsible for any delay on this account and no claim, whatsoever, on this account shall be entertained.
- iii. The contractor shall make its own arrangement for tapping of electricity from local available Electricity Board for which necessary prevailing charges shall be paid by the contractor to the

electricity Statutory Body. Before tendering, the bidders shall visit the site and assess the manner in which he/she is able to arrange the above facilities. The Engineer-in-Charge shall in no way be responsible for any delay on this account and no claim, whatsoever, on this account shall be entertained.

- iv. Water for construction purposes shall be responsibility of contractor.
- v. The Contractor shall abide by the rules/ bye laws applicable in respect of water/ electricity connection and he shall be solely responsible for any penalty on account of violation of any of the rules / bye laws in this regard. The Contractor shall indemnify the Institute against any claim arising out of pilferage, theft, damage, penalty, non-settlement of bills etc. whatsoever on this account.
- vi. In the event of any local personal problems, local body issues etc. arising while discharging function at site, contractor will deal with it appropriately and will not brings such matter towards Institute.
- vii. The agency shall be required to strictly follow security norms and procedure in terms of entry/ exit passes to all the vehicles/ persons/ materials, issue/ reissue/ surrender of labour passes and other rules and regulations that will be brought in force from time to time by. Any penalty imposed by for violating security norms will be immediately paid by the agency for which nothing extra shall be paid.
- viii. The liasioning with any local bodies as in required shall be in scope of the contractor.
- ix. After completion of individual work, the area shall be clean and cleared of debris. No debris shall be seen laying outside/ near by side and shall be disposed off from **IIM Udaipur** premises at contractor risk and cost, so as no statutory authorities shall be complain.
- x. Some restrictions may be imposed by the security staff etc. on the working and for movement of labour, materials etc. The contractor shall be bound to follow all such restrictions/ instructions and nothing extra shall be payable on this account.
- xi. Contactor shall follow all the safety rules and security process vogue and applicable during execution of work. Contractor is requested to take practical steps to prevent danger to persons employed by the contractor from the risk of Snake bite, Accident fall, Electric Shock, Fire Explosion etc. In case above precautions are neglected, contactor is bound to bear expenses of defence of every suit action or other proceedings law that may be brought by any person and to pay damages/cost towards the compromise any claim by such persons

## PROFORMA OF SCHEDULES

(Operative Schedules to be supplied separately to each intending e-bidder)

<b>SCHEDULE 'A'</b> Schedule of quantities (as per PWD-3)	As per enclosed Schedule of Quantities.
<b>SCHEDULE 'D'</b> Extra schedule for specific requirements/ document for the work, if any.	Nil
<b>SCHEDULE 'E'</b> Reference to General Conditions of contract.	GCC 2023 (Construction Works), CPWD form 7 as modified & corrected up to the last date of submission of tender.
Name of Work	<b>Construction &amp; CAMC of 3 nos. 100 KLD MBBR technology prefabricated Sewage Treatment Plant at IIM Udaipur</b>
Estimated cost of work	<b>Total Rs. 2,96,82,795/-</b>
Earnest money	<b>Rs. 5,93,656/-</b>
Performance guarantee	5% of tendered value
Security deposit	2.5% of tendered value
<b>SCHEDULE 'F'</b> <b>GENERAL RULES DIRECTIONS:</b>	
Officer inviting tender	<b>Director, IIM Udaipur</b>
Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2:	See appropriate clause under definition below
<b>Definitions:</b>	
2(v) Engineer-in-Charge	<b>Engineer-in-charge, IIM Udaipur</b>

2(viii) Accepting Authority	Director, IIM Udaipur		
2(x) Percentage on cost of materials and labour to cover all overheads and profits:	15%		
2(x)(a) Standard Schedule of Rates	D.S.R. 2023 with correction slips issued up to the last date of submission of tender and Market rates.		
2(xi) Department	Campus Development & Maintenance Office, IIMUdaipur.		
9(ii) Standard CPWD Contract Form	GCC 2023 (Construction Works), CPWD form 7 as modified & corrected up to the last date of submission of tender.		
<b>Clause 1</b>			
(i) Time allowed for submission of performance guarantee, programme chart (time and progress) and applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board or proof of applying thereof from the date of issue of letter of acceptance.	10 days		
(ii) Maximum allowable extension with late fee at 0.1% per day of performance guarantee amount beyond the period provided in (i) above	05 days		
<b>Clause 2</b>			
Authority for fixing compensation under clause 2	Director, IIM Udaipur		
<b>Clause 5</b>			
Number of days from the date of issue of letter of acceptance for reckoning date of start.	10 days		
Mile Stone(s) as per table given below:-			
<i>S.No.</i>	<i>Description of Milestone (Financial)</i>	<i>Time allowed in Months (from date of start)</i>	<i>Amount to be with-held in Case of non-achievement of mile stone</i>
1	1/8 <sup>th</sup> (of the Tendered amount).	1/4 <sup>th</sup> (of the whole period)	1.25% of tendered Amount

2	3/8 <sup>th</sup> (ofthe Tenderedamount)	1/2th (of the wholeperiod)	1.25% of tendered Amount
3	3 /4 <sup>th</sup> (ofthe Tenderedamount).	3/4 <sup>th</sup> (ofthe wholeperiod)	1.25% of tendered Amount
4	FullAmount(ofthe Tenderedamount).	Full Period	1.25% of tendered Amount

**Note:** The withheld milestone will only be released when subsequent milestone is achieved within the specified time.

Time allowed for execution of work	<b>3.5 months (Constrcution)+ 12 months (Operation &amp; Maintenance)</b>
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**Authority to decide:**

(i) Authority to convey the decision of Shifting of Milestone and Extension of time

**Director, IIM Udaipur**

(ii) Authority to decide rescheduling of Milestone and Extension of time

**Director, IIM Udaipur**

(iii) Shifting of date of start in case of delay in handing over of site

**Director, IIM Udaipur**

**Clause 5 Schedule of handing over of site**

<b>Part</b>	<b>Portion of Site / Design</b>	<b>Description</b>	<b>Time Period for handing over reckoned from date of issue of letter of intent</b>
Part A	Portion without any hindrance.	<b>Total Site</b>	Available
Part B	Portions with encumbrances	----	Not Applicable
Part C	Portions dependent on work of other agencies	----	Not Applicable

**Clause 6** Computerized Measurement Book (CMB) / Electronic Measurement Book (EMB)

**Mode of Measurement: CMB/EMB**

Computerized Measurement Book(CMB)

<b>Clause 7</b>	
Gross work to be done together with net payment / adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment.	<b>Rs.60.00 Lakhs</b>
<b>Clause 7A</b> Whether Clause 7A shall be applicable.	<b>Yes</b> (No running Account Bill shall be paid for the work till the applicable GST registration of the same State in which work is to be taken up, labour licenses, registration with EPFO, ESIC, whatever applicable are submitted by the contractor to the Engineer-in-charge). No interest shall be payable in case of delay in processing bill.
<b>Clause 8A</b> Authority to decide compensation on account if contractor fail to submit completion plans	<b>Engineer-in-charge</b>
<b>Clause 10A</b> List of testing equipment to be provided by the contractor at site lab.	<b>List attached</b>
<b>Clause 10 B (ii) (Mobilization advance)</b> Whether clause 10 B (ii) shall be applicable	<b>No</b>
<b>Clause 10C</b> Component of labour expressed as percent of value of work	<b>25%</b>

<b>Clause 10CC</b>		<b>Not Applicable</b>
<b>Clause 11</b>		
Specifications to be followed for execution of work		CPWD Specification 2019 Vol.-I & II for Civil works and CPWD General Specification 2023-Part-I (Internal) & Part-II (External), with correction slips upto the submission of bid.
<b>Clause 12</b> Authority to decide Deviation beyond 1.25 times upto 1.50 times of tendered amount		Director, IIM Udaipur
12.2(C) Deviation limit beyond which clauses 12.2 (C) shall apply for building work.		100%
i) Deviation limit beyond which clauses 12.2 (C) shall apply for foundation work (except items mentioned in earth work sub-head in DSR & related items)		100%
ii) Deviation limit for items mentioned in earth work sub-head of DSR & related items		100%

<b>Clause 16</b>		
Competent authority for deciding reduced rates.		Director, IIM Udaipur
<b>Clause 18</b> List of mandatory machinery, tools & plants to be deployed by the contractor at site:-	As per list	
<b>Clause 19</b> <b>Authority to decide penalty for each default.</b>	<b>Engineer-in-charge</b>	
<b>Clause 19 C</b>	Rs. 2000/- each default	
<b>Clause 19 D</b>	Rs. 2000/- each default	
<b>Clause 19 G</b>	<i>Rs. 2000/- for each plus Rs.200/- per day for each day of default (Subject to a maximum of 5% of the estimated cost of work put to tender)</i>	
<b>Clause 19 K</b>	<i>Rs. 1000/- per tradesman per day.</i>	

**Clause 25 Applicable. The Dispute Redressal Committee (DRC) shall be appointed by Director, IIMU.**

**Clause 32:** requirement of technical representative & recovery rate

Sl. No.	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical / Technical Representative)	Minimum Experience (Years)	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 32	
						Figures (inRs.)	Words
1	Graduate Engineer or Diploma Engineer	Civil + Electrical/Mechanical	Project manager + CumPlanning / Quality / Site /Billing Engineer	2 or 5 years respectively	1 + 1	30,000/-	(Rupees Thirty Thousand Only) Per Month per person

**Note:**

Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers. Diploma holder with minimum 10 year relevant experience with a reputed construction co. can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineers.

<b>Clause 38</b>				
Variations permissible on theoretical quantities:		Variations	Recoveries proposed	
			Plus side	Minus Side
(a)	Cement for works with estimated cost put to tender not more than Rs. 25 lakh.	3% plus/minus	Nil	Not Permitted
(b)	For works with estimated cost put to tender more than Rs. 25 lakh.	2% plus/minus	Nil	Not Permitted
(c)	Bitumen all works	2.5%plus only & nil on minus side	Nil	Not Permitted
(d)	Steel reinforcement and structural steel sections for each diameter, section and category	2% plus/minus	Nil	Not Permitted
	All other materials.	Nil	Nil	Not Permitted

**Table-I (T&P)**

**LIST OF MANDATORY MACHINERY, TOOLS & PLANTS TO BE DEPLOYED BY THE CONTRACTOR AT SITE AS & WHEN REQUIRED UNDER CLAUSE-18**

S. No.	Name of Equipment	Numbers
<b>1</b>	<b>Excavators (various sizes)</b>	<b>1 No.</b>
<b>2</b>	<b>Equipment for Concrete work</b>	
2.1	Concret/Motor mixer	1 No.
2.2	Vehicle mounted concrete pump with boom/ concrete pump ofadequate capacity as decided by Engineer-in-Charge	1 No.
<b>3</b>	<b>Concrete transit mixer</b>	<b>As per requirement</b>
3.1	Rebound hammer for testing concrete	1 No.
3.2	Concrete mixer (diesel)	--
3.3	Needle vibrator (electrical)	3 Nos.
3.4	Needle vibrator (petrol)	3 Nos.
3.5	Surface vibrator	2 Nos.
<b>4</b>	<b>Equipment for Building work</b>	
4.1	Bar bending Machine	1 No.
4.2	Bar cutting machine	1 No.
4.3	Welding machine i/c transformer	1 No.
4.4	Cube testing machines	1 No.
4.5	Grinding/polishing machines	4 Nos.
<b>5</b>	<b>Shuttering</b> <b>Note:-</b> Recovery at the rate of Rs. 2500/Sqm/month Shall be made for non-procurement of Shuttering in required quantity	Total minimum quantity of shuttering 250Sqm.
<b>6</b>	<b>Equipment for transportation</b>	
6.1	Tippers	1 No.
6.2	Trucks	1 No.
6.3	Tractor with Trolley	1 No.
6.4	Water Tanker	1 No.
<b>7</b>	<b>Pneumatic equipment</b>	
7.1	Air compressors (diesel)	1 No.
<b>8</b>	<b>Dewatering equipment</b>	
8.1	Pump (diesel)	1 No.
8.2	Pump (electric) (Desirable)	1 No.
<b>9</b>	<b>Power equipment</b>	
9.1	Diesel generator of sufficient capacity	1 No.
<b>10</b>	<b>Testing Equipment / Survey Instruments</b>	
10.1	Theodolite /Total station	1 No.
10.2	Autolevel and Staff	1 No.
<b>11</b>	<b>Graduated Glass Cylinder</b>	<b>As per requirement</b>
11.1	Measuring jars 100ml, 200ml, 500ml	1 No. each
11.2	Verniers calipers 12” & 6”	1 No.
11.3	Digital Micrometer least count 0.01 mm	1 No.

11.4	Screw Gauge 0.01mm – 10mm,	1 No.
11.5	Steel tapes-3m	1 No.
11.6	Micrometer Screw 25 mm gauge	1 No.
11.7	A good quality plumb bob	1 No.
11.8	Spirit level, minimum 30cms long with 3 bubbles for horizontal vertical	1 No.
11.9	Dynamic penetrometer	1 No.
11.10	Depth Gauge	1 No.
11.11	Moisture meter for timber	--

- Note:** -1. The above list is only indicative and not exhaustive.  
2. The contractor shall procure necessary T&P whenever required for timely completion of the work. Any idle T&P (from the list mentioned above) if not required/needed shall be removed away from site under information to Engineer-in-Charge.

# PART- B

**(CIVIL Work)**

## **GENERAL REQUIREMENT FOR THE TENDER**

**Name of Work:-: Construction & CAMC of 3 nos. 100 KLD MBBR Technology prefabricated Sewage Treatment Plant (STP).**

1. The tenderer is advised to read and examine the tender documents for the work. He should inspect and examine the site and its surroundings by himself before submitting his tender.
2. Separate schedule of quantity is included in this tender for civil and electrical items of work. If the tenderer wants to offer any unconditional rebates on their rates, the same should also be offered in the respective components of civil and electrical schedules separately. The contractor shall quote the percentage rates in figures and words accurately so that there is no discrepancy in rates written in figures and words.
3. Time allowed for the execution of work is **3.5 months (Construction) + 12 months (Maintenance)**
4. The Contractors are advised to inspect and examine the site and its surroundings and satisfy themselves with the nature of site, the means of access to the site, constraints put by local regulations, if any, weather conditions at site, general ground / subsoil conditions etc. or any other circumstances which may affect or influence their tenders. The Contractor shall carryout survey of the work area, at his own cost, setting out the layout and fixing of alignment of the building as per architectural and Structural drawings in consultation with the Engineer-in- Charge. Any discrepancy between the architectural drawings and actual layout at site shall be brought to the notice of the Engineer-in-charge. It shall be responsibility of the Contractor to ensure correct setting of alignment. Nothing extra shall be payable on this account. No claims, whatsoever, shall be entertained at a later date for any errors found, on plea that the information supplied by the Department in the tender is insufficient or is at variance with the actual site conditions
5. The Department shall not bear any responsibility for the lack of knowledge and also the consequences, thereof to the Contractor. The information and data mentioned in the tender documents have been furnished, in good faith, for general information and guidance only. The Engineer- in-Charge, in no case, shall be held responsible for the accuracy thereof and/or interpretations or conclusions drawn there from by the Contractor and all consequences shall be borne by the Contractor. No claim, whatsoever, shall be entertained from the Contractor, if the data or information furnished in tender document is different or in-correct otherwise or actual working drawings are at variance with the drawings available for inspection or attached to the tender documents. .
6. It is presumed that the Contractor shall satisfy himself for all possible contingencies, incidental charges, wastages, bottlenecks etc. likely during execution of work and acts of coordination, which may be required between different agencies. Nothing extra shall be payable on this account.
7. The nomenclature of the item given in the schedule of quantities gives in general the work content but is not exhaustive i.e. does not mention all the incidental works required to be carried out for complete execution of the item of work. The work shall be carried out, all in accordance with true intent and meaning of the specifications and the drawings taken together, regardless of whether the same may or may not be particularly shown on the drawings and/or described in the specifications, provided that the same can be reasonably inferred. There may be several incidental works, which are not mentioned in the nomenclatureof each item but will be necessary to complete the item in all respects.

8. The contractor(s) shall submit a detailed program of execution in accordance with the master programme / milestone within ten days from the date of issue of award letter.
9. Quality of the work is of utmost importance. This shall be adhered to in accordance with the provisions of CPWD specifications and guidelines given in the relevant paras.
10. The contractor (s) shall make his own arrangements for electricity and water required for the execution of work.
- 11 **Cement shall be arranged by the contractor himself.**
- 12 **Steel Reinforcement shall be arranged by the contractor himself.**
- 13 **Engagement of agency for specialized works:**

Contractor has to engage specialized agencies for specialized items of works such as Water proofing, Pre constructional Anti-termite treatment, *Fabrication & Erection of Structural Steel Trusses* of large span. Only those specialized agencies/firms who have satisfactorily executed Works as per NIT and approved by Engineer-in-charge.

14. Contractor has to deploy required Plant and machinery on the project.. In case the contractor fails to deploy the plant and machinery whenever required and as per the direction of the Engineer-in-charge, he (Engineer-in-charge) shall be at a liberty to get the same deployed at the risk and cost of the contractor.
15. The Engineer-in-charge and /or his / her authorized representative would thereafter check this CMB and record the necessary certificates for their checks /test checks as per the standard format of department and shall act as per clause 6 of GCC-2023 of construction work.
16. Contractor has to provide reinforcement cover blocks made of approved proprietary pre packed free flowing mortars (Conbextra as manufactured by M/s Fosroc Chemical India Ltd. or approved equivalent) of high early strength.
17. The contractor shall comply with the provisions of the Apprentices Act 1961, and the rules and orders issued there under from time to time.
18. In the event of any local problems arising while discharging your function at site, Contractor will deal with situation appropriately and Contractor will not bring Institute on the scene for such matters.
19. All the liabilities arising out of any provision of Labour Acts in force and enacted / amendment from time to time during the execution of contract shall be contractor's responsibility.
20. The contractor shall be responsible for the proper conduct of their employees who would be employed by them on execution of this work in case it is noticed that any of their staff indulges in bad behaviour or commit thefts or tamper with any of the properties of the Centre, the contractor shall remove the concerned employee and make good the loss forthwith on receipt of complaint.
21. The contractor shall abide by the general directives and conditions of contract and contract labour health regulations or any other directives issued by the management / state Centre. Govt. or any other statutory body at any time during the execution of contract.
22. If your work is found unsatisfactory, Institute reserves right to terminate the contract without giving any notice and work shall be completed at Contractor risk and cost.

## **MATERIAL AND QUALITY ASSURANCE**

### **1 Quality of Materials and Workmanship**

- i. The Contractor shall ensure that the Materials and workmanship are in accordance with the requirements specified in this Agreement, Specifications and Standards and Sound Engineering practice. The work shall be of the specified quality and standard, both in respect of ingredients as well as the intended functions it is supposed to perform for service life.
- ii. The Contract warrants that all Materials shall be new, unused, not reconditioned, unless otherwise allowed as per contract or by Engineer-in-Charge, and in conformity with Specification and Standards, Applicable Laws and Sound Engineering Practice, and that the Contractor shall not use any materials which are generally recognized as being deleterious under Sound Engineering Practice.
- iii. The contractor shall get the source of all other materials, not specified elsewhere in the document, approved from the Engineer-in-Charge. The contractor shall stick to the approved source unless it is absolutely unavoidable. Any change shall be done with the prior approval of the Engineer-in-Charge for which tests etc. shall be done by the contractor at his own cost. Similarly, the contractor shall submit brand/ make of various materials not specified in the agreement, to be used for the approval of the Engineer-in-Charge along with samples and once approved, he shall stick to it.

### **2 Quality Assurance System**

The Contractor shall devise a quality assurance mechanism to ensure compliance with the provisions of this Agreement (the "Quality Assurance Plan" or "QAP").

- (i) The Contractor shall, submit to the Engineer-in-Charge, its Quality Assurance Plan 15 (fifteen) days in advance of start of the execution stage specified in the NIT. The Engineer-in-Charge shall convey its comments to the Contractor within a period of 7 (seven) days of receipt of the QAP stating the modifications, if any, required and the Contractor shall incorporate those in the QAP conforming with the provisions of this clause. The QAP shall include the following:
  - (a) Contractor's Organization & structure, duties and responsibilities of individual key personnel, quality policy of contractor, procedure for control of non-conformities and corrective action, inspections and documentation.
  - (b) Internal quality audit system.
  - (c) Machinery, Shuttering, other Tool & Plants, etc. required to be deployed at site.
  - (d) Method statement of important activities. These can be submitted as per the sequencing of the activities of the work.
  - (e) Quality control mechanism including sampling and testing of Materials, test frequencies, standards, acceptance criteria, testing facilities, reporting, recording and interpretation of test results, approvals, proforma for testing and calibration in accordance with the Specifications and Standards and Sound Engineering Practice; and Material Lot size, number of required tests and frequency of testing for different construction materials. All the relevant and applicable codes, specifications and standards, as well as the acceptance criteria for various items of work, workmanship, materials and process employed needs to be mentioned.
  - (f) Check-list for various items and materials.
  - (g) Formats for site documentation, monthly reports on implementation of QAP

1. Test Laboratories:

**A. Laboratory at site:**

The contractor shall establish a testing lab at site and provide testing equipment and materials for the field tests mentioned in the list of mandatory tests given in CPWD specifications 2019 Vol. 1 & 2. Nothing extra shall be payable to him on this account.

The representatives of the department shall be at liberty to inspect the testing facilities at site and conduct testing at random in consultation with Engineer-in-charge. The contractor shall provide all necessary facilities for the purpose. The laboratory shall be equipped, inter alia, with the following equipment's:

a) Balances:

- i) 7 kg to 10 kg capacity, semi-self-indicating type – Accuracy 10 gm.
- ii) 500 gm capacity, semi-self-indicating type Accuracy 1 gm.
- iii) Pan Balance- 5 kg Capacity- Accuracy 10 gm.

b) Ovens- Electrically operated thermostatically controlled up to 110°C- Sensitivity 1°C.

c) Sieves: as per IS: 460-1962.

- i) IS Sieves – 450 mm internal dia of sizes 100 mm, 80 mm, 63 mm, 50 mm, 40 mm, 25 mm, 20 mm, 12.5 mm, 10 mm, 6.3 mm, 4.75 mm, complete with lid and pan.
  - ii) IS Sieves – 200 mm internal dia (brass frame) consisting of 2.36 mm, 1.18 mm, 500 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns with lid and pan.
- d) Sieve shaker capable of 200 mm and 300 mm dia sieves, manually operated with timing switch assembly.

e) Equipment for slump test- slump cone, steel plate, taping rod, steel scale, scoop.

f) Equipment for concrete testing

- i) Concrete cube moulds 15x15x15cm. 12 Nos.
- ii) Temping Rods 2Kg weight length 40cm and ramming face 25mm 02 Nos.
- iii) Extra Bottom plates for 15cm cube mould 12 Nos.
- iv) Standard Vibration table for cubes 02 Nos.
- v) Dial gauges 25 mm travel- 0.01 mm/division least count- 02 Nos.
- vi) Graduated measuring cylinders 200ml capacity 03 Nos.
- vii) Enamel trays (for efflorescence test for bricks).
  - (i) 300mmx250mmx40mm 2 Nos.
  - (ii) Circular plates of 250mm dia 4 Nos.

Not more than 90% tests for material be performed at site lab with above stated equipment's, however at least 10% testing of materials shall be got done from external laboratories. However, for the tests to be carried out by the external laboratories, the contractor shall supply free of charge all the materials required for testing, including transportation. If the tests which were to be conducted in the site laboratory are conducted in other laboratories for any reason the cost of such tests shall be borne by the contractor.

#### **Other Laboratories:**

**The contractor shall arrange carrying out all tests required under the agreement through the laboratory as approved by the Engineer-in-Charge** and all expenditure to be incurred for testing of samples e.g. packaging, sealing, transportation, loading, unloading, etc. including testing charges shall be borne by the contractor.

Testing of materials in any Govt Lab / Public Undertaking Lab/IIT or NIT lab/Government Engineering College may be allowed by the Engineer-in-charge. However in case of private lab, the ADG/SDG will approve the lab accredited by NABL or any other accreditation body which operates in accordance with ISO/IEC 17011 and accredits labs as per ISO/IEC 17025 for testing and calibration scopes.

### **3 Sampling of Materials :**

- i. All samples of materials including Cement Concrete Cubes shall be taken by the QA engineers deployed by the Contractor and shall be witnessed by the Engineer-in-Charge or his authorized representatives as specified in NIT. All the necessary assistance, facilities and safety shall be provided by the contractor. Cost of sample of materials and testing charges shall be borne by the contractor and he/she is responsible for safe custody of samples to be tested at site.
- ii. Sample of building materials fittings and other articles required for execution of work shall be got approved from the Engineer-in-Charge. Articles manufactured by companies of repute and approved by the Engineer-in-Charge shall only be used. Articles bearing BIS certification mark shall be used. In case the above are not available, the quality of samples brought by the contractor shall be judged by standards laid down in the relevant BIS specifications. All materials and articles brought by the contractor to the site for use shall conform to the samples approved by the Engineer-in-Charge which shall be preserved till the completion of the work.
- iii. The contractor shall ensure quality of construction in a planned and time bound manner. Any sub-standard material/work beyond set out tolerance limit shall be summarily rejected by the Engineer-in-Charge.
- iv. BIS marked materials except otherwise specified shall be subjected to quality test at the discretion of the Engineer-in-Charge besides testing of other materials as per the specifications described for the item/materials. Wherever BIS marked materials are brought to the site of work, the contractor shall if required, by the Engineer-in-Charge furnish manufacturers test certificate to establish that the material produced by the contractor for incorporation in the work satisfies the provisions of BIS codes relevant to the material and/or the work done.
- v. The contractor shall procure all the materials in advance so that there is sufficient time to testing and approving of the materials and clearance of the same before use in work.

- vi. All materials brought by the contractor for use in the work shall be got checked from the Engineer-in-Charge or his authorized representative of the work on receipt of the same at site before use.
- vii. The contractor shall be fully responsible for the safe custody of the materials issued to him even if the materials are in double lock and key system.
- viii. The Stone aggregate / stone, sand shall be brought from source approved by engineer-in-charge subjected to the said materials confirm CPWD specifications.

#### **4 Testing of Materials:**

The contractor shall establish temporary field laboratory of adequate size with all necessary facilities. Field laboratory shall be equipped with the testing equipment for conducting routine field tests as per this contract. It will also have copies of standards, BIS codes, IRC codes, relevant publications. All the tests in field lab setup at construction site shall be carried out by the QA Staff deployed by the contractor and shall be witnessed by the Engineer-in-Charge or his authorized subordinates as specified in NIT. The contractor shall provide all necessary facility to them for witnessing the tests in the field laboratory. In general, contractor shall carry out 90% of field tests in site laboratory and 10% tests shall be got carried out from outside laboratory as indicated below. Contractor shall endeavor to obtain test reports for tests conducted from outside laboratory in a reasonable time.

#### **5 Maintenance of Register:**

- 1 All test registers, MAS registers and Cement, Steel, Paint, Chemical etc. registers Site Order Book, Inspection Register, and Hindrance records are to be maintained at site. All test registers, site order book, MAS registers and Cement, Steel, Paint, Chemical etc. registers issued by the Engineer-in-Charge shall be maintained by the contractor which will be reviewed by the officers of CPWD at regular intervals.
- 2 Maintenance of Register of Test –
  - i. The test registers to be issued to the contractor are:
    - a) Materials at site account register.
    - b) Cement register.
    - c) Master test registers.
    - d) Cube test register.
    - e) Inspection registers.
  - ii. All the entries in the register of test are to be made by the designated QA Engineers of the contractor and same is to be regularly reviewed by the field officers as well as the Engineer-in-Charge. The contractor shall allow inspection of such records any time as desired by Engineer-in-Charge or his authorized representative.
  - iii. All the tests carried out at construction site or outside laboratories are to be maintained by the contractor in the prescribed format in the test registers provided by the contractor and duly authenticated by Engineer-in-Charge. The test reports shall also be maintained in hard file.
  - iv. All Samples of materials including Cement Concrete Cubes shall be taken jointly with Contractor by JE/AE and out of this at least 50% samples shall be taken in presence of AE in charge. If there is no JE, all Samples of materials including Cement Concrete Cubes shall be taken by AE jointly with Contractor. All the necessary arrangement shall be

provided by the contractor. Cost of sample materials is to be borne by the contractor and he shall be responsible for safe custody of samples to be tested at site/lab.

- v. All the test in field lab setup at Construction Site shall be carried out by the Engineering Staff deployed by the contractor which shall be 100% witnessed by JE/AE. At least 10% of the tests are to be witnessed by the Executive Engineer. Mandatory test conducted as per approved proforma shall be attached with each Running bill. Submission of copy of all test registers and material at site register along with each alternate Running Account Bill and with Final Bill is mandatory. This register should be check in the office Engineer-in-charge, IIMU or his Successor.
- vi. Minimum 10% test should be conducted in outside approved lab as directed by Engineer-in-Charge. Nothing extra will be paid on this account.

### 3 Maintenance of Material at Site (MAS) Register-

- i. MAS register of the key materials including Cement and Steel Registers shall be maintained in the proforma approved by Engineer-in-Charge. All the entries in the MAS registers are made by the designated staff of the contractor and same is regularly reviewed by the field officers as well as the Engineer-in-Charge. Contractor is responsible for maintenance and safe custody of MAS registers. Authenticated copies of bills / vouchers of materials which have to be entered in the MAS register are to be submitted by the contractor to CPWD before making payments.
- ii. Each entry of receipt of material at site is 100% test checked by JE or by AE if there is no JE. If both JE & AE are available AE should test check at least 50% of the entries.
- iii. Each MAS Register is checked by JE & AE at least once a week.
- iv. Cement Register is reviewed by EE at least once in a month for work at same station and alternate months for work at outstation.
- v. It will be deemed that work so measured, checked and paid is of the required quality and standard, both in respect of ingredients as well as the intended functions it is supposed to perform. In other words, the work would not only meet the required specifications but also the workmanship as per sound engineering practices.
- vi. The SE /CE shall also have to check and sign the registers at suitable intervals in token of his ensuring compliance of the 'Quality Assurance Plan' for the work.
- vii. Copies of bills: Agency will provide authenticated copies of itemize bills of materials which has to be entered in the MAS Register viz steel, cement, bitumen, paint, water proofing or any other item suggested by the Engineer-in- Charge.

## 6 Samples

The Contractor shall, at its own expense and without delay, provide the samples of Materials and relevant information like Manufacturer's test reports, standard samples of manufactured Materials and Samples of such other Materials as the Engineer-in-Charge may require for review and approvals in accordance with Clause 10A of GCC before actual use.

## 7. Test

- (i) For determining that the Works conform to the Specifications and Standards, the Engineer-in-Charge shall require the Contractor to carry out or cause to be carried out tests, at such time and frequency and in such manner as specified in this Agreement and in accordance with sound engineering practice for quality assurance. Frequency and the manner in which tests shall be conducted shall be in the following order of preference:

- (a) Contract provisions.

- (b) CPWD specifications.
  - (c) BIS codes.
  - (d) IRC codes.
  - (e) MoRTH Specifications.
  - (f) International Codes.
  - (g) Manufacturer's specifications. Outside tests shall be conducted at Government labs /IITs/NITs and other approved laboratories by the Engineer-in-Charge for testing of materials
- (ii) The Contractor shall, with due diligence, carry out all the tests in accordance with the agreement and furnish the results thereof to the Engineer-in-Charge. The Engineer-in-Charge or his authorized representative shall witness or participate during the testing as specified in NIT. The contractor shall provide all necessary assistance for witnessing/participating in the field tests.
- (i) In the event that results of any tests conducted under this clause establish any defects or deficiencies in the Works, the Contractor shall carry out remedial measures at its own cost and furnish a report to the Engineer-in-Charge in this regard. The Engineer-in-Charge shall require the Contractor to carry out or cause to be carried out tests to determine that such remedial measures have brought the works into compliance with the specifications and standards and the procedure shall be repeated until such Works conform to the Specifications and Standards

#### **8. Inspection of records**

The Engineer-in-Charge or his authorized representative shall have the right to inspect the records of the Contractor relating to the works.

#### **9. Inspection of Works**

- i. Officers of CPWD shall be inspecting the ongoing work at site at any time with or without prior intimation. The contractor shall, therefore, keep updated the following requirements and detailing.
  - a. Entrance and area surrounding to be kept cleaned.
  - b. Display layout plan key plan, building drawings including plans, elevations and sections.
  - c. Upto date displays of Bar chart, CPM and PERT etc.
  - d. Keep details of quantities executed, balance quantities, deviations, possible Extra item, substituted Item etc.
  - e. Keep plastic / cloth mounted one sets of Structural Drawings.
  - f. Set of Helmets and safety shoes for exclusive use for officers/dignitaries visiting at site.
- ii. The Engineer-in-Charge and his authorized subordinates shall at all times;

- a) have full access to all parts of the site and to all places from which natural materials are being obtained for use in the works; and
  - b) during production, manufacture and construction at the site and at the place of production, be entitled to examine, inspect, measure and test the materials and workmanship and to check the progress of the manufacturer of Materials.
- iii. The Contractor shall give the Engineer-in-Charge and its authorized representative access, facilities and safety equipment for carrying out their obligations under this agreement.

#### **10. Examination of work before covering up/ Test Check of item of Work**

In respect of the work which the Engineer-in-Charge or his authorized representatives are required to examine, inspect, measure or test before it is covered up or put out of view or any part of the work is placed thereon, the Contractor shall give notice to the Engineer-in-Charge whenever any such work is ready and before it is covered up. The Engineer-in-Charge shall then either carry out the examination, inspection or testing without unreasonable delay within 7 days, or promptly give notice to the Contractor that the Engineer-in-Charge does not require him to do so. Provided, however, that if any work is of a continuous nature where it is not possible or prudent to keep it uncovered or incomplete, the Contractor shall notify the schedule of carrying out such work to give sufficient opportunity, not being less than 3(three) business days' notice, to the Engineer-in-Charge to conduct its inspection, measurement or test while the work is continuing. Provided further that in the event the Contractor receives no response from the Engineer-in-Charge within a period of 3 (three) business days from the date on which the Contractor's notice hereunder is delivered to the Engineer-in-Charge, the Contractor shall be entitled to assume that the Engineer-in-Charge would not undertake the said inspections.

#### **11. Rejection**

- i. If, as a result of an examination, inspection, measurement or testing, any Plant, Materials, design or workmanship is found to be defective or otherwise not in accordance with the provisions of this Agreement, the Engineer-in-Charge may reject such piece of work, Plant, Materials, design or workmanship by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure that the rejected item complies with the requirements of this Agreement.
- ii. If the Engineer-in-Charge requires a Piece of work, Plant, Material, design or workmanship to be retested, the tests shall be repeated on the same terms and conditions, as applicable in each case. If the rejection and retesting cause the department to incur any additional costs, such costs shall be recoverable by the Engineer-in-Charge from the Contractor and may be deducted by the Engineer-in-Charge from any amount due to be paid to the Contractor.
- iii. The Contractor shall not be entitled to any extension of time on account of rectifying any defect or retesting as specified in this clause.
- iv. Examination, inspection, measurement or testing of any Plant, Material, design or workmanship by the Engineer-in-Charge or its failure to convey its observations or to examine, inspect, measure or test shall neither relieve the Contractor of its obligations and liabilities under this Agreement in any manner nor shall the Engineer-in-Charge be liable for the same in any manner.

#### **12. Remedial work**

- i. Notwithstanding any previous test or certification, the Engineer-in-Charge may instruct the Contractor to:

- (a) Remove from the site and replace any piece of work, plant or materials which are not in accordance with the provisions of this Agreement.
  - (b) Remove and re-execute any work which is not in accordance with the provisions of this Agreement and the Specification and Standards; and
  - (c) Execute any work which is urgently required for the safety of the Project, whether because of an accident, unforeseeable event or otherwise.
- ii. If the Contractor fails to comply with the instructions issued by the Engineer-in-Charge under aforesaid para, within the time specified in the notice or as mutually agreed, the Engineer-in-Charge may get the work executed by another agency. The cost so incurred by the Engineer-in-Charge for undertaking such work shall, without prejudice to the rights of the Engineer-in-Charge to recover damages in accordance with the provisions of this Agreement, be recoverable from the Contractor and may be deducted by the Engineer-in-Charge from any amount due to be paid to the Contractor.

### 13. Program Chart

- i. The Contractor shall prepare an integrated program chart within fifteen days of issue of award letter including civil as well as E & M activities for the execution of work, showing clearly all activities from the start of work to completion, with details of manpower, equipment and machinery required for the fulfillment of the program within the stipulated period and submit the same for approval of the Engineer-In-Charge. The detailed provisions in clause 5 of GCC shall be followed.
- ii. The Department shall in no way be responsible for either any delay in getting electric and/or water and/or telephone connections for carrying out the work or not getting connections at all. No claim of delay or any other kind, whatsoever, on this account shall be entertained from the Contractor. Also, contingency arrangement of stand-by water & electric supply shall be made by the Contractor for commencement and smooth progress of the work so that work does not suffer on account of power failure or disconnection or not getting connection at all. No claim of any kind whatsoever shall be entertained on this account from the Contractor. Nothing extra shall be payable on this account.

### 14. Cleanliness Of Site

- i. The Contractor shall not stack building material/malba/muck on the land or road of IIM Udaipur or on the land owned by the others, as the case may be. So the muck, rubbish etc. shall be removed periodically as directed by the Engineer-in-Charge, from the site of work to the approved dumping grounds as per the local bye laws and regulations of the concerned authorities and all necessary permissions in this regard from the local bodies shall be obtained by the Contractor. Nothing extra shall be payable on this account. In case, the Contractor is found stacking the building material/malba as stated above, the Contractor shall be liable to pay the stacking charges/penalty as may be levied by the local body or any other authority and also to face penal action as per the rules, regulations and bye-laws of such body or authority. The Engineer -in-Charge shall be at liberty to recover, such sums due but not paid to the concerned authorities on the above accounts, from any sums due to the Contractor including amount of the Security Deposit and performance guarantee in respect of this contract agreement.
- ii. The Contractor shall take all care to prevent any water- logging at site. The waste water, slush etc. shall not be allowed to be collected at site. For discharge into public drainage system, necessary permission shall be obtained from relevant authorities after paying the necessary charges, if any, directly to the authorities. The work shall be carried out in such a way that the area is kept clean and tidy. All the fees/charges in this regard shall be borne by the Contractor.

Nothing extra shall be payable on this account.

**15. Insurance Policies**

- i. Before commencing the execution of work, the Contractor shall, without in any way limiting his obligations and liabilities, insure at his own cost and expense against any damage or loss or injury, which may be caused to any person or property, at site of work. The Contractor shall obtain and submit to the Engineer-in-Charge proper Contractor All Risk Insurance Policy for an amount 1.25 times the contract amount for this work, with Engineer-in-Charge as the first beneficiary. The insurance shall be obtained in joint names of Engineer-in-Charge and the Contractor (who shall be second beneficiary). Also, he shall indemnify the Department from any liability during the execution of the work. Further, he shall obtain and submit to the Engineer-in-Charge, a third-party insurance policy for maximum Rs.10 lakh for each accident, with the Engineer-in-Charge as the first beneficiary. The insurance shall be obtained in joint names of Engineer-in-Charge and the Contractor (who shall be second beneficiary).
- ii. The Contractor shall, from time to time, provide documentary evidence as regards payment of premium for all the Insurance Policies for keeping them valid till the completion of the work. The Contractor shall ensure that Insurance Policies are also taken for the workers of his Sub-Contractors / specialized agencies also. Without prejudice to any of its obligations and responsibilities specified above, the Contractor shall within 10 days from the date of letter of acceptance of the tender and thereafter at the end of each quarter submit a report to the Department giving details of the Insurance Policies along with Certificate of these insurance policies being valid, along with documentary evidences as required by the Engineer-in-Charge. No work shall be commenced by the Contractor unless he obtains the Insurance Policies as mentioned above. Also, no payment shall be made to the Contractor on expiry of insurance policies unless renewed by the Contractor. Nothing extra shall be payable on this account. No claim of hindrance (or any other claim) shall be entertained from the contractor on these accounts.

16. The Contractor shall at all reasonable times provide access to the Engineer-in-Charge or his authorized representative to the workshops, factories or other places where materials are stored, for inspection and/or collection of samples. Nothing extra shall be payable on this account.

**17. Local Body Permission**

The contractor shall be responsible for liasoning work required, if any, in this regard with the local bodies. Nothing extra shall be payable on this account. Statutory charges, fees etc. required to be paid to the local bodies in this connection shall be paid by the contractor and shall be reimbursed by the Department to the contractor on production of proof of actual payment by him.

18. The day to day receipt and issue accounts of different grade/brand of cement shall be maintained separately in the standard proforma by the Jr. Engineer-in-Charge of work and which shall be duly signed by the contractor or his authorized representative.
19. The contractor shall be fully responsible for the safe custody of materials brought by him issued to him even though the materials are under double lock key system.
20. Separate cement registers showing the receipt of the OPC and PPC shall be maintained at site. The contractor shall construct separate godowns for storage of OPC & PPC at site and nothing extra on this account shall be payable.

21. Cement issued shall be for consumption at site only. No cement for factory made items and those not manufactured at site shall be issued.
22. In case there is any discrepancy in frequency of testing as given in the list of mandatory test and that in the individual sub-head of work as per CPWD specification 2019 Vol. 1 & 2 the higher of the two frequencies of testing shall be adopted.

**Note:** 1. The above conditions are in addition to general/ other/ additional conditions as specified elsewhere in tender document and nothing extra shall be paid on the account of these conditions.

## GENERAL TERMS AND CONDITIONS

1. The order of preference in case of any discrepancy as indicated in condition No. 8.1 under “Conditions of Contract” give in standard CPWD contract form may be read as the following:
  - (i) Description of items as given in Schedule of quantities
  - (ii) Particular specifications
  - (iii) Special conditions
  - (iv) Additional Conditions
  - (v) Tender drawings attached
  - (vi) CPWD Specifications
  - (vii) General Conditions of Contract for CPWD works
  - (viii) I. S. Codes
  - (ix) National Building code.
  - (x) ASTM, BS, or other foreign origin code mentioned in tender document
  - (xi) Decision of Engineer-in-Charge
  - (xii) SoundEngineeringpracticesorwellestablishedlocalconstructionpractices.

**Note: Unless otherwise specified, CPWD Specifications 2019 volume I &II with correction slips till the last date of tender submission shall be followed in general. Any additional item of work, if taken up subsequently, shall also conform to the relevant CPWD specifications mentioned above.**

A reference made to any Indian Standard specification in these documents, shall imply to the latest version of that standard. Including such revision / amendments as issued by the Bureau of Indian standard up to last date of receipt of tenders. The contractor shall keep at his own cost all such publications of relevant Indian standard applicable to the work at site.

2. Except for the items, for which particular specifications are given or where it is specifically mentioned otherwise in the description of items in the schedule of quantities the work shall generally be carried out in accordance with the “CPWD specifications 2019 Vol. 1 and Vol. 2 (with upto date corrections slips). (Here in after to be referred to as CPWD specifications) and instructions of Engineer-in-Charge. Wherever CPWD specifications are silent the latest IS codes/specification shall be followed.
3. Unless otherwise provided in the Schedule of Quantities/Specifications, the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the work and nothing extra shall be payable to him on account of the same.
4. Several documents forming the tender are to be taken as mutually complementary to one another. Detailed drawings shall be followed in preference to small scale drawings and figured dimensions in preference to scale dimensions.
5. The works to be governed by this contract shall cover delivery and transportation up to destination, safe custody at site, insurance, erection, testing and commissioning of the entire works.
6. The work shall be carried out in accordance with the approved architectural drawings, structural drawings, services drawings to be issued from time to time, by the Engineer-in Charge. Before commencement of any item of work the contractor shall correlate all the relevant architectural and structural drawings, nomenclature of items and specifications etc. issued for the work and satisfy himself that the information available from there is complete and unambiguous. The figure and

written dimension of the drawings shall be superseding the measurement by scale. The discrepancy, if any, shall be brought to the notice of the Engineer- in- charge before execution of the work. The contractor alone shall be responsible for any loss or damage occurring by the commencement of work on the basis of any erroneous and or incomplete information and no claim whatsoever shall be entertained by the department on this account.

- 7** The Contractor(s) shall take instructions from the Engineer-in-Charge regarding collection and stacking of materials at any place. No excavated earth or building rubbish shall be stacked on areas where other buildings, roads, services and compound walls are to be constructed. The stacking shall take place as per stacking plan however, if any change is required, the same shall be done with the approval of Engineer-in-Charge.
- 8** The Contractor shall bear all incidental charges for cartage, storage and safe custody of materials, if any, issued by department as well as to those materials also arranged by the contractor.
- 9** Any cement slurry added over base surface (or) for continuation of concreting for better bond is deemed to have been built in the items and nothing extra shall be payable or extra cement considered in consumption on this account.
- 10**

  - a) The contractor (s) shall inspect the site of work before tendering and acquaint himself with the site conditions and no claim on this account shall be entertained by the department.
  - b) The contractor (s) shall get himself acquainted with nature and extent of the work and satisfy himself about the availability of materials from kiln or approved quarries for collection and conveyance of materials required for construction.
- 11** Existing roads of campus cannot be allowed to use for loaded Trucks. The Entry to the site for loaded trucks to carry material shall be along the Boundary Wall, the same shall be made good, improved and maintained by the contractor at his own cost. No payment shall be made on this account.
- 12** The contractor (s) shall give to the Municipality, Police and other authorities all necessary notices etc. that may be required by law and obtain all requisite Licenses for temporary obstructions, enclosures etc. and pay all fee, taxes and charges which may be leviable on account of these operations in executing the contract. He shall make good any damage to the adjoining property whether public or private and shall supply and maintain light and other illumination on for cautioning the public at night.
- 13** The contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards day and night speed limit boards red flags, red lights and providing barriers. He shall be responsible for all dangers and incidents caused to existing / new work due to negligence on his part. No hindrances shall be caused to traffic during the execution of the work.

- 14 The contractor shall make his own arrangement for obtaining electric connection(s) if required and make necessary payments directly to the department concerned.
- 15 The contractor shall fully comply with all legal orders and directions of the Public or local authorities or municipality and adhere by their rules and regulations and pay all fees and charges for which he may be liable in this regard. Nothing extra shall be paid/reimbursed for the same.
- 16 If as per local Municipal regulations, huts for labour are not to be erected at the site of work; the contractor shall be required to provide such accommodation at a place outside the campus as is acceptable to the local body and nothing extra shall be paid on this account.
- 17 It shall be ensured by the contractor that no electric live wire is left exposed or unattended to avoid any accidents in this regard.
- 18 The contractor shall maintain in perfect condition, all portions executed till completion of the entire work allotted to him. Where however phased delivery of work is contemplated these provisions shall apply separately to each phase.
- 19 The entire royalty at the prevalent rates shall have to be paid by the contractor on all the boulders, metals, shingle sand etc. collected by him for execution of the work, directly to the Revenue authority or authorized agents of the State Government concerned or the Central Government, as the case may be.
- 20 The contractor shall issue Identity card to all labourers and engineers/staff engaged by him and nothing shall be paid on this account.

**21 Prevention of Nuisance and Pollution Control**

The contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants or occupiers of adjacent properties and to the public in general and to prevent any damage to such properties from pollutants like smoke, dust, noise. The contractor shall use such methodology and equipment so as to cause minimum environmental pollution of any kind and minimum hindrance to road users and to occupants of the adjacent properties or other services running adjacent/near vicinity. The contractor shall make good at his cost and to the satisfaction of the Engineer-in-Charge, any damage to roads, paths, cross drainage works or public or private property whatsoever caused due to the execution of the work or by traffic brought thereon by the contractor. All waste or superfluous materials shall be carried away by the contractor, without any reservation, entirely to the satisfaction of the Engineer-in-Charge.

**Water Pollution**

- (i) The Contractor shall take all precautionary measures to prevent the wastewater during construction to accumulate anywhere.
- (ii) The wastewater arising from the work is to be disposed of in the manner that is acceptable to the Engineer –in-charge.
- 22 If the work is carried out in more than one shift or during night no claim on this account shall be entertained.
- 23 Existing drains, pipes, cables, over-head wires, sewer lines, water lines and similar services encountered in the course of the execution of work shall be protected against the damage by the

contractor at his own expense. The contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services.

- 24 The contractor shall be responsible for the watch and ward / guard of the buildings, safety of all fittings and fixtures including sanitary and water supply fittings and fixtures provided by him against pilferage and breakage during the period of installations and thereafter till the building is physically handed over to the department. No extra payment shall be made on this account.
- 25 The contractor shall bear all incidental charges for cartage, storage and safe custody of materials issued by department.
- 26 The contractor shall take instructions from the Engineer-in-charge for stacking of materials. No excavated earth or building materials etc. shall be stacked / collected in areas where other buildings, roads, services, compound walls etc. are to be constructed.

Any trenching and digging for laying sewer lines/water lines/cables etc. shall be commenced by the contractor only when all men, machinery's and materials have been arranged and closing of the trench(s) thereafter shall be ensured within the least possible time.

- 27 The contractor shall take all precautions to avoid accidents by, exhibiting caution boards day and night, speed limit boards, red flags, red light and providing necessary barriers and other measures required from time to time. The contractor shall be responsible for all damages and accidents due to negligence on his part.
  - i) The contractor shall conduct work so as not to interfere with or hinder the progress or completion of the work being performed by other contractor(s) or by the Engineer-in-Charge and shall as far as possible arrange his work and shall place and dispose off the materials being used or removed so as not to interfere with the operations of other contractor or he shall arrange his work with that of the others in an acceptable and coordinated manner and shall perform it in proper sequence to the complete satisfaction of others.
- 28 Samples of all materials and fittings to be used in the work in respect of brand manufacturer and quality shall be got approved from the Engineer-in-Charge, well in advance of actual execution and shall be preserved till the completion of the work. Articles bearing BIS certifications mark shall only be used unless no manufacturer has got BIS mark for the particular material. Any material/fitting whose sample has not been approved in advance and any other unapproved material brought by the contractor shall be immediately removed as soon as directed.

Unless otherwise specified in the schedule of quantities the rates for all items shall be considered as inclusive of pumping/baling out water, if necessary, for which no extra payment shall be made. Those conditions shall be considered to include water from any source such as inflow of flood, surface and sub-soil water etc. and shall apply to the execution in any season.

## **29 Construction Waste Disposal**

- (i) The pre-identified dump locations will be a part of solid waste management plan to be prepared by the Contractor in consultation with Engineer-in-charge.
- (ii) Contractor shall get approved the location of disposal site prior to commencement of the excavation/dismantling work on any section of the work site.

- (iii) Contractor shall ensure that any spoils of material / construction / dismantled material waste will not be disposed off in any municipality solid waste collection bins.

### **30 Procurement of Construction Materials**

- (i) All vehicles delivering construction materials to the site shall be covered to avoid spillage of materials and maintain cleanliness of the roads.

### **31 Security And Traffic Arrangements**

In the event of any restrictions being imposed by the Security agency, CPWD, Traffic or any other authority having jurisdiction in the area on the working or movement of labour /Material, the contractor shall strictly follow such restrictions and nothing extra shall be payable to the contractor on such accounts. The loss of time on these accounts, if any, shall have to be made up by augmenting additional resources whatever required.

- 32** No payment shall be made for any damage caused by rain, snowfall, flood or any other natural calamity, whatsoever during the execution of the work. The contractor shall be fully responsible for any damage to the govt. property and the work for which payment has been advanced to him under the contract and he shall make good the same at his risk and cost. The contractor shall be fully responsible for safety and security of his material, T&P/Machinery brought to the site by him.
- 33** The contractor shall construct suitable godowns, yard at the site of work for storing all other materials so as to be safe against damage by sun, rain, damages, fire, theft etc. at his own cost and also employ necessary watch and ward establishment for the purpose at his cost
- 34** All materials obtained from contractor shall be got checked by the representative of Engineer- in-Charge on receipt of the same at site before use.
- 35** All statutory taxes, levies, charges (including water and sewerage charges, charges for temporary service connections and / or any other charges) payable to such authorities for carrying out the work, shall be borne by the Contractor. The Contractor shall arrange to give all notices as required by any statutory / regulatory authority and shall pay to such authority all the fees that is required to be paid for the execution of work. He shall protect and indemnify the Department and its officials & employees against any claim and /or liability arising out of violations of any such laws, ordinances, orders, decrees, by himself or by his employees or his authorized representatives. Nothing extra shall be payable on these accounts.
- 36** For works below ground level the contractor shall keep that area free from water. If dewatering or bailing out of water is required the contractor shall do the same at his own cost and nothing extra shall be paid.
- 37** The Contractor shall make all necessary arrangements for protecting from rains, fog or likewise extreme weather conditions, the work already executed and for carrying out further work, during monsoon including providing and fixing temporary shelters, protections etc. Nothing extra shall be payable on this account and also no claims for hindrance shall be entertained on this account.
- 38** In case of flooding of site on account of rain or any other cause and any consequent damage, whatsoever, no claim financially or otherwise shall be entertained notwithstanding any other

provisions elsewhere in the contract agreement. Also, the Contractor shall make good, at his own cost, the damages caused, if any. Further, no claims for hindrance shall be entertained on this account.

### **39 Setting out**

- i. The Contractor shall carry out survey of the work area, at his own cost, setting out the layout of buildings/ roads/ services in consultation with the Engineer -in-Charge & proceed further. Any discrepancy between architectural drawings and actual layout at site shall be brought to the notice of the Engineer -in-charge. It shall be responsibility of the Contractor to ensure correct setting out of alignment. Total station survey instruments only shall be used for layout, fixing boundaries, and centre lines, etc., Nothing extra shall be payable on this account.
- ii. The Contractor shall establish, maintain and assume responsibility for grades, lines, levels and benchmarks. He shall report any errors or inconsistencies regarding grades, lines, levels, dimensions etc. to the Engineer -in-Charge before commencing work. Commencement of work shall be regarded as the Contractor's acceptance of such grades, lines, levels, and dimensions and no claim shall be entertained at a later date for any errors found.
- iii. The Contractor shall be entirely and exclusively responsible for the horizontal, vertical and other alignments, the level and correctness of every part of the work and shall rectify effectively any errors or imperfections therein. Such rectifications shall be carried out by the Contractor at his own cost to the entire satisfaction of the Engineer - in-Charge.
- iv. The rates quoted by the Contractor are deemed to be inclusive of site clearance, setting out work (including marking of reference points, center lines of buildings), construction and maintenance of reference bench mark(s), taking spot levels, construction of all safety and protection devices, barriers, barricading, signage, labour safety, labour welfare and labour training measures, preparatory works, working during monsoon, working at all depths, height and location etc. and any other incidental works required to complete this work. Nothing extra shall be payable on this account.

**40** A site laboratory with the minimum equipment's as specified in CPWD specifications/in this agreement shall be established, made functional and maintained within one month from the award of work as per clause 10A of schedule A to F without any extra cost to the department. In case of non-compliance / delay in compliance (To be set up within maximum 2 months from date of start) in this, a recovery @ Rs. 500/- per day will be imposed which will be recovered from the immediate next R/A Bill of the Contractor.

### **41 Tools And Plants**

The bidder should have own constructions equipment required for the proper and timely execution of the work. Nothing extra shall be paid on this account.

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

#### **42 Scaffolding**

Wherever required for the execution of work, all the scaffolding shall be provided and suitably fixed, by the Contractor. It shall be provided strictly with steel double scaffolding system, suitably braced for stability, with all the accessories, gangways, etc. with adjustable suitable working platforms to access the areas with ease for working and inspection. It shall be designed to take all incidental loads. It should cater to the safety features for workmen. Nothing extra shall be payable on this account. It shall be ensured that no damage is caused to any structure due to the scaffolding.

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

#### **44 Royalty**

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

#### **45 Preservation And Conservation Measures**

- i. Existing drains, pipes, cables, over-head wires, sewer lines, water lines and similar services, if any, encountered in the course of the execution of work shall be protected against the damage by the contractor at his own expense. In case the same are to be removed and diverted, expenditure incurred in doing so shall be payable to the contractor. The contractor shall work out the cost, get the same approved by Engineer-in-Charge before taking up actual execution. The contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services.
- ii. All fossils, coins, articles of value of antiquity, structures and other remains or things of geological or archaeological interest discovered on project location during excavation/construction shall be the property of the Government, and shall be dealt with as per provisions of the relevant legislation. The contractor will take reasonable precaution to prevent his work men or any other persons from removing and damaging any such article or thing. He will, immediately upon discovery thereof and before removal acquaint the

Engineer- in-charge of such discovery and carry out the official instructions of Engineer-in-charge for dealing with the same, till then all work shall be carried out in a way so as not to disturb/damage such article or thing.

#### **46 Responsibility**

- i. He shall protect and indemnify the Institute and its officials & employees against any claim and /or liability arising out of violations of any such laws, ordinances, orders, decrees, by himself or by his employees or his authorized representatives. Nothing extra shall be payable on these accounts.
- ii. The Contractor shall assume all liability, financial or otherwise in connection with this contract and shall protect and indemnify the Department from any and all damages and claims that may arise on any account. The Contractor shall indemnify the Department against all claims in respect of patent rights, royalties, design, trademarks of name or other protected rights, damages to adjacent buildings, roads or members of public, in course of execution of work or any other reasons whatsoever, and shall himself defend all actions arising from such claims and shall indemnify the Department in all respect from such actions, costs and expenses. Nothing extra shall be payable on this account.

#### **47 Co-operation With Other Contractors/Specialized Agencies/ Associate Contractors**

- i. The Contractor shall take all precautions to abide by the environmental related restrictions imposed by any statutory body having jurisdiction in the area as well as prevent any pollution of streams, ravines, river bed and waterways. All waste or superfluous materials shall be transported by the Contractor, entirely to the satisfaction of the Engineer- in-Charge and disposed at designated places only. No claim what so ever on account of site constraints mentioned above or any other site constraints, lack of public transport, inadequate availability of skilled, semi-skilled or unskilled workers in the near vicinity, non-availability of construction machinery spare parts and any other constraints not specifically stated here, shall be entertained from the Contractor. Therefore, the Tenderers are advised to visit site and get first-hand information of site constraints. Accordingly, they should quote their tenders. Nothing extra shall be payable on this account.
- ii. The Contractor shall cooperate with and provide the facilities to the associate Contractors and other agencies working at site for smooth execution of the work. The contractor shall indemnify the Institute against any claim(s) arising out of such disputes. The Contractor shall:
  - (a) Allow use of scaffolding, toilets, sheds etc.
  - (b) Properly co-ordinate their work with the work of other Contractors.
  - (c) Provide control lines and benchmarks to his associate Contractors and the other Contractors.
  - (d) Provide electricity and water at mutually agreed rates.
  - (e) Provide hoist and crane facilities for lifting material at mutually agreed rates.
  - (f) Co-ordinate with other Contractors for leaving inserts, making chases, alignment of services etc. at site.
  - (g) Adjust work schedule and site activities in consultation with the Engineer-in-Charge and other Contractors to suit the overall schedule completion.

(h) Resolve the disputes with other Contractors/ associate contractors amicably and the Engineer-in-Charge shall not be made intermediary or arbitrator.

#### **48 Supervision of Work:**

The Contractor shall depute Site Engineer & skilled workers as required for the work along with details of Engineers and supervisory staff. It shall be ensured that all decision-making powers shall be available to the representatives of the Contractor at Mumbai itself to avoid any likely delays on this account. The Contractor shall also furnish list of persons for specialized works to be executed for various items of work. The Contractor shall identify and deploy key persons having qualifications and experience in the similar and other major works, as per the field of their expertise. If during the course of execution of work, the Engineer-in-Charge is of the opinion that the deployed staff is not sufficient or not well experienced, the Contractor shall deploy more staff or better- experienced staff at site to complete the work with quality and in stipulated time limit. Required minimum experience of technical representatives of the contractor shall be as per table given in schedule "F" under clause 32.

#### **49 Specialized Agencies**

- i. The contractor has to engage one of the approved agencies as mentioned in the list of specialized work. The main contractor shall not change the specialized agency. However, if the change is warranted, he may do so, with permission of Engineer-in-charge. Nothing extra shall be payable on this account.
- ii. It shall be the responsibility of main contractor to sort out any dispute / litigation with the Specialized Agencies without any time & cost overrun to the Department. The main contractor shall be solely responsible for settling any

#### **50 Personal Safety Measures for Labour**

Contractor shall provide the following items for safety of workers employed by contractor and associate agencies:

- (i) Protective footwear / helmet and gloves to all workers employed for the work on mixing, cement, lime mortars, concrete etc. and openings in water pipeline/sewer line.
- (ii) Welder's protective eye-shields to workers who are engaged in welding works.
- (iii) Safety helmet and Safety harness/ belt Provide adequate sanitation/safety facilities for construction workers to ensure the health and safety of the workers during construction, with effective provisions for the basic facilities such as sanitation, drinking water and safety equipment's or machinery.
- (iv) All the workers should be wearing helmet and shoes all the time on site.
- (v) Masks and gloves should be worn whenever and wherever required.
- (vi) Adequate drinking water facility should be provided at site, adequate number of decentralized latrines and urinals to be provided for construction workers.
- (vii) Full time workers (if any with the approval of Engineer-in-Charge) residing on site should be provided with clean and adequate temporary hutment.
- (viii) First aid facility should also be provided.
- (ix) Overhead lifting of heavy materials should be avoided. Barrow wheel and hand-lift boxes should be used to transport materials onsite.
- (x) Tobacco and cigarette smoking should be prohibited onsite.

- (xi) All dangerous parts of machinery are well guarded and all precautions for working on machinery are taken.
- (xii) Maintain hoists and lifts, lifting machines, chains, ropes and other lifting tackles in good condition. Provide safety net of adequate strength to arrest falling material down below.
- (xiii) Use of durable and reusable formwork systems to replace timber formwork and ensure that formwork where used is properly maintained.
- (xiv) Ensure that walking surfaces or boards at height are of sound construction and are provided with safety rails and belts. Provide protective equipment's such as helmets.
- (xv) Provide measure to prevent fire. Fire extinguisher and buckets of sand to be provided in fire prone area and elsewhere.
- (xvi) Provide sufficient and suitable light for working during night.
- (xvii) Ensure that measures to protect workers from materials of construction, transportation, storage and other dangers and health hazards are taken.
- (xviii) Ensure that the construction firm/division/company have sound safety policies.
- (xix) Comply with the safety procedure, norms and guidelines (as applicable) as outlined in NBC 2016.
- (xx) Adopt additional best practices and prescribed norms as in NBC 2016 with upto date amendments.

**51** Identify roads on-site that would be used for vehicular traffic. Update vehicular roads (if these are unpaved) by increasing the surface strength by improving particle size, shape and mineral type that make up the surface base. Add surface gravel to reduce source of dust emission. Limit amount of fine particles (smaller than 0.075mm) to 10 - 20%. Limit vehicular speed on site 10km/h. Nothing extra will be payable for this.

**52** All material storages should be adequately covered and contained so that they are not exposed to situations where winds on site could lead to dust/particulate emissions.

**53** Spills of dirt or dusty materials shall be cleaned up promptly so the spilled material does not become a source of fugitive dust and also to prevent of seepage of pollutant laden water into the ground aquifers. When cleaning up the spill, ensure that the clean – up process does not generate additional dust. Similarly, spilled concrete slurries or liquid wastes should be contained/cleaned up immediately before they can infiltrate into the soil/ground or runoff in nearby areas.

**54** Ensure that water spraying is carried out by wetting the surface by spraying water on:

- (i) Any dusty material.
- (ii) Areas where demolition work is carried out.
- (iii) Any unpaved main-haul road and.
- (iv) Areas where excavation or earth moving activities are to be carried out.

**55** The contractor shall ensure the following:

- (i) Cover and enclose the site by providing dust screen, sheeting or netting to scaffold along the perimeter of a building.
- (ii) Covering stockpiles of dusty material with impervious sheeting.
- (iii) Covering dusty load on vehicles by impervious sheeting before they leave the site.
- (iv) Transferring, handling / storing dry loose materials like bulk cement and dry pulverized fly ash inside a totally enclosed system.

(v) Spills of dirt or dusty materials shall be cleaned up promptly so that the spilled material does not become a source of fugitive dust and also to prevent seepage of pollutant laden water into the ground aquifers. When cleaning up the spill, ensure that the clean-up process does not generate additional dust. Similarly, spilled concrete slurries or liquid wastes should be contained / cleaned up immediately before they can infiltrate into the soil/ground or runoff in nearby areas.

(vi) Clear vegetation only from areas where work will start right away.

- 56** Adopt measures to prevent air pollution in the vicinity of the site due to construction activities. There is no standard reference for this. The best practices should be followed (as adopted from international best practice documents and codes).
- 57** Provide sheet covering / barricading of site of not less than 3m height along the site boundary, next to a road or other public area. Nothing extra will be paid for this.
- 58** The contractor shall provide experienced personnel with suitable training to ensure that these methods are implemented. Prior to the commencement of any work, the method of working, plant equipment and air pollution control system to be used on –site should be made available for the inspection and approval of the Engineer –in-Charge to ensure that these are suitable for the project.
- 59** Employ measures to segregate the waste on-site into inert, chemical or hazardous wastes. Recycle the unused chemical/hazardous wastes such as oil, paint, batteries and asbestos. The inert waste is to be disposed off to Municipal Corporation/local bodies dump yard and landfill sites.
- 60** Spill prevention and control plans should clearly state measures to stop the source of the spill. Measures to contain the spill and measures to dispose the contaminated material and hazardous wastes. It should also state the designation of personnel trained to prevent and control spills. Hazardous wastes include pesticides, paints, cleaners and petroleum products.
- 61** All lighting installed by the contractor around the site and at the labour quarters during construction shall be CFL/LED bulbs of the appropriate illumination levels. This condition is a must, unless specifically prescribed otherwise.

**Note:** 1. The general terms and conditions detailed above are in addition to special/ other/ additional conditions as specified elsewhere in tender document.

2. Nothing extra shall be paid on the account of these conditions.

**LIST OF TESTING EQUIPMENT TO BE PROVIDED BY CONTRACTOR AT SITE AS  
& WHEN REQUIRED**

Sl. No.	Equipment	Numbers
1.	100MT compression testing machine, electrical-cum-manuallyoperated	1No.
2.	Slump cone,steelplate,tampingrod,steelscale,scoop	2Nos.
3.	Pumps andpressuregaugesforhydraulictestingofpressure	1No.
4.	Weighing scale platform type 100Kg	1No.
5.	Graduated glass measuring cylinder of various capacity	As per requirement
6.	Sets of sieves of 450mm internal dia. For coarse aggregate [100mm,80mm, 40mm,2mm,12.5mm]	2set
7.	Sets of sieves of 200mm internal dia.for fine aggregate [4.75mm;2.36mm;1.18mm;600microns;300microns&150micron ,with lid and pan]	2set
8.	Sieve Brushes and sieve shaker capable of 200mm and 300mm dia.sieves,manually operated with timings witch assembly	2No.
9.	Cube moulds size70mmx70mmx70mm	12Nos.
10.	Cube mould ssize 150mmx150mmx150mm	30Nos.
11.	Hot air oven temp.Range50°Cto300°C-sensitivity1 <sup>0</sup>	1No.
12.	Electronic balance 600gx0.1g.,10kgand50kg	2Nos.
13.	Physical balance weight upto 5kg	12No.
14.	Measuring jars 100ml, 20ml, 500ml	5Nos.eachsize
15.	Spatula 100mm & 20mm with long blade wooden handle	5Nos.
16.	Vernier calipers 12” &6”size	1each
17.	Digital PHmeter least count 0.01mm	1No.
18.	Digital Micrometer least count.0.01mm	1No.
19.	GI tray 600x450x50mm, 450x300x40mm, 300x250x40mm	2Nos.each
20.	Electric Motormixer 0.25cum capacity	1No.
21.	Rebound hammer test digital rebound hammer	1No.
22.	Screw gauge 0.1mm-10mm,least count0.05	2Nos.
23.	Water testing kit	1No.
24.	Motorized sieve shaker	1No.
25.	Extra Bottom plates for15cmcube mould	6Nos.
26.	Standard Vibration Table for gauging the Cubes	1No.
27.	Counter scale capacity1kgand 10kg	2Nos.
28.	Iron Weight of 5kg,2 kg,1kg,500gm,20 gm,100 gm	1each

29.	Brass Weight of 50 gm, 2 gm, 10 gm, 5 gm, 2 gm, 1 gm	1 each
30.	Measuring cylinder TPX or Polypropylene capacity 1000ml, 500ml, 250 ml, 100ml	1 each
31.	Set of boxes and ratchet	1 No.
32.	Hammer 1lb & 2lb	2 each
33.	Measuring tape (5 meter)	5 Nos.
34.	Measuring tape (30 meter)	2 Nos.
35.	Any other equipment for site tests as outlined in BIS codes and as directed by the Engineer-in-charge.	As per requirement
36.	Concrete Core cutter Machine	2 No.
37.	Moisture meter	1 No.

- Note:** -1. The above list is only indicative and not exhaustive.  
2. The contractor shall procure necessary T&P whenever required for timely completion of the work. Any idle T&P (from the list mentioned above) if not required/needed shall be removed away from site under information to Engineer-in-Charge.

### ADDITIONAL CONDITIONS

1. The tenderer shall acquaint himself with the proposed site of work, its approach roads, working space available etc. Before quoting his rates and no claim on this account shall be entertained by the department.
2. The contractor(s) shall get him acquainted with nature and extent of the work and satisfy him about the availability of materials from kiln or approved quarries for collection and conveyance of materials required for construction.
3. The tenderer shall see the approaches to the site. In case any approach from main road is required at site or existing approach is to be improved and maintained for cartage of materials by the contractor, the same shall be provided, improved and maintained by the contractor at his own cost. No payment shall be made on this account.
4. Contractor shall take all precautionary measures to avoid any damage to adjoining property. All necessary arrangement shall be made at his own cost.
5. The contractor shall take all necessary precautions to prevent any nuisance or in- convenience to the owners, tenants or occupiers of adjacent properties and to the public in general and to prevent any damage to such properties and any pollution of smoke, streams and water-ways. He shall make good at his cost and to the satisfaction of the Engineer-in-Charge, any damage to roads, paths, cross drainage works or public or private property whatsoever caused thereon by the contractor. All waste or superfluous materials shall be carried away by the contractor without any reservation entirely to the satisfaction of the Engineer-in-Charge.
6. Utmost care shall be taken to keep the noise level to the barest minimum so that no disturbance as far as possible is caused to the occupants / users of building/adjacent properties.
7. The contractor shall be entirely and exclusively responsible for the horizontal, vertical and other alignment, the level and correctness of every part of the work and shall rectify effectively any errors or imperfections therein. Such rectifications shall be carried out by the contractor at his own cost to the instructions and satisfaction of the Engineer-in-Charge.
8. The rates quoted by the contractor are deemed to be inclusive of site clearance, setting out work, profile, establishment of reference bench mark, spot levels, construction of all safety and protection devices, barriers, earth embankments, preparatory works, all testing of materials working during monsoon, working at all depths, height and locations etc. unless specified in the schedule of quantities.
9. Royalty at the prevailing rates wherever payable shall have to be paid by the contractor on the boulders, metal, shingle, sand and bajri etc. or any other material collected by him for the work direct to revenue authorities and nothing extra shall be paid by the department for the same.
10. The contractor shall provide at his own cost suitable weighing, surveying and levelling and measuring arrangements as may be necessary at site for checking. All such equipment shall be got calibrated in advance from laboratory, approved by the Engineer-in-Charge. Nothing extra shall be payable on this account.

11. The contractor shall get the water tested with regard to its suitability and conforming to the relevant IS Code. The contractor shall obtain written approval from the Engineer-in-Charge before he proceeds by using the same for execution of work. The water testing charges shall be borne by the contractor.
12. All material shall only be brought at site as per program finalized with the Engineer-in-Charge. Any delivery of the material not required for immediate consumption shall not be accepted and thus not paid for.
13. All materials and fittings brought by the contractor to the site for use shall conform to the samples approved by the Engineer-in-Charge which shall be preserved till the completion of the work. If a particular brand of materials specified in the nomenclature of item, the same shall be used after getting the same approved from Engineer-in-Charge. Wherever brand / quality of material is not specified, the contractor shall submit the samples as per approved list of brand names given in the tender document / particular specifications for approval of technical sanctioning authority. For all other items, materials and fittings of ISI Marked shall be used with the approval of Engineer-in-Charge. Wherever ISI Marked material / fittings are not available, the contractor shall submit samples of materials / fittings manufactured by firms of repute conforming to relevant specifications or IS codes and use the same only after getting the approval to avoid delay, contractor should submit samples as stated above well in advance so as to give timely orders for procurement. If any material, even though approved by Engineer-in-Charge is found defective or not conforming to specifications shall be replaced / removed by the contractor at his own risk & cost.
14. The contractor shall ensure quality construction in a planned and time bound manner. Any sub-standard material / work beyond set-out tolerance limit shall be summarily rejected by the Engineer-in-Charge & contractor shall be bound to replace / remove such sub-standard / defective work immediately.
15. For construction works which are likely to generate malba / rubbish the contractor shall dispose of malba, rubbish & other unserviceable materials and wastes to the notified specified Municipal dumping ground & disposed off to recycling agents only and under no circumstances these shall be stacked / dumped even temporarily, outside the construction premises.
16. In the event of any restrictions being imposed by the Security agency, CPWD, Traffic or any other authority having jurisdiction in the area on the working or movement of labour/material, the contractor shall strictly follow such restrictions and nothing extra shall be payable to the contractor on this account. The loss of time on this account, if any, shall have to be made up by generating additional resources etc.
17. No payment shall be made for any damage caused by rain, snowfall, flood or any other natural calamity, whatsoever during the execution of the work. The contractor shall be fully responsible for any damage to the govt. property and work for which the payment has been advanced to him under the contract and he shall make good the same at his risk and cost. The contractor shall be fully responsible for safety and security of his material, T & P, Machinery brought to the site by him.

## **MODE OF MEASUREMENTS**

### **(A) For Computerized Measurement:**

The measurements shall be recorded and entered in computerized format in the first instance by the contractor, and a hard copy shall be submitted to the Department. All entries shall be made exactly as per the existing procedure.

These measurements shall then be 100% checked by the Junior Engineer / Assistant Engineer. The contractor shall incorporate all such changes or corrections, as may be done during these checks, to his draft computerized measurement and submit to the department the corrected computerized measurement Books now in use, and with its pages machine numbered.

Executive Engineer shall test check these computerized measurement as per the existing instructions. This book shall be treated as a Computerized Measurement Book.

The Junior Engineer / Assistant Engineer and the Executive Engineer shall record the necessary certificates for their checks and test checks as per the existing procedure in this Computerized Measurement Book.

The Computerized Measurement Book shall be allotted a serial number as per the Register of Computerized Measurement Books.

## **ADDITIONAL CONDITIONS FOR CEMENT**

1. The contractor shall procure 43 grade ordinary Portland cement conforming to IS: 8112 /Portland Pozzolana Cement conforming to IS:1489 {Part-I} as required in the work, from reputed manufacturers or their authorized dealers/ reseller of cement such as Ultratech, J.K. Super, ACC Cement **or from any other reputed cement Manufacturer having a production capacity not less than one million tonnes per annum as approved by Engineer-in-charge or his successor thereof appointed by competent authority for that region.** The tenderers may also submit a list of names of cement manufacturers which they propose to use in the work. The tender accepting authority reserves right to accept or reject name(s) of cement manufacturer(s) which the tenderer proposes to use in the work. No change in the tendered rates will be accepted if the tender accepting authority does not accept the list of cement manufacturers, given by the tenderer, fully or partially.

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

2. The cement shall be brought at site in bulk supply of approximately 50 tonnes or as decided by the Engineer-in-Charge. The cement godowns of the capacity to store a minimum of **2000bags** of cement shall be constructed by the contractor at site of work for which no extra payment shall be made.
3. Double lock provision shall be made to the door of the cement godown. The keys of one lock shall remain with the Engineer-in-charge or his authorized representative and the key of the other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of the cement godown. The contractor shall facilitate the inspection of the cement godown by the Engineer-in-Charge at any time.
4. The cement shall be got tested by the Engineer-in-Charge and shall be used on the work only after satisfactory test results have been received. **All expenditure to be incurred for testing of samples e.g. supply of material, packaging, sealing, transportation, loading, unloading, etc. including testing charges shall be borne by the contractor.**
5. The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in clause 38 of the contract and shall be governed by conditions laid therein. No Minus side cement consumption is allowed. In case of excess consumption no adjustment need to made.
6. The cement brought to site and the cement remaining unused after completion of the work shall not be removed from site without the written permission of the Engineer-in-Charge.
7. The damaged cement shall be removed from the site immediately by the contractor on receipt of a notice in writing from the Engineer-in-Charge. If he does not do so within three days of receipt of such notice, the Engineer-in-Charge shall get it removed at the cost of the contractor.

- 8** The contractor may use PPC conforming to IS 1489 (Part I) in place of OPC for other items of work other than concrete and RMC.
- 9** 43 grades ordinary Portland cement conforming to IS 8112 shall be used for concrete and RMC work. The Contractor shall procure cement only from reputed manufacturers as per list of preferred brands as specified in the tender document.
- 10** Cement: - 43 grade ordinary Portland cement conforming to IS 8112 shall be used.
- a) In case 43 grade Ordinary Portland Cement is not available, the contractor will be allowed to use 53 grade Ordinary Portland Cement (confirming to IS: 12269), subject to documentary evidence produced by the contractor regarding non availability of the specified grade and also subject to independent verification by the Engineer-in-Charge. Nothing extra shall be paid for this.
  - b) Use of fly ash conforming to IS 3812 (Part –I) is permitted in cement concrete work as partial substitution of OPC subject to fulfilment of conditions as per IS 1489 (Part-I) and satisfying the condition of minimum cement content.

## **ADDITIONAL CONDITIONS FOR STEEL REINFORCEMENT**

### **1. Special condition for steel reinforcement bars.**

**1.1** The Contractor shall procure only ISI marked corrosion resistant steel (CRS) reinforcement bars (TMT bars of Fe 500D grade or more) from primary manufacturers only:

- a. The CPWD / contractor shall procure only ISI marked corrosion resistant steel (CRS) reinforcement bars (TMT bars Fe 500D grade or more) from steel manufacturers such as SAIL, RINL, Tata, JSW, JSPL or their authorized dealer / reseller approved by Engineer-in-charge.
- b. Eligibility criteria and other technical parameter for steel manufacturers:
  - I) The steel manufacturers should have following documentary evidence-
    - i. Certificate of incorporation.
    - ii. Memorandum of articles of Association
    - iii. Credit rating of the company from CARE/CRISIL/ICRA (the grading should not be C/D grade for minimum last 3 years)
  - II) The steel manufacturers must have following licenses and certificates
    - i. ISI certificate for billets (IS 2830:2012).
    - ii. ISI certificate for TMT bars (IS 1786:2008(Amendment-1 Nov 2012)
  - III) The steel manufacturers should also preferably have the following licenses –
    - i. ISO 9001:2015
    - ii. ISO 14001:2015
    - iii. OHSAS 18001:2007
  - IV) The steel manufacturer should be using iron ore as the basic raw material. The entire gamut of iron and steel production is owned by the same company or its subsidiary company (ies) and the iron making capacity is sufficiently matching the steel making capacity, adopting any of the refining technologies for manufacturing steel & TMT Bars as given under are eligible:
    - i. BF-BOF route
    - ii. COREX –BOF Route.
    - iii. DRI-EAF route (Each Electric Arc Furnace should be 100 MT or more).
  - V) Billets produced must be ISI marked (IS 2830:2012).
  - VI) The TMT bars produced must be ISI marked (IS 1786:2008). 330
  - VII) The steel manufacturer should have the following in house testing facilities (NABL Accredited):
    - i. Computerized Universal Testing Machine
    - ii. Spectrometer
    - iii. Bend Re-bend facility as per IS-1786:2008 (Amendment-1 Nov 2012).
    - iv. Raw material laboratory: Arrangement for testing Carbon, Sulphur & Phosphorous etc.
    - v. Other testing facilities as specified in IS -1786:2008 & IS-2830:2012

**1.2** The contractor shall obtain manufacturer's certificate stating the process of manufacture, chemical composition and test sheet giving result of each mechanical test applicable to the material purchased and submit it to the Engineer-in-Charge. Each test certificate shall indicate the number of the cast to which it applies corresponding to the number or identification mark to be found on the material.

**1.3** Samples shall also be taken and got tested by the Engineer-in-Charge as per the provisions in this regard in relevant BIS codes.

- 1.4 In case the test results indicate that the steel arranged by the contractor does not conform to the specifications, the same shall stand rejected, and it shall be removed from the site of work by the contractor at his cost within a week time or written orders from the Engineer-in-Charge to do so.
- 1.5 The steel reinforcement bars shall be brought to the site in bulk supply of 10 tonnes or more, or as decided by the Engineer-in charge.
- 1.6 The steel reinforcement bars shall be stored by the contractor at site of work in such a way as to prevent their distortion and corrosion, and nothing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.
- 1.7 For checking nominal mass, tensile strength, bend test, re-bend test etc. specimens of sufficient length shall be cut from each size of the bar at random, and at frequency not less than that specified below:

Size of bar	For consignment below 100 tonnes	For consignment above 100 tonnes
Under 10 mm dia bars	One sample for each 25 tonnes or part thereof	One sample for each 40 tonnes or part thereof
10 mm to 16mm dia bars	One sample for each 45 tonnes or part thereof	One sample for each 50 tonnes or part thereof
Over 16 mm dia bars	One sample for each 50 tonnes or part thereof	One sample for each 75 tonnes or part thereof

**Note: Consignment shall be defined as quantity included in single purchase voucher.**

- 1.8 All expenditure to be incurred for testing of samples e.g. supply of material, packaging, sealing, transportation, loading, unloading, etc. including testing charges shall be borne by the contractor.
- 1.9 The actual issue and consumption of steel on work shall be regulated and proper accounts maintained. The theoretical consumption of steel shall be worked out as per procedure prescribed in clause 38 of the contract and shall be governed by conditions laid therein. No Minus side consumption is allowed. In case of excess consumption no adjustment need to be made.
- 1.10 The steel brought to site and the steel remaining unused shall not be removed from site without the written permission of the Engineer-in-charge.
- 1.11 Steel bars brought by the contractor for use in the work shall be got checked from the Engineer-in-Charge or his authorized representative of the work on receipt of the same at site before use.
- 1.12 In case the contractor brings surplus quantity of steel the same after completion of the work will be removed from the site by the contractor at his own cost after approval of the Engineer-in-Charge.
- 1.13 Reinforcement including authorized spacer bars and lappages shall be measured in length of different diameters, as actually (not more than as specified in the drawing) used in the work, nearest to a centimeter. Wastage and unauthorized overlaps shall not be measured.

**1.14** The standard sectional weights referred to as in **Table 5.4 under para 5.3.4 ,page-140** , in CPWD specifications for works 2019 Vol.1 will be considered for conversion of length of various sizes of MS bars, Tor steel bars and TMT bars into standard weight.

**1.15** Records of actual sectional weight shall also be kept dia-wise & lot-wise. The average sectional weight for each diameter shall be arrived at from samples from each lot of steel received at site. The decision of the Engineer-in-Charge shall be final for the procedure to be followed for determining the average sectional weight of each lot. Quantity of each diameter of steel received at site of work each day will constitute one single lot for the purpose. The weight of steel by conversion of length of various sizes of bars based on the actual weighted average sectional weight shall be termed as derived actual weight.

**1.16** If the derived weight as in para**1.15** above is lesser than the standard weight as in para**1.14** above the derived actual weight shall be taken for payment.

If the derived actual weight is found more than the standard weight then the standard weight as worked out in para**1.14**above shall be taken for payment. In such case nothing extra shall be paid for the difference between the derived actual weight and the standard weight.

**1.17** Mixing of different type of steel/different grades of steel shall not be allowed in the same structural members as main reinforcement to satisfy clause 26.1 of IS: 456.

**1.18** Tolerances on Nominal Mass (individual sample) shall be as under:-

**(Table 5.4A / page-141 / Specification – Vol-1-2019)**

Sl. No.	Nominal size mm	Tolerances on the Nominal Mass, percentage
1	Up to and including 10	-8%
2	Over 10 up to & including 16	-6%
3	Over 16	-4%

## **PARTICULAR SPECIFICATION & CONDITIONS OF WORK**

### **1 EARTH WORK**

- 1.1 The work shall be done in accordance with CPWD specifications. Any trenching and digging within the least possible for laying sewer lines/water lines/cables etc. shall be commenced by the contractor only when all men, machinery's and materials have been arranged and closing of the trench(s) thereafter shall be ensured time.
- 1.2 The earthwork in excavation, wherever required, shall be carried out in slushy position. Rates for earthwork shall include cost of the element for working in or under water / liquid mud including pumping of water / liquid mud. Nothing extra shall be payable on this account. Therefore, the Contractor shall quote his rates after studying the site conditions.
- 1.3 De-watering shall be carried out by suitable means with adequate stand-by arrangements of pumps etc. And it shall be ensured that its disposal is carried out as per the regulations of the local bodies. The agencies are, therefore, advised to inspect and acquaint themselves of the site and location of disposal point(s) of water / slush and satisfy themselves as regards method of pumping and disposal required to be adopted. Any default or failure on the part of the Contractor to acquaint him with the aforesaid aspect of work shall not absolve him from his responsibility for the execution / performance of this contract. Also, all permissions in this regard, to be taken from local authorities, shall be obtained by the Contractor. Nothing extra shall be payable on these accounts.
- 1.4 In trenches where surface water is likely to get into cut / trench during monsoons, a ring bund of puddle clay or by any other means shall be formed outside, to the required height, and maintained by the Contractor. Also, suitable steps shall be taken by the Contractor to prevent back flow of pumped water into the trench. Nothing extra shall be payable on this account.
- 1.5 The cost of de watering or working under water and / or liquid mud for execution of all the items for the work is deemed to be included in quoted rates of the respective items and shall not be measured separately for payment. Nothing extra shall be payable for de watering in this work, irrespective of whether specified or not, in the item descriptions or in the specifications / conditions in this contract agreement.
- 1.6 This shall also include water encountered from any sources such as rains, floods, sub- soil water table being high and/or due to any other cause whatsoever.

#### **1.7 Note for all items for excavation:-**

**It is the responsibility of the contractor to take suitable slope protection measures, If required, to ensure protection of adjoining structures / buildings / compound wall / service line etc during excavation.**

**The contractor shall submit proposal for the measures to be undertaken, to the Engineer in Charge for approval before excavation. The approval shall not absolve the contractor of his responsibility to ensure protection of adjoining structures / buildings / compound wall / service line etc during excavation. The rates quoted by the contractor shall be inclusive of all such protection measures.**

#### **1.7 Note regarding payment of Royalty to State Government**

**No excavated earth shall be removed from the campus unless suggested otherwise by Engineer-in-Charge. All subsoil shall be reused in backfilling / landscape, etc. as per the instructions of the Engineer-in-Charge. The surplus excavated earth shall be disposed of by the contractor at his own cost for reuse. Royalty at the prevailing rate on the soil is to be deposited with the State Govt. Department. A receipt of the same is to be produced by the contractor to the Engineer-in-Charge as a proof of payment. A certificate of reuse as required by the Engineer-in-Charge shall be submitted by the contractor.**

**2 RCC WORK**

The work shall be done as per CPWD specifications.

- 2.1 If the quantity of cement actually used in the work is found to be more than the theoretical quantity of cement including authorized variation, nothing extra shall be payable to the contractor on this account. No minus side variation is allowed in quantity of cement actually used.
- 2.2 For non-scheduled items, the decision of the Engineer-in-charge or his successor thereof regarding theoretical quantity of the cement which should have been actually used shall be final and binding on the contractor.
- 2.3 Cement brought to site and cement remaining unused after completion of work shall not be removed from site without written permission of the Engineer-in-Charge.
- 2.4 In case the contractor brings surplus quantity of cement the same after completion of the work will be removed from the site by the contractor at his own cost after approval of the Engineer-in-Charge.
- 2.5 Cement register for the cement shall be maintained at site. Cement bags shall be stored in separate godowns to be constructed by the contractor at his own cost as per sketch (which is only indicative and actual size will depend on the site requirements) given in CPWD specifications with weather proof roofs and walls. Each godown shall be provided with a single shutter door with two locks. The key of one lock shall remain with Engineer-in-charge or his authorized representative and that of the other lock with the authorized agent of the contractor at the site of work so that the cement is issued from the godown according to the daily requirements with the knowledge of both parties and proper account for the same is maintained in the standard proforma.

**2.6 PROFORMA FOR THE CEMENT REGISTER**

**PARTICULARS OF RECEIPT**

Date of receipt	Quantity received	Progressive total	Date of issue	Quantity issued	Items of work for which issued
1	2	3	4	5	6

**PARTICULARS OF ISSUE**

Qty. returned at the end of the day	Total issued	Daily balance in hand	Contractor's initial	JE's initial	Remarks (AE/EE's periodical check)
7	8	9	10	11	12

### **3 DESIGN MIX CONCRETE:**

**3.1** CPWD Specifications and latest IS Codes shall be followed.

**3.2** The concrete mix design / laboratory tests with and without admixture shall be got done by contractor at his own cost and will be carried out by the contractor through one of the following laboratory/Test houses:

IIT /NIT / Govt. Engineering Institutions as directed by the Engineer-in-charge.

The various ingredients for mix design / laboratory tests shall be sent to the test houses through the Engineer-in-Charge and the samples of such aggregate & cement shall be preserved at site by the department

**3.3** The contractor shall submit the mix design report from any of above approved laboratory for approval of Engineer-in-Charge within 30 days from the date of issue of letter of acceptance of the tender. No concreting shall be done until the mix design is approved by the Engineer-in-charge. In case of white Portland cement and the likely use of admixtures in concrete with PPC/white Portland cement the contractor shall design and test the concrete mix by using trial mixes with white cement and/or admixtures also for which nothing extra shall be payable.

**3.4** In case of change of source or characteristic properties of the ingredients used in the concrete mix during the work, a revised laboratory mix design report conducted at laboratory established at site shall be submitted by the contractor as per the direction of the Engineer-in-Charge.

### **4 Concrete and RCC Work**

**4.1** Design Mix Concrete from RMC plant:

- i. The agency shall arrange RMC (Ready Mix Concrete) from RMC Plants only after getting the same approved from Engineer-in-charge for supplying the concrete. No batch-mix plant at site shall be allowed.
- ii. The Engineer-in-Charge reserves the right to inspect at any stage and reject the concrete if he is not satisfied about quality of product at the user's end.
- iii. The Engineer-in-charge reserves the right to exercise control over the:-
  - a) Ingredients, water and admixtures to be used in the concrete including conducting of tests for checking quality of materials, recording of test results and declaring the materials fit or unfit for use in production of mix.
  - b) Calibration check of the RMC plant.
  - c) Weight and quantity check on the ingredients, water and admixtures added for batch mixing.
  - d) Time of mixing of concrete.
  - e) Testing of fresh concrete, recordings of results and declaring the mix fit or unfit for use. This will include continuous control of the workability during production and taking corrective action, if required.
- iv. For exercising such control, the Engineer-in-charge may depute his authorized representative at the RMC plant. It shall be responsibility of the agency to ensure that all necessary equipment, manpower & facilities are made available to Engineer-in-Charge and/or his authorised representative at RMC plant.

- v. The computerized dispatch slips for each dispatch of RMC shall be kept as record and shall be made available to the Engineer-in-Charge or his authorized representative.
- vi. All required relevant records of produced and used concrete shall be made available to the Engineer-in-Charge or his authorised representative. Engineer-in-Charge shall, as required, specify guidelines & additional procedures for quality control & other parameters in respect of materials, production & transportation of concrete mix which shall be binding on the agency.
- vii. Concrete as per approved design mix by Engineer-in-Charge shall only be produced and transported to the site.
- viii. The concrete mix design will be carried out by the agency, at his own cost, through laboratories/Test houses to be approved by Engineer-in-charge
- ix. In the event above laboratories are unable to carry out the requisite design/testing, the agency shall have to get the same done from any other reputed laboratory with prior approval of the Engineer-in-Charge.

**4.2 Cement:-** 43 grade ordinary Portland cement conforming to IS 8112 shall be used.

- a) In case 43 grade Ordinary Portland Cement is not available, the contractor will be allowed to use 53 grade Ordinary Portland Cement (confirming to IS: 12269), subject to documentary evidence produced by the contractor regarding non availability of the specified grade and also subject to independent verification by the Engineer-in-Charge. Nothing extra shall be paid for this.
- b) Use of fly ash conforming to IS 3812 (Part –I) is permitted in cement concrete work as partial substitution of OPC subject to fulfilment of conditions as per IS 1489 (Part-I) and satisfying the condition of minimum cement content.
- c) Admixtures/ Plasticizers:- The admixture shall conform to IS:9103, wherever required, the admixture of approved quality and from preferred make list attached to this tender document only shall be used to attain the required workability. Nothing extra shall be paid for use of admixtures.

## **5 PRE-CAST RCC WORK**

- 5.1** Pre-cast reinforced concrete units shall be of grade or mix as specified. Provision shall be made in the mould to accommodate fixing devices such as hooks, flats etc. and forming of notches and holes. Each unit shall be cast in one operation. A sample of the unit shall be got approved from Engineer-in-Charge before taking up the work.
- 5.2** Pre-cast units shall be clearly marked to indicate the top of member and its locations.
- 5.3** Pre-cast units shall be stored, transported and placed in position in such a manner that these are not damaged.

## **6 SANITARY INSTALLATIONS, WATER SUPPLY AND DRAINAGE**

- 6.1** The work of water supply and sanitary installations shall be got executed by the agency as approved by Engineer-in-Charge.
- (i) The entire plumbing drawing and sanitary installation drawing/ details shall be submitted by the contractor and got approved by the Engineer-in-Charge before the execution.
  - (ii) The entire responsibility for the quality of work will however rest with the building contractor only.
- 6.2** The work of water supply, internal sanitary installations and drainage etc. shall be carried out as per the bylaws of the Municipal Corporation or any other local body and the contractor shall produce necessary completion certificates from such authority after completion of work if required.
- 6.3** All water tanks, taps, sanitary, water supply and drainage pipes fittings and accessories etc. shall conform to the bylaws and specifications of the Municipal Body/Corporation where CPWD specifications are not available.
- 6.4** The contractor shall engage licensed plumbers for the work and the materials (fixtures/fittings) tested by the local Municipal Body/Corporation wherever required at his own cost. Nothing extra shall be paid/reimbursed for the same.
- 6.5** The contractor shall give a performance test of the entire installation(s) as per standing specifications before the work is finally accepted by making his own arrangements for water supply, electricity etc. and nothing extra whatsoever shall be payable for the same.
- 6.6** The work in general shall be carried out as per CPWD specifications. Rate includes all materials, labour and all the operations mentioned in the respective items unless and otherwise specifically mentioned.
- 6.7** The contractor shall be responsible for all the protection of sanitary, water supply fittings and fixtures against pilferage and breakage during the period of installation until the completion / handing over of the work.
- 6.8** The contractor shall submit completion plans for water supply internal sanitary installations and building drainage work within thirty days of the date of completion. These plans are to be submitted on drawings prepared preferably through computers (1 original copy + 3 photocopies) on suitable scales to show the general arrangement and desired details.
- 6.8** The chasing, cutting and making holes in the masonry and / or cement concrete and / or RCC works shall be done carefully without causing any damage to the structure. As far as possible, mechanical cutters & core cutting machines shall be used in a workman like manner, for concealing the pipelines and fittings. The chases / holes, so made, shall be made good with the cement mortar of mix 1:4 (1 cement: 4 coarse sand) after testing of the pipe lines for leakage. The cost of cutting cores in RCC, cutting holes in masonry & making good the same shall be inclusive in the respective item of drainage / water supply lines.

## **7 Source of Materials:**

- 7.1 All stone aggregate and stone ballast shall be of hard stone variety to be obtained from approved quarries or any other source to be got approved by the Engineer-in-charge.
- 7.2 Coarse sand should be obtained from approved quarries or any other source to be got approved by the Engineer-in-charge and screened as required. The same shall be clean and sharp angular grit type. If the sand brought to site is dirty it must be washed in clean water.
- 7.3 Fine sand should be obtained from approved quarries any other source to be got approved by the Engineer-in-charge and screened as required. The same shall be clean and sharp angular grit type. If the sand brought to site is dirty it must be washed in clean water.

## **8. Particular specification for Concrete and RCC Work**

### 8.1 General:

- i. The work in general shall be carried out as per the CPWD specifications.
- ii. All nominal concrete used at site shall be machine mixed at site.
- iii. Design mix concrete from fully automatic computerized concrete batching and mixing plant.

### 8.2 Proportioning Concrete:

- 8.2.1 In proportioning cement concrete, the quantity of both cement and aggregates shall be determined by weight. The cement shall be weighed separately from the aggregates. Water shall either be measured by volume in calibrated tanks or weighed. All measuring equipment shall be maintained in a clean and serviceable condition. The amount of mixing water shall be adjusted to compensate for moisture content in both coarse and fine aggregates. The moisture content of aggregates shall be determined in accordance with IS: 2386 (Part III). Suitable adjustments shall also be made in the weights of aggregates to allow for the variation in weight of aggregates due to variation in moisture content.

### 8.3 Production of Concrete:

- 8.3.1 The concrete shall be produced in a central batching and mixing plant with, computerized printing for contents and admixture dosage. The batching plant shall be fully automatic. Automatic batcher shall be charged by devices which, when actuated by a Single starter switch will automatically start the weighing operation of each material and stop automatically, when the designated weight of each material has been reached. The batching plant shall have automatic arrangement for dispensing the admixture and shall also be capable of discharging water in more than one stage. A print out from the batching plant for every lot shall be submitted. A batching plant essentially shall consist of the following components:
- a. Separate storage bins for different sizes of aggregates, silo for cement; and water storage tank.
  - b. Batching equipment
  - c. Mixers
  - d. Control panels
  - e. Mechanical material feeding and elevating arrangements
  - f. Dust collector

- 8.3.2 The compartments of storage bins for aggregates shall be approximately of equal size. The

cement compartment shall be centrally located in the batching plant. It shall be watertight and provided with necessary air vent, aeration fittings for proper flow of cement & emergency cement cut off gate. The aggregate and sand shall be charged by power operated centrally revolving chute. The entire plant from mixer floor upward shall be enclosed and insulated. The batch bins shall be constructed so as to by self- cleansing during drawdown. The batch bins shall in general conform to the requirements of IS: 4925.

8.3.3 WATER: a) Water to be used in manufacturing and curing of Concrete shall be tested before use. All such tests shall be submitted to the Engineer in charge for his approval before water is used in work.

8.3.4 Contractor shall identify the location of source of water intended to be used. Each such source of water shall be separately tested. In the event of a change in source of water all tests specified herein shall have to be repeated.

8.3.5 In the event of water is drawn from tube wells or open wells, water samples shall be for seasonal fluctuations in water table or at intervals to be directed by the Engineer-in-charge. Water samples from each source shall be tested as under:

Test	Number of tests for each source
Acidity	3
Alkalinity	3
Presence of Solids	3

8.3.6 Mean values of the above tests shall be taken as the representative value and the acceptance criteria shall be based on these test results. All testing procedure and computation of test results shall conform to IS: 3025.

8.3.7 Approved quality water shall be collected and stored in the Under Ground sumps/elevated tanks for the day-to-day requirement of work and same shall be used for all cement works and also for curing. Due care shall be taken in this regard.

8.3.8 If Government source of supply is nearby and made available to the contractor; the contractor may use that water and accordingly, charges of metered water consumption at the rate decided by the Engineer-in-Charge will be deducted from the bills payable to him. However, testing procedure & frequency & storage modalities will remain same. Whatever may be the source of water, adequate capacity for storage shall be made. If required, RO PLANTS of sufficient capacity shall be established at his own cost.

8.3.9 The batching equipment shall be capable of determining and controlling the prescribed amounts of various constituent materials for concrete accurately i.e., Water, cement, sand, individual size of coarse aggregates etc. The accuracy of the measuring devices shall fall within the following limits.

Measurement of Cement	±2% of the quantity of cement in each batch
Measurement of Mineral Admixture	±2% of the quantity of cement in each batch

Measurement of Water	±3% of the quantity of water in each batch
Measurement of Aggregate	±3% of the quantity of aggregate in each Batch
Measurement of Admixture	±3% of the quantity of admixture in each Batch

In a batching plant, the concrete production equipment shall be calibrated initially at the time of installation or reconditioning of the equipment and subsequently at the following intervals-  
 Mechanical/knife edge system: At least once in every two months. Electrical or load cell system: At least once in every three months.

NOTE: All ingredients of concrete shall be used by mass except water and admixtures which may be by volume.

8.3.10 It is important to maintain the water-cement ratio constant at its correct value. To this end, determination of moisture contents in both fine and coarse aggregates shall be made as frequently as possible, the frequency for a given job being determined by the engineer-in-charge according to weather conditions. The amount of the added water shall be adjusted to compensate for any observed variations in the moisture contents. For the determination of moisture content in the aggregates, IS 2386 (Part 3) may be referred to. Where batching plants are used, it is recommended to determine moisture content by moisture probes fitted to the batching plants. To allow for the variation in mass of aggregate due to variation in their moisture content, suitable adjustments in the masses of aggregates shall also be made.

8.4 Mixing Concrete:

The mixer in the batching plant shall be so arranged that mixing action in the mixers can be observed from the operator's station. The mixer shall be equipped with a mechanically or electrically operated timing, signaling and metering device which will indicate and assure completion of the required mixing period. The mixer shall have all other components as specified in IS: 4925.

8.5 Transportation, Placing and Compaction of Concrete:

Mixed concrete from the batching plant shall be transported to the point of placement by transit mixers or through concrete pumps or steel closed bottom buckets capable of carrying 0.6 cum concrete. In case the concrete is proposed to be transported by transit mixer, the mixer speed shall not be less than 4 rev/ min. Of neither the drum nor greater than a speed resulting in a peripheral velocity of the drum as 70 m / minute at its largest diameter. The agitating speed of the agitator shall be not less than 2 rev / min. Nor more than 6 rev / min. of the drum. The number of revolutions of the mixing drum or blades at mixing speed shall be between 70 to 100 revolutions for a uniform mix, after all ingredients, have been charged into the drum. Unless tempering water is added, all rotation after 100 revolutions shall be at agitating speed of 2 to 6 rev / min. And the number of such rotations shall not exceed 250. The general construction of transit mixer and other requirements shall conform to IS: 5892.

In case concrete is to be transported by pumping, the conduit shall be primed by pumping a batch of mortar / thick cement slurry through the line to lubricate it. Once the pumping is started, it shall not be interrupted (if at all possible) as concrete standing idle in the line is liable to cause a plug. The operator shall ensure that some concrete is always there in the pump-receiving hopper during operation. The lines shall always be maintained clean and shall be free of dents.

Materials for pumped concrete shall be batched consistently and uniformly. Maximum size of aggregate shall not exceed one-third of the internal diameter of the pipe. Grading of aggregate shall be continuous and shall have sufficient ultra-fine materials (materials finer than 0.25mm). Proportion of fine aggregates passing through 0.25mm shall be between 15 & 30% and that passing through 0.125 mm sieve shall not be less than 5% of the total volume of aggregate. Suitability of concrete shall be through pumping shall be verified by trial mixes and by performing pumping tests.

**8.6 PREPARATION OF MIXES AS PER APPROVED DESIGN MIX AND CONDUCTING CONFIRMATORY TEST AT FIELD LAB:**

The contractor shall make the cubes of trial mixes as per approved Mix design at site laboratory for all grades, in presence of Engineer in charge using sample of approved materials proposed to be used in the work prior to commencement of concreting and get them tested in his presence to his entire satisfaction for 7 days and 28 days. Test cubes shall be taken from trial mixes as follows.

For each mix, a set of six cubes shall be made from each of the three consecutive batches. Three cubes from each set of six shall be tested at age of 7 days and remaining three cubes at age of 28 days. The cubes shall be made, cured, transported and tested strictly in accordance with specifications. The average strength of nine cubes at age of 28 days shall exceed the specified target mean strength for which design mix has been approved, the evaluation of test results will be done as per IS: 456-2000.

**8.7 Ultrasonic Pulse Velocity Method of Test for RCC:**

The underlying principle of assessing the quality of concrete is that comparatively higher velocities are obtained when the quality of concrete in terms of density, homogeneity and uniformly is good. The consistency of the concrete as regards its general quality gets established. In case of poorer quality lower velocities are obtained. If there are cracks, voids or flaws inside the concrete which come in the way of transmission of pulse, lower velocities are obtained.

The quality of concrete in terms of uniformity, incidence or absence of internal flaws, cracks and segregation etc. Indicative of the level of workmanship employed, can thus be assessed using the guidance given in table below, which have been evolved for characterizing the quality concrete in structure in term of the ultrasonic pulse velocity.

Velocity criterion for Concrete Quality Grading.

Sl. No.	Pulse velocity by Cross Probing (km/sec)	Concrete Quality Grading
1	Above 4.5	Excellent
2	4.5 to 3.5	Good
3	3.5 to 3.0	Medium
4	Below 3.0	Doubtful

Note: In Case of “doubtful” quality it may be necessary to carry further tests.

Pulse velocity method of test of concrete is to be conducted as a routine test. The acceptance criteria as per the above table will be applicable which is as per IS 13311 (part-1): 1992. From the above “Good” and “Excellent” grading are acceptable and below these grading the concrete will not be acceptable.

All RCC Columns and 5% of the other of RCC members in each category i.e., Beam, column, slab and footing may be tested by UPV test method for establishing quality of concrete. It is

suggested that test be conducted on RCC beam near joint with column, on RCC column near joint with beam, on RCC footings and rafts. On RCC rafts a suitable grid can be worked out for determining number of tests. In addition, doubtful areas such as honeycombed locations, locations, where continuous seepage is observed, construction joints and visible loose pockets will also be tested.

The test results are to be examined in view of the above acceptance criteria “Good” and “Excellent” and wherever concrete is found with less than required quality as per acceptance criteria, repairs to concrete will be made. Honeycombed areas and loose pockets will be repaired by grouting using Portland Cement Mortar/Polymer Modified Cement Mortar /Epoxy Mortar, etc. After chipping loose concrete in appropriate manner. In areas where concrete is found below acceptance criteria and defects are not apparently visible on surface, injecting approved grout in appropriate proportion using epoxy grout /acrylic Polymer modified cements slurry made with shrinkage compensating cement / plain cement slurry etc. will be resorted to for repairs. Repairs to concrete will be done till satisfactory results are obtained as per the acceptance criteria by retesting of the repaired area. If satisfactory results are not obtained dismantling and relaying of concrete will be done.

9. **Unless otherwise specified, CPWD specifications 2019 volume I & II with up to date correction slips and shall be followed in general. Any additional item of work if taken up subsequently, shall also conform to the relevant CPWD specifications, mentioned above, should there be any difference between description of items as given in the schedule of quantities, nomenclature and specifications for individual items of work (special conditions) and I. S. Codes, work shall be got done in the following order of precedence.**

- i) Description of items as given in Schedule of quantities
- ii) Particular specifications
- iii) Special conditions
- iv) Additional Conditions
- v) Tender drawings attached
- vi) CPWD Specifications
- vii) General Conditions of Contract for CPWD works
- viii) I. S. Codes
- ix) National Building code.
- x) ASTM, BS, or other foreign origin code mentioned in tender document
- xi) Decision of Engineer-in-Charge
- xii) SoundEngineeringpracticesorwellestablishedlocalconstructionpractices..

9.1 In case of item not covered by the CPWD specifications referred to above, or particular specification attached, reference shall be made to appropriate latest I. S. Codes and the decision of the Engineer-in-Charge shall be final and binding on the contractor.

- 9.2 Wherever any reference to any Indian standard Specifications occurs in the documents relating to this contract, the same shall be inclusive of all amendments issued thereto or revisions thereof, if any, up to the date of receipt of tender.
- 9.3 Unless otherwise specified in the schedule of quantities, the rates for all items of work shall be considered, as inclusive of pumping out or balling out water, if required for which no extra payment will be made. This will include water encountered from any source such as rains, floods, sub soil water table being high and / or due to any other cause whatsoever.
- 9.4 The work shall be executed and measured as per metric dimensions given in the Schedule of quantities, drawings etc. (F.P.S. Units wherever indicated are for guidance only).
- 10.0 The following modifications to the above specifications and some additions specifications shall however apply.**
- 10.1 All stone aggregate and stone ballast shall be hard stone variety obtained from source to be got approved by the Engineer-in-Charge.
- 10.2 Coarse/fine sand obtained from source to be got approved by the Engineer-in-Charge and screened as required. The same shall be clean and sharp angular grit type. If the sand brought to site is dirty it must be washed with clean water.
- 10.3 For structural repair work where quartz sand is specified, coarse grained quartz sand shall be used in jacketing work whereas graded quartz sand shall be used for preparation of in situ polymer modified cement mortar.
- 10.4 Bricks shall be of crushing strength not less than 35 kg/sq.cm. The average water absorption of bricks when immersed in water for 24 hours shall not be more than 20% of the dry weight.
- 10.5 Cast iron pipes and fittings without ear shall be used. However, pipes and fittings with ears may be accepted without any extra payment. In such cases, clamps are not required for fixing and no extra payment will be made for fixing the pipes.
- 10.6 The rates for all items of work, shall unless clearly specified otherwise, include cost of all labour, materials, scaffolding and other inputs involved in the execution of the item at all floors and heights.
- 10.7 To avoid displacement of bars in any direction and to ensure proper cover only factory made round type cover blocks as approved by Engineer-in-charge should be used for RCC works. Nothing extra shall be paid for this.

## **11.0 EMBEDDING OF PIPES, CONDUITS ETC.**

- 11.1 The brickwork for the portions of the external wall of W.C. through which pipes are taken, will be done after the pipes are fixed as far as practicable.
- 11.2 All crossings, embedment etc. in walls and floors for water supply, drainage and sanitary pipes, fittings etc. shall be provided as per previously prepared detailed drawings for individual walls and floors so as to avoid cuttings of brick works and floors. All such areas shall be made good during finishing and nothing extra shall be paid for this.

## **12.0 WATER SUPPLY, SANITARY FITTINGS, PAINTS & OTHER MATERIALS.**

- 12.1 Sanitary fittings, paints and other materials shall be obtained from one of the firms on the list of approved manufactures of CPWD, and/or shall bear I.S.I. mark.
- 12.2 All the material shall be tested as per provisions of CPWD Specifications Vol. I & II and the relevant I. S. codes. If there is any difference between acceptance CRITERIA given in I.S. codes, CPWD specifications and special conditions, the acceptance CRITERIA shall be in the following order of precedence.
1. Special conditions
  2. CPWD Specifications
  3. B. I. S. codes
- 12.3 The Contractor's rate for the items involving the use of materials shall be deemed to cover the cost of samples consumed in testing. The cost of packing, sealing, transportation, loading, unloading etc. shall be borne by the contractor. Testing charges borne by the department only when the samples satisfy the provision specified and conform to the requirements of the relevant specification. If the results show that the samples do not satisfy the relevant specifications, the testing shall be borne by the contractor.
- 12.4 As far as practicable no water supply/drainage pipes and fittings shall be fixed to RCC columns, beams etc. unless such a layout is approved by the Engineer-in-Charge. In such case, the SCI pipe and G. I. pipe wherever necessary shall be fixed to RCC columns, beams etc. with rawl plugs and nothing extra shall be paid for this.

## SPECIAL CONDITIONS

- 1.0 The contractor will have to work according to the program of work, decided by the Engineer-in-charge for which purpose the contractor should submit a tentative program of the work within one month from the date of start of the work. The contractor shall also construct a sample unit, complete, in all respects within time specified by the Engineer-in-Charge and this sample unit shall be got approved from the Engineer-in-charge before mass construction is taken up. No extra claim whatsoever beyond the payments due at agreement rates will be entertained from the contractor on this account.
- 2.0 The contractor shall take instructions from the Engineer in charge for stacking of materials in any place. No excavated earth or building material shall be stacked on areas where other buildings, roads, services or compound walls are to be constructed.
- 3.0 If as per municipal rules the huts for labour are not to be erected at the site of work, the contractors are required to provide such accommodation as is acceptable to local bodies and nothing extra shall be paid on this account.
- 4.0 The work on items of internal finishing must be started as soon as the structure of two floors is completed.
- 5.0 Unless otherwise provided in the Schedule of quantities / CPWD specification 2019 the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the building and nothing extra shall be payable to him on this account.
- 6.0 The work shall be carried out in accordance with the architectural drawings and structural drawings. The structural and architectural drawings shall have to be properly correlated before executing the work. In case of any differences noticed between architectural and structural drawings, final decision, in writing of the Engineer-in-charge shall be obtained by the contractor. In case of any discrepancy between the nomenclature of item given in the schedule of quantities appended with the tender and architectural drawings related to the relevant items, the former shall prevail unless and otherwise given in writing by the Engineer-in-charge. Samples shall be prepared before starting particular items of work for prior approval of the Engineer-in-Charge and nothing extra will be payable on this account.
- 7.0 All the material to be used on works shall bear ISI certification mark unless otherwise the make is specified in the item or special conditions appended with this tender document. In case ISI marked materials or the materials mentioned in the tender documents are not available as per opinion of Engineer-in-Charge, which shall be final and binding, the material to be used shall conform to CPWD Specifications applicable in this tender or IS code. In such cases Engineer-in-Charge shall satisfy himself about the quality of such materials and give his approval in writing. Only articles classified, as first quality by the manufacturers shall be used unless otherwise specified. All material not having ISI mark shall be tested as per relevant CPWD / ISI specification.  
The Engineer-in-Charge may relax the condition regarding testing if the quantity of the materials required for the work is very small. In all cases of use of ISI marked materials proper proof of procurement of materials from authentic manufacturers shall be provided by the contractor to the entire satisfaction of Engineer-in-Charge.
- 8.0 All materials equivalent to the one specified should be got approved by the Engineer-in-Charge before using the said materials in the work.
- 9.0 For form work use of solid timber and products involving solid timber shall not be permitted. Specifications for steel centering, shuttering and formwork shall be followed as per para 5.2 and its sub paras of CPWD specifications 2019.
- 10.0 The contractor shall be responsible for the protection of sanitary and water supply fittings and fixtures against pilferage and breakage during the period of installation and thereafter until the building is handed over.
- 11.0 Any damage to work resulting from rains or from any other cause until the work is taken over by Department after completion of work shall be made good by the contractor at his own cost.

- 12.0 Some restrictions may be imposed by the security staff etc. on the working and for movement of labour, materials etc. The contractor shall be bound to follow all such restrictions/ instructions and nothing extra shall be payable on this account.
- 13.0 The contractor shall comply with the provision of any Government acts, which relate to the work and to the regulations and laws of any local authorities. The contractor shall give all notices required by the said Acts, laws etc. and pay all fees payable to such authorities and allow for those contingencies, cost of restorations etc. and all other fees payable to the local authorities.  
Water and sewerage charges for execution of the work shall be payable by the contractor directly to the local bodies under intimation to the department. In case such charges are not paid by the contractor, the same shall be recovered from the bill for remittance or if already remitted to the local bodies.
- 14.0 Tendered rates are inclusive of all taxes and levies payable under the respective statutes. Rates quoted shall be inclusive of the Sales Tax/Turnover tax GST as leviable by the State Governments on the transfer of property in goods involved in the execution of works contract and nothing extra will be payable on that account.
- 15.0 The contractor shall give a performance test of the entire installation(s) as per standing specifications before the work is finally accepted and nothing extra whatsoever shall be payable to the contractor for the test.
- 16.0 The tenderer should not quote unnecessary conditions contradicting the general conditions and particular specifications given in this tender, as such conditions apart from being not agreed to can lead to rejection of the tender.

**17.0 BRIEF WORDING OF ITEMS**

17.1 For the purpose of recording measurements and preparing running account bills, the underlined portions of the nomenclature of items included in the Schedule of Quantities shall be adopted as the abbreviated nomenclature of the particular item. The abbreviated nomenclature shall be taken to cover all the materials and operations as per the complete nomenclature of the relevant item in the agreement and relevant specifications. In the case of items for which abbreviated nomenclature is not indicated in the Schedule of quantities, the full nomenclature shall be reproduced while recording measurements and preparing the bills.

Also following abbreviations may be adopted.

- |     |          |   |                       |
|-----|----------|---|-----------------------|
| (A) | P/L for  | : | Providing and Laying. |
| (B) | P/F for  | : | Providing and Fixing. |
| (C) | C.C. for | : | Cement Concrete.      |
| (D) | C.M. for | : | Cement Mortar.        |

- 17.2 In case of extra/substituted items of work for which brief wording is not provided in the agreement, the full nomenclature of the item shall be reproduced in the measurement books and bill forms of running account bills.
- 17.3 The full nomenclature of the items shall be adopted in preparing abstract of final bill in the measurement books and also in the forms for final bills.

**18.0 Water proofing treatment**

The work of Waterproofing treatment shall be executed through specialized agency(s) meeting the eligibility requirements mentioned in table below. The bidder shall submit details of such agency(s) as given below to the Engineer-in-charge at least one month in advance from taking the work.

1. Name of Firm
2. List of works as given in table below

3. Performance certificate from the Client
4. Availability of manpower and machineries

#### 18.1 **GUARANTEE FOR WATER PROOFING TREATMENT**

**Ten years** guarantee in prescribed proforma attached must be give by the contractor for the water proofing treatment. In addition 10 (ten percent) of the cost of these items would be retained as guarantee to watch the performance of the work executed. However, half of this amount (withheld) would be **released after five monsoon** season after the completion of the work if the performance of the water proofing work done is satisfactory. If any defect is noticed during the guarantee period it should be rectified by the contractor within seven days and, if not attended to, the same shall be got done by other agency at the risk and cost of the contractor. In any case the guaranteeing firms during the guarantee period should inspect and examine the treatment once in every year and make good any defect observed. However, the security deposit can be released in full, if bank guarantee of equivalent amount for 10 (Ten) years is produced and deposited with the department.

#### 19 **VARIATION IN CONSUMPTION OF MATERIALS**

- 19.1 The variation in consumption of material shall be governed as per CPWD specification and clauses of the contract to the extent applicable. The following specific clauses shall govern the variation in consumption of pig lead.
- 19.2 The pig lead for caulking of joints of SCI pipes shall be issued as per theoretical consumption for SCI pipes of size 100mm, 75mm, 50mm at 0.98 Kg, 0.88 kg. and 0.77 Kg. per joint respectively. Over and above the theoretical quantities of lead as worked out a variation of 5% shall be allowed for wastage etc. Any difference between the actual consumption of pig lead and theoretical consumption worked out on the above basis including the authorized variation if not returned by the contractor shall be recovered at the rate mentioned under schedule “ F “. Where the pig lead is arranged by the contractor, variation of + 5% be allowed. In case the variation is on the lower side, the quantity of the pig lead less used shall be recovered from the contractor at market rate to be determined by the Engineer-in-Charge whose decision in the matter shall be final and binding..
- 19.3 The theoretical quantity of cement to be utilized in items of concrete involving use of single aggregate and mixed by volume batching shall be computed on the basis of the co-efficient for cement to be used in different items of the work provided in the DSR 2021 after reducing each of the co-efficient by 5%. However where the concrete is mixed by weight batching no such reduction shall be made from the theoretical co-efficient given in DSR 2021 for concrete with crushed stone aggregate.

#### 20 **MATERIALS OBTAINED FROM DISMANTLEMENT**

The contractors in course of their work, should understand that all materials (e.g. stone and other materials) obtained in the work of dismantling, excavation etc. will be considered Government property and may be issued to the contractor if required for use in this work at rates approved by the S.E.

#### 21 **MATERIAL BROUGHT BY THE CONTRACTOR.**

The contractor shall have to deposit the approved paints of required colour and shade as per actual requirements of the work to be done, with the Engineer-in-Charge at his departmental stores at the site of work.

The paint will be issued to the contractor from time to time according to his requirements for the work in the same manner as the issue of materials stipulated to be issued departmentally.

Similar procedure shall be followed for water proofing compound.

The day-to-day receipt and issue quantity account of water proofing compound, paints etc. shall be maintained by the Junior Engineer and signed daily by the contractor or his authorized agent.

Empty containers shall be not removed without the written permission of the Engineer-in- charge.

## 22 TESTING OF MATERIALS

The contractor shall procure all the materials in advance so that there is sufficient time for testing and approving of the material and clearance of the same before use in the work.

The contractors rates for the items involving the use of materials shall be deemed to cover the cost of samples, the cost of packaging, sealing, transportation, loading, unloading etc. shall be borne by the contractor, Testing charges shall be borne by the Department only when the samples satisfy the provisions specified & conform to the requirements of the relevant specifications. If the results show that the samples do not satisfy the relevant specifications, the testing charges shall be borne by the contractor.

In case of concrete and reinforced concrete work, the contractor shall be required to make arrangement for carrying out comprehensive strength tests at his own cost. He shall render all assistance for the preparation of cubes, safe custody of the same, proper curing and carriage up to the laboratory where the test is to be performed: the cubes tests can be performed at any laboratory approved by the Engineer – in – charge.

- 23 The contractor shall make his own arrangements for obtaining electric connections, if required and make necessary payments directly to the department concerned.
- 24 If other agencies will also be executing simultaneously the works like electrification, horticulture or external services and other building works for the same project along with this work in particular, the contractor shall afford necessary facilities for the same. No claim in this respect shall be entertained. The contractor shall leave such necessary holes, opening etc. for laying/burying in the work, pipes, cables, conduits, clamps, boxes and hook for fan clamps etc. as may be required for electric, sanitary, air Conditioning, fire fighting P.A. system telephone system C.C.T.V. system etc. and nothing shall be paid for the same. Conduits for electrical wiring/cables will be laid in such a way that they leave enough space for concreting and do not adversely affect the structural members. Nothing extra over the agreement rate shall be paid for the same.
- 25 Any cement slurry if added over base surface (or for continuation of concreting) for bond, Its cost shall be deemed to have been included in the respective items, unless otherwise, explicitly stated, and nothing extra shall be payable nor extra cement considered in the cement consumption on this account.
- 26 The contractor shall take proper care during dismantling operations if any to ensure that there is no danger/damage to any adjoining/existing structures and in case of any damage the contractor shall re-do the work/do the necessary repairs as per direction of the Engineer-in-Charge for which no claim would be entertained by the department.
27. The work shall be carried out in manner complying in all respects with the requirement of relevant byelaws of the local Municipal Corporation of the local body whatsoever.
- 28 a) The contractor shall put necessary boards on display forbidding the residents/public from approaching the building under repair to avoid any accident.
- b) The contractor shall take all precautions to avoid all accidents by exhibiting necessary caution-boards. They shall be responsible for all damages and accidents caused due to negligence on their part.
- 29 All incidental charges of any kind including cartage, storage cutting and wastage and safe custody of materials etc. (not covered under any other condition) shall be borne exclusively by the contractor and nothing extra shall be payable to them on this account.
30. Materials procured for the work such as epoxy resins, hardeners, polymers, rust remover compounds etc. as specified in the nomenclature of items shall be deposited with the Engineer-in-Charge and got issued on day to day basis based on the consumption/requirements for the work. The watch & ward of such materials shall, however, remain to be responsibility of the contractor and no claim on this account shall be entertained.

31. Storage and watch & ward of construction material will be the responsibility of the contractor. However, necessary storage space for the same would be made available at site during the execution of the work.
32. The contractor shall progress on different fronts simultaneously as much as possible and practicable.
33. All the service connection like storm water drains, sewer connections and water supply connections to be obtained from the local body (ies) for which no separate payment is payable.

## SPECIAL CONDITIONS FOR CEMENT

- 1) The contractor shall procure 43 grade) ordinary Portland cement (confirming to IS 8112 ) as required in the work, from reputed manufacturers of cement such as ACC, Ultra Tech, J & K super cement Corporation of India as approved by the Ministry of Industry, Government of India, and holding license to use ISI certification mark for their product or from any other reputed cement manufacturers having a production capacity not less than one million tones or more per annum as approved by Engineer-in-charge of region. The tenderers may also submit a list of names of cement manufactures which they propose to use in the work. The tender accepting authority reserves right to accept or reject name(s) of cement manufacture (s) which the tenderer propose to use in the work. No change in the tender rates will be accepted if the tender accepting authority does not accept the list of cement manufacturers, given by the tenderer, fully or partially. The supply of cement shall be taken 50 kg. bags bearing manufacturer's name and ISI marking. Samples of cement arranged by the contractor shall be taken by the Engineer-in-Charge and got tested in accordance with provisions of relevant BIS codes. In case the test results indicate that the cement arranged by the contractor does not conform to the relevant BIS codes, the same shall stand rejected, and it shall be removed from the site by the contractor at his own cost within a week's time of written order from the Engineer-in-charge to do so.
- 2) The cement shall be brought at site in bulk supply of approximately 50 tonnes or as decided by the Engineer-in-charge.  
The cement go-down of the capacity to store a minimum of 2000 bags of cement shall be constructed by the contractor at site of work for which no extra payment shall be made.
- 3) Double lock provision shall be made to the door of the cement go-down. The keys of one lock shall remain with the Engineer-in-charge or his authorized representative and the keys of the other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of the cement go-down. The contractor shall facilitate the inspection of the cement go-down by the Engineer-in-charge at any time.
- 4) The cement shall be got tested by the Engineer-in-charge and shall be used on the work only after satisfactory test results have been received. The contractor shall supply free of charge the cement required for testing including its transportation cost to testing laboratories. The cost of tests shall be borne by the contractor/Department in the manner indicated below:
  - (a) By the contractor, if the results show that the cement does not conform to relevant BIS codes.
  - (b) By the Department, if the results show that the cement conforms to relevant BIS codes.
- 5) The actual issue and consumption of cement on work shall be regulated and proper accounts maintained. The theoretical consumption of cement shall be worked out as per procedure prescribed in clause 38 of the contract and shall be governed by conditions laid therein. In case the cement consumption is less than theoretical consumption including permissible variation, recovery at the rate so prescribed shall be made. In case of excess consumption no adjustment need to made.
- 6) The cement brought to the site and the cement remaining unused after completion of the work shall not be removed from site without the written permission of the Engineer-in-charge.
- 7) The damaged cement shall be removed from the site immediately by the contractor on receipt of a notice in writing from the Engineer-in-charge. If he does not do so within 3 days of receipt of such notice, the Engineer-in-charge shall get it removed at the cost of the contractor.  
The SDG may change the brand of Cement depending upon availability in local market, if needed. Instructions in this respect can be issued by them at regular intervals. The name of manufacturers should be finalized after taking into consideration the suggestions of contractors during pre bid meeting, if any.  
Similar conditions for cement of other types like slag cement etc. may be incorporated wherever required by the NIT approving authority by providing for relevant BIS Codes, suitable brands of cement and technical circulars issued by the department.

## SPECIAL CONDITIONS FOR STEEL REINFORCEMENT BARS

1 The CPWD/ Contractor shall/ procure only ISI marked TMT corrosion resistant steel (CRS) reinforcement bar (TMT bar of Fe 500D grade or more) from the Steel Manufacturers such as SAIL, TATA Steel Ltd., RINL, Jindal Steel & Power Ltd. and JSW Steel Ltd. Or their authorized dealers having valid BIS license for IS: 1786-2008 (Amendment-1 November 2012)

1(a). The procured steel should have following qualities:

- i. Excellent ductility, bend ability and elongation of finished product due to possible refining technology.
- ii. Consumption of steel should be accurate as per design.
- iii. Steel should have no brittleness problem in finished product.
- iv. Steel should carry the quality of corrosion and earthquake resistance.
- v. Quality steel with achievement of proper level of sulphur and phosphorus as per IS: 1786-2008

1(b). Selection Criteria of steel manufacturers

(I)The supply of reinforcement steel for all CPWD works should have following selection criteria of steel manufacturers:-

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

- (i) DRI-EAF = Direct Reduced iron – Electric arc furnace.  
or
- (ii) BF-BOF = Blast furnace – Basic oxygen furnace  
or
- (iii) COREX-BOF = COREX - Basic oxygen furnace

For production of liquid steel to finish product at single / multiple locations with NABL or any other similarly placed accrediting Government body which operates in accordance with ISO/IEC17011 and accredits labs as per ISO/IEC 17025 conforming to IS: 1786 - 2008 (Amendment –1 November 2012).

The check list for incorporation of any quality steel producer is enclosed for technical assessment is given in Annexure -1.

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

- 2 The contractor shall have to obtain and furnish test certificates to the Engineer-in-charge in respect of all supplies of steel brought by him to the site of work
- 3 Samples shall also be taken and got tested by the Engineer-in-charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to the specifications the same shall stand rejected, and it shall be removed from the

site of work by the contractor at his cost within a week time on written orders from the Engineer-in-charge to do so.

- 4 The steel reinforcement bars shall be brought to the site in bulk supply of 10 tonnes or more, or as directed by the Engineer-in-charge.
- 5 The steel reinforcement bars shall be stored by the contractor at site of work in such a way as to prevent their distortion and corrosion, and nothing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.
- 6 For checking nominal mass, tensile strength, bend test, re-bend test etc. specimens of sufficient length shall be cut from each size of the bar at random, and at frequency not less than that specified below:

Size of bar	For consignment below 100 tonnes	For consignment above 100 tonnes
Under 10 mm dia bars	One sample for each 25 tonnes or part thereof	One sample for each 40 tonnes or part thereof
10 mm to 16 mm dia bars	One sample for each 45tonnes or part there of	One sample for each 50tonnes or part thereof
Over 16 mm dia bars	One sample for each 50tonnes or part there of	One sample for each 75tonnes or part thereof

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

- 8 The actual issue and consumption of steel on work shall be regulated and proper accounts maintained. The theoretical consumption of steel shall be worked out as per procedure prescribed in clause 38 of the contract and shall be governed by conditions laid therein. In case of actual consumption is less than theoretical consumption including permissible variations recovery at the rate so prescribed shall be made. In case of excess consumption no adjustment need to be made.
- 9 The steel brought to site and the steel remaining unused shall not be removed from site without the written permission of the Engineer-in-charge.

### Annexure I

#### Special Condition for steel

(Reference para 9)

Sl.	Item	Checkpoint	Remarks
1	Steel Producer having manufacturing facilities at plant	a. Factory address and Registration no.	
		b. Certificate of manufacturing process	
		c. Refining process of steel Producer	
		c.1 BF-BOF route	
		c.2 Corex – BOF route	
		c.3 DRI –EAF route	
		With documentary evidence either for BOF or EAF	
		d. Steel plant having infrastructure for producing sponge iron, billete and TMT Rebars	
		e. Production and Quality Flow Chart	
		f.Plant Evaluation and Process Verification	
g. List of Plant & Machinery			
2	Established	<b>Document verification for:</b>	
		a.Govt. / PSU Approvals	
		b. Supply orders of TMT Re-bars in Govt. Projects (Minimum-5 years)	
		c. Verification of direct supply orders to any State/Central Govt. Department	
		d. User Certificate issued by any Govt. Department directly	
3	Indigenous	<b>Documentary evidence like;</b>	
		a. Certificate of Incorporation	
		b. Memorandum of Articles of Association	
		c. Credit rating of the company from CARE/CRISIL/ICRA should not be C/D grade (minimum last 3 year)	
	Reliable	a. Test Results from Govt. /NABL accredited laboratories	
		b. In-house testing facility for physical/Chemical tests (NABL accredited)	
4		d. Calibration Certificates	
		e. List of Lab Equipments:	

		e.1 Spectrometer	
		e.2 Computerized UTM	
5	Use of Iron-Ore/Processes Iron ore as basic raw materials	Verification of iron-Ore/Process iron ore invoices	
6	In-housing rolling facility	Plant verification to identify in-house rolling facilities, production of liquid steel & crude steel	
7	Licences& Certificates	a.ISO 9001:2008 Certification	
		b. ISO 14001:2004 Certiifcation	
		c.OHSAS 18001:2007 Certification	
		d.IS 1786:2008 (TMT Re-bars)	
		e.IS 2830:1992 (Billets)	
8	Product Range	TMT Re-bars FE 415/415D/500/500D/550/550D	
		CRS (Corrosion Resistant) & EQR (Earthquake Resistant) TMT Re-bars Size 8 to 36 mm dia	

Note:

DRI-EAF-> Direct Reduce Iron-Electric ARC Furnace

BF-BOF-> Blast Furnace – Basic Oxygen Furnace

COREX-BOF-> COREX Furnace –Basic Oxygen Furnace.

## **Particular specifications for water proofing treatment**

### **1. WATER PROOFING TREATMENT**

- 1.1 All the water proofing treatment shall be got executed through one of the specialized agencies as per the list of approved agencies attached with the tender. The water proofing agency shall carry out water proofing work with one of the approved water proofing compound mentioned in the tender. If so specifically requested by the contractor, he will be allowed to use other water proofing compound meeting various technical parameters, subject to prior approval of Engineer-in-Charge.
- 1.2 The work under this sub-head in general shall be carried out as per the CPWD specifications, as per the manufacturer's specifications, as per architectural drawings and as per directions of Engineer-in-Charge.
- 1.3 Ten years guarantee in prescribed proforma attached shall be given by the contractor for the water proofing treatment. In addition 10% (ten percent) of the cost of these items of water proofing under this sub head shall be retained as guarantee amount to watch the performance of the work executed. However, half of this amount (withheld) would be released after five years from the date of completion of the work, if the performance of the waterproofing works is satisfactory. The remaining withheld amount shall be released after completion of ten years from the date of completion of work, if the performance of the waterproofing work is satisfactory. If any defect is noticed during the guarantee period, it should be rectified by the contractor within seven days of issuing of notice by the Engineer-in-Charge / IITB and, if not attended to, the same shall be got done by Engineer-in-Charge / IITB through other agency at the risk and cost of the contractor and recovery shall be effected from the amount retained towards guarantee. The guarantee amount can be released in full, if bank guarantee of equivalent amount, valid for the duration of guarantee period, is produced and deposited with the Department.



## LIST OF PREFERRED MAKES

**Note:**

1. The contractor shall obtain prior approval from the Engineer-in-Charge before placing order for any specific material or engaging any of the specialized agencies. The contractor shall make a detailed submittal with catalogues and highlighted proposed specification as well as full details of the works executed by the specialized agencies, as specified.
2. Unless otherwise specified, the brand / make of the material as specified in the item nomenclature, in the particular specification and in the list of approved materials attached in the tender, shall be used in the work.
3. In case of non-availability of the brand specified in the contract the contractor shall be allowed to use alternate equivalent brand of the material subject to submission of documentary evidence of non-availability of the specified brand. The necessary cost adjustments on account of above change shall be made for the material.
4. The Engineer-In-Charge shall verify that manufacturers must have valid IS Certification as on date for materials wherever applicable.

The following brands shall be used if not otherwise mentioned in the items.

### LIST OF PREFERRED MAKE / BRAND

MATERIALS	PREFERRED MAKE/ BRAND
ORDINARY PORTLAND CEMENT / PORTLAND POZZOLANA CEMENT	ULTRA TECH, A.C.C., AMBUJA, BIRLA, J.K. CEMENT, VIKRAM.
WHITE CEMENT / PUTTY	J.K., BIRLA, SAINT GOBAIN (WEBER)
REINFORCEMENT STEEL	TATA STEEL, SAIL, RINL, JINDAL STEEL & POWER LTD., JSW STEEL LTD.
PARALLEL THREADED COUPLERS	DEXTRA, G-TECH, SPPLICETEK, ISHITA
RE-BARRING CHEMICAL	HILTI, 3M INDIA, FISCHER
STRUCTURAL STEEL/TUBES	TATA STEEL, SAIL, RINL, JINDAL, JSPL, APL APOLLO VIZAG, JINDAL
PLASTICIZER, SUPER PLASTICIZER, ADMIXTURES, OTHER CONSTRUCTION CHEMICALS	MC BAUCHEMIE, SIKA, FOSROC, BASF, DR. FIXIT, CICO, ASIAN
<b>CEMENT CONCRETE BLOCKS</b>	<b>CONWOOD, GURJARI, HINDUSTAN, LOK GROUP, SAI BLOCKS, VED PMC LTD., GODREJ</b>
AAC BLOCKS	AEROCON, SIPOREX, ULTRA TECH, ECOLITE, GODREJ
ACC BLOCK ADHESIVE	ACC, ULTRA TECH, J.K., FERROUS CRETEM, BAL ENDURA, AEROCON, ARDEX ENDURA
POLYMER MODIFIED CEMENTITIOUS GROUT / TILE ADHESIVE	ARDEX ENDURA, LATECRETE, FOSROC, BASF, ACC, ECO GREEN.
LIST OF RMC PRODUCERS	A.C.C., ULTRA TECH, PRISM JOHNSON RMC, GODREJ, JSW, NUVOCO (LAFARGE)
WATERPROOFING COMPOUND	DOCTOR FIXIT (PIDILITE), BASF, CICO, SIKA, FOSROC, KRYTON, ASIAN LABORATORIES, MC BAUCHEMIE
WATER PROOFING BASE COAT	UNO, ASIAN, SIKA
SILICON BASED WATER REPELLENT/ WEATHER SEALANT	GE PLASTICS, DOW COMINGS, WACKER, BASF, PIDILITE
POLY-SULPHIDE SEALANT	FOSROC, PIDILITE, SIKA, BASF
PLYWOOD	ARCHID, KITPLY, GREEN PLY, CENTURY, REGENCY WOOD PANEL, KALPATARU

FLUSH DOOR SHUTTERS	KENWOOD, ANCHOR, KUTTY, GREENPLY, ORIENT, KALPATARU
HIGH-PRESSURE LAMINATE	AICA(SUNMICA), MERINO, GREENLAM, CENTURY, ROYAL TOUCH, DURIAN, ANCHOR
METAL-FIRE RATED DOOR SHUTTERS	ADHUNIK TECHNOLOGY, GODREJ, , SUKRITI, SHAKTI HORMANN, NAVAIR
FIRE RATED VISION PANELS	SAINTGOBAIN,PILKINGTON,SCHOTT,FERILITE, PYROGUARD
GLAZED FIRE DOOR	PROMAT,SAINT GOBAIN,GODREJ,SHAKTI MET,PACIFIC FIRE CONTROLS , NAVAIR
ROLLING SHUTTER WITH GRILLS	STANDARD,SWASTIK,SHUBDHWAR,SONA
ALUMINIUM EXTRUSIONS	HINDALCO,JINDAL
DASH FASTNERS	HILTI,FISHER,CANON
SS RAILING	KICH, GODREJ,ARCHWARE, HAFELE
SS HARDWARE AND ACCESSORIES FOR DOORS AND FIRE DOORS	DORMA, HAFELE, GEZE,KICH, ARCHWARE, OZONE
STAINLESS STEEL	SALEM STEEL, JINDAL OR EQUIVALENT
HARDWARE FOR KITCHEN CABINET, WARD ROBE AND SHELVES	GODREJ, EBCO, KAFF, SLEEK, HAFELE, DORMA
HERMITICALLY SEALED PERFORMANCE GLASS TOUGHENED GLASS,DGU	AUTHORIZED FABRICATORS OF MODI GUARD, SAINTGOBAIN,TATAASAHI,GLEVERBEL,PILKINGTON, HNG.
PARTICLE BOARD	ACTION TESA, GREENLAM, MERINO, KITPLY
MELAMINE POLISH	ASIAN PAINTS (MELAMYNE GOLD), PIDILITE INDUSTRIES (WUDFIN), ICI DULUX (TIMBERTONE)
CEMENT BASED WALL PUTTY	BIRLA WALL CARE, JK WHITE , BERGER, ASIAN PAINTS
OIL BOUND WASHABLE DISTEMPER / DRY DISTEMPER	ASIAN PAINT : (PROFESSIONAL ACRYLIC DISTEMPER), NEROLAC : BEAUTY ACRYLIC DISTEMPER BERGER: BISON ACRYLIC DISTEMPER
1ST QUALITY ACRYLIC DISTEMPER / DRY DISTEMPER	ASIAN PAINTS : (TRACTOR AQUA LOCK PAINT), BERGER : COMMANDO OR EQUIVALENT PAINTS OF NEROLAC OR
ACRYLIC EMULSION PAINTS	ASIAN PAINTS : (PROFESSIONAL PREMIUM INTERIOR EMULSION PAINTS), NEROLAC :BEAUTY GOLD BERGER : RANGOLI TOTAL CARE
PLASTIC EMULSION PAINT	ASIAN PAINTS : (APCOLITE HEAVY DUTY PREMIUM EMULSION PAINT), NEROLAC : IMPRESSION BERGER : EASY CLEAN
PREMIUM ACRYLIC EMULSION PAINTS (INTERIOR)	ASIAN PAINTS : (ROYAL LUXURY EMULSION), NEROLAC : IMPRESSION BERGER : SILK JENSON & NICHOLSON
TEXTURED EXTERIOR PAINT	ASIAN PAINTS, NEROLAC, BERGER PAINTS, ULTRATECH PAINTS, LUXTURE
ACRYLIC SMOOTH EXTERIOR PAINT	ASIAN PAINTS : (APEX/PROFESSIONAL PREMIUM

	EXTERIOR EMULSION), NEROLAC : XL BERGER : WEATHER COAT, PEARL, PEARL-ULTIMA (ADVANCE ANTI-ALGAL WEATHER PROOF PAINT)
PREMIUM ACRYLIC SMOOTH EXTERIOR PAINT WITH SILICON ADDITIVE	ASIAN PAINTS :APEX ULTIMA NEROLAC : XL TOTAL BERGER : WEATHER COAT ALL GUARD ,
SYNTHETIC ENAMEL PAINT	ASIAN PAINTS : APCOLITE PREMIUM GLOSS ENAMEL, NEROLAC : SYNTHETIC HI GLOSS BERGER : LUXOL HI GLOSS
CEMENT PRIMER	NEROLAC, BERGER, BP WHITE (BERGER), DECOPRIME WT (ASIAN), WHITE PRIMER (ICI)
STEEL PRIMER (RED OXIDE ZINC CHROMATE PRIMER)	ASIAN PAINTS, BERGER , NEROLAC
WOOD PRIMER	ASIAN PAINT (WOOD PRIMER- WHITE/PINK), BERGER, NEROLAC
EPOXY PAINT	NEROLAC, ASIAN, BERGER, KANSAI AKZO NOBEL.
FIRE PAINT	ASIAN PAINTS, AKZONOBEL COATINGS INDIA LTD, PROMAT, JOTUN
GYPSUM PLASTER	GYPROC, ASIAN PAINTS, BIRLA ,FERROUS CRETE, ULTRA TECH.
GYPSUM BOARD	SAINT GOBAIN,BORAL
CEMENT BASED READY MIX PLASTER	ULTRATECH, WALLPLAST, BUILDWELL, ACC.
EPDM GASKET	AMEE RUBBER INDUSTRIES PVT. LTD., BOHRA RUBBER, OSAKA
DASH / ANCHORING FASTENERS	HILTI, FISCHER, ARROW, KUNDAN, TRIXEL, WURTH
MORTICE LOCK	GODREJ,HARRISON
SPIDER FITTINGS	DORMA,HAFELE, GEZE
ALUMINIUM STRUCTURAL MEMBERS - WINDOWS, GLAZING AND PARTITIONS	HINDALCO, INDALCO, JINDAL ALUMINIUM LTD.
ALUMINUM B & R PANEL(ACP)	ALSTRONG,ALUCOBOND,ALUDECOR, EUROBOND
FLOOR SPRING/DEAD LOCK/DOOR CLOSERS/PANIC BAR	DORMA,GEZE, HAFELE.
ALL TYPE OF SILICONE	DOW CORNING,GE SILICON
METALLIC FALSE CEILING	KNAUF ARMSTRONG, HUNTER DOUGLAS, SAINT GOBAIN,DEXUNEINTERACH
ALUMINUM HALF ELLIPTICAL PROFILED LOUVERS	HUNTER DOUGLAS, CANTORI, DEZEEN
ALUMINUM QUADROCLAD HONEYCOMB FAÇADE SYSTEM WITH 25MM THICK PANELS	HUNTER DOUGLAS, CANTORI, DEZEEN
FLOOR & WALL TILES : CERAMIC / VETRIFIED TILES / ANTISKID / MATT / GLAZED	KAJARIA, JOHNSON, NITCO, SOMANY

CHEQUERED TILES, PAVER BLOCK & KERB STONE	SUPER TILES, HIND MOSAIC, KAJARIA, ULTRA DESIGNER TILE, NITCO, VITCO, VYAARA
VITRIFIED PAVER TILES	KAJARIA, PAVIT, JOHNSON, NITCO, VITCO.
CLEAR / FLOAT / FROSTED GLASS / MIRROR	ST. GOBAIN, MODIGUARD, ASAHI, PILKINGTON
VITREOUS CHINAWARE SANITARY WORK	HINDWARE, JAQUAR, KOHLER
BATHROOM ACCESSORIES (TOWEL RING, TOWEL RACK, SOAP DISH HOLDER, ETC)	CERA, JAGUAR, ARCHWARE, KICH, HINDWARE.
GULLY TRAPS(S.W.)	PERFECT, PARRY, CHERRY
PLASTIC SEAT WITH LID	PARRYWARE, HINDWARE, SEABIRD
SANITARY WARE	KOHLER, HINDWARE, JAQUAR.
WATER SUPPLY CP FITTINGS & ACCESSORIES	SIMPOLO, JAQUAR, KOHLER, ROCA, CERA
PVC WATER TANK	SINTEX, NATIONAL PLASTIC, KAVERI.
STAINLESS STEEL SINK	NIRALI, CERA, JAQUAR, NEELKANTHA, STAR, JAYNA, NIRALI
C P BRASS FITTINGS	JAQUAR, KOHLER, HINDWARE.
C P BRASS FLUSH VALVE	JAQUAR, ZOLOTO, LEADER.
GI PIPES	ZENITH / TATA / JINDAL, SURYA, ASIAN
GI FITTINGS	UNIK, ZOLOTO, AVR, R-BRAND
VALVES	ZOLOTO, SANT, KIRLOSKAR, LEADER
HDPE PIPE	RELIANCE, JAIN PIPES, ORIPLAST, SUPREME
DI PIPES AND FITTINGS	ELECTROSTEEL, KESORAM, JINDAL, TATA DUCTURA, NECO, KAPILANSH.
CENTRIFUGALLY CAST (SPUN) IRON PIPES & FITTINGS	NECO, KAPILANSH, SKF, BIC
HUBLESS CI PIPES & FITTINGS	NECO, KAPILANSH, SKF, SAINT GOBAIN
CI MANHOLE COVERS, FRAMES & GI GRATINGS	NECO, KAPILANSH, SKF
SFRC COVERS	KK SPUN PIPES, JAIN SPUN PIPES, SS INDUSTRIES
RCC PIPES	JAIN SPUN PIPES, LAKSHMI, SOOD & SOOD, PRAGATI, K.K.SPUN PIPE, THE INDIAN HUME PIPE CO.LTD., PATEL HUME PIPES.
UPVC / CPVC PIPE & FITTINGS	FINOLEX SUPREME, PRINCE, ASTRAL, ASHIRWAD, RAKSHA.
UPVC DOORS & WINDOWS (PROFILE MAKERS & THEIR AUTHORIZED FABRICATORS ONLY)	FENESTA, KOMMERLING, ALUPLAST, DUROPLAST
UPVC DOORS & WINDOWS HARDWARE	ROTTA, DORSET, KINLONG
FRP CHAJJA, FRP SHUTTERS & FRAME	FIBREWAYS, BHUTT FRP
ANODISED ALUMINIUM DOORS FITTINGS (ISI MARKED ONLY)	CLASSIC, SHALIMAR, PRESTIGE
PVC SHUTTERS & FRAME	RAJASHREE, PLASTIWOOD, ACCUCEL, DUROPLAST, POLYLINE, POLYWOOD, VIJAY DOORS.

STEEL DOOR / WINDOW FRAMES	AGEW, SENHARVIK , SHIV MULAR, STEEL PLAST
SBR COMPOUND ( FOR REPAIR MORTAR & WATER PROOFING SLURRY )	MASTER EMACO SBR2 OF BASF, SIKA LATEX POWER, CICO LATEX SBR
ACRYLIC POLYMER FOR BOND COAT AND POLYMER MODIFIED MORTAR	ANUVI CHEMICAL, SUNANDA SPECIALTY COATING PVT. LTD,
RUST REMOVER	ANUVI CHEMICAL, SUNANDA SPECIALTY COATING PVT. LTD,
RUST PASSIVATOR	ANUVI CHEMICAL, SUNANDA SPECIALTY COATING PVT. LTD,
READYMADE SINGLE COMPONENT POLYMER CHEMICAL AND MODIFIED REPAIR MORTAR	ANUVI CHEMICAL,SUNANDA SPECIALITY COTING PVT.LTD, SKG CONSTN.,BASF, SIKA,PIDILITE, FOSROC, SUNANDA, KRISHNA
STRUCTURAL REPAIR CHEMICALS	ANUVI CHEMICAL,SUNANDA SPECIALITY COTING PVT.LTD, SKG CONSTN.,BASF, SIKA,PIDILITE, FOSROC, SUNANDA, KRISHNA
MICRO CONCRETE	DR. FIXIT , BASF , FOSROC, ACC, ULTRA TECH
STONE WARE PIPES GRADE-A (ISI MARKED ONLY)	SONYA, SUPERTECH, CHERRY
PTMT (ISI MARKED ONLY)	PRAYAG , POLYTUF
VEENERS	GREENLAM ( SUCUPIRA, GOLDEN TEAK, AFRICAN WALNUT) OR EQUIVALENT IN DURO, EKBOTE, CENTURY
METAL FALSE CEILING	ARMSTRONG, USG BORAL, AEROLITE
MINERAL FIBRE FALSE CEILING	ARMSTRONG, USG BORAL, AEROLITE
TOILET CUBICLES	MERINO ( TITAN SERIES) OR EQUIVALENT IN GREENPLY, DORMA
ACCOUSTICAL WALL PANELLING	ARMSTRONG, ANUTONE, USG BORAL ECOPHONE, TECHNO
ACCOUSTICAL TILE FALSE CEILING	ARMSTRONG, ECOPHONE, USG BORAL
PUFF PANEL SHEET	KINGSPAN JINDAL, LLOYD INSULATION, ALFA

**Note:-**

1. The above makes are subjected to the compliance of Make in India norms.

**GUARANTEE TO BE EXECUTED BY CONTRACTORS FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF STRUCTURAL REPAIRS WORKS**

This agreement made this ..... day of ..... two thousand and .....between..... Son of ..... of .....(hereinafter called the GUARANTOR of the one part) and the PRESIDENT OF INDIA (hereinafter called the GOVERNMENT of the other part).

WHEREAS THIS AGREEMENT is supplementary to a contract (hereinafter called for contract) dated .....and made between the GUARANTOR of the one part and the GOVERNMENT of the other part, hereby the contractor inter-alia, under took to render the buildings and structures on the said contract completely structurally sound.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the effect that the said structures will remain sound and strong **for five years** from the date of completion of work.

NOW THE GUARANTOR hereby guarantee that structural repairs done by him will render the structures completely steady & strong and the minimum life of such repairs shall be five years to be reckoned from the date of the completion of works.

Provided that the guarantor will not be responsible for damage caused due to earthquake or misuse of buildings or alteration and for such purpose. The decision of the Engineer-in-Charge with regard to cause of damage shall be final and binding.

During this period of guarantee the guarantor shall make good all defects 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 the guarantor fails to make good the defects 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 Government and the decision of the Engineer-in-Charge will be final and binding on both the parties.

An amount equivalent to 2 % of item----- will be deducted from R.A. Bills as security and the same will be refunded **after five years** from the date of completion of work.

IN WITNESS WHEREOF these presents have been executed by the obligator \_\_\_\_\_ and by \_\_\_\_\_ and for and on behalf of the PRESIDENT OF INDIA on the day, month and year first above written.

SIGNED, sealed and Delivered by (OBLIGATOR) in presence of

- 1.
- 2.

SIGNED FOR AND ON BEHALF OF THE PRESIDENT OF INDIA

BY

In the presence of:

- 1.

**GUARANTEE BOND TO BE EXECUTED BY CONTRACTOR FOR  
REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF WATER  
PROOFING WORKS**

**(BASEMENT / LOWER GROUND FLOOR / UNDER GROUND TANK / ROOF)**

The Agreement made this \_\_\_\_\_ day of \_\_\_\_\_ Two thousand and \_\_\_\_\_  
between \_\_\_\_\_ son of \_\_\_\_\_  
\_\_\_\_\_ (hereinafter called the Guarantor of the one part) and the  
PRESIDENT OF INDIA (hereinafter called the Government 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 Government of the other part, whereby the contractor, inter alia, undertook to render the buildings and structures in the contract recited completely water and leak-proof.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the effect that the said structures will remain water and leak-proof for **10 (Ten) years** from the date after the Construction period prescribed in the contract.

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 **10 (Ten) years** to be reckoned from the date after the Construction period prescribed in the contract.

Provided that the Guarantor will not be responsible for the 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 an 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/seepage 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 the 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 done by the department by some other agency contractor at the GUARANTOR's risk and cost. 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 make good all defects 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 Government the decision of the Engineer-in-Charge will be final and binding on the parties.

**In addition 10% (ten percent) of the cost of these items would be retained as guarantee to watch the performance of the work executed. However, half of this amount (withheld) would be released after five monsoon seasons after the date of completion of the work, if the performances of the waterproofing work is satisfactory.**

IN WITNESS WHEREOF these presents have been executed by the Obligor \_\_\_\_\_ and by \_\_\_\_\_ and for and on behalf of the PRESIDENT OF INDIA on the day, month and year first above written.

SIGNED, SEALED AND delivered by OBLIGOR in the presence of :

1. ....
2. ....

SIGNED FOR AND ON BEHALF OF THE PRESIDENT OF INDIA BY \_\_\_\_\_ in the presence of:

1. ....
2. ....

**GUARANTEE TO BE EXECUTED BY THE CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF WATER SUPPLY AND SANITARY INSTALLATIONS**

The agreement made this \_\_\_\_\_ day of \_\_\_\_\_ Two Thousand and \_\_\_\_\_ between \_\_\_\_\_ son of \_\_\_\_\_ (hereinafter called the GUARANTOR of the one part) and the PRESIDENT OF INDIA (hereinafter called the Government 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 Government of the other part, whereby the contractor inter alia, undertook to render the work in the said contract recited structurally stable workmanship, finishing and use of sound materials.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the effect that the said work will remain structurally stable and guaranteed against faulty workmanship, finishing, manufacturing defects of materials and leakages, etc.

NOW THE GUARANTOR hereby guarantee that work executed by him will remain structurally stable after expiry of Construction period prescribed in the contract for the minimum life of **02 (Two) year** to be reckoned from the date after the expiry of Construction period prescribed in the contract.

The decision of the Engineer-in-charge with regard to nature and cause of defect shall be final.

During this period of guarantee, the guarantor shall make good all defects to the satisfaction of 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 the guarantor fails to make good all the defects commits breach thereunder, then the guarantor will indemnify the principal and his successor 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 Government, the decision of the Engineer-in-charge will be final and binding on both the parties.

**An amount equivalent to 2% of item's will be deducted from R. A. Bills as security and the same will be refunded after 2 (Two) years from the date of completion of work.**

IN WITNESS WHEREOF these presents, have been executed by the obligator \_\_\_\_\_ and \_\_\_\_\_ by \_\_\_\_\_

for and on behalf of the PRESIDENT OF INDIA on the day, month and year first above written.

SIGNED, sealed and delivered by OBLIGATOR in the presence of:

1. \_\_\_\_\_
2. \_\_\_\_\_

SIGNED FOR AND ON BEHALF OF THE PRESIDENT OF INDIA BY \_\_\_\_\_ in the presence of:

1. \_\_\_\_\_
2. \_\_\_\_\_

**On non-judicial stamp paper of minimum Rs.100**

(Guarantee offered by Bank to CPWD in connection with the execution of contract)

**Form of Bank Guarantee for Earnest Money Deposit / Performance Security**  
**(Guarantee) / Security Deposit / Mobilization Advance**

1. WHEREAS, the .....  
(hereinafter called "the Government") has invited bid under..... (NITNo.) .....  
Dated ..... for..... (Name of  
work)..... The Government has further agreed to accept irrevocable Bank Guarantee  
forRs... (Rupees.....only) valid upto ..... (Date)\* ..... as **Earnest  
Money Deposit** from ..... (Name and address of contractor) .....(hereinafter called "the  
contractor ") for compliance of his obligations in accordance with the terms and conditions of the said  
NIT.

**OR\*\***

WHEREAS, the ..... on behalf of  
the President of India (hereinafter called "the Government") has entered into an agreement bearing  
number.....with.....(name and address of contractor).....  
(hereinafter called "the contractor ") for execution of work ..... (name of work)  
..... The Government has further agreed to accept irrevocable Bank Guarantee forRs.  
.....(Rupees.....only) valid upto .....(date)\* .....as  
**Performance Guarantee /Security Deposit / Mobilization Advance** from said contractor for  
compliance of his obligations in accordance with the terms and conditions of the agreement.

1. We,..... (indicate the name of the Bank) ..... (hereinafter referred to as "the Bank "),  
hereby undertake to pay to the Government an amount not exceeding  
Rs.....(Rupees.....only) on demand by the Government within 10  
days of the demand.
2. We,..... (indicate the name of the Bank) ....., do hereby undertake to pay the amount  
due and payable under this guarantee without any demur, merely on a demand from the Government  
stating that the amount claimed is required to meet the recoveries due or likely to be due from the said  
contractor. 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,..... (indicate the name of the Bank)....., further undertake to pay the Government  
any money so demanded notwithstanding any dispute or dispute raised by the contractor in any suit or  
proceeding pending before any court or tribunal, our liability under this Bank Guarantee being  
absolute and unequivocal. The payment so made by us under this Bank Guarantee shall be valid  
discharge of our liability for payment there under and the contractor shall have no claim against us for  
making such payment.
4. We,..... (indicate the name of the Bank) ....., further agree that the Government shall  
have the fullest liberty without our consent and without affecting in any manner our obligation here  
under to vary any of the terms and conditions of the said agreement or to extend time of performance  
by the said contractor from time to time or to postpone for any time or from time to time any of the  
powers exercisable by the Government against the said contractor 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 or for any forbearance,  
act of omission on the part of the Government or any indulgence by the Government to the said  
contractor 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.
5. We,..... (indicate the name of the Bank) ....., further agree that the Government at its  
option shall be entitled to enforce this Guarantee against the Bank as a principal debtor at the first

instance without proceeding against the contractor and notwithstanding any security or other guarantee the government may have in relation to the contractor's liabilities.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor.
7. We,..... (indicate the name of the Bank) ....., undertake not to revoke this guarantee except with the consent of the government in writing.
8. This bank guarantee shall be valid up to ....., unless extended on demand by the Government. 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 the date of expiry or extended date of expiry of this guarantee, all our liabilities under this guarantee shall stand discharged.

DATE .....

WITNESSES:

Authorised signatory

1. SIGNATURE..... Name

NAME AND ADDRESS

Designation

Staff code no.

Bank seal

2. SIGNATURE .....

NAME AND ADDRESS

\*Date to be worked out on the basis of validity period of 90 days where only for financial bids are invited and ~~180 days for two / three bid system~~ from the date of submission of tender.

\*\* In paragraph 1, strike out the portion not applicable. Bank Guarantee will be made either for earnest money or for Performance Guarantee /Security Deposit / Mobilization Advance, as the case may be.

**PART-C**  
**Electrical & Mechanical Works**

The main agency fulfills the prescribed eligibility criteria respectively for the above specialized work(s).

Or

He directly procures the equipment of approved make from manufacturer and gets it installed from authorized agency / service provider of the manufacturer or specialized agency as per criteria mentioned above.

The main contractor shall have to submit documents such as self-attested copies of Certificates of Work Experience/Completion issued by client department clearly indicating 1. Name of work 2. Scope of Work 3. Agreement No. 4. Estimated Cost 5. Tendered Cost 6. Final Value of Work Done 7. Date of Start 8. Stipulated date of Completion 9. Actual date of completion 10. Nature of the Work etc. (In case some of above said details are not mentioned in the Completion certificate, the firm shall attach sample proof in support of above details), self-attested copy of valid Electrical contractor license, GST registration of the proposed associated specialized agencies for verification (if required) and for approval of the department as per eligibility requirement mentioned in above condition no.3 after acceptance of tender alongwith Performance Guarantee. Main contractor shall also be required to furnish either copy of applicable licenses/registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare Board of proposed associated specialized agencies alongwith above documents.

Consent letter of such selected associated specialized agencies for association shall also be enclosed in the prescribed format as per FORM-A. alongwith documents mentioned at sl.no-4.

If the main contractor fails to submit all the documents of the proposed associated specialized agency(s) as mentioned at Sl No. 4 & 5 above, after acceptance of tender alongwith Performance Guarantee then department shall reject his/her tender & shall forfeit the deposited EMD absolutely & debar him from re-tendering for this work.

After approval of associated specialized agencies by Engineer-in-charge, the main contractor will submit MOU signed with the associated specialized agency as per FORM-B in shape of affidavit on stamp paper duly attested by notary in original within 7 (Seven) Days after issue of approval letter (for associate specialized agency). The MOU shall be signed by both the parties" i.e. main contractor As 1st party and associated specialized Agency as 2nd party, independently for all specialized work(s).

All technical discussions during currency of the contract, shall be attended by the associated specialized agencies and the main contractor. Commercial/Technical submissions for the specialized work(s) shall be signed and submitted by the associate specialized agencies along with the main contractor.

The associated specialized agencies and the main contractor shall attend the site during inspection of the work by the Engineer-in-Charge or higher authority.

The main contractor shall be entirely responsible and answerable for all the works done by his associated specialized agency regarding their quality, adherence to the laid down specification, terms and conditions, warranty/guarantee etc as per the agreement and he shall be liable to bear any compensation that may be levied by the department under any of the clauses of the agreement.

In the event of the concerned Associated specialized Agency not performing satisfactorily or failure to complete the specialized works(s), the main contractor on written directions of the Engineer-in-charge, shall remove the Associated specialized Agency deployed on the work and shall submit name of new associated specialized Agency as per eligibility criteria mentioned in the NIT to execute the left over specialized work(s) without any loss of time after completion of all formalities mentioned as above in Sl.No.1,4 & 5.

Also if main contractor wants to change the associated specialized agency during the currency of the contract he shall submit name of new associated specialized Agency as per eligibility criteria mentioned in the NIT to execute the left over specialized work(s) after completion of all formalities mentioned as above in Sl. No. 1, 4 & 5.

The main contractor shall be responsible and liable for proper and complete execution of the all works including specialized work(s) and ensure coordination and completion of all associated specialized works. Running payment for the work shall be made to the main contractor. In case main contractor fails to make the payment to the associated specialized agency(s) by him within 15 days of receipt of each running account payment then on the written complaint of any associated specialized agency(s) for such work, Engineer-in-Charge shall serve the show cause to main contractor and after considering the reply of the same he may make the payment directly to the concerned associated specialized agency(s) for the work as per the terms & conditions of the agreement/M.O.U. drawn between main contractor and associated specialized agency(s) fixed by him, if reply of main contractor either not received or found unsatisfactory. Such payment made to the associated specialized agency(s) shall be recovered by Engineer-in-Charge from the next RA/final bill due to main contractor as the case may.

**PROPOSAL FOR ASSOCIATING SPECIALIZED AGENCIES**

We hereby propose the following specialized agencies as per details mentioned against each. Their consent letters are also attached as per Form K.

<b>Sl. No.</b>	<b>Name of Specialized agency</b>	<b>Category and class of registration in CPWD(if any)</b>	<b>Registration No.</b>	<b>Monetary Limit of Work</b>	<b>Validity of registration</b>	<b>Consent letter attached (Yes/No)</b>

Contractor Signature

**FORM – ‘K’**

**WILLINGNESS CERTIFICATE FROM CONCERNED COMPETENT ELECTRICAL AGENCY**

(Separate for each sub head of E&M work)

Dated:

Name of Work: “Construction of 3 nos. 100 KLD MBBR Technology prefabricated Sewage Treatment Plant (STP)..”

Name of sub-work: .....

I hereby give my willingness to work as associated agency for the above mentioned electrical work. I will execute the work as per specifications and conditions of the agreement and as per direction of the Engineer-in-charge. Also I will employ full time technically qualified supervisor for the works. I will attend the inspection of officers of the department as and when required.

Signature of Main Agency                      Signature of Associate Electrical Agency Address:                      and

Registration detail Address:

Telephone:                      Telephone:

FAX:                      FAX:

e-mail:                      e-mail:

**MEMORANDUM OF UNDERSTANDING [MoU] BETWEEN  
(Separate for each sub head of E&M work)**

M/S [Name of the firm with full address] [Henceforth called the main agency]

And

M/S [Name of the firm with full address]

[Henceforth, called Associated Electrical Agency or Electrical Agency]

For the execution of Electrical Work: “Construction of 3 nos. 100 KLD MBBR Technology prefabricated Sewage Treatment Plant (STP).”

Name of sub-work: .....

We state that MoU between us will be treated as an agreement and has legality as per Indian Contract Act [amended upto date] and the department [CPWD] can enforce all the terms and conditions of the agreement for execution of the above work. Both of us shall be responsible for the execution of work as per the agreement to the extent this MOU allows. In case of any dispute, either of us will go for mediation/arbitration by the competent authority. Any of us may appeal against the edition/arbitration to the Superintending Engineer / SDG, CPWD, Mumbai. His decision shall be final and binding on both of us.

We have agreed as under:

The electrical agency will execute all electrical works in the wholesome manner as per terms and conditions of the agreement. The electrical agency shall be paid as per standard procedure followed by the department and the agreement between parties. Any type of internal transaction between the electrical agency and the main agency shall be as per their convenience and mutual understanding without involving the department.

The electrical agency shall be liable for disciplinary action if he failed to discharge the action[s] and other legal action as per agreement.

All the machinery and equipments, tools and plant required for execution of the electrical works, as per agreement, shall be the responsibility of the electrical agency.

The site staff required for the electrical work shall be arranged by the electrical agency as per terms and conditions of the agreement.

Site order book maintained for the said work shall be signed by the main agency as well as by the Engineer of the Associated Agency and by Associated Agency himself.

The payment to associate contractor will be released after the payment to main contractor is made by the CPWD. In case main contractor delays the payment to associated contractor after the payment is released by department to the main contractor then on receipt of delay in payment from associate contractor, it will be the prerogative of CPWD to directly make the payment to associated contractor.

Either party shall not repudiate the contract in mid way without the consent of each other. Otherwise it will be treated as breach of agreement for any reason whatsoever.

TDS shall be deducted by the main contractor as per Income Tax law from associated agency. In case liability of tax other than Income Tax (Such as GST) is levied on associated contractor then the main agency will reimburse it in full to associated agency.

The associated contractor shall be bound to execute work upto a deviation limit of 100% in quantities of items of work at the agreement rate. Beyond deviation limit the rates will be decided by main & Associated contractor on mutually agreed basis.

All the correspondence regarding execution of the electrical work shall be done by the Department with the Associated Agency with a copy to the main agency. In case of non-compliance of the provisions of agreement, the main agency, as well as the associated agency shall be responsible. The action under clauses 2 and 3 shall be initiated and taken against the main agency.

Name of the Sub Head to be indicated :

Signature of main agency      Signature of associated electrical agency Name :      Name :  
Address :      Address :

Date:      Date :

Place:      Place:

COUNTERSIGNED EXECUTIVE ENGINEER

**FORM 'A'**

DETAILS OF ALL WORKS OF SIMILAR CLASS COMPLETED DURING THE LAST SEVEN YEARS ENDING LAST DAY OF THE MONTH PREVIOUS TO THE ONE IN WHICH APPLICATIONS ARE INVITED.

Sl. No	Name of Work /project and location	Owner or Sponsoring organization	Gross amount	Date of Commencement of contract	Stipulated date of completion	Actual date of completion	Litigation/arbitration with details* pending/in progress	Name & contact No. of officer to be made address/Telephone home reference may	Remarks
1	2	3	4	5	6	7	8	9	

\*Indicate gross amount claimed and amount awarded by the Arbitrator.

SIGNATURE OF APPLICANT(S)

Note:-

1. Only those works which satisfy the eligibility criteria needs to be mentioned.

**FORM 'B'**

**PERFORMANCE REPORT OF WORKS REFERED TO IN FORM "A"**

Name of Firm

(i) Name of Work / Project & Location

(ii) Name of Client / Department

Agreement Number

Completion Cost

Date of Start

Date of actual completion

Performance Report - (Quality of work)

The details of STP plant installed, should be clearly given or complete schedule be enclosed.

Dated:

To be signed by competent authority in-charge of work of Executive Engineer level or equivalent.

Note: The Department shall be at liberty to verify the details submitted by the applicant.

## **GENERAL TERMS & CONDITIONS**

The work shall be carried out strictly in accordance with CPWD specifications for Electrical Works 2023 (internal) and 2023 (External) as amended upto date and in accordance with Indian Electricity Rules, & Indian Electricity Act, as amended upto date and as per instructions of the Engineer-in-Charge and nothing will be paid extra.

All materials to be used on this work shall be ISI marked & shall be got approved from the Technical sanctioning authority/Engineer-in-Charge before installation at site if delivered then department is not responsible and payment will not be done.

PVC insulated Cu. conductor wire used shall be multi-standard FRLS grade for which nothing extra shall be paid.

The work shall be carried out according to approved drawings/details which shall be approved by the successful tenderer for execution of work and as per instructions of Engineer-in-Charge who will have the right to change the layout as per requirement at site and the contractor shall not have any claim due to change in layout. The work shall be executed by skilled person Licensed by the approved authorities.

All damages done to the building during execution of electrical work shall be the responsibility of the contractor and the same will be made good immediately at his own cost to the satisfaction of the Engineer-in-Charge. Any expenditure incurred by the department in this condition shall be recovered from the contractor and decision of the Engineer-in-Charge about recovery shall be final.

The bad workmanship will not be accepted and defects shall be rectified at contractor's cost to the satisfaction of the Engineer-in-Charge.

All the debris of the electrical works should be removed and the site should be cleared by the contractor immediately after the accruing of debris. Similarly any rejected material should be immediately cleared off from the site by the contractor.

The contractor or his representative is bound to sign the site order book as and when required by the Engineer-in-Charge and to comply with the remarks therein.

The size of conduit and wiring shall be got approved from the Engineer-in-Charge before taking up the execution.

The contractor shall make his own arrangement at his own cost for electrical / general tools and plants required for the work.

All materials shall be supplied and used in items of works by the contractor should be of standard and approved quality. They should be got approved from the Engineer-in-Charge or his authorized representative before installation otherwise no payment will be made for an unapproved or rejected material used on the works and the same shall be removed at his cost from site or work.

The contractor shall have to prove bonafides of the make of materials by producing necessary documentary evidence. They are advised to obtain prior approval of Engineer-in-Charge for proposed make of material, before bringing material to site work.

Location of Light fixtures, cable routes etc. should be got approved from the Engineer-in-Charge before execution.

All interconnection in the panel, DB, cable-looping boxes shall be carried out with suitable cable commensurate with the current carrying capacity of incoming and outgoing cables complete with thimbles etc. as required for which nothing extra shall be paid.

All panels, DB's, cable-looping boxes will be numbered and marked with paint / name plate and nothing extra will be payable on this amount.

All MCB, MCCB, MCB, DB's, RCBO's, RCCB with DB's, SM DB's shall be of same make / manufacturer

All the material should be ISI Marked wherever applicable.

The feeder pillar panels shall be fabricated from CPRI approved firms (from list of acceptable makes) and as per CPWD specifications.

The entire installation shall be at the risk and responsibility of the contractor until these are tested and handed over to the department.

Not with-standing the schedule of quantities, all items of interrelated works considered necessary to make the installation complete and operative are deemed to be included shall be provided by the contractor at no extra cost.

The connection, inter connection and inter earthing shall be done by the contractor wherever required and noting extra shall be paid on this account All repairs & patch work shall be neatly carried out to match with the original finish & all damages caused to the building installation during the execution of work shall have to be made good by the contractor immediately at his own cost to the entire satisfaction of Engineer-in-charge. In case contractor fails to comply with the instructions of the Engineer-in-charge, Engineer-in-charge shall be at liberty to get the work done by any other agency and recover such amount as paid to the other agency from the bill(s) of the contractor. Contractor shall have no claim, whatsoever, on the extent of such amount.

The makes of material have been indicated in the list of acceptable makes. No other make will be acceptable. The material to be used in the work shall be got approved from the Engineer-in-Charge before use at site. The Engineer-in-Charge shall reserve the right to instruct the contractor to remove the material which, in his opinion, is not as per specifications.

No material shall be brought to site without the approval of Engineer-in Charge. All fixtures and fittings shall be procured just before the installation.

Wherever ceiling roses are not required to be provided in the light/fan/exhaust fan points, due to site conditions, the contractor shall use suitable three pin connectors for which nothing extra shall be paid. Wiring shall be carried out with FRLS wires.

Contractor shall provide polythene/PVC plastic cover for all MDB's/SDB's/DB's, panels, feeder pillars etc to protect them from rust/damages, during execution of work till the work is actually completed and handed over to the department.

Makes of all items that are not covered in the schedule of work/additional specifications shall be got approved from the Engineer-in-charge and shall conform to relevant Indian Standard as applicable.

The contractor shall ensure that the staff employed by him for execution of the electrical work, possess the valid electrical license issued by competent authority. Consequences arising due to the default of the contractor in not complying with the above condition shall be the responsibility of the contractor.

All concealed work and earthing shall be done in the presence of the Engineer-in-charge or his authorized representative.

The schematic diagram/dimensional drawings of the various electrical cubical panels shall be got approved from the Engineer-in-charge before fabrication and shall comply with CPWD specifications and Indian Electricity Rules. All panels shall be powder coated inside out, in shade approved by the Engineer-in-charge.

The contractor shall make his own arrangement for storage of material at his own responsibility in the site.

The doors of all cubicle panels shall be hinged type including those of bus bar chambers and cable alleys. The locking shall be with chrome plated metal key locks. All doors shall be earthed with copper conductor wire as approved by the Engineer-in-charge.

The work shall be carried out according to drawing approved by the Engineer-in-charge. The layout once approved can only be changed by the Engineer-in-charge as per requirement at site. It shall be the responsibility of the contractor to plan the layout and get the approval from the Engineer-in-charge before laying the conduits etc.

The MCB should be of the same make as that of MCB DB's and having a minimum breaking capacity of 10 KA. Contractor shall obtain approval of the Engineer-in-charge before procurement of MCB DB's.

MCCBs shall be used with terminal spreaders and all terminals shall be shrouded to avoid direct contact.

All measuring and indicating instruments shall be protected through MCB's and isolating switches.

Termination to SDB and main board adapter box i/c connection wires to MCB,s inter connection between SDB and main board etc shall be included in the tendered rates and nothing extra shall be paid for the same.

## **ADDITIONAL TERMS AND CONDITIONS FOR STP PLANT**

### Introduction

**Name of work:** “Construction & CAMC of 3 nos. 100 KLD MBBR Technology prefabricated Sewage Treatment Plant (STP).”

The proposed Sewage Treatment Plant of capacity 100 KLD – 3 Nos. based on Moving bed biofilm Reactor (MBBR) technology and as per Treatment Process Flow Diagram attached with this tender document complete as per design and direction of Engineer-in-Charge is to be provided IIM Udaipur

Stipulated period for completion of the job is 3.5 months. The contractor shall plan and execute the work, strictly adhering to the scheduled date of completion, which may require simultaneous taking up the work at secured area there may be wastage of labour due to entry passes, for which nothing extra shall be paid.

### Site Information

The contractor is advised to visit the site of work before tendering to acquaint himself regarding the site conditions, availability of water, provisions and other necessities to be made for execution of work and arrangement to be made for labour and supervisory staff including transportation and cartage as required. Department can facilitate the entry in the secured area.

The installations where the work is to be carried out are of sensitive nature and meant for National Security, therefore all the staff deployed by the contractor shall be of sound integrity and the antecedents of the staff needs to be got verified from the police authorities. The contractor shall have to coordinate with police authorities, if required, within his quoted rates.

The contractor has to take full precaution & safety measures of his men and materials, during execution of work, till the time the entire work is completed i/c. testing, as required under the rules and handing over of the installation to the Department. Nothing extra shall be payable on this account.

For any type of mis-happening/human loss, during the said period, the contractor will be fully responsible for it and liable to bear all losses and pay full compensation. The department will not take any responsibility for such type of happening.

### Conformity with Statutory Acts/Rules, Standards, Specifications and Codes:

All components shall conform to relevant Indian Standard Specifications, wherever existing, as amended up to date.

All the work shall be carried out as per following CPWD General Specifications and should also comply with relevant provisions of the Indian Electricity Rules and Act as applicable, amended up to date. :-

CPWD Specifications for Electrical work part-I (Internal) -2023

CPWD Specifications for Electrical work part-II (External) - 2023

The material shall be procured only from the manufacturers & their authorized dealers & documentary proof for such procurement & supply shall be produced by the contractor. Contractor has to produce original bill/challan to the Eng-in-charge.

No claim for defective material brought by the contractor and not approved by the Engineer-in- Charge shall be entertained.

The persons executing the electrical work should have, the valid electrical license issued by the competent authority.

The contractor is bound to sign the site order book, as and when required, by the Engineer-in-charge and carryout the instruction recorded therein.

All debris/malba generated while carrying out E&M work shall be removed and shall be cleared by contractor as soon as the work is completed.

No T & P will be issued by the Department. All T&P required for the execution of work shall be arranged by the contractor at his own cost and nothing extra shall be paid on this account.

Submission of Drawings / documents for approval:

The successful bidder shall prepare & submit three sets of AutoCAD drawings and get them approved from the Engineer-in-charge before the start of the work.

The work shall be carried out as per the approved drawings/ layout plan and directions given by the Engineer-in-Charge or his authorized representative.

The approval of drawings however does not absolve the contractor not to supply the equipments/ materials as per agreement, if there is any contradiction between the approved drawings and agreement

Works to be done by the contractor

Unless otherwise mentioned in the tender documents, the following works shall be done by the contractor and therefore, their cost shall be deemed to be included in their tendered cost-whether specifically indicated in the schedule of work or not: -

Foundations for equipments.

Making good all damages caused to the structure during installation and restoring the same to their original finish.

Minor building works necessary for installation of equipments, making of opening in walls or in floors and restoring them to their original condition / finish and necessary grouting etc. as required.

All repairs & patch work shall be neatly carried out to match with the original finish & all damages caused to the road / embankment during the execution of work shall have to be made good by the contractor immediately at his own cost to the entire satisfaction of Engineer-in-charge.

In case contractor fails to comply with the instructions, the Engineer-in-charge shall be at liberty to get the work done by any third agency and recover such amount paid from the bill(s) of the contractor.

All supports for installation of STP equipments and associated work etc. as are necessary.

All equipment, pipes, valves, pressure gauge, insulations, electric control panel, cabling and cable connections etc required for overall completeness of Sewage Treatment Plant from the tapping point to the discharge point.

Painting of all exposed metal surfaces of equipments and components with appropriate colour.

On award of work :

The contractor will have to submit the following within two weeks of award of work.

Full line diagram / flow sheet for the offered system.

Full PID for the offered system including therein all equipment details, pipe line specifications and sizes, flow directions and all other relevant details.

Complete technical submittal with calculations, catalogues and technical data sheets and drawings for all equipment included in the system.

Complete Layout of the whole plant room.

Complete set of shop drawings for all the civil works required for the plant, made as per space, dimensions and levels actually available at site.

Detailed fabrication drawings for all fabricated equipment.

Full Piping isometric diagram. (Can be separate drawings for air and water piping but the two drawings should be space – co-ordinated.)

Complete electrical drawings including GA for electrical panel(s), power diagrams, auxiliary and control diagrams, cabling and wiring drawings etc. complete in all respects.

All these drawings will have to be made / modified according to site requirements.

Rectification of existing collection tanks, with necessary desludging of units as directed by the Engineer-in-charge.

#### During Execution

As and when the contractor places order for the Sewage Treatment Plant, a copy of such orders shall be endorsed to the Engineer-In-Charge.

#### On completion of Installation

A final set of "As Built Drawings" containing all details as actually executed shall be submitted for future reference and use of department / owners.

Operation and maintenance manual of Sewage Treatment Plant, detailing all adjustments, operation and maintenance procedure.

Original Guarantee Cards / warranty certificates from all manufacturers / suppliers for various equipment as received by the contractor.

#### Inspection of materials and equipments

##### Initial Inspection & Testing

Initial inspection of materials & equipment at manufacture's works will be done by the engineer- in-charge or his representative for items/equipment requiring initial inspection at manufacture's works before dispatch. The contractor shall give sufficient advance notice regarding the dates proposed for such tests to the department's representative(s) to facilitate his presence during testing. The Engineer-in-charge at his discretion may witness such testing. Equipments will be inspected at the manufacturer/authorized dealer's premises, before dispatch to the site by the contractor.

The department also reserves the right to inspect the fabrication job at factory and the successful tenderer has to make arrangements for the same.

The materials duly inspected by engineer-in-charge or his authorized representatives shall be dispatched to site by the contractor.

The Contractor shall preserve the copies of invoices, test certificates, gate passes etc. to prove the Genuineness of material / purchases. The responsibility of procurement of genuine material of specialized makes shall be of the contractor.

Third Party Testing of STP samples:

For the purpose of handover; the contractor shall have to collect at least 4 (four) samples of treated sewage (water) from the outlet point of tertiary treatment, the sample collections being not less than one week apart, during the course of trial runs, and get them tested for the stipulated results from Government Approved Laboratories, as decided by the Engineer-in-Charge.

At least two consecutive test results should conform to stipulated treated sewage values. Failing which; the trial run period will keep extending till such time that the test results are satisfactory for at least two weeks in continuation.

#### Trial Run Period

The trial run will be deemed to begin when the contractor has completed the entire installation, done individual equipment working testing, has removed all snags / shortcomings / fault repair etc. and the entire process is operational for at least 24 hours continuously without any interruption on any front.

The trial run period for 30 days from the above noted date, subject to test results of sample being satisfactory as detailed in subsequent paragraphs.

Successful tenderer is to impart training to the departmental staff for operation of the Sewage Treatment Plant during the trial run period of 30 days.

#### Maintenance period:

##### MAINTENANCE:

1 Sufficient trained and experienced staff shall be made available to meet any exigency of work during the guarantee period of 12 months from the handing over of the installation.

2 The maintenance, routine as well as preventive for 12 months (Extendable further 2 years on yearly basis on mutually agreed terms) from the date of taking over the installation as per manufacturer's recommendation shall be carried out and the record of the same shall have to be maintained.

3 The agency shall quote rates for AMC of the STP Operation for a period of one year from date of Handing over of the STP plant. The work will be initially awarded for Design and construction of STP and supplementary agreement for AMC part will be drawn by department for the AMC period.

##### 1. Regular Maintenance

- Removal of Debris: Inspection and removal of plastic materials or solid waste from the intake screens.
- System Check: Inspection of the blower and overall unit for any unusual noise.
- Disinfection Check: Ensuring the disinfection unit (e.g., chlorine tablets) is functioning and replenishing as necessary.

##### 2. Periodic Maintenance

- Desludging: The primary, most critical O&M activity is the removal of accumulated sludge, which is required roughly every six months.
- Spares for Electro-mechanical equipment

##### 3. Long-Term/Operational Support

- Blower Maintenance: The aeration blower is a key component that requires occasional, simple maintenance
- Filter Media Replacement: Filter media inside pressure vessels to be changed/replaced every 1 year to ensure proper treated water quality
- Diffusers replacement (Only if required)

- **Scope of Work** The following activities shall be done by the agency on regular basis : **Daily Activity** Checking of regular parameters required for smooth operation of complete STP at site level.
- All necessary measure will be taken to operate the plant satisfactorily.
- Maintaining all sorts of records as per the requirements such as log sheet of the system, performance sheet of the system, chemical consumption record, etc to minimize the downtime of any utility and to enhance the performance of entire system.
- Regular cleaning & checking of Valves.
- Regular cleaning of screen and screen chamber.
- Regular backwash of PSF, ACF for STP.
- Preventive maintenance of pumps, strainers etc.
- Regular dosing of chemicals in the system.
- **Weekly Activity** Checking of oil and grease of all Pumps, and maintenance of pumps and their strainers.
- Regeneration, rinsing back washing cycles after regular intervals for pressure sand filters, Activated Carbon Filters etc.
- Cleaning greasing/varnishing of various equipment if required.
- Preventive maintenance of mechanical equipments like pumps, valves etc. with corrective action.
- 
- **Monthly Activity** Checking parameters like color, odor and any other parameter required for the smooth operation of the plant and take corrective measures in case of any deterioration of these parameters.
- All the parameters of treated water shall be will within state pollution control norms at any time.
- Testing of water and submission of testing report to JE/AE.

The contractor shall provide all services for operation and maintenance of STP with necessary housekeeping of the agreed utilities.

### **Guarantee**

All materials shall be guaranteed for a period of 12 months from the date of installation and taking over by the department, against unsatisfactory performance and / or break downs due to defective design, workmanship of material, the equipments or components, or any part thereof, so found defective during the guarantee shall be forthwith repaired or replaced free of cost, to the satisfaction of the Engineer-in-Charge.

The contractor shall guarantee among other things, the followings

Quality, strength and performance of the materials used as per manufacturers standards.

Safe mechanical and electrical stress on all parts at specified conditions of operation.

Satisfactory operation during the maintenance period.

Overall plant and process performance, all operating parameters and all treated water quality parameters within the stipulated limits at all times during the operation of the plant.

The equipments or components, or any part thereof, so found defective during guarantee period shall be forthwith repaired or replaced by the contractor free of cost, to the satisfaction of the Engineer-in-Charge. In case the overall plant and process performance, all operating parameters and all treated water quality parameters is found to be beyond the stipulated limits at any time during the operation of the plant, the

contractor will take actions to achieve the same free of cost, to the satisfaction of the Engineer-in-Charge. In case, undue delay is caused by the contractor in doing this, the same will be got done by the department at the risk and cost of contractor. The decision of Engineer-in-Charge in this regard shall be final and binding. The contractor shall ensure adequate & prompt after sales service “free of cost” during guarantee period, in the form of maintenance, spares and personnel, as and when required during defect liability period and shall minimize the breakdown period.

**Rates:**

The contractor shall quote the rates for all items inclusive of all taxes, duties & levies and all charges for packing, forwarding, insurance, freight and delivery, installation, testing, commissioning etc. at the site including temporary constructional storage, risks, overhead charges, general liabilities/obligation etc. Nothing extra shall be payable on this account.

GST / Security Deposit / Income Tax and any other tax as applicable, will be recovered from the contractor’s bill.

**Terms of Payments:**

Following payment terms shall be applicable.

No advance payment shall be made.

Following percentage of contract rates shall be payable against the stage of work shown herein:

Sl. No.	Stage of Work	For STP equipments
1.	After initial inspection (wherever specified) and delivery of material at site in good condition on pro-rata basis.	50%
2.	On completion of installation in all respect on pro-rata basis.	25%
3.	On successful Commissioning and taking over by the department after trail run and satisfactory sample results .	25%

Deduction of security deposit shall be governed by standard / relevant clause of the CPWD 7.

**Handing over of installation**

Completed work is to be handed over to the department. The hand over will be taken by the department only upon successful completion of trial runoff 30 days. However, any defect pointed out by the department at the time of handing over is to be rectified by the contractor. Nothing extra shall be paid on this account.

**Compliance to the Tender Specifications**

Prospective bidders are to quote as per the Technical specification acceptable makes and scope of work specified in the tender documents.

**Operation & Maintenance:**

The Operation and Maintenance (O&M) of the Sewage Treatment Plant (STP) shall be carried out for an initial period of 12 (twelve) months from the date of successful commissioning and handing over of the plant. The payment for O&M services shall be governed by the following terms and conditions:

The Contractor shall be paid on a monthly basis for satisfactory operation and maintenance of the STP. The monthly payment shall be released upon submission of the invoice along with all relevant operational records, including but not limited to logbooks, chemical consumption details, energy consumption records, treated water quality reports, and maintenance registers. The performance of the STP shall be strictly in compliance

with the prescribed discharge norms and standards stipulated by the Rajasthan State Pollution Control Board and other applicable statutory authorities.

The release of each monthly payment shall be subject to certification by the Engineer-in-Charge confirming that the STP has been operated efficiently, all equipment is in proper working condition, and the treated effluent meets the required quality standards. In case of non-compliance with discharge norms or unsatisfactory performance, proportionate deductions shall be made from the monthly payment, and repeated defaults may lead to suspension or termination of the O&M contract.

After completion of the initial 12-month O&M period, the contract may be extended on a yearly basis for a maximum period of 2 years, subject to satisfactory performance of the Contractor and mutual agreement. During such extended period, an annual escalation of O&M charges shall be applicable at a rate not exceeding 5% per annum over the previous year's accepted O&M cost.

The extension of the contract shall be based on a formal performance evaluation, including compliance with effluent standards, uptime of the plant, preventive maintenance practices, timely replacement of consumables, and overall operational efficiency. The decision of the Employer regarding performance assessment and continuation of the contract shall be final and binding.

No escalation shall be payable during the initial 12-month O&M period. The escalation, if granted during the extended period, shall be applicable only on the approved base O&M rates and shall not be compounded beyond the stipulated limit.

All applicable taxes, duties, and statutory levies shall be paid as per prevailing government norms. Payments shall be made within a reasonable period upon submission of certified bills, subject to statutory deductions as applicable.

#### Penalty Clause (Quantified) for O&M of STP

In case of any deficiency in operation and maintenance of the STP, the following penalties shall be levied and recovered from the monthly O&M payments:

Any instance of treated effluent not meeting the prescribed discharge standards shall attract a penalty of ₹2,000 per parameter per day (for parameters such as BOD, COD, TSS, pH, etc.). In case more than one parameter exceeds the permissible limits, the penalty shall be cumulative. If non-compliance continues for more than 3 consecutive days, an additional lump sum penalty of ₹10,000 shall be imposed for each such occurrence.

For plant downtime, the Contractor shall ensure a minimum uptime of 95% in a month. In case uptime falls below this threshold, a penalty of ₹3,000 per day shall be levied for each day of downtime beyond the permissible limit. If downtime exceeds 5 consecutive days, the penalty shall increase to ₹5,000 per day from the sixth day onwards.

Failure to maintain proper operation due to non-availability of manpower, including operators or supervisors, shall attract a penalty of ₹1,500 per day per person for each day of absence.

Non-maintenance of logbooks, records, and submission of monthly reports including treated water quality reports shall attract a penalty of ₹1,000 per instance. Continued failure beyond 7 days shall result in an additional penalty of ₹5,000 per month.

Failure to carry out scheduled preventive maintenance or delay in replacement of consumables (such as media, chemicals, oils, etc.) shall attract a penalty of ₹2,500 per instance, and in case it leads to deterioration in plant performance, additional penalties as applicable for non-compliance shall also be imposed.

In case of odour nuisance, overflow, or environmental non-compliance complaints attributable to poor O&M, a penalty of ₹5,000 per incident shall be imposed, subject to verification by the Engineer-in-Charge.

The total penalty in a month shall, however, be capped at 20% of the monthly O&M charges. In case penalties exceed this limit or if there are repeated instances of non-performance (more than three major defaults in a quarter), the same shall be treated as a material breach of contract, which may lead to termination of the contract, forfeiture of Performance Security, and execution of work at the risk and cost of the Contractor.

All penalties shall be certified by the Engineer-in-Charge, whose decision shall be final and binding on the Contractor.

## TECHNICAL SPECIFICATIONS

### Scope of Work

- 1.1 The Sewage treatment plant shall include the items / equipments specified in following paras but not limited to the same. The successful bidder is to design the system in a technically sound manner, as per CPCB Guidelines, Rajasthan PCB Guidelines, NGT Guidelines, as well as OEMs standard and to provide any additional equipment / component / accessories etc wherever required. Nothing extra shall be payable on this account.
- 1.2 The Sewage recycle plant is designed to treat 100 m<sup>3</sup>/day of sewage. The Treated water outlet quality will be as mentioned in Tenders requirements for recycling and reusing the water for gardening / landscaping & irrigation purpose. The primary objective of the sewage treatment plant is to provide the required quality of water on a consistent basis.
- 1.3 The plant shall be placed on ground and a fully automatic package type containerized Sewage Treatment Plant based on Moving Bed Bio Reactor (MBBR) technology in FRP. The STP tank shall be designed as a package type plant in 100% FRP material of construction.

Below is the list of equipment required for 100 KLD capacity. The same list is applicable for all systems (DW1, DW2 & DW3)

1. One (1) No. Basket screen
  - a. Type : Manually operated
  - b. Screen opening : Mesh type
  - c. MOC : SS

With accessories like railing system and suitable lifting mechanism. Hand rake to be provided for cleaning the screen.

2. Two (2) Nos Air Blowers for Mixing in EQT & FFT
  - a. Type : Twin lobe design
  - b. Capacity : 70 Cum/hr. @

0.35 bar

- c. MOC : C.I

Air Blowers are of two lobe design complete with motor, pulleys, filter, silencer, base plate etc.

3. One (1) Lot Fine Bubble Diffused Aeration System for EQT &

FFT

Comprising of set of membrane diffusers to be installed in Existing civil tanks.

- a. Number of Membranes: 6 to 8 Nos.
- b. Size: 90mm OD x 1000mm long
- c. Type: Tubular Diffusers
- d. MOC of membrane: EPDM
- e. Type of Aeration: Retrievable type

4. Two (2) Nos. Raw sewage transfer pumps (1W+1S)

- a. Type : Submersible
- b. Capacity : 10 to 15 M3/hr.
- c. Pressure : 1.5 to 2.0 kg/ sq.cm
- d. MOC : CI

Four (4) Lots Pre-fabricated STP Capsules

- a. FRP Treatment Tank (MOC: 100% FRP) comprising of the following
- b. Separation and Sedimentation Chamber
- c. Anaerobic Chamber
- d. Moving Bed Chamber
- e. Sedimentation Chamber
- f. Disinfection Chamber
- g. In Built re-circulation Line
- h. Manhole covers
- i. Air Blowers for STP as per Daiki
- j. Divider Box
- k. Wire Ropes for Fixing the STP tank

6. Two (2) Nos. Filter Feed & Backwash Pumps with Motor

- a. Type : Horizontal Centrifugal
- b. Capacity : 10 M3/hr.
- c. Pressure : 2.0 to 3.0 kg/ sq.cm
- d. MOC : CI

7. One (1) Lot Pressure Sand Filter (PSF)

- a. Media : Under bed Media + Multi grade sand
- b. Size : 1000 mm dia. x 2100mm Ht.
- c. MOC : MS filter with Epoxy (Internal)

Note: Accessories viz., inlet feed and bottom collecting system with frontal piping and valves

8. One (1) Lot Activated carbón Filter (ACF)
- a. Media : Under bed Media +Sand
  - b. Size : 1000 mm dia. x 2100mm Ht.
  - c. MOC : MS filter with Epoxy (Internal) + Carbon

Note: Accessories viz., inlet feed and bottom collecting system with frontal piping and valves

**General Requirements:**

- 1. One (1) Lot All interconnecting piping, Fittings and valves

Interconnecting piping, fitting, valves within the battery limits of the Sewage Treatment Plant. MOC:

PVC (Sch 40) of sewage & Treated water lines with PP ball valves / CI butterfly valves.

MOC: G.I (C class) of Air lines as per IS 1239 with CI butterfly valves.

2. One (1) Lot. Electrical panel, inter connecting cabling,

starters

Comprising of MCC panel to accommodate all the new drives along with cabling, Earthing, etc for the STP.

Type: Non-Compartmental Type-Indoor Duty

Control panel to accommodate all the instruments.

3. One (1) Lot Instrumentation

a. Pressure Gauges – 6 Nos. Type: Diaphragm Range: 0 to 3 bar pressure

b. Flow meter – 1 No. Type: Electro-magnetic flow meter Capacity: 0 to 20 Cum/hr.

c. Level Switch - 4 Nos.

Type: Float switch **List of makes for Major**

**Electromechanical Equipment:**

1. Horizontal Centrifugal Pump: Johnson/Kirloskar/ CNP /  
Equiv

2. Submersible pump: Kirloskar/Lubi/Equiv.

3. Air Blowers: Everest/Kay/Equivalent

4. Diffused Aeration system: SSI/ Escogen/Equivalent

5. Prefabricated STP Capsules:

Daiki/ArvindEvisol/Sintex/Equivalent

6. Flow Meters: H Guru /Kranti/ Equiv

7. Pressure Gauges: H Guru / Gluck / Equiv

8. MCC panel: Major components L & T / Siemens /  
Schneider components

9. Cables: Havells / Polycab / Nicco

10. UPVC / PVC Pipes: Supreme / Finolex

11. Pressure vessel: Fabrication item

12. Basket screen: Fabrication item

The Contractor shall be solely responsible for obtaining the Authorities approval of his works prior to the handing over to the client. The required NOC shall be arranged at appropriate time from the Pollution Control Department by the contractor at his own level however the charges claimed by the department shall be reimbursed after production of receipt. If the contractor fails to manage the NOC from Pollution Control Board or other authority, he will be penalized @ Rs. 20,000/- per month from the due date.

Technical Specifications of the equipments / components: -

Contractor shall in all condition ensure that quality of effluent from STP shall have desired characteristics in conformity with specifications as mentioned above and shall guarantee for it.

Mechanical:

General Mechanical Requirements

The following clauses specify general mechanical requirements and standards of workmanship for equipment and installation and must be read in conjunction with the particular requirements for Contract. These general specification clauses shall apply where appropriate except where redefined in the particular required sections of the Specification which shall be applicable.

Materials

All material incorporated in the works shall be the most suitable for the duty concerned and shall be of first class commercial quality, free from imperfection and selected for long life and minimum maintenance. All mechanical items shall be as per approved makes given in the tender and if any make for certain item is not mentioned it will be of standard and good quality.

Design and Construction

The plant design, workmanship and general finish shall be of sound quality in accordance's with good engineering practice. Design shall be robust and rated for continuous service for all the specified duties, under the prevailing operational site conditions.

The general design of mechanical and electrical Plant, particularly wearing parts of equipments, shall be governed by the need for long periods of service without frequent attention but shall afford ready access for any necessary maintenance.

Similarly, items of Plant and their component parts shall be completely inter-changeable. Spare parts shall be manufactured from the same material specification as of the originals.

It shall be the responsibility of the contractor to ensure that all the equipment selected is fully compatible, mechanically, electrically and also with respect to instrumentation control and automation. It shall be the responsibility of the contractor to ensure his equipment interfaces with any existing equipment correctly. Any interfaces must not affect the integrity of the equipment or invalidate any warranties or guarantees.

Each component or assembly shall have been proven in service in a similar application as under conditions no less than those specified therein.

The equipment shall be compatible with the civil structure, when installed, with sufficient space for operator access and maintenance procedures.

All materials shall be of the best commercial quality and free from any flaws, defects of imperfections. Materials shall be selected to eradicate or reduce corrosion to a minimum.

### Process and Design Norms:

The STP shall be designed & maintained based on the following inlet-outlet parameters as per latest NGT/RSPCB Norms:

Sr. No.	Parameters	Inlet	Outlet
1.	pH	6.5 – 8.5	6.5 – 8.5
2.	BOD	250 - 300 mg/lit	< 10 mg/lit
3.	COD	400 – 600 mg/lit	< 50 mg/lit
4.	TSS	1000 mg/lit	< 20 mg/lit
5.	FOG	50 mg/lit	< 5 mg/lit
6.	Total Nitrogen	50 mg/lit	< 10 mg/lit
7.	FaecalColifrom	-	< 100 MPN per 100 ml

The system should be handle a range of flows from 1.0 cum/hour to 100 cum/day with no deterioration in outlet quality parameters.

- c) The system will not require cleaning at a frequency greater than twice in a year. In case of failure to meet the above performance requirements, Bidder will replace/ rectify the system or components to get the necessary performance.

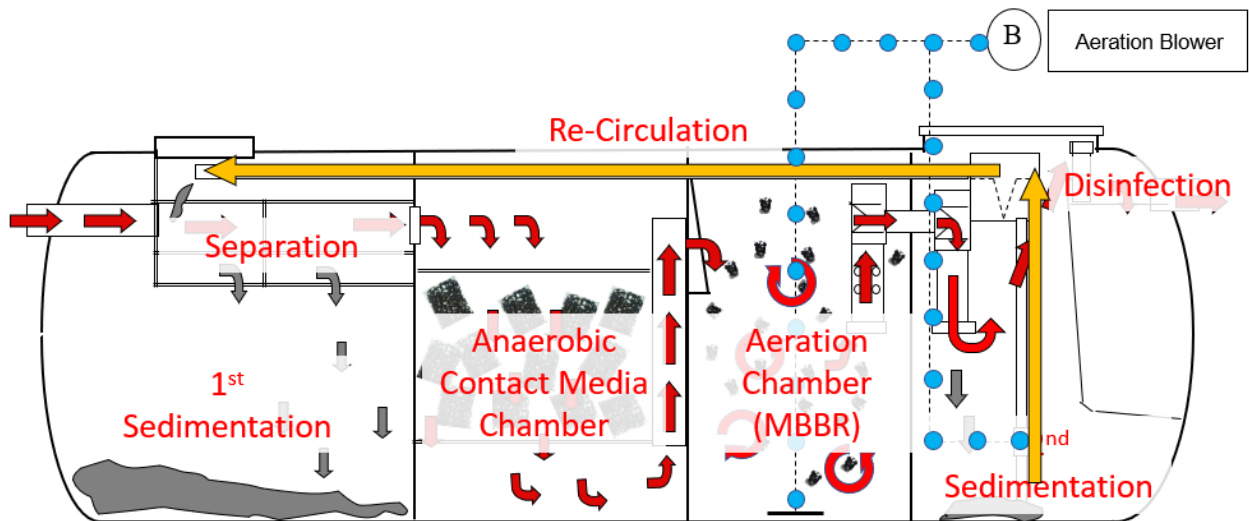
The following are the list of civil works/refurbishment required:

1. Water proofing of all existing civil units to arrest leakage and seepage
2. To cut the unwanted trees, shrubs and weeds. Also, to provide approach with steps and pathway for easy operation & maintenance of plant.
3. Cut outs to be provided at bottom and at top to connect the tanks.
4. Damaged man hole chambers to be replaced
5. Top slab to be cut open in the first and second chamber for screen installation and also for proper ventilation system
6. Existing PGF bed can be used as foundation bed (after required modifications) to place the pre-fabricated capsules. Filter media from the bed to be removed for placing the capsules.
7. Painting of existing civil units (Externally)wherever required.

Typical picture and flow chart

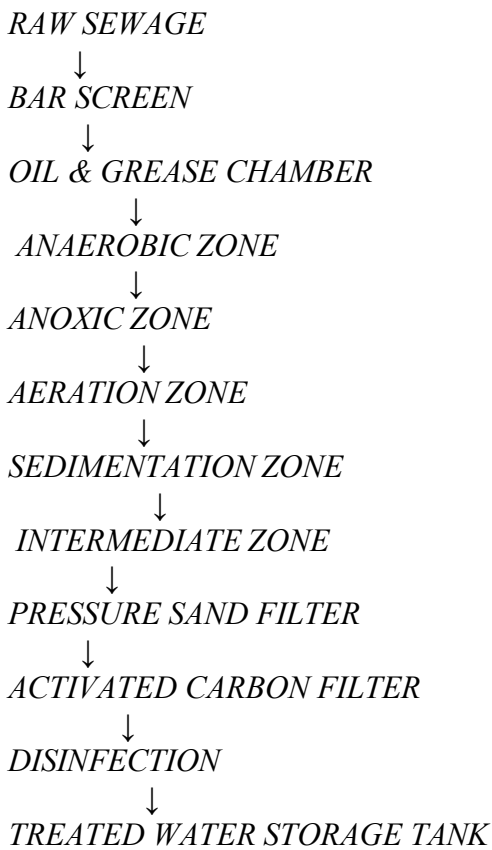
For the design of the 100 KLD capacity MBBR Technology based STP, a design guideline along with unit requirement is mentioned in the following paragraphs. The plant shall be designed and equipment shall be selected for giving best performance and satisfaction to achieve required result as per data provided below and schedule of quantities. The capacities of each item shall be as following or as designed during detailed system engineering, whichever is better. The detailed design calculations for capacity of equipments proposed to be selected shall be submitted by the successful bidder, after award of work. The calculation will be examined & approved by the Engineer-in-Charge, before actual execution of work.

*Readymade STP Snap Shot:*



*FLOW CHART:*

*Flow Diagram/ chart of 100 KLD MBBR Based STP Plant*



**LIST OF ACCEPTABLE MAKES**

**Note:** *Incasemakeofanyequipmentormaterial in any sub work / subheadisnotspecifiedintheNIT,themattershallbe referredtotheNITapprovingauthority as per direction of Engineer in chargeandobtaintheapproval.Thereaftertheagencycan proceedwiththesupplyofmaterial.*

**(Internal EI, Fans & Fittings)**

**LIST OF APPROVED MAKES OF MATERIALS**

1	PVC/GI CONDUIT (ISI MARKED)	BEC/AKG/POLYCAB/ ASTRAL / RMCON / Jindal
2	PVC CONDUIT ACCESSORIES (ISI MARKED)	BEC/AKG/POLYCAB/ ASTRAL / RMCON
3	PVC INSULATED FRLS COPPER CONDUCTOR CABLES 1.1 KV GRADE	FINOLEX/POLYCAB/HAVELLS/ RRKABLE /
4	MODULAR PLATE TYPE SWITCH/ SOCKET GI BOXES / FAN REGULATOR//TELEPHONE / RJ-45/RJ-11 MODULAR SOCKET	MK/SCHNEIDER (ZENCELO) / LEGRAND (ARTEOR)/ABB(CHEIRON)/L&T(ENTICE)
5	MCB / ISOLATOR / MCB DB'S / RCCB / ELCB / MODULER TYPE BELL	LEGRAND / SCHNEIDER&T/ /HAGER/ ABB/ SIEMENS
6	LED/LIGHTING FIXTURES & LED LAMPS & FAÇADE	PHILIPS /LIGHTING TECHNOLOGY / HALONIX/HAVELLS / REGENT
7	CEILING FAN (BLDC) / EXHAUST FAN	HAVELLS/ALMONARD / HALONIX/ ORIENT /ATOMBERG/
8	TELEPHONE CABLES / WIRES (ISI MARKED) / CO-AXIAL TV CABLES	FINOLEX/POLYCAB/HAVELLS/RRKABLE/ KEI/GLOSTER
9	Cat 6 Cable/ Cat 6A/ Fiber Optic Cable& associated items	SCHNEIDER /SIEMMON / LEGRAND / MOLEX / HONEYWELL
10	TELEPHONE TAG BLOCKDP BOXES	KRONE (GERMAN) /D LINK /ITL
11	DWC HDPE PIPE (ISI MARKED)	REX/DURALINE/TRUPATI/GEMINI/ RELIANCE/AKG
12	1.1 KV XLPE CABLE (ISI MARKED)	FINOLEX/POLYCAB/HAVELLS/RRCABLE/ KEI/GLOSTER/ EECTROLITE
13	Floor trunking / DLP	Legrand / OBO vetterman / MK Honeywell
14	Relays	L&T/Siemens/Schneider/Neptune(Ducati)
15	MCCBs	Legrand/L&T/Schneider/ABB/Siemens/ Hager
16	Current Transformers	AutomaticElectric/Kappa/L&T/Neptune/ Pragathi
17	Potential Transformer	AutomaticElectric/Kappa/L&T/Neptune/ Pragathi
18	Digital Iindicating / Measuring Instrument / Multifunction Meters / CT	L&T (QUASER)/Schneider(Conzerv)/ AE/ABB
19	Selector Switch	L&T/Kaycee/Siemens/ABB
20	Indication Lamp & Push Button	BCH/L&T/Siemens/Schneider/ABB
21	Digital Energy Meter	L&T/Conzerv/Secure/ABB/Bentac

**For the materials of STP Plant**

<b>S.No</b>	<b>Material</b>	<b>Approved Make</b>
i.	AirBlowers	KAY/Everest/equivalent
ii.	STP	Daiki/ Sintex / Envisol/suez/equivalent
iii.	Bar screens	As per manufacturer's design
iv.	Diffusers	SSI/Escogen/equivalent
v.	Air Purging Grid	AWT/Fit 'N' Fresh/Thermax/Ion Exchange/EPECPL/ Hydro-Treat/Osdpl
vi.	Dosing Pumps	Kirloskar/CNP/Lubi/equivalent
vii.	Epoxy paint	Fosroc/ Berger/equivalent
viii.	Rotameter, Flow Meter, Differential Pressure Transmitter, Air flow transmitter, Actuated Valves, Level Switch, Vacuum Gauge, Turbidity Meter, DO meter	H.guru/Kranti/equivalent
ix.	Pressure gauge	EMERSON / ABB /Wika / Kobold / Siemens / Krohne Marshall / H.Guru
x.	MCC Control panel	Major components L & T / Siemens / Schneider components
xi.	Pressure sand filter	Thermax/EPECPL/WWF/Ion Exchange /AWT/ Eco Aqua / Pentair/Alpha
xii.	Activated carbon filter	Thermax/EPECPL/WWF/Ion Exchange /AWT/ Eco Aqua/ Pentair/Alpha
xiii.	Sewage pumps	Kirloskar/CNP/Lubi/equivalent
xiv.	Submersible Sewage Pumps	Kirloskar/CNP/Lubi/equivalent
xv.	M.S pipe	TATA / JINDAL /SAIL
xvi.	UV disinfection system	AWT / ALFA / Advance/ Eco Aqua / sukrut
xvii.	Spiral Screw Press	Ecologix/Osdpl/Transcend cleantech
xviii.	U-PVC pipe	Astral / supreme/finolex
xix.	Butterfly valve /NRV /Gate /Ball /Foot Valve / Motorised valves (ISI marked)	Zolotto/Leader/Sant/Kirloskar/Danfoss/Audco
xx.	Contactors	Schneider /L&T/Siemens/ABB/ C&S/ Legrand/ ABB
xxi.	Timer	Schneider /L&T/Siemens/Minilec/ Legrand/ ABB
xxii.	Any Missing Item	As per OEM/Prior Permission as per Make approved by Engineer In Charge

**Integrity Letter**

To,

.....,  
.....,  
.....

Sub: NIT No.: .....

Dear Sir,

It is here by declared that IIM Udaipur is committed to follow the principle of transparency, equity and competitiveness in public procurement.

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

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

Yours faithfully,

Engineer-in-charge  
IIM Udaipur

To,  
The Engineer-in-charge  
IIM Udaipur

Sub: Submission of Tender for the work of “.....”.

Dear Sir,

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

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

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

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

Yours faithfully

(Duly authorized signatory of the Tenderer)

**To be signed by the Tenderer and same signatory competent / authorised to sign the relevant contract on behalf of IIM Udaipur.**

**INTEGRITY AGREEMENT**

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

**BETWEEN**

Director, IIM Udaipur, (Hereinafter referred as the, IIM, Udaipur ‘Principal/Owner’, which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

**AND**

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

..... (Hereinafter referred to as the (Details of duly authorized signatory)

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

**Preamble**

WHEREAS the Principal / Owner has floated the Tender (NIT No. ....) (hereinafter referred to as “**Tender/Bid**”) and intends to award, under laid down organizational procedure, contract for.....  
(Name of work) hereinafter referred to as the “**Contract**”.

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Tenderer(s)and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as “**Integrity Pact**” or “**Pact**”), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

**Articles**

**Article -1: Commitment of the Principal**

- (1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:
  - (a) No employee of the Principal, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person

is not legally entitled to.

- (b) The Principal will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.
- (c) The Principal shall endeavor to exclude from the Tender process any person, whose conduct in the past has been of biased nature.

(2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures .

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

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

principal directly could bid in a tender but not both. Further, in cases where an agent participates in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

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

### **Article 3: Consequences of Breach**

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

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

exercising any legal rights that may have accrued to the Principal, may in its considered opinion forfeit the entire amount of Earnest Money Deposit Performance Guarantee and Security Deposit of the Bidder/Contractor.

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

#### **Article 4: Previous Transgression**

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

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

4. The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement by any of its Subcontractors/sub-vendors.
5. The principal will enter into pacts on identical terms as this one with all Bidders and Contractors.
6. The principal will disqualify Bidders who do not submit the duly signed Integrity Pact between the Principal and the Bidder along with the Tender or violate its provisions at any stage of the Tender process.

#### **Article 6- Duration of the Pact**

This Integrity Pact begins when both the parties have legally signed it. It expires for the Contractor 12 months after the completion of work under the contract or expiry of defect liability period or last payment made under the contract, whichever is later and for all other bidders, 6 months after the Contract has been awarded.

If any claim is made/lodged during this time, the same shall be binding and continue to be valid despite the lapse of this Integrity Pact as specified above, unless it is discharged/determined by the competent authority of institute.

#### **Article 7- Other Provisions**

1. This Integrity Pact is subject to Indian Law, place of performance and jurisdiction is the Headquarters of the Division of the Principal, who has floated the tender.
2. Changes and supplements as well as termination notice need to be made in writing.
3. If the Contractor is a partnership or a consortium, this Integrity Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all

partners and consortium members. In the case of a Company, the Integrity Pact must be signed by a representative duly authorized by board resolution.

4. Should one or several provisions of this Integrity Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
5. Issues like Warranty /Guarantee etc. shall be outside the purview of IEMs.
6. It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Pact, any action taken by the principal in accordance with this Integrity Pact or interpretation thereof shall not be subject to arbitration.
7. In view of the nature of integrity pact, the Integrity Pact is irrevocable and shall remain valid even if the main tender/contract is terminated till the currency of the integrity pact.
8. If any complaint regarding violation of IP is received directly by the principal in respect of the contract, the same shall be referred to the IEM for comments/recommendations.

#### **Article 8 -Independent External Monitor (IEM)**

- (1) The principal appoints a competent and credible Independent External Monitor for this Pact after approval by Central Vigilance Commission (Names and address of IEMs are as mentioned in Schedule-F). The task of the Monitor is to review independently and objectively whether and to what extent the parties comply with the obligations under this agreement.
- (2) The Monitor is not subject to instructions by the representatives of the parties and performs his/her functions neutrally and independently. The Monitor would have access to all contract documents, whenever required. It will be obligatory for him/her to treat the information and documents of the Bidders / Contractors as confidential.
- (3) The Bidder(s)/Contractor(s) accepts that the IEM has the right to access without restriction to all project documentation of the principal including that provided by the Contractor, The Contractor will also grant the IEM, upon his/her request and demonstration of a valid interest, unrestricted and unconditional access to their project documentation. The same applicable to sub- contractors.
- (4) The IEM is under contractual obligation to treat the information and documents of the Bidder{s}/Contractor(s)/ Sub-contractor(s) with confidentiality. The IEM has also signed 'Non- Disclosure of Confidential Information' and 'Absence of Conflict of Interest'. In case if any conflict of interest arising at a later date, the IEM shall inform the Engineer-in-Charge and recuse himself / herself from that case.
- (5) As soon as the IEM notices, or believes it to notice, a v i o l a t i o n of t h i s agreement, he/she will inform the Management of the Principal and request the Management to discontinue or take corrective action , or to take other relevant action. The IEM can in this regard submit non-binding recommendations. Beyond this, the IEM has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- (6) The IEM will submit a written report to the Director within 8 to 10 weeks from the date of reference or intimation to him by the principal and, should the occasion arise, submit proposals for correcting problematic situations.
- (7) If the IEM has reported to the Director, a substantiated suspicion of an offence under relevant IPC/PC Act, and the Director concerned has, within a reasonable time, not taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the IEM may also transmit this information directly to the Central

Vigilance Commissioner.

- (8) The principal will provide the IEM sufficient information about all meetings among the parties related to the project provided such meetings could have impact on contractual relations between the principal and the contractor. The parties will offer to the IEM the option to participate in such meetings.
- (9) The word IEM or monitor would include both singular and plural.

**Article 9- Legal and Prior Rights**

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

INWITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

(For and on behalf of Principal)

(For and on behalf of

Bidder/Contractor)WITNESSES:

1

(signature, name and address)

2

(signature, name and address)

Place: Dated:

**Note: To be signed by the Bidder and the Engineer-in-Charge.**

## **DRAFT AGREEMENT**

AGREEMENT made this            day of            Two Thousand\_\_\_\_\_between            the Indian Institute of Management Udaipur incorporated as Institutions of National Importance through its Director IIM Udaipur (hereinafter referred to as “The Institute and M/s\_\_\_\_\_ (Hereinafter referred to as “The Contractor”) which expression shall include his/their respective heirs, executors, administrators and assigns of the other part.

WHEREAS the Institute is desirous for “\_\_\_\_\_” and has caused drawings and specifications describing the work to be done and WHEREAS the said drawings as per list attached, the specifications, the priced Schedule of Quantities the conditions of tender and the conditions of contract have been signed by or on behalf of the parties hereto AND WHEREAS the contractor has agreed to execute upon and subject to the condition set forth (herein after referred to as ‘the said conditions’) the work shown upon the said drawings and described in the said specification and the said priced Schedule of Quantity ‘at the respective rates mentioned in the priced Schedule of Quantities.

AND WHEREAS the contractor has deposited by Cash / FDR a sum of Rs.\_\_\_\_\_-/- (Rupees \_\_\_\_\_ only), with the Institute for the due performance of agreement.

NOW IT IS HEREBY AGREED AS FOLLOWS:

1. In consideration of the payments to be made to the contractor as herein after provided the Contractor shall upon and subject to the said conditions execute and complete the works shown upon the said drawing and such further detailed drawings as may be furnished to him by the said Institute and described in the said specification, and the said priced Schedule of Quantities.
2. The Institute shall pay the contractor such sums as shall become payable hereunder at the time and in the manner specified in the said conditions.
3. Time is the essence of the agreement. In the event of the Contractor failing to comply with this condition, he shall be liable to pay compensation as per clause 2 of the condition of the contract as decided by the competent authority of the Institute in writing which shall be final and binding on the contractor.
4. The Drawings, specifications and priced Schedule of Quantities above mentioned shall form the basis of this contract and the decision of the Director or Arbitrator or Umpire as mentioned in the conditions of the Contract in reference to all matters of disputes as to material, workmanship or account and as to the intended interpretation of the clause of this agreement or any other document attached here to shall be final and binding on both parties and may be made a rule court.
5. The said contract comprises the work above mentioned, and all the subsidiary work connected therewith the same site all may be ordered to be done from time to time by the institute even though such works may not be shown on the drawings or described in the said specifications or the priced Schedule of Quantities.
6. The institute reserves the right altering the drawings and nature of the work and of adding to or omitting any items of work or of having portions of the same carried out departmentally or otherwise and such alterations or variations shall not vitiate this contract.
7. The said conditions and appendix there to shall be read and construed as forming part of this agreement and the parties here to will respectively abide by and submit themselves to the conditions and stipulations and perform the agreement on their parts respectively in such conditions contained.
8. All other disputes and differences except those excluded specifically as per applicable GCC shall be dealt with as per provision at ~~Sl. No.59~~ Clause 25 of GCC i.e. **“Dispute Resolution” under particular specification and special conditions**
9. All disputes arising out of or in any way connected with this agreement shall be deemed to have arisen in Udaipur and only courts in Udaipur shall have jurisdiction to determine the same.
10. The several parts of this contract have been read to us and fully understood by us. In witness whereof the parties hereto have set their respective hands the day and the year herein above written.

In the presence of: 1.

Eng  
ineer-in-  
charge

For and on behalf of  
the Director

2.

Contractor

**On Non-Judicial Stamp Paper of minimum Rs. 100**  
**(Guarantee offered by Bank to Institute in connection with**  
**the**  
**execution of contracts)**

**Form of Bank Guarantee for Earnest Money Deposit / Performance Guarantee / Security**  
**Deposit / Mobilization Advance**

1. Whereas the Director, IIMU..... , on behalf of the Indian Institute of Management, Udaipur  
(hereinafter called "The institute") has invited bids under .....(NIT Number)  
.....dated .....for.....(name of work) ..... The Institute has further  
agreed to accept irrevocable Bank Guarantee for Rs. ....(Rupees .....only) valid upto  
.....(date)\* .....as Earnest Money Deposit from .....(name and address of contractor)  
.....(hereinafter called "the contractor") for compliance of his obligations in accordance  
with the terms and conditions of the said NIT.  
Or\*\*
2. Whereas the Director, IIMU....., on behalf of the Indian Institute of Management, Udaipur  
(hereinafter called "The Institute") has entered into an agreement bearing number  
..... With .....(name and address of contractor).....  
.....(hereinafter called "the contractor") for execution of work .....(name of  
work)  
..... The Institute has further agreed to accept irrevocable Bank Guarantee for Rs.  
.....(Rupees .....only) valid upto .....(date)\* .....as Performance Guarantee /  
Security Deposit / Mobilization Advance from the said Contractor for compliance of his  
obligations in accordance with the terms and conditions of the agreement.
3. We, .....(indicate the name of the bank).....(herein after referred to as "the  
Bank") ,hereby undertake to pay to the Institute an amount not  
exceeding Rs.  
.....(Rupees... ..... only) on demand by the Institute within 10 days of the demand.
4. We,.....(indicate the name of the Bank)....., do here by undertake to pay the amount due  
and payable under this guarantee without any demur, merely on the demand from the Institute  
stating that the amount claimed is required to meet the recoveries due or likely to be due from  
the said Contractor. 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).
5. We, .....(indicate the name of the Bank)..... , further undertake to pay the Institute  
any money so demanded notwithstanding any dispute or disputes raised by the contractor in  
any suit or proceeding pending before any Court or Tribunal, our liability under this Bank  
Guarantee being absolute and unequivocal. The payment so made by us under this Bank  
Guarantee shall be a valid discharge of our liability for payment there under and the  
Contractor shall have no claim against us for making such payment.
6. We, .....(indicate the name of Bank)....., further agree that the Institute shall have  
the fullest liberty without our consent and without affecting in any manner our obligation here  
under to vary any of the terms and conditions of the said agreement or to extend time of  
performance by the said Contractor from time to time or to postpone for any time or from  
time to time any of the powers exercisable by the Institute against the said contractor 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 or for any forbearance, act of omission on the part of the Institute or any indulgence by the Institute to the said Contractor 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.

7. We, .....(indicate the name of the Bank)....., further agree that the Institute at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor at the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee the Institute may have in relation to the contractor's liabilities.
8. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor.
9. We, .....(indicate the name of the Bank)....., undertake not to revoke this guarantee except with the consent of the Institute in writing.
10. This Bank Guarantee shall be valid up to .....unless extended on demand by the Institute. 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 the date of expiry or extended date of expiry of this guarantee, all our liabilities under this guarantee shall stand discharged.

Date.....

Witnesses:

1. Signature.....  
signatory Name and address

Authorized  
Name  
Designation  
Staff code no.  
Bank seal

2. Signature .....  
Name and address

\*Date to be worked out on the basis of validity period of 90 days where only financial bids are invited and 180 days for two / three bid system from the date of submission of tender.

\*\*In paragraph 1, strike out the portion not applicable. Bank Guarantee will be made either for earnest money or for performance guarantee / security deposit / mobilization advance, as the case may be.

**INFORMATION REGARDING  
ELIGIBILITY LETTER OF  
TRANSMITTAL**

From  
:

**To**

**The Director**  
**IIM Udaipur**

**Subject:** Submission of Bid for the work "....."

Sir,

Having examined the details given in **bid** document for the above work, I / we hereby submit the relevant information.

1. I / we hereby certify that the statement made and information supplied in the enclosed forms **A to J** and accompanying statement are true and correct.
2. I / we have furnished all information and details necessary for eligibility and have no further pertinent information to supply.
3. I / we submit the requisite certified Solvency Certificate and authorize the **Engineer-in-charge, IIM Udaipur** to approach the bank issuing the Solvency Certificate to confirm the correctness thereof. I / We also authorize Engineer-in-charge, IIM, Udaipur to approach individuals, employers, firms & Corporation to verify out competence and general reputation.
4. I / we submit the following certificates in support of our suitability, technical knowledge and capability for having successfully completed the following **eligible similar** works:

Name of work	Certificate From

**Certificate:**

**It is certified that the information given in the enclosed eligibility bid are correct. It is also certified that I / we shall be liable to be debarred, disqualified / cancellation of enlistment incase of any information furnished by me / us found to be incorrect.**

Enclosures: Seal of bidder

Seal of bidder

Date of submission:

**Signature(s) of Bidder(s)**

**FORM 'A'**

**FINANCIAL INFORMATION**

- i. **Financial Analysis** – Details to be furnished duly supported by figures in Balance Sheet / Profit & Loss Account for 5 (five) years duly certified by the Chartered Accountant, as submitted by the applicant to the Income-Tax Department (Copies to be attached).

Note: The bidder should not have incurred any loss (profit after tax should be positive) in more than two years during available last five consecutive years' balance sheets, duly audited and certified by the Chartered Accountant. **(The balance sheet in case of Pvt./ Public Ltd. company means its standalone finance statement and consolidated financial statement both).**

Financial Years  
(In lakh)

Sl. No	Details	(1)	(2)	(3)	(4)	(5)
		2024-25	2023-24	2022-23	2021-22	2020-21
i)	Gross annual turnover in works.					
ii)	Profit / Loss					

- ii. Financial arrangements for carrying out the proposed works.  
*Note: Attach additional sheets, if necessary*

Signature of Chartered Accountant with seal

Signature (s) of Bidder(s)

**FORM 'B'**

**FORM FOR CERTIFICATE OF NET WORTH FROM CHARTERED ACCOUNTANT**

“It is to certify that as per the audited balance sheet and profit & loss account during the financial year \_\_\_\_\_, the Net worth of M/s \_\_\_\_\_ (Name & Registered Address of individual / firm/company), as on \_\_\_\_\_ (the relevant date) is Rs. \_\_\_\_\_ after considering all liabilities. It is further certified that the Net worth of the company has not eroded by more than 30% in the last three years ending on (the relevant date)”

Signature of Chartered Accountant	
Name of Chartered Accountant	
Membership no. of ICAI	
Date and seal	

**FORM 'C'**

**Details of eligible similar nature of works completed during the last seven years.**  
**(Ending up to previous day of last date of submission of online tender)**

<i>Sl. No.</i>	<i>Name of work / Project and location</i>	<i>Owner or Sponsoring organisation</i>	<i>Cost of work (in crores)</i>	<i>Date of commencement as per contract</i>	<i>Stipulated date of completion</i>	<i>Actual date of completion</i>	<i>Litigation / Arbitration pending / in progress with details *</i>	<i>Name and Address/ Telephone number of officer to whom reference may be made.</i>	<i>Whether the work was done on back-to-back basis Yes / No</i>
1	2	3	4	5	6	7	8	9	10

**\* Indicate gross amount claimed and amount awarded by the**

**Arbitrator. Signature of Tenderer(s)**

**FORM 'D'**

**Performance Report Of Works Referred In Form 'C' – M/s .....**

(Furnish this information for each individual work from the employer for whom the work was executed)

1. Name of work /  
Project &  
Location.
2. Agreement No.
3. Estimated Cost
4. Tendered Cost
5. Actual value of work done
6. Date of start
7. Date of completion
  - a) Stipulated date of completion
  - b) Actual date of completion
8. (a) Whether case of levy of compensation for delay has been decided or not **Yes/No**  
(b) If decided, amount of compensation levied for delayed completion, if any
9. Performance report
  - i) Quality of work Outstanding/ Very good /Good/ Poor
  - ii) Finance Soundness Outstanding/ Very good /Good/ Poor
  - iii) Technical Proficiency Outstanding/ Very good /Good/ Poor
  - iv) Resourcefulness Outstanding/ Very good /Good/ Poor
  - vi) General behavior Outstanding/ Very good /Good/ Poor

Date:

Executive Engineer or  
Equivalent (Seal of the  
organization)

**FORM 'E'****Structure & Organisation**

1.	Name and address of Tenderer	
2.	Telephone No. / Fax No. / email address	
3.	Legal status of the Tenderer (Attach copies of original document defining the legal status). The applicant is: a) An individual b) A proprietary firm c) A Firm in partnership d) A limited company or corporation	
4.	Particulars of registration with various Govt. bodies (Attach attested photocopies) a) Registration Number b) Organisation / Place of registration c) Date of validity	
5.	Name and title of Directors and officers with designation to be concerned with this work.	
6.	Designation of individual authorized to act for the organization.	
7.	Has the Tenderer or any constituent partner in case of partnership firm Limited Company/Joint Venture, ever been convicted by the court of law? If so, give details.	
8.	In which field of Civil Engineering construction, the Tenderer has specialisation and interest?	
9.	Any other information considered necessary but not included necessary but not included above.	

Signature of Tenderer(s)

**FORMAT FOR UNDERTAKING FOR SITE INSPECTION**

To  
The Engineer-in-charge,  
IIM Udaipur

I/we hereby give an undertaking for the given work as follows:

Sub: NIT No.: .....

I/we have inspected and examined the site and its surroundings is / are satisfied before submitting our bid as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation I/we may require and in general shall myself / ourselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect our bid. I/we shall be deemed to have full knowledge of the site whether I/we inspect it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. I/we shall be responsible for arranging and maintaining at our own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents one work which was already executed and Existing at site shall not form part of any of my bills & shall not be payable to me. I/we shall be paid for only the work which will be executed by me/us.

Submission of a bid by a I/we implies that I/we have read this notice and all other contract documents and has made myself / our self-aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. If any will be issued to us by the Government and local conditions and other factors having a bearing on the execution of the work.

Place:

Date:

Yours faithfully  
(Signatures of Bidder(s))

**Form 'H'**

**Declaration regarding local contents for preference make in India.**

It is hereby clarified that I will follow the DIPP order No. P45021/2/2017-PP(BE-II) dated 28.05.2018 regarding PPP-MI and MEITY notification number 33(1)/2017-IPHW dated 14.09.2017, wherein it is the policy of the Government of India to encourage "Make in India" and promote manufacturing and production of goods and services in India with a view to enhancing income and employment. Therefore, convergence with other existing centrally sponsored and missions such as Make in India etc. shall be ensured during the designing and production.

Seal & Signature of the bidder(s)

**Form 'I'**

**Undertaking for GST registration Certificate of the State i.e. other than(Rajasthan)**

“If work is awarded to me, I/we shall obtain GST registration Certificate of the State, in which work is to be taken up within one month from the date of receipt of award letter or before release of any payment by the institute, whichever is earlier, failing which I/We shall be responsible for any delay in payments which will be due towards me/us on a/c of the work executed and/or for any action taken by the institute or GST department in this regard”.

Seal & Signature of the bidder(s)

**CERTIFICATE & DECLARATION**

It has been certified that all information provided in tender form is true and correct to the best of my knowledge and belief. No forged / tampered document(s) are produced with tender form for gaining unlawful advantage. We understand that IIM, Udaipur is authorized to make enquiry to establish the facts claimed and obtain confidential reports from clients.

In case it is established that any information provided by us is false / misleading or in the circumstances where it is found that we have made any wrong claims, we are liable for forfeiture of EMD/SD and or any penal action and other damages including withdrawal of all work / purchase orders being executed by us. Further IIM, Udaipur is also authorized to blacklist our firm/company/agency and debar us in participating in any tender/bid in future.

I / We assure the Institute that neither I / We nor any of my / our workers will do any act/s which are improper / illegal during the execution in case the tender is awarded to us.

Neither I / We nor anybody on my / our behalf will indulge in any corrupt activities / practices in my / our dealing with the Institute.

Our Firm/ Company/ Agency is not been blacklisted or banned by any Govt. Department, PSU, University, Autonomous Institute or Any other Govt. Organization.

Date

Signature of the Tenderer

Place

Stamp

**Note: This certificate should be executed on duly notarized Rs.500/- Non-Judicial Stamp Paper.**

**Authority for signing the tender document.**

Name of work: .....

NIT No.: .....

I, ..... (*Name & Designation of owner/proprietor/authorized person*)

of Firm (M/s .....

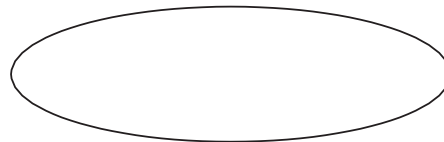
..... (*Name & Complete address of*

*the agency / company/ firm*), hereby authorize

.....

(*authorised signatory, Designation*) to sign the tender document for the above cited work.

**Sign. of the tender signing person**



**Attested by**

**Sign. of the authorised signatory of the firm**

**Note : This certificate should be executed on duly notarized Rs.500/- Non-Judicial Stamp Paper.**

**Undertaking structural stability and soundness of already completed building and infrastructure projects.**

I/we undertake and confirm that any building/infrastructure constructed by our firm/partnership firm/ company has not suffered any failure, making it unfit for intended use, either due to structural design and defects or due to use of sub-standard materials or execution of sub-standard work, poor workmanship or any other reason during the last 15 (Fifteen) years.

I/we also undertake that in addition to the above the Engineer-in-Charge shall be free to debar us forever for tendering in IIM Udaipur

The decision of the Engineer-in-Charge or any higher authority shall be final and binding.

Signature of Notary with seal

Signature of bidder or an  
Authorized person of the firm  
with stamp

**Note: Affidavit to be furnished on a 'non-judicial' stamp paper of Rs. 500/- (Scanned copy of the notarized affidavit to be uploaded at the time of submission of bid.)**

**Furnish an affidavit on non-judicial stamp paper worth Rs.500/-**

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 Institute, then I/we shall be debarred for bidding in IIM Udaipur 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 / Performance Guarantee. (Scanned copy to be uploaded at the time of submission of bid).

Signature of Notary with seal

Signature of bidder or an Authorized person of the firm with stamp

**Note: Affidavit to be furnished on a 'non-judicial' stamp paper of Rs.500/-.**

**(Scanned copy of the notarized affidavit to be uploaded at the time of submission of bid.**

# Part- D

# Schedule of

# Quantities

**Schedule-A**

**Name of work: Construction of 3 nos. 100 KLD MBBR Technology prefabricated Sewage Treatment Plant (STP).**

S.No.	Description	Qty	Unit	Rate	Total amount (in Rs.)
<b>(a) Civil works</b>					
1	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to 50 m outside the periphery of the area cleared.	1,700	sq.m.	17.60	29,920
2	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earthwith lead upto 50 metres.	1,700	sq.m.	218.90	3,72,130
3	Providing and laying 60 mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50 mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge.	1,700	sq.m.	972.00	16,52,400
4	Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservoir, sewage & water treatment plant, tunnels / subway and bridge deck etc., prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry : 1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. The material shall meet the requirements as specified in ACI-212-3R-2010 i.e by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self-healing of cracks up to a width of 0.50 mm. The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.				-
4.1	For vertical surface two coats @ 0.70 kg per sqm	1,121	sq.m.	472.90	5,30,121
4.2	For horizontal surface one coat @1.10 kg per sqm	750	sq.m.	362.80	2,72,100
5	Finishing walls with water proofing cement paint of required shade : New work (Two or more coats applied @ 3.84 kg/10 sqm)	180	sq.m.	116.90	21,042
6	Replacement of existing man hole covers with FRP covers of size 900 X900mm including frame	40	nos.	7,500.00	3,00,000
7	Providing openings in baffle walls to inter connect the tanks of required size and location by core cutting of size	120	nos.	650.00	78,000
8	Cover slab to be cut open to provide bar Screen and ventilation purpose	3	Job	5,000.00	15,000

9	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge	3	Cu.m.	3,551.35	10,654
10	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level. 4.1.2 1 : 1½:3 (1 Cement: 1½ coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	9	Cu.m.	8,340.85	75,068
11	Earth work by mechanical / manual means in rough excavation, banking excavated earth in layers not exceeding 20cm in depth, breaking clods, watering, rolling each layer with ½ tonne roller or wooden or steel rammers, and rolling every 3rd and top-most layer with power roller of minimum 8 tonnes and dressing up in embankments for roads, flood banks, marginal banks and guide banks or filling up ground depressions, lead upto 50 m and for all lift.	36	cu.m.	395.30	14,231
12	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level. 1:4:8 (1 Cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 40 mm nominal size derived from natural sources	7	cu.m.	6,812.00	47,003
13	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level. 1:1.5:3 (1 cement : 1.5 coarse sand (zone- III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	22	cu.m.	9,045.70	1,99,729
14	Centering and shuttering including strutting, propping etc. and removal of form for				
	Foundations, footings, bases of columns, etc. for mass concrete	11	sq.m.	392.15	4,118
	Lintels, beams, plinth beams, girders, bressumers and cantilevers	4	sq.m.	736.40	2,982
15	Mild steel and Medium Tensile steel bars	1,500	kg	107.10	1,60,650
16	Structural steel work in single section, fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	1,500	kg	117.35	1,76,025

17	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-Charge) of total coated thickness 0.50 mm (base metal of minimum 0.45 mm thickness with total coating thickness of 0.05mm) with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	60	sq.m.	738.65	44,319
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**Sub  
Total (A) 40,05,491**

**(b) Electromechanical works**

1	Design, Supplying, Installation, testing and commissioning of FRP based Packaged Sewage Treatment Plant of Capacity 100 KLD				
	<p>Prefabricated-fabricated Unit</p> <p>a.FRP Treatment Tank (MOC: 100% FRP) comprising of the following</p> <p>b. Separation and Sedimentation Chamber</p> <p>c.Anaerobic Chamber</p> <p>d. Moving Bed Chamber</p> <p>e. Sedimentation Chamber</p> <p>f. Disinfection Chamber</p> <p>g. In Built re-circulation Line</p> <p>h. Manhole covers</p> <p>i. Air Blowers for STP</p> <p>j. Wire Ropes for Fixing the STP tank</p> <p>k. No. of capsules : 4 Nos.</p> <p>l. Divider Box- 1 Lot</p> <p>No. of Capsules : 4 Nos.</p> <p>(Each capsule of 25 KLD)</p> <p>Size of each capsule: 5.26 m(L) x 2.4 m(W) x 2.48 M (Ht)</p> <p>Make: Daiki/Arvind Envisol/Sintex/</p>	3	units	80,79,804	2,42,39,413
	<p>Basket screenType : Basket screen</p> <p>Accessories : with guide rails for movement &amp; lifting mechanism &amp; hand rake</p> <p>MOC: SS</p> <p>Make: Fabricated item</p>				
	<p>Air Blowers for Mixing in EQT &amp; FFT: Air Blowers are of two lobe design complete with motor, pulleys, filter, silencer, base plate etc.</p> <p>Capacity : 70 Cum/hr. @ 0.35 to 0.4 bar pressure.</p> <p>Make: Everest / Kay / Equivalent.</p> <p>Qty: 2 Nos. (1W+1S)</p>				

<p>Diffused Aeration System for Mixing in EQT &amp; FFT: Comprising of set of membrane diffusers to be installed. Type: Fine bubble Tubular diffusers Number of Membranes: 8 Nos.(4 sets) Size of each membrane: 90mm OD x 1000mm long MOC of membrane: EPDM Type of Aeration: Retrievable type. Make: SSI / EDI/Equivalent</p>				
<p>Raw Sewage Transfer pumps: Type : Submersible Pumps Capacity: 10 m<sup>3</sup>/ hr @ 1.5 to 2.0 kg/ sq.cm pressure. MOC: CI Make: Kirloskar/ CNP / Lubi / Equivalent Qty : 2 Nos. (1 W+1S)</p>				
<p>Filter Feed pumps: Type : Horizontal Centrifugal pumps Capacity: 10 m<sup>3</sup>/ hr @ 2.0 to 3.5 kg/ sq.cm pressure. MOC: CI Make: Kirloskar/ CNP / Lubi / Equivalent Qty : 2 Nos. (1 W+1S)</p>				
<p>Pressure Sand Filter: MS internally epoxy painted pressure vessel with first charge of filtering sand media and frontal pipe work. Size: 1000 mm dia. x 2100 mm Height</p>				
<p>Activated carbon filter: MS internally epoxy painted pressure vessel with first charge of filtering sand media and carbon and frontal pipe work. Size: 1000 mm dia. x 2100 mm Height</p>				
<p>Electrical Panel with Interconnecting cabling and starters: Comprising of MCC panel to accommodate all the new drives along with cabling, Earthing, etc for the STP. Welded type SS304 Panel, Non- Compartmental, Indoor type, Single front, non- Draw out type panel with Stand. IP with all MCC components made out of ABB/Esbee. Top Cable Entry with 800mm Angle stand.No. of Feeders : 9 Nos. Refer power table for details.</p>				
<p>Piping Works: Interconnecting piping, fitting, valves within the battery limits of the Treatment Plant. For Effluent lines: UPV/ PVC Schedule 40 pipes with PP ball valves. Total Pipeline Requirement(Approx.): Raw sewage discharge from EQT to Prefabricated Capsule: 20 m Discharge from capsule to FFT : 20 m Inlet to TWT : 45 m</p>				
<p>Instruments: a. Pressure Gauges– 6 Nos. Type: Diaphragm Range : 0 to 3 bar pressure b.F low meter– 1 No. Type: Electro-magnetic flow meter Capacity : 0 to 20 Cum/hr. c. Level Switch - 4 Nos. Type: Float switch</p>				

Provision of proper supports for pipeline. All modules to be des-sludged and sludge to be disposed off.(Settler-1,ABR ,AF & Settler-2).All modules to be cleaned manually. Removal of filter media within the An-aerobic filter. Removal of filter media for PGF.Misc.. Works for refurbishment (Inclusive of Core cutting, chipping and minor repair works wherever required). Grease & trap chamber for trapping oil,grease,etc as per directives of Engineer-in-charge.

<b>Total (B)</b>	<b>2,42,39,413</b>
<b>G. Total (A+B)</b>	<b>2,82,44,904</b>

**Schedule-B**

**Name of work: CAMC of 3 nos. 100 KLD MBBR Technology prefabricated Sewage Treatment Plant (STP).**

S.No.	Description	Qty	Unit	Rate	Total amount (in Rs.)
1	Operation and routine maintenance of 3 nos. Sewage Treatment Plant of capacity 100 KLD capacity each in two shift on all days of the week including Sunday & holidays by deploying following staff. Operation & maintenance includes monitoring and healthy working of the plant to ensure the treated effluent as per RSPCB norms, etc complete as reqd. (a) STP Operator - 2 Nos. (6.00AM to 2.00 PM & 2.00 PM to 10.00 PM)	12	months	60,824.28	7,29,891
2	Comprehensive Maintenance of Sewage Treatment plant of capacity 3 nos. 100 KLD (Inclusive of the Disinfection tablets, de-sludging cost, spares for electro-mechanical equipment, Blower maintenance, Filter media and Diffusers replacement).	12	months	59,000.00	7,08,000
				<b>Total</b>	<b>14,37,891</b>

# Part-E

# Price Bid

**Percentage BoQ**

Tender Inviting Authority: Director IIM Udaipur

Name of Work: Construction of 3 nos. 100 KLD MBBR Technology prefabricated Sewage Treatment Plant (STP).

Contract No: IIMU/Project/Tender/2026-27/01

Name of the Bidder/ Bidding Firm / Company :

**PRICE SCHEDULE**

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	TOTAL AMOUNT Without Taxes in Rs. P	TOTAL AMOUNT In Words
1	2	3	4	5	6
1	Construction of 3 nos. 100 KLD MBBR Technology prefabricated Sewage Treatment Plant (STP) as per the Part D, schudle A of the tender document.	1.000	Job	2,82,44,904.00	INR Two Crore Eighty Two Lakh Forty Four Thousand Nine Hundred & Four Only
<b>Total in Figures</b>				<b>28244904.00</b>	INR Two Crore Eighty Two Lakh Forty Four Thousand Nine Hundred & Four Only
<b>Quoted Rate in Figures</b>			Select	<b>0.00</b>	INR Zero Only
<b>Quoted Rate in Words</b>			<b>INR Zero Only</b>		

**Item Rate BoQ**

Tender Inviting Authority: Director IIM Udaipur

Name of Work: CAMC of 3 nos. 100 KLD MBBR Technology prefabricated Sewage Treatment Plant (STP).

Contract No: IIMU/Project/Tender/2026-27/01

Name of the Bidder/ Bidding Firm / Company :

**PRICE SCHEDULE**

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate in Rs. P	BASIC RATE In Figures To be entered by the Bidder in Rs. P	TOTAL AMOUNT Without Taxes in Rs. P	TOTAL AMOUNT In Words
1	2	3	4	5	6	7	8
1.01	Operation and routine maintenance of 3 nos. Sewage Treatment Plant of capacity 100 KLD capacity each in two shift on all days of the week including Sunday & holidays by deploying following staff. Operation & maintenance includes monitoring and healthy working of the plant to ensure the treated effluent as per RSPCB norms, etc complete as reqd. (a) STP Operator - 2 Nos. (6.00AM to 2.00 PM & 2.00 PM to 10.00 PM)	12.000	Month	60,824.28		0.00	INR Zero Only
1.02	Comprehensive Maintenance of Sewage Treatment plant of capacity 3 nos. 100 KLD (Inclusive of the Disinfection tablets, de-sludging cost, spares for electro-mechanical equipment, Blower maintenance, Filter media and Diffusers replacement).	12.000	Month	59,000.00		0.00	INR Zero Only
<b>Total in Figures</b>						<b>0.00</b>	INR Zero Only
<b>Quoted Rate in Words</b>						<b>INR Zero Only</b>	