PART - I - Eligibility Bid Document

Index

Name of Work: - Construction of Storm water line at road no-15 to rain water harvesting pond near sports complex at Indian Institute of Technology Indore.

<table>
<thead>
<tr>
<th>Serial No.</th>
<th>Contents</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Index</td>
<td>1</td>
</tr>
<tr>
<td>2.</td>
<td>Salient Features of the Tender Documents</td>
<td>2</td>
</tr>
<tr>
<td>3.</td>
<td>Press Notice</td>
<td>3</td>
</tr>
<tr>
<td>4.</td>
<td>Information and Instructions for Bidders</td>
<td>4</td>
</tr>
<tr>
<td>5.</td>
<td>CPWD 6</td>
<td>6</td>
</tr>
<tr>
<td>6.</td>
<td>Section – I (Brief particulars of the work)</td>
<td>11</td>
</tr>
<tr>
<td>7.</td>
<td>Section - II (Information &amp; Instruction for bidders)</td>
<td>12</td>
</tr>
<tr>
<td>8.</td>
<td>Section - III (Information regarding eligibility)</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>(form C to E)</td>
<td></td>
</tr>
</tbody>
</table>

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SALIENT FEATURES OF TENDER DOCUMENTS

Name of Work: - Construction of Storm water line at road no-15 to rain water harvesting pond near sports complex at Indian Institute of Technology Indore.

The tenderer is advised to read and examine the tender documents and the set of drawings available with Engineer – in –charge carefully. The tenderer is also advised to inspect and examine the site etc. and satisfy himself before submitting the tender. The tenderer may kindly note that this tender is being invited on item rate basis on GCC – 2014, Form–8. Some salient highlights of the tender documents are:-

<table>
<thead>
<tr>
<th>Description of Salient Features</th>
<th>For details Ref. to page / conditions No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>No conditional rebates / conditions shall be quoted by tenderers. The tenders of such tenderers, who shall quote any condition or / and conditional rebate, shall be summarily rejected.</td>
<td>Para 13 of CPWD-6 at page no 21 of eligibility bid document</td>
</tr>
<tr>
<td>Time allowed for execution of work is 4 (four) months only. Payment under clause 10 will be applicable for work done during the stipulated period of the contract including the justified period extended under the provision of clause -5 of the contract without any action under clause -2. The security deposit will be refunded only after the satisfactory maintenance period of 12 months is over.</td>
<td>Clause 10 C and Clause 17 of the GCC 2014</td>
</tr>
<tr>
<td>The contractor(s) shall not be entitled to be paid any interim payment if the gross work to be done together with net payment / adjustment of advances for material collected.</td>
<td>Clause -7 of GCC 2014</td>
</tr>
<tr>
<td>The required entire quantities of cement shall have to be procured from reputed manufacturers having production capacity of one million tonnes or more per annum, such as ACC, Ultra Tech,Vikram, Shree Cement, Birla Gold, Ambuja and JK Cement</td>
<td>Page no. 40 of financial bid document.</td>
</tr>
<tr>
<td>The contractor will have to construct cement store of adequate capacity as per details given in General Conditions of Contract, 2014 and to make arrangements for safe storage of steel reinforcement bars as per directions of Engineer-in-charge.</td>
<td></td>
</tr>
<tr>
<td>The contractor shall make his own arrangement for electricity and water required for the execution of work for which nothing extra shall be payable.</td>
<td>Page 24 of the financial bid document</td>
</tr>
<tr>
<td>Details of Milestones – indicating withholding of amount in not achieving the milestone.</td>
<td></td>
</tr>
<tr>
<td>Earnest Money (Mode and Form)</td>
<td>Page 20 of Eligibility Bid document</td>
</tr>
</tbody>
</table>
INDIAN INSTITUTE OF TECHNOLOGY INDORE

NOTICE INVITING TENDER

The SE & Project in Charge invites bids on behalf of IIT Indore on item rate basis in two bid system for following work(s):

NIT No. : IITI/ES/PR/Storm water line /MOW/2019-20/12

Name of Work: Construction of Storm water line at road no-15 to rain water harvesting pond near sports complex at Indian Institute of Technology Indore.

Estimated Composite Cost : ₹ 45,00,000

Cost of tender form :- ₹500

Earnest Money: ₹90,000

Time of Completion: 3 Months.

Date of availability of tender document for downloading from 28.05.2019(13:30 hrs) to 04.06.2019(17:00 hrs) on website www.tenderwizard.com/IITI

Period of submission of bids June 06, 2019 Upto 3.00pm, Time and date of opening of eligibility bid: June 06, 2019 at 3.30 pm

The tender forms and other details can be seen on the website www.iiti.ac.in
INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR TENDERING FORMING PART OF BID DOCUMENT AND TO BE POSTED ON WEBSITE

The Project in Charge, IIT Indore on behalf of IIT Indore invites item rate tenders from eligible firms / contractors of repute in two bid system for the following work:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>NIT No.</th>
<th>Name of work &amp; Location</th>
<th>Estimated cost put to tender</th>
<th>Earnest Money</th>
<th>Period of completion</th>
<th>Last date &amp; Time of submission/uploading of eligibility and financial bids and other documents as specified</th>
<th>Time &amp; date of opening of Eligibility bid</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>IITI/ES/PR/Storm water line/MOW/2019-2012</td>
<td>Construction of Storm water line at road no-15 to rain water harvesting pond near sports complex at Indian Institute of Technology Indore</td>
<td>Estimated Cost : ₹45,00,000/-</td>
<td>₹90,000</td>
<td>3 Months</td>
<td>June 06, 2019 Up to 3.00pm</td>
<td>June 06, 2019 at 3.30pm</td>
</tr>
</tbody>
</table>

1. Contractors who fulfill the following requirements shall be eligible to apply. Joint ventures are not accepted.
   (a) Should have satisfactorily completed the works as mentioned below during the last five years ending previous day of last date of submission of bids.
      (i) Three similar works each costing not less than Rs. 18 lac, or two similar works each costing not less than Rs.27 lac or one similar work costing not less than Rs. 36 lac;
      Eligible similar work shall mean works of “Construction of Plumbing work, RCC Work, earth work, Pipe line work and general civil construction 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 previous day of last date of submission of bids.

   (c) Should have an average annual financial turnover of Rs. 22.5 lac on construction works during the last three years ending 31st March, 2019.

   (d) Should not have incurred any loss (profit after tax should be positive) in more than two years during the last five years ending 31st March, 2019.

   (e) Should have a solvency of Rs 18 lac.

2. 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.

3. Information and Instructions for bidders posted on website shall form part of bid document.

4. 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.iiti.ac.in.

5. The bid can only valid tender cost of Rs 90,000 in favour of Registrar IIT Indore gateway by credit / debit card, internet banking or RTGS/NEFT facility and enclosed original documents on-line mode or Fixed Deposit Receipts and Bank Guarantee of any Scheduled Bank towards EMD in favour of Registrar IIT Indore other documents as specified.
6. Date of availability of tender document for download from **28.05.2019 (13:30 hrs)** to **04.06.2019 (17:00 hrs)** on website **www.tenderwizard.com/IITI**

7. (i) The EMD can be paid online mode only or Fixed Deposit Receipts along with Bank Guarantee of any Scheduled Bank drawn in favour Registrar IIT Indore,

(ii) Copy of Certificate of Work experience, Certificate of Financial Turnover from Chartered Accountant, Bank Solvency Certificate and other documents mentioned in Serial No. 16 shall be submitted and all documents mentioned in ELIGIBILITY BID DOCUMENTS in the prescribed formats of Form ‘A’ to ‘E’ along with certified copies of supporting documents and letter of transmittal shall also be submitted. At the time of submission of bid contractor may submit ‘Affidavit / Certificate from CA mentioning Financial Turnover of last 5 years or for the period as specified in the bid document and further details, if required, shall be asked from the Contractor after opening of Eligibility bid documents. There is no need to upload entire voluminous balance sheet.

(iii) Bid documents submitted by intending bidders shall be opened only of those bidders, whose Earnest Money Deposit and other documents submitted are found in order.

8. In Percentage Rate Tender, the bidder shall quote percentage (to two places of decimals only) below/above (in figures as well as in words) at which he will be willing to execute the work.

9. The Eligibility bid shall be opened first on due date and time as mentioned above. The time and date of opening of financial bid of contractors qualifying the eligibility bid shall be communicated to them at a later date.

10. IIT Indore 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.

11. When bids are invited in three stage system and if it is desired to submit revised financial bid then it shall be mandatory to submit revised financial bid. If not submitted then the bid submitted earlier shall become invalid.

12. **List of Documents to be submitted within the period of bid submission**

   (i) online deposited receipt/ FDR / Bank Guarantee of any Scheduled Bank against EMD and copy of receipt of deposition with the Project in Charge IIT Indore other than bid inviting authority, as detailed in Para 9 of CPWD-6.

   (ii) Duly filled in Forms as provided in Section III of Eligibility Bid Document accompanied with required documents duly authenticated / certified by authorities as mentioned in Section II of Eligibility Bid Document :-

   (a) Certificate of Financial Turnover- (Form –A) At the time of submission of bid contractor may upload ‘Affidavit / Certificate from CA mentioning Financial Turnover of last 5 years or for the period as specified in the bid document and further details, if required, shall be asked from the bidders after opening of Eligibility bids..

   (b) Bank Solvency Certificate (Form – B)

   (c) Details of eligible similar works (Form – C)
(d) Certificates of Work Experience (Form –D).

(e) Structure and organization of the firm/company (Form –E).

(iii) Certificate of Registration for Sales Tax / VAT and acknowledgement of up to date filed return.

(iv) Certificate of Registration for GST and acknowledgement of up to date filed return.

(v) Signed copy of the Integrity Pact (Page No.13 to 20 of financial bid document)

(vi) Any other document as specified in the press notice.

(vii) EMD in favour of Registrar IIT Indore.

Indian Institute of Technology Indore

Notice Inviting Tender

1. Project in Charge IIT Indore on behalf of IIT Indore invites item rate bids from eligible firms / contractors of repute in two bid systems for the work of “Construction of Storm water line at road no-15 to rain water harvesting pond near sports complex at Indian Institute of Technology Indore.

1.1 The work is estimated to a composite cost of: ₹ 45,00,000 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 indicate the estimated cost of each component separately. The eligibility of bidder will correspond to the combined estimated cost of different components put to bid.

1.2 Intending bidder is eligible to submit the bid provided he has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below:-

Criteria of eligibility for submission of bid documents:

1.2.1 Criteria of eligibility for CPWD class II & Non CPWD contractors (if tenders are also open to Non CPWD contractor).

Three similar works each of value not less than ₹ 190 lakh or two similar work each of value not less than ₹ 240 lakh or one similar work of value not less than ₹ 370 lakh in last 7 years ending last day of the month previous to the one in which the tenders are invited.

Similar works means 'Building Works with RCC framed structure'.

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 last date of receipt of tenders.

Class II contractors of CPWD should be registered for Western Region / Rajasthan / Delhi.

1.2.2 Criteria of eligibility for contractors:
Contractors who fulfill the following requirements shall be eligible to apply. Joint ventures are not accepted.

(a) Should have satisfactorily completed the works as mentioned below during the last five years ending previous day of last date of submission of bids.

(i) Three similar works each costing not less than Rs. 18 lac, or two similar works each costing not less than Rs.27 lac or one similar work costing not less than Rs. 36 lac;

Eligible similar work shall mean works of "Construction of Plumbing work, RCC Work, earth work, Pipe line work and general civil construction 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 previous day of last date of submission of bids.

(b) Should have an average annual financial turnover of Rs. 22.5 lac on construction works during the last three years ending 31st March, 2019.

© Should not have incurred any loss (profit after tax should be positive) in more than two years during the last five years ending 31st March, 2019.

(f) Should have a solvency of Rs 18 lac.

1.2.3 For CPWD class II/ Non CPWD contractors, as per the provisions of clause 1.2.1 above, it will be mandatory to upload the work experience certificate(s) and the affidavit as per the provisions of clause 1.2.2.

\(\text{For such bids, Class-I contractors without submission of work experience certificate and affidavit, it will be mandatory to submit the bids as per the provisions of clause 1.2.2.}\)

\(\text{For such bids, Class-I contractors shall upload two separate letters for experience certificate and affidavit to the effect that these documents are not required to be submitted by them. Uploading of these two letters is mandatory otherwise system will not clear mandatory fields.}\)

1.3 To become eligible for issue of bid, the bidder shall have to furnish an affidavit 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 Department, then I/we shall be debarred for tendering in IIT Indore 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.

2. Agreement shall be drawn with the successful bidder on prescribed Form No. CPWD 8 modified / amended upto last date of receipt of tender, Bidder shall quote their 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 Months from the date of start as defined in Schedule ‘F’ or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the bid documents.

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

OR

(ii) The architectural and structural drawing for the work is available

OR

The architectural and structural drawings shall be made available in phased manner, as per requirement of the same as per approved programme of completion submitted by the contractor after award of the work.

5. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form,2014 can be seen on website of IIT Indore www.iiti.ac.in free of cost.
Earnest Money in on line mode or Fixed Deposit Receipt of a Scheduled Bank (drawn in favour of Registrar IIT Indore) submitted within the period of bid submission.

The original EMD should be deposited either in the office of Project in Charge IIT Indore, inviting bids within the period of bid submission. The EMD receiving Superintending Engineer IIT Indore shall issue a receipt of deposition of Earnest Money deposited to the bidder in a prescribed format given at Annexure – ‘B’ of financial bid documents.

A part of earnest money is acceptable in the form of Bank Guarantee also. In such case, minimum 50% of earnest money or Rs. 20 lac, whichever is less, shall have to be deposited in shape prescribed above, and balance may be deposited in shape of Bank Guarantee of any Scheduled Bank having validity for six months or more from the last date of receipt of bids which is to be scanned and uploaded by the intending bidders.

Copy of Enlistment Order and certificate of work experience and other documents as specified in the press notice shall be submitted within the period of bid submission. However, certified copy of all the documents as specified in press notice shall have to be submitted within a week physically in the office of tender opening authority.

The bid submitted shall be opened at June 06, 2019 on 3.30pm.

9 A) Copy of certificate of work experience, Certificate of financial turnover from Chartered Accountant, Bank Solvency Certificate and other documents mentioned shall be submitted within the period of bid submission and all documents mentioned in ELIGIBILITY BID DOCUMENTS in the prescribed formats of Form 'A' to 'E' along with certified copies of supporting documents and letter of transmittal shall also be submitted. At the time of submission of bid contractor must submit ‘Affidavit / Certificate from CA mentioning Financial Turnover of last 5 years or for the period as specified in the bid document and further details, if required, shall be asked from the Contractor after opening of Eligibility bid documents.

10. The bid submitted shall become invalid and shall not be refunded if:
   (i) The bidder is found ineligible.
   (ii) The bidder does not deposit original EMD
   (iii) The bidder does not submit all the documents (including service tax registration/VAT registration / Sales Tax registration) as stipulated in the bid document including the copy of receipt for deposition of original EMD.
   (iv) 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 bid opening authority.
   (v) 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.

11. The contractor whose bid is accepted will be required to furnish performance guarantee of 5% (Five Percent) of the bid amount within the period specified in Schedule F. This guarantee shall be in the form of Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule ‘F’ including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. 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 sub contractors, if any engaged by the contractor**
for the said work and programme chart (Time and progress) within the period specified in Schedule 'F' 

12. The description of the work is as follows:

The scope of works include Construction of Plumbing work, RCC Work, earth work, pipe line work and general civil construction works”.

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 bids. 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 it has read this notice and all other contract documents and has made itself 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 it by the Government and local conditions and other factors having a bearing on the execution of the work.

13. The competent authority on behalf of the Board of Governance of IIT Indore 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 bidder shall be summarily rejected.

14. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bid submitted by the contractors who resort to canvassing will be liable to rejection.

15. The competent authority on behalf of Board of Governance of IIT Indore reserves to himself the right of accepting the whole or any part of the bid and the bidder shall be bound to perform the same at the rate quoted.

16. The contractor shall not be permitted to bid for works in the IIT Indore in which its near relative is posted as an Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive) responsible for award and execution of contracts. It shall also intimate the names of persons who are working with it in any capacity or are subsequently employed by it and who are near relatives to any Gazetted officer in the IIT Indore or in the Ministry of Human Resource Development.

17. 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 previous permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of its 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.

18. The bid for the works shall remain open for acceptance for a period of 60 days (Sixty days) from the date of opening of technical bid. If any bidder withdraws its bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then IIT Indore shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidders shall not be allowed to participate in the re-bidding process of the work.
18(a) The Eligibility bid shall be opened first on due date and time. The time and date of opening of financial bid of contractors qualifying the eligibility bid shall be communicated to them at a later date.

19. This Notice Inviting Bid shall form a part of the contract document. The successful bidder, on acceptance of its tender by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:-
   a) The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid 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 8 amended / modified upto last date of receipt of bid.

20. **For Composite Bids**
   20.1.1 Project in Charge of the work will call bids for the composite work. The Earnest Money will be fixed with respect to the combined estimated cost put to tender for the composite bid.
   20.1.2 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,
      Part B: Particular Specifications and Special conditions, specifications and schedule of quantities as applicable to major component of the work.
      Part C: Schedule A to F for minor component of the work. (SE & PIC in charge of work shall also be competent authority under clause 2 and clause 5 as mentioned in Schedule A to F). Special Conditions, additional terms & conditions, specifications and schedule of quantities applicable to minor component(s) of the work.
   20.1.3 For electrical works, the bidder should have **valid electrical license from competent authority in the name of the contractor.** However, the contractors is allowed to participate in tender with an undertaking that they will either obtain valid electrical license at the time of execution of electrical work or associate contractors having valid electrical license of eligible class.
   20.1.4 The eligible bidders shall quote rates for all items of major component as well as for all items of minor components of work.
   20.1.5 After acceptance of the bid by competent authority, the PIC of the work shall issue letter of award on behalf of IIT Indore. After the work is awarded, the main contractor will have to enter into agreement with PIC of work.
   20.1.6 Entire work under the scope of composite bid including major and all minor components shall be executed under one agreement.
   20.1.7 Security Deposit will be worked out separately for each component corresponding to the estimated cost of the respective component of work.
   20.1.8 If required, the main contractor has to associate agency(s) for minor component(s) conforming to eligibility criteria as defined in the bid document and has to submit detail of such agency(s) to PIC of work within prescribed time. Name of the agency(s) to be associated shall be approved by PIC IIT Indore.
   20.1.9 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 minor component. The new agency/agencies shall also have to satisfy the laid down eligibility criteria. In case PIC 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.

20.1.10 the main contractor has to enter into agreement with contractor(s) associated by him for execution of minor component(s). Copy of such agreement shall be submitted to PIC of work. In case of change of associate contractor, the main contractor has to enter into agreement with the new contractor associated by him.

20.1.11 Running payment shall be made by PIC of major discipline to the main contractor.

20.1.12(A) 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.

20.1.12(B) Final bill of whole work shall be finalized and paid by the PIC in the final bill for composite contract.
SECTION - I

BRIEF PARTICULARS OF THE WORK
SECTION – II

INFORMATION & INSTRUCTIONS FOR BIDDERS.

1.0 GENERAL
1.1 Letter of transmittal and forms for deciding eligibility are given in Section III.

1.2 All information called for in the enclosed forms should be furnished against the relevant columns in the forms. If for any reason, information is furnished on a separate sheet, this fact should be mentioned against the relevant column. Even if no information is to be provided in a column, a "nil" or "no such case" entry should be made in that column. If any particulars/query is not applicable in case of the bidder, it should be stated as "not applicable". The bidders are cautioned that not giving complete information called for in the bid forms or not giving it in clear terms or making any change in the prescribed forms may result in the bidder being summarily disqualified.

1.3 The bidder should seal & sign each page.

1.4 Pages of the Eligibility Bid Document are numbered. Additional sheets, if any added by the contractor, should also be numbered by him. They should be submitted as a package with signed letter of transmittal.

1.5 References, information and certificates from the respective clients certifying suitability, technical knowledge or capability of the bidder should be signed by an officer not below the rank of Executive Engineer or equivalent.

1.6 The bidder may furnish any additional information which he thinks is necessary to establish his capabilities to successfully complete the envisaged work. He is, however, advised not to furnish superfluous information. No information shall be entertained after submission of Eligibility Bid Document unless it is called for by the Employer.

2.0 DEFINITIONS
2.1 In this document following words and expressions have the meaning hereby assigned to them:

2.2 EMPLOYER: Means the IIT Indore, acting through the Director, IIT Indore

2.3 BIDDER: Means the individual, proprietary firm, firm in partnership, limited company private or public or corporation.

2.4 "Year" means "Financial Year" unless stated otherwise.

3.0 METHOD OF APPLICATION
3.1 If the bidder is an individual, the bid shall be signed by him above his full type written name and current address.

3.2 If the bidder is a proprietary firm, the bid shall be signed by the proprietor above his full type written name and the full name of his firm with its current address.

3.3 If the bidder is a firm in partnership, the bid shall be signed by all the partners of the firm above their full type written names and current addresses or, alternatively, by a partner holding power of attorney for the firm. In the later case, a certified copy of the power of attorney should accompany the bid. In both cases, a certified copy of the partnership deed and current address of all the partners of the firm should accompany the bid.
3.4 If the bidder is a limited company or a corporation, the bid shall be signed by a duly authorized person holding power of attorney for signing the bid documents accompanied by a copy of the power of attorney. The bidder should also furnish a copy of the Memorandum of Articles of Association duly attested by a Public Notary.

4.0 FINAL DECISION MAKING AUTHORITY
The employer reserves the right to accept or reject any bid, to annul the process and reject all bids at any time, without assigning any reason or incurring any liability to the bidders.

5.0 PARTICULARS PROVISIONAL
The particulars of the work given in Section-I are provisional. They are liable to change and must be considered only as advance information to assist the bidder.

6.0 SITE VISIT
The bidder is advised to visit the site of work, at his own cost, and examine it and its surroundings himself and collect all information that he considers necessary for proper assessment of the prospective assignment.

9.0 FINANCIAL INFORMATION
Bidder should furnish the following financial information:

Annual financial statement for the last five years in (Form "A") and Solvency Certificate in (Form "B").

10.0 EXPERIENCE IN WORKS HIGHLIGHTING EXPERIENCE IN SIMILAR WORKS.
10.1 Bidder should furnish the following:

List of eligible similar nature of works successfully completed during the last five years in (Form "C").

11.0 ORGANISATION INFORMATION
Bidder is required to submit the information in respect of his organization in Forms "E"

12.0 LETTER OF TRANSMITTAL
The bidder should submit the letter of transmittal attached with the document.

13.0 OPENING OF FINANCIAL BID
After evaluation of applications, a list of short-listed agencies will be prepared. Thereafter, the financial bids of only the qualified and technically acceptable bidders shall be opened at the notified time, date and place in the presence of the qualified bidders or their representatives. The bids shall remain valid for 60 days from the date of opening of eligibility bids.

14.0 AWARD CRITERIA
14.1 The employer reserves the right, without being liable for any damages or obligation to inform the bidder, to:

(a) Amend the scope and value of contract to the bidder.

(b) Reject any or all of the applications without assigning any reason.
14.2 Any effort on the part of the bidder or his agent to exercise influence or to pressurize the employer would result in rejection of his bid. Canvassing of any kind is prohibited.
SECTION - III

INFORMATION REGARDING ELIGIBILITY
LETTER OF TRANSMITTAL

From:

To

The Project in Charge,
IIT Indore (MP).

Name of work:- “Construction of Storm water line at road no-15 to rain water harvesting pond near sports complex at Indian Institute of Technology Indore.

Sir,

Having examined the details given in Press Notice and bid documents for the above work, I/ we hereby submit the relevant information.

1. I / we hereby certify that all the statements made and information supplied in the enclosed forms A to E 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 Superintending Engineer & PIC, IIT Indore to approach the Bank issuing the solvency certificate to confirm the correctness thereof. I / we also authorize Superintending Engineer & PIC, IIT Indore to approach individuals, employers, firms and corporation to verify our 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:

<table>
<thead>
<tr>
<th>Name of work</th>
<th>Certificate from</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>..................</td>
</tr>
<tr>
<td>2.</td>
<td>..................</td>
</tr>
<tr>
<td>3.</td>
<td>..................</td>
</tr>
</tbody>
</table>

CERIFICATE : 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 in case any information furnished by me / us found to be incorrect.

Enclosures :-

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 (after tax) for the last five years duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department (Copies to be attached).

<table>
<thead>
<tr>
<th>Financial Year</th>
<th>14-15</th>
<th>15-16</th>
<th>16-17</th>
<th>17-18</th>
<th>18-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Annual turnover on construction works</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profit/Loss</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

II. Financial arrangements for carrying out the proposed work.

III. Solvency Certificate from Bankers of bidders in the prescribed Form “B”.

Signature of Chartered Accountant with Seal. SIGNATURE OF BIDDER(S)
FORM ‘B’

FORM OF BANKERS’ CERTIFICATE FROM A SCHEDULED BANK

This is to certify that to the best of our knowledge and information that M/s / Shri……………………………………………………………….. having marginally noted address, a customer of our bank are / is respectable and can be treated as good for any engagement upto a limit of Rs. ……………… (Rupees………………………...).

This certificate is issued without any guarantee or responsibility on the bank or any of the officer.

(Signature)
For the Bank

Note (1) Bankers certificates should be on letter head of the Bank, addressed to tendering authority.

(2) In case of partnership firm, certificate should include names of all partners as recorded with the Bank.
**PART - II - Financial Bid**

**INDEX**

Name of Work: - Construction of Storm water line at road no-15 to rain water harvesting pond near sports complex at Indian Institute of Technology Indore.

<table>
<thead>
<tr>
<th>Serial No.</th>
<th>Contents</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Index</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td><strong>PART - A</strong></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Integrity Pact</td>
<td>20</td>
</tr>
<tr>
<td>3.</td>
<td>Tender</td>
<td>28</td>
</tr>
<tr>
<td>4.</td>
<td>Particular specification and Special conditions</td>
<td>30</td>
</tr>
<tr>
<td>5.</td>
<td>Schedule “A” to “F”</td>
<td>68</td>
</tr>
<tr>
<td>6.</td>
<td>ANNEXURE – ‘A’</td>
<td>75</td>
</tr>
</tbody>
</table>

**PART - B**

<table>
<thead>
<tr>
<th>Serial No.</th>
<th>Contents</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>List of Approved materials</td>
<td>76</td>
</tr>
<tr>
<td>8.</td>
<td>Correction Slip to GCC 2014</td>
<td>78</td>
</tr>
<tr>
<td>9.</td>
<td>Schedule of quantities</td>
<td>81</td>
</tr>
</tbody>
</table>

**PART - C**

<table>
<thead>
<tr>
<th>Serial No.</th>
<th>Contents</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.</td>
<td>Schedule “A” to “F” (Electrical)</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Special conditions for electrical works for composite tender</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Memorandum of understanding (Elect)</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Additional Terms &amp; Conditions (Electrical)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>including list of approved materials (Electrical)</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Schedule of quantities (Electrical)</td>
<td></td>
</tr>
</tbody>
</table>

**PART - D**

<table>
<thead>
<tr>
<th>Serial No.</th>
<th>Contents</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.</td>
<td>Schedule “A” to “F” (Horticulture)</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>General Terms &amp; Conditions (Horticulture)</td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>Schedule of quantities (Horticulture)</td>
<td></td>
</tr>
</tbody>
</table>
INTEGRITY PACT

To,

Sub: NIT No. IITI/ES/PR/Storm water line/MOW/2019-20/12 for the work of “Construction of Storm water line at road no-15 to rain water harvesting pond near sports complex at Indian Institute of Technology Indore.”

Dear Sir,

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

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

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

Yours faithfully,

Executive Engineer
To,
The Project in Charge
IIT Indore

Sub: Submission of Tender for the work of “Construction of Storm water line at road no-15 to rain water harvesting pond near sports complex at Indian Institute of Technology Indore.

Dear Sir,

I / We acknowledge that IIT Indore 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 IIT Indore. 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, IIT Indore shall have unqualified, absolute and unfettered right to disqualify the tenderer/bidder and reject the tender/bid is accordance with terms and conditions of the tender/bid.

Yours faithfully

(Duly authorized signatory of the Bidder)
To be signed by the bidder and same signatory competent / authorised to sign the relevant contract on behalf of CPWD.

INTEGRITY AGREEMENT

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

BETWEEN

Director IIT Indore through Project in Charge , .................................................................,

(Name of Division)

IIT Indore , ................................................................., (Hereinafter referred as the

(Address of Division)

'Principal/Owner', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

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

through .................................................................. (hereinafter referred to as the

(Details of duly authorized signatory)

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

Preamble

WHEREAS the Principal/Owner has floated the Tender (NIT No. IIT/ES/PR/Storm water line/2019-20/12 (hereinafter referred to as "Tender/Bid") and intends to award, under laid down organizational procedure, contract for “Construction of Storm water line at road no-15 to rain water harvesting pond near sports complex at Indian Institute of Technology Indore.

Herein after referred to as the “Contract”.

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

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

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:
Article 1: Commitment of the Principal / Owner

1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:

(a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

(b) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.

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

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

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

1) It is required that each Bidder / Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.

2) The Bidder(s) / Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:

a) The Bidder(s) / Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal / Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of
any kind whatsoever during the Tender process or during the execution of the Contract.

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.

b) 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.

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

d) The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose (with each tender as per performa enclosed) any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract

3) The Bidder(s) / Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

4) The Bidder(s) / Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice means a willful misrepresentation or omission of facts or submission of fake / forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.

5) The Bidder(s) / Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his / her reputation or property to influence their participation in the tendering process).
Article 3: Consequences of Breach

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

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

2) Forfeiture of EMD / Performance Guarantee / Security Deposit:
   If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder / Contractor.

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

Article 4: Previous Transgression

1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.

2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holding listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.

3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.
Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors

1) The Bidder(s) / Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder / Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Sub-contractors/sub-vendors.

2) The Principal / Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.

3) The Principal / Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 6- Duration of the Pact

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

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

Article 7- Other Provisions

1) This Pact is subject to Indian Law, place of performance and jurisdiction is the Head quarters of the Division of the Principal / Owner, who has floated the Tender.

2) Changes and supplements need to be made in writing. Side agreements have not been made.

3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.

4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation there of shall not be subject to arbitration.
Article 8- LEGAL AND PRIOR RIGHTS

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

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

(For and on behalf of Principal/Owner)

(For and on behalf of Bidder/Contractor)

WITNESSES:

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

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

Place: -

Dated: -
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 respects with the specifications, designs, drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

I/We agree to keep the tender open for Sixty (60) days from the due date of opening of eligibility bid and not to make any modification in its terms and conditions.

A sum of ₹ 90,000/- is hereby forwarded in on line mode or Fixed Deposit Receipts of a Scheduled Bank/ Demand Draft of a Scheduled Bank/ Bank Guarantee issued by a Scheduled 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 his 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 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 IIT Indore 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 Deposited / 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 of the State.

Dated #......................
Signature of Contractor#

Postal Address#
Witness : #
Address: #
Occupation : #

# To be filled in by the contractor/witness as applicable
ACCEPTANCE

The above tender (as modified vide letters mentioned hereunder) is accepted by me for and on behalf of the IIT Indore for a sum of ₹. ___________

(Rupees____________________________________________________________)

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

a)

b)

c)

For & on behalf of the IIT Indore.

Signature ........................................

Dated .........................

Designation ...........................
GENERAL CONDITIONS OF CONTRACT

The names of concerned authorities as per GCC 2016 of CPWD should be read as below:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of Concerned authority as per GCC of CPWD</th>
<th>To be read as</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>President of India</td>
<td>IIT Indore</td>
</tr>
<tr>
<td>2</td>
<td>Engineer-In-Charge</td>
<td>Project In charge</td>
</tr>
<tr>
<td>3</td>
<td>Director General</td>
<td>Director, IIT Indore</td>
</tr>
<tr>
<td>4</td>
<td>Department</td>
<td>Estate Section, IIT Indore</td>
</tr>
<tr>
<td>6</td>
<td>Chief Engineer CPWD</td>
<td>Project In charge,</td>
</tr>
<tr>
<td>7</td>
<td>Director General (works) CPWD</td>
<td>Director, IIT Indore</td>
</tr>
<tr>
<td>8</td>
<td>Additional Director General</td>
<td>Dean of planning, IIT Indore</td>
</tr>
<tr>
<td>9</td>
<td>The Divisional Engineer</td>
<td>Asst. Executive Engineer, IIT Indore</td>
</tr>
</tbody>
</table>

- The word “CPWD” will remain intact, wherever the rules, forms, formats, annexures, appendices, clauses, rate analysis formats, specifications etc. published by CPWD are referred.
GENERAL CONDITIONS OF CONTRACT

DEFINITIONS

In the contract, the following expressions shall, unless the context otherwise requires, have the meanings hereby respectively assigned to them:

The CONTRACT shall mean the documents forming the tender and acceptance thereof together with the documents referred to therein including conditions, specifications, designs, drawings and instructions issued from time to time by the Engineer-in-Charge and all these documents taken together shall be deemed to form one contract and shall be complementary to one another.

The works or work shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works, by virtue of the contract contracted, to be executed whether temporary or permanent, and whether original, altered, substituted or additional.

The Site shall mean the land/or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.

The Contractor shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company.

General Condition of Contract for CPWD works 2014 as amended up to CON/295 shall become parts & parcel of the tender documents

The Board of Governors of IIT Indore shall mean its successors also. The Engineer In-charge shall mean the Superintending Engineer IIT Indore or his authorized representative.
The Institute shall mean the Indian Institute of Technology Indore. or his nominee as notified
The Accepting Authority shall mean the Director, IIT Indore on the behalf of Board of Governors IIT Indore.

The Expected Risks shall mean risks due to riots (other than those on account of contractor's employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority.

The Market Rate shall mean the rate as decided by the Engineer-in-Charge on the basis of the cost of material and labour at the site where the work is to be executed plus 15% cover all the overheads and profits.

The Schedule(s) referred to in these conditions shall mean the relevant schedule(s) annexed to the tender document and the Standard Schedule of Rates of the Institute with the amendments thereto issued up to the date of issue of notice inviting tenders.

The Tendered Amount shall mean the amount of the work as stipulated in the letter of award.

Where the context so requires, words imparting the singular only also include the plural and vice versa. Any reference to masculine gender shall, whenever required, include feminine gender and vice versa.

Headings to the General Conditions of Contract shall not be deemed to form part thereof or
be taken into consideration in the interpretation or construction thereof or of the contract.

The contractor shall be furnished, free of cost one certified copy of the contract except standard specifications, Schedule of Rates and such other printed and published documents, together with all the drawings as may be forming part of the contract. None of these documents shall be used for any purpose other than that of this contract.

WORKS TO BE CARRIED OUT

The work to be carried out under the Contract shall, except as otherwise provided in these conditions, include all labour, materials, tools, plants, equipment and transport which may be required in preparation of and in the full and entire execution and completion of the works. The descriptions given in the Schedule of Quantities shall, unless otherwise stated, be held to include wastage on materials, carriage and cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labour necessary in and for the execution and completion of the work as aforesaid in accordance with good practice and recognized principles.

SUFFICIENCY OF TENDER

The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the Schedule of Quantities, which rates and prices shall, except as otherwise provided, cover all his obligations under the Contract and all the matters and things necessary for the proper completion and maintenance of the works.

DISCREPANCIES AND ADJUSTMENT OF ERRORS

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

In the case of discrepancy between the Schedule of Quantities, the Specifications and/ or the Drawings, the following order of preference shall be observed:-

- Description of Schedule of Quantities. Particular
- Specification and Special Condition, if any.
- Drawings
- CPWD Specifications
- Indian Standard Specifications of BIS.

If there are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intention of the document and his decision shall be final and binding on the contractor.

Any error in description, quantity or rate in the Schedule of Quantities or any omission therefrom shall not vitiate the contract or release the contractor from the execution of the whole or any part of the work comprised therein according to drawings and specifications or from any of his obligations under the contract.
SPECIAL CONDITIONS FOR CONTRACT

1. The tenderer shall acquaint himself with the proposed site of work, its sub soil strata, underground water tables and its approach roads before quoting his rates. The construction of new approach road or repair of the existing approach and its maintenance during the execution of the work shall all be carried out by the tenderer and nothing extra shall be payable over his quoted rates.

2. If for any reasons, any part of the site is not available temporarily for some time for part of the work under the contract, the agreed construction schedule shall be suitably modified and contractor shall diligently divert his men and materials to utilize them appropriately, profitably and no claim of damages whatsoever shall be entertained on this account. However, the contractor shall be allowed extension of time for completing the work as deemed fit by the competent authority. The contractor shall also not be entitled to any compensation for any loss suffered by him and revision in the rates quoted by him.

   a. On account of delay in commencing the work by the contractor.

   b. On account of reduction in the scope of work.

   c. On account of suspension of work or abandoned after award of work.

3. The contractor shall make his own arrangement for obtaining electric connection required for execution of work and make necessary payments directly to the concerned departments and nothing extra shall be payable on this account.

   The contractor shall make his own arrangement for water suitable for construction.

4. The water for construction work shall be got tested quarterly from the laboratory approved by the Engineer-in-charge to ensure its suitability for construction. The charges for these tests and related arrangements shall be borne by the Contractor. In the event of water found unsuitable for construction, the contractor shall make alternative arrangement for suitable water from any other source to the satisfaction of the Engineer-in-charge. However, the contractor shall not be paid extra on this account.

5. The contractor shall provide, at his own cost instruments for surveying, weighing and measuring purpose at the site of work as may be necessary for execution of the work.

6. The contractor shall construct a sample unit of different activities complete in all respect as per the directions of the Engineer-in-charge and Architect. This sample unit shall be got approved from the Engineer-in-charge and Architect before commencing the mass work.

7. The contractor shall take care of all safety precautions pertaining to construction of work, such as scaffolding, ladder, working platforms, gangways, electric arc/ gas welding, use of hoist and construction machinery.

8. On account of security consideration, some restrictions may be imposed by the security staff on the working and/ movement of men and materials etc. The contractor shall be bound to follow all such restrictions/ instructions and he shall organize his work accordingly. No claim on this account, whatsoever, shall be payable.

9. 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 damages and accidents caused to existing/ new work due to negligence on his part. No hindrance shall be caused to traffic during the execution of the work.

10. The contractor shall be responsible for the watch and ward of all materials brought by the contractor to site against pilferage and breakage during the period of installation and thereafter till the works are physically handed over to the department.
11. The contractor shall take all preventive measures against any damage caused by rain, snowfall, floods or any other natural calamity, whatsoever during the execution of the work. The contractor shall be fully responsible for any damage to the Owners property and to the work for which the payment has been advanced to him under the contract. However, the contractor shall maintain an equal to the payment received against the work done, at his own cost. This will also cover the defect liability period. This shall be favouring the Director, Indian Institute of Technology Indore. Nothing extra on this account shall be payable to the contractor for maintaining such insurance Policy.

12. The work will be carried out in the manner complying, in all respects, with the requirements of relevant bye-laws of the local body under the jurisdiction of which the work is to be executed or as directed by the Engineer-in-Charge and nothing extra shall be paid on this account.

13. The contractor shall comply with proper and legal orders and directions of the local or public authority or municipality and abide by their rules and regulations and pay all fees and charges which may be liable.

14. The contractor shall give due notices to Municipal, Police and/or other authorities that may be required under the law/rules under force in the area and obtain all requisite licenses for temporary obstructions / enclosures and pay all charges which may be leviable on account of his execution of work under the agreement. Nothing extra shall be payable on this account.

15. All materials to be incorporated in the work shall be arranged by the contractor and shall be in accordance with the specifications laid down.

16. The tenderer shall use materials bearing ISI Certification Mark unless otherwise specified or allowed in writing by the Engineer-in-Charge. Any material banned by the department shall not be used in the work.

17. The contractor shall submit to the Engineer-in-charge and Architect samples of all materials for approval. Such samples of materials which affect aesthetics of the work shall also be got approved from the Engineer-in-charge and Architect of the project before procuring bulk supplies. These approved samples shall be preserved and retained in the custody of the Engineer-in-charge as standards of materials till the completion of the work. The cost of such samples shall be borne by the Contractor and nothing shall be payable on this account over the Agreement rates.

18. The contractor shall be required to get all the necessary mandatory and other tests as per the specifications/ IS codes, carried out on materials/ work from an approved laboratory as per the direction of the Engineer-in-charge. The testing charges and conveyance from the site shall be borne by the contractor.

19. In case any material / work is found sub-standard the same shall be rejected by the Engineer-in-charge/ Architect representative and the same shall be removed from the site of work within 48 hours, failing which the same shall be got removed by the Engineer-in-charge at the risk and cost of the contractor without giving any further notice and time.

20. In order to ensure quality of work during its execution, the Engineer-in-charge/ Architect representative may require samples for mandatory or routine testing of materials. All costs of these samples, their packaging, conveyance from the site to the testing laboratory and return, shall be borne by the contractor.

21. Even ISI marked materials may be subjected to quality test at the discretion of the Engineer-in-charge/ Architect. Whenever ISI marked materials are brought to the site of work the contractor shall, if required by the Engineer-in-charge/ Architect, furnish manufacturer's test certificate or test certificate from approved testing laboratory to establish that the materials procured by the contractor, satisfy the provisions of relevant ISI
codes. The testing charges shall be borne by the contractor. However cement/steel will be necessarily tested before start of work and also during the execution of work as per the requirements of specifications and will not be used till test certificates are obtained and approved by Engineer-in-Charge/ Architect.

22. Cement bags shall be stored in separate godowns to be constructed by contractor at his own cost as per sketch at page 39 (e) of CPWD specifications 2009 Vol. II with weatherproof roofs and walls. (The sketch is only indicative and actual size will be depend on the site requirements) Each godown shall be provided with a single door with double lock arrangement. The keys of one lock shall always remain with authorized representative of Engineer-in-charge of work and that of the other lock with the authorized agent of the contractor at site of work so that the cement from the godown is removed according to daily requirement with the knowledge of both the parties and proper account of issue of cement is maintained in the prescribed proforma.

23. The cement shall be brought at site not less than 10 tones lots or as decided by the Engineer-in-charge/ Architect.

24. The cement godown of the capacity to store a minimum of 500 bags of cement shall be constructed by the contractor at site of work for which no extra payment shall be made. 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.

25. The contractor shall supply free of charge the cement / other material required for testing. The cost of tests shall be borne by the contractor.

26. 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 42 of the contract and shall be governed by conditions laid therein.

27. Cement brought to site and remaining unused after completion of work shall not be removed from site without written permission of the Engineer-in-charge.

28. Secured advance for cement if so desired by the contractor, will be given on production of test certificate from the manufacturer.

29. The contractor shall procure steel reinforcement bars TMT-FE-500 (thermo-mechanically treated bars) conforming to relevant IS codes from SAIL, TISCO, & VAIZAG. Structural steel of main Producer only shall be permitted for use. 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. Samples shall also be taken and got tested by the Engineer-in-charge as per the provision in this regard in relevant IS codes. In case the test results indicate that the steel arranged by the contractor does not conform to BIS codes the same shall stand rejected and shall be removed from the site of work by the contractor at his cost within a week's time from the written orders from the Engineer-in-charge to do so. The cost of steel, testing charges and to & fro cartage shall be borne by the contractor.

30. The steel reinforcement shall be stored by the contractor at site of work in such a way as to prevent 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 at any time as and when desired by the Engineer in charge/Architect.

31. The contractor shall supply free of charge the steel required for testing.

32. The actual issue and consumption of steel on work site shall be calculated and proper accounts maintained. The theoretical consumption of steel shall be worked out as per the procedure prescribed in clause 42 of the contract and shall be governed by conditions laid therein.
33. Steel brought to site and steel remaining unused shall not be removed from site without the written permission of the Engineer-in-charge.

34. The work shall be executed and measured in metric system. The metric dimensions given in the schedule of quantities and drawing etc. shall be followed. (The dimension in FPS units wherever indicated are for guidance only) The figures in the drawings shall be followed.

35. The contractor shall be responsible for completing the work and for satisfying all terms and conditions of the Contract without any extra payment over his quoted rates unless otherwise specified. The contractor shall quote his rate for various items of work accordingly and no claim whatsoever shall be entertained for any incidental or extra work involved in the execution of the work as per nomenclature of the item and the specifications indicated in the tender documents.

36. Subject to the nomenclature of the item as per schedule of quantities, the specification indicated in the tender documents, the rates quoted shall include cost of all materials including royalty and taxes if any, labour, sundry inputs, execution of work at all heights, levels, pattern and design for all leads, lifts and depths including overhead charges and contractor's profit. Nothing extra shall be paid on this account.

37. The rate shall be inclusive of making design, pattern and execution of work as per Architectural and structural drawings, at all levels and heights.

38. The rates shall be inclusive of making any holes in walls/ RCC work for fixing any fixture frame work and making good the structure to its original shape and finish.

39. The rate shall be inclusive of working under water and adverse of foul conditions and including pumping out or bailing out water, unless otherwise specified in the nomenclature. This will include water encountered from any source such as rains, floods and any other cause whatsoever and including sub-soil water.

40. Other agencies doing works related with this project will also simultaneously execute the works and the contractor shall afford necessary co-ordination for un-hindered completion of these sub-works.

41. The contractor shall leave necessary holes, opening, etc. as may be directed by the Engineer-in-charge for laying, burying or fixing, conduits, pipes, boxes, hooks, fans etc. Conduits for electrical wiring/cables will be laid in a way that they leave enough space for concreting and do no adversely affect structural members.

42. The contractor shall give a satisfactory performance test of installations individually and as a whole to ensure their proper functioning before the work is finally declared and completed and accepted.

43. The contractor shall continue to maintain watch and ward to safeguard the Owner's property in his possession until the same is formally handed over as per directions of the Engineer-in-charge. Nothing extra over agreement rates shall be paid on this account.

44. All tools, plants and measuring or weighing equipment shall be arranged by the contractor himself and nothing extra shall be paid to the contractor on this account.

45. The quantities of various items incorporated in the tender are approximate. However, the payments shall be made to the contractors on the basis of actual measurements taken at site.

46. The contractor shall protect the adjoining buildings or works and the work under execution from fire and shall make adequate arrangements for fire protection and fire fighting and if any property is damaged, by fire due to the negligence of the contractor, the same shall be made good by the contractor at his own cost, to the entire satisfaction of Engineer-in-charge.
47. The contractor shall provide adequate lighting arrangements as approved by the Engineer-in-charge for carrying out the work during night time, if so required and also provide all other facilities for the labour employed to carry out the work as per direction of Engineer-in-Charge.

48. In order to achieve the targeted date of completion the contractor may have to work in multiple shifts, round the clock including public and gazetted holidays and nothing extra shall be paid on this account.

49. The contractor shall get the samples of all the materials to be used, in the work approved from Engineer-in-Charge and Architect before going for bulk procurement. Bulk procurement shall be taken up only after obtaining approval from the Engineer-in-charge. Any delay in getting the samples approved shall be contractor’s responsibility.

50. All materials, articles and workmanship shall be of respective best quality and kind for the class described in the schedule of quantities and specifications. All materials, so used in different items of work shall be subject to the approval of the Engineer-in-charge and Architect.

51. The contractor is supposed to abide the minimum wages act, and shall produce all records to the Engineer-in-charge or any other statutory authority as and when called for. The Engineer-in-charge does not hold any responsibility on account of any lapses in this regard.

52. No extension of time shall be granted to the contractor on account of rains or inclement weather conditions.

53. For any clarification/ doubt, the Institute may organize regular meetings with Contractor. The contractor shall attend such meetings invariably as and when required.

54. In respect of the work of other agencies, where the commencement or progress of such work of any other agency is dependent upon the completion of particular portions of the contractor’s work or generally upon the contractor maintaining progress in accordance with the approved coordinated construction programme, it shall be the responsibility of the Contractor to complete such portions and maintain such progress.

55. Should any difference arise between the contractor and the other agencies, these shall immediately be brought to the attention of the Engineer-in-Charge who after reviewing the matters causing the differences will give their decision which shall be final and binding on the contractor.

56. The contractor shall have to do all drilling of holes and cutting of walls, chases or other elements of the building for the complete and proper installation of the pipe lines/ ducts and other equipments by using electrically operated tools such as drills/ chases cutting machine etc. Manual drilling or chiseling or cutting shall be permitted on special request only.

57. No chiseling or cutting or drilling of RCC columns, beams, girders and other principal structural members shall be done unless prior permission has been granted by the Engineer-in-charge in writing.

58. All chases and openings made by the contractor for his pipe lines shall be filled/ covered over with cement plaster in reasonable manner. Before rough plastering on the pipe surfaces the concealed pipes shall be secured to the wall by using proper supports/ clamps.

59. After completion of work and before issuance of certificate of virtual completion the contractor shall submit eight (8) sets to the Engineer-in-charge, layout drawing drawn at appropriate scale and with 2 copies on Compact disc indicating the complete PLUMBING/SANITARY system ‘as installed’, with written approval of Engineer- in-charge on the 8 sets.
60. The contractor shall prepare and produce instruction, operation and maintenance manuals in English for the use, operation and the maintenance of the supplied equipment and installations, and submit to the Engineer-in-charge in (8) copies at the time of handing over. The shall get generally consist of the following:

   a. Description of the project
   b. Operating instructions
   c. Maintenance instructions including procedures for preventive maintenance
   d. Manufacturer's catalogues.
   e. Spare parts list
   f. Trouble shooting charts
   g. Drawings
   h. Type and routine test certificates for major items.
   i. One (1) set of reproducible ‘as built’ drawings on polyester film.

61. The contractor shall be provided adequate storage/ office space for his use. The space has to be maintained/ constructed by the contractor as per his usage requirements.

62. All spaces allotted to the contractor as described above shall be vacated and all structures removed from site at any time as and when required and directed by the Engineer-in-charge, unconditionally and without any reservation. The Engineer-in-charge will not be obliged to give any reason for such removal. Upon receiving instructions to vacate the space, the contractor shall immediately remove all his structures, materials, etc. from the sources and clear and clean-up the site to the satisfaction of the Engineer-in-charge.

63. It shall be the responsibility of the Contractor to safeguard the site and ensure that no illegal encroachments are made by outside elements within the area allotted to the contractor. Upon completion of the work or earlier as required by Engineer-in-Charge, the contractor shall vacate the land totally without any reservation.

64. The contractor will arrange to erect, at his own cost, barbed wire or other appropriate fence around the infrastructure site, with entry/exit gates at suitable points. The contractor shall, at his own cost, provide and erect suitable fencing around the spaces allotted to him at the infrastructure sites to ensure the security of his men. Materials and equipment within the sites and in relation to other contractors who will also be allotted spaces at above sites.

65. The security of workmen, materials, equipment stores etc. within the area allotted to the contractor shall be the responsibility of the contractor.

66. The site of work shall have required equipments for various tests at site by the contractor at his own cost and nothing extra shall be payable on this account.

67. The contractor shall arrange minimum plant and equipments at site for the execution of work as per requirement. These may have to be increased depending on the requirement site.

68. During the execution of construction work the contractor will have to create brackets of suitable material like clean GI sheets with steel supports.

69. The quantities indicated are for guidance only however it may vary to any extent and the contractor should not have any financial or other implications for such variations. The owner reserves to reduce the scope of work of any item if the contractor fails to deliver the works in time and the contractor shall not ask for any financial consideration for such deletion of scope of the work.

70. Any item which is not available in the BOQ shall be paid as per DSR 2016 rates along with up to date cost index. If it is not available in BOQ & DSR 2016 then extra item shall be worked out as actual cost of the materials and actual cost of the labour plus 15% as overhead and profit. The decision of Engineer-in-charge will be conclusive and final binding on the contractor.
71. The contractor shall take photographs of site prior to commencement of work, during construction and after completion of work as suggested and shall submit the photographs in soft and hard copies to IIT and Architect for which no extra payment will be made.

72. The Contractor(s) will have to keep on site complete survey instruments like Total Station / Theodolite / Auto Level along with technical personal to operate those instruments to facilitated and obtain the information required as instructed by Engineer-In-Charge and Architect, for which no extra payment will be made.

73. If required and directed by Engineer-In-Charge, contractor shall arrange visits of his personnel comprising of Engineer-In-Charges to various places/plants in or out side Indore to check and verify the quality of material at manufacturers places. No extra cost shall be given for this to contractor.

74. All statutory approvals for Permanent Water, drainage and other services are to be obtained by contractor at no extra cost. Only the official payment made in the Govt. treasury or to the local bodies for deposit etc will be reimbursed against treasury slip.

75. Layout of works shall be got checked by engineer-in-charge & only then further work shall be taken by after approval.

76. Performa of Registers to be as per standard CPWD formats.

77. Barricading around the construction site with G.I. Sheet / Metallic Shell be provided by the contractor without any extra cost.
1. **GENERAL**

1.1 Wherever any reference to any Indian Standard Specifications of BIS or other International standards of ASTM / BS/EN occurs in the documents relating to this contract, the same shall be inclusive of all amendments issued there-to or revisions thereof, if any, up to the date of receipt of tenders.

1.2 The contractor shall work according to the programme of work as approved by the Engineer-in-charge, for which purpose, the contractor shall submit a programme of the work within 15 days from the stipulated date of start of the work based on computer software such as MS Project etc. and shall update the same every fortnight.

The contractor shall submit monthly progress report of the work in a computerized form. The progress report shall contain the following, apart from whatever else may be required as specified:

(i) Project information, giving the broad features of the contract of the work under the contract, and the broad structural or other details.

(ii) Introduction, giving a brief scope of the work under the contract, and the broad structural or other details.

(iii) Construction schedule of the various components of the work through a bar chart for the next three quarters (or as may be specified), showing the milestones, targeted tasks and upto date progress.

(iv) Progress chart of the various components of the work that are planned and achieved, for the month as well as cumulative upto the month, with reasons for deviations, if any, in a tabular format.

(v) Plant and machinery statement, indicating those deployed in the work, and their working status.

(vi) Man-power statement, indicating individually the names of all the staff deployed in the work, along with their designations.

(vii) Financial statement, indicating the broad details of all the running account payments received upto date, such as gross value of work done, advances taken, recoveries effected, amounts withheld, net payments, details of cheque payments received, etc.

(viii) A statement showing the extra and substituted items submitted by the contractor, and the payments received against them, items pending for sanction/decision by the Department, broad details of the Bank Guarantees, indicating clearly their validity periods, broad details of the insurance policies taken by the contractor, if any, the advances received and adjusted.

(ix) Progress photographs, in colour, of the various items/components of the work done upto date, to indicate visually the actual progress of the work.

(x) Quality assurance and quality control tests conducted during the month, with the results thereof.

(xi) Videography at various stages of construction right from the day of start of work to date of completion/occupation, covering all major events, inspections, visits by dignitaries etc.

1.3 The contractor shall take instructions from the Engineer-in-charge for stacking of materials at site. No excavated earth or building materials shall be stacked on areas where the buildings, roads, services or compound walls are to be constructed.

1.4 If as per Municipal or prevailing rules of the secured campuses owned by IIT, Indore, no labour huts is permitted within the campus of IIT, Indore, the contractors shall provide such accommodation at such locations as are acceptable to local bodies with all provisions concerning labour safety & sanitation as contained in the relevant clause of the contract, for which nothing shall be payable.
1.5 Unless otherwise provided in the Schedule of quantities, 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 shall be payable to him on this account.

1.6 The working drawings appearing at para 8.1(iii) of conditions of contract in the form CPWD-7/8, shall mean to include both architectural and structural drawings respectively. The structural and architectural drawings shall be properly correlated before executing the work. In case of any difference noticed between architectural and structural drawings, final decision, in writing of the Engineer-in-charge shall be obtained by the contractor before proceeding further.

1.7 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 restriction / instructions including issue of identity cards to all persons authorized by him to do work / visit the work site and nothing shall be payable on this account.

1.8 The contractor shall make his own arrangements for obtaining electric connections, if required, and make necessary payments directly to the department concerned.

1.9 The contractor shall conduct his work, so as not to interfere with or hinder the progress or completion of the work being performed by other contractor(s) or by the Engineer-in-Charge and shall as far as possible arrange his work and shall place and dispose off the materials being used or removed, so as not to interfere with the operations of other contractors, 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 Engineer-in-Charge. The contractor shall be responsible for any damage due to hindrance caused by him.

1.10 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 and no extra payment shall be made for fixing the pipes in a different manner.

1.11 Any cement slurry added over base surface for bond or for continuation of concreting, for protecting reinforcement bars, its cost shall be deemed to have been included in the respective items, unless specified otherwise and nothing extra shall be payable nor extra cement shall be considered in the cement consumption on this account.

1.12 Stacking of materials and excavated earth including its disposal shall be done as per the directions of the Engineer-in-Charge. Double handling of materials or excavated earth if required at any stage shall have to be done by the contractor at his own cost.

1.13 No claim for idle establishment & labour, machinery & equipment, tools & plants and the like, for any reason whatsoever, shall be admissible during the execution of work as well as after its completion.

1.14 Only Star headed Stainless Steel screws shall be used unless otherwise specified.

1.15 Work shall be carried out in professional manner with finished product serving the intended purpose with specified strength, durability and aesthetics.

1.16 Work activities shall be executed in well thought out sequences such that consequent activities not adversely affecting previously done work. Nothing extra shall be payable to protect the works already done.

1.17 The contractor shall prepare all the needed shop drawings well in advance and get them approved before placing the order and execution of the item.

1.18 The contractor shall, at his risk and cost, make all arrangements and shall provide all facilities as the Engineer-in-Charge may require for collecting, and preparing the required number of samples for such tests at such time and to such place or places as may be directed by the Engineer-in-Charge and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications.

1.19 The contractor shall not store/dump construction material or debris on metalled road.

1.20 The contractor shall get prior approval from Engineer-in-charge for the area where the construction material or debris can be stored beyond the metalled road. This area shall not cause any obstruction to the free flow of traffic / inconvenience to the pedestrians. It should be ensured by the contractor that no accidents occur on account of such permissible storage.
1.21. The contractor shall take appropriate protection measures like raising wind breakers of appropriate height on all sides of the plot / area using CGI sheets or plastic and / or other similar material to ensure that no construction material dust fly outside the plot area.

1.22. The contractor shall ensure that all the trucks or vehicles of any kind which are used for construction purposes / or are carrying construction material like cement, sand and other allied material are fully covered. The contractor shall take every necessary precautions that the vehicles are properly cleaned and dust free to ensure that enroute their destination, the dust, sand or any other particles are not released in air / contaminate air.

1.23. The contractor shall provide mask to every worker working on the construction site and involved in loading, unloading and carriage of construction material and construction debris to prevent inhalation of dust particles.

1.24. The contractor shall provide all medical help, investigation and treatment to the workers involved in the construction of building and carry of construction material and debris relatable to dust emission.

1.25. The contractor shall ensure that C&D waste is transported to the C & D waste site only and due record shall be maintained by the contractor.

1.26. The contractor shall compulsory use of wet jet in grinding and stone cutting.

1.27. The contractor shall comply all the preventive and protective environmental steps as stated in the Mo EF guidelines, 2010.

1.28. The contractor shall carry out on-Road-Inspection for black smoke generating machinery. The contractor shall use cleaner fuel.

1.29. The contractor shall ensure that all DG sets comply emission norms notified by MoEF.

1.30. The contractor shall use vehicles having pollution under control certificate. The emissions can be reduced by a large extent by reducing the speed of a vehicle to 20 kmph. Speed bumps shall be used to ensure speed reduction. In cases where speed reduction cannot effectively reduce fugitive dust, the contractor shall divert traffic to nearby paved areas.

1.31. The contractor shall ensure that the construction material is covered by tarpaulin. The contractor shall take all other precaution to ensure that no dust particles are permitted to pollute air quality as a result of such storage.

1.32. The paving of the path for plying of vehicles carrying construction material is more permanent solution to dust control and suitable for longer duration projects.

1.33. Contractor shall handover the completed buildings to IIT, Indore along with a set of completion drawings and service plans.

1.34. The agency is permitted for erect the site office, store yard and ground water extraction facility temporarily near the place of construction free of cost. Contractor shall remove such structures on completion of work.

1.35. IIT, Indore shall provide security clearance and access to contractors materials and labour to site of work and electricity connection on payment of usual charges.

2.0 FLOORING, SKIRTING, VENEERING, DADO, TREADS & RISERS OF STEPS, JAMBS, SILLS & SOFFITS

2.1 Nothing extra shall be payable for using combination of marble, granite and kota in the required pattern at various locations unless otherwise specified.

2.2 Flooring in toilets, verandah, kitchen, courtyard and at other places if required shall be laid to the required slope/gradient as per the directions of the Engineer-in-Charge and nothing extra shall be paid on account of the same.

2.3 The pattern, spacing and locations of joints shall be as per drawings and direction of the Engineer-in-Charge and nothing extra shall be paid on account of the same.

3.0 SPECIALISED ITEMS

3.1 LIST OF SPECIALISED ITEMS:

1. Water proofing treatment work
2. Laying of granite stone flooring
3. Special foundations including all types of piles.
4. Fibrous plaster ceiling.
5. Acoustic treatment and other decorative items such as glass ceiling.
6. Aluminum doors and windows, aluminum partition.
7. Underground & overhead RCC tank.
9. Aluminum composite panel.
10. Fabrication and erection of space frame including covering with lightweight poly carbonate roofing.
11. Diaphragm walls.
13. Stainless steel cladding and stainless steel railing.
14. Structural glazing work,
15. Fiber glass doors.
16. Stone works such as:
   (a) Ashlar stone masonry work.
   (b) Stone jali work.
   (c) Italian marble work.
17. Superior water supply fittings such as Jacuzzi steam cabins, cascades, etc.
19. Plumbing with copper/polypropylene pipes using advanced technology for jointing.
20. Textured finishing work.
21. Signages
22. Wooden flooring

3.2 Procedure for Execution of the Specialized Items:
Such items should be got executed only through associated agencies specialized in these fields. The contractor shall indicate the name(s) of his associated specialized agencies those fulfilling the conditions described in para 16.5 of CPWD Works Manual-2014 as early as possible and within one month of award of work to Engineer-in-Charge for approval of competent authority.

3.3 Specialized Agencies
3.3.1 Specialized Agencies for items in case of Civil works shall be approved by the competent authority. The contractors shall quote the rates after careful study of contract conditions, specifications, drawings & schedule of quantities.

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

3.3.3 For specialized items, the main contractor cannot work as a specialized agency unless his name is already included in the list of approved specialized agencies for these items. The contractor shall get these items executed through the specialized agencies as approved by competent authority.

3.4 Rates
3.4.1 The rates quoted by the Contractor are deemed to be inclusive of site clearance, setting out work, profile, setting lay out on ground, establishment of reference benchmark(s), installing various signage, taking spot levels, survey with total station, construction of all safety and protection devices, compulsory use of helmet and safety shoes, and other appropriate safety gadgets by workers, imparting continuous training for all the workers, barriers, preparatory works, construction of clean, hygienic and well ventilated workers housings in sufficient numbers as per drawing supplied by Engineer in charge, working during monsoon or odd season, working beyond normal hours, working at all depths, height, lead, lift, levels and location etc. and any other unforeseen but essential incidental works required to complete this work. Nothing extra shall be payable on this account and no extension of time for completion of work shall be granted on these accounts.

3.4.2 The rates quoted by the tenderer, shall be firm and inclusive of all taxes and levies (including works contract tax but excluding service tax).
3.4.3 No foreign exchange shall be made available by the Department for importing (purchase) of equipment, plants, machinery, materials of any kind or any other items required to be carried out during execution of the work. No delay and no claim of any kind shall be entertained from the Contractor, on account of variation in the foreign exchange rate.

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

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

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

3.5 CLEANLINESS OF SITE
The Contractor shall not stack building material / malba / muck/ rubbish on the land or road of the local development authority or on the land owned by the others, as the case may be. So the muck, rubbish etc. shall be removed periodically as directed by the Engineer-in-Charge, from the site of work to the approved dumping grounds as per the local byelaws and regulations of the concerned authorities and all necessary permissions in this regard from the local bodies shall be obtained by the Contractor. Nothing extra shall be payable on this account. In case, the Contractor is found stacking the building material / malba as stated above, the Contractor shall be liable to pay the stacking charges / penalty as may be levied by the local body or any other authority and also to face penal action as per the rules, regulations and bye-laws of such body or authority. The Engineer—in-Charge shall be at liberty to recover, such sums due but not paid to the concerned authorities on the above counts, from any sums due to the Contractor including amount of the Security Deposit and performance guarantee in respect of this contract agreement.

3.6 INSPECTION OF WORK
In addition to the provisions of relevant clauses of the contract, the work shall also be open to inspection by the Superintending Engineer IIT Indore and other senior officers of IIT Indore in addition of the Engineer-in-Charge and his authorized representative. The contractor shall at times during the usual working hours and at all times at which reasonable notices of the intention of the Engineer-in-Charge or other officers as stated above to visit the works shall have been given to the Contractor, either himself be present to receive the orders and instructions or have a responsible Site Engineer duly accredited in writing, to be present for that purpose Senior Officers of IIT Indore Authorities shall be inspecting the on-going work at site at any time with or without prior intimation.

3.7 GUARANTEE FOR WATER PROOFING TREATMENT:
The contractor shall give Ten years performance guarantee in the prescribed proforma for the water proofing treatment. In addition 10% (Ten percent) of the cost of water proofing items shall be retained as security, to watch the performance of the work executed.
However, half of this amount (withheld) shall be released after five years, after the completion of the work, if no defect comes to notice. If any defect is noticed during the guarantee period, it shall be rectified by the contractor within Seven days after serving the notice by Department and, if not attended to, the same shall be got done through other agency at the risk and cost of the contractor. In any case the guaranteeing firms during the guarantee period shall inspect and examine the treatment once every year and make good any defect observed and Certificate to that effect shall be submitted to Department every year. However, the 10 % security deposit referred above can be replaced with bank guarantee of equivalent amount for relevant period.

4.0 Stainless Steel Railing/Handrails:

4.1 GENERAL
The contractor shall apply all materials, labour, tools, ladders, scaffolding and other equipments necessary for the completion and protection of all stainless steel work.

4.2 MATERIAL
All stainless steel pipes and plates shall conform to AISI 304 in 18/8 composition. 18 will be chromium and 8 will be Nickel and carbon content will be 0.03 maximum and the relevant clauses associated with this grade of steel to be followed.

4.3 SURFACE FINISH
Surface finish of all the stainless steel materials will be in 240 grit satin finish / matt finish.

4.4 ACCESSORIES
Fixing will be done by stainless steel expansion bolts of approved size and make as per Engineer-in-charge and welding to be done by using organ welding rods and the surface being duly finished and cleaned by K2 passivation, which is nitric acid plus floric acid solution treatment by which the chances of corrosion will be eliminated and any burn out makes on the metal will also be eliminated.

4.5 COATING MASS
All stainless steel material will have to be coated by a solution of Inox to avoid finger in prints and avoidance of settlement of environment / atmospheric dust.

4.6 MEASUREMENT
All the stainless steel finished parts shall be weighed correct to a gram and paid on weight basis.

4.7 RATE
The rate shall include the cost of all the materials, machinery and labour involved in all the operations described above including cartage, lifts and all taxes like Sales Tax / VAT, Excise duty, Octroi etc. as applicable.
Any incidental additional requirements for execution of this item to the satisfaction of Engineer-in-Charge shall also be treated as included in the item and shown in attached drawing and nothing extra will be paid for such extra work installation drawings for approval of the Engineer-in-charge-in-Charge and no work shall be performed until the approval of these drawings is obtained.

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

4.8.1 The Contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants or occupants of the adjacent properties and to the public in general. The Contractor shall take all care, as not to damage any other adjacent property or other services running adjacent to the plot. If any damage is done, the same shall be made good by the Contractor at his own cost and to the entire satisfaction of the Engineer-in-Charge. The Contractor shall use such methodology and equipments for execution of the work, so as to cause minimum environmental pollution of any kind during construction. Further, the Contractor shall take all precautions to abide by the environmental related restrictions imposed by Madhya Pradesh Pollution control board, Govt. of Madhya Pradesh.
Utmost care shall be taken to keep the noise level to the barest minimum so that no disturbance as far as possible is caused to the occupants / users of adjoining buildings. No claim what so ever on account of site constraints mentioned above or any other site constraints, 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
4.8.2 The Contractor shall cooperate with and provide the facilities to the sub-Contractors and other agencies working at site for smooth execution of the work. The contractor shall indemnify the IIT, Indore (M.P.).

4.8.3 Against any claim(s) arising out of such disputes. The Contractor shall:

(i) Allow use of scaffolding, toilets, sheds etc.
(ii) Properly co-ordinate their work with the work of other Contractors.
(iii) Provide control lines and benchmarks to his Sub-Contractors and the other Contractors.
(iv) Provide electricity and water at mutually agreed rates.
(v) Provide hoist and crane facilities for lifting material at mutually agreed rates.
(vi) Co-ordinate with other Contractors for leaving inserts, making chases, alignment of services etc. at site.
(vii) Adjust work schedule and site activities in consultation with the Engineer-in-Charge and other Contractors to suit the overall schedule completion.
(viii) Resolve the disputes with other Contractors/ sub-contractors amicably and the Engineer-in-Charge shall not be made intermediary or arbitrator.

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

4.8.5 Other agencies will also simultaneously execute and install the works of sub-station / generating sets, air-conditioning, lifts, etc. for the work and the contractor shall afford necessary facilities for the same. The contractor shall leave such recesses, holes, openings trenches etc. as may be required for such related works (for which inserts, sleeves, brackets, conduits, base plates, clamps etc. shall be supplied free of cost by the department unless otherwise specifically mentioned) and the contractor shall fix the same at time of casting of concrete, stone work and brick work, if required, and nothing extra shall be payable on this account.

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

5.0 CONSUMPTION OF PIG LEAD AND IT’S VARIATION FOR SCI SANITARY PIPES AND FITTINGS AS PER IS:3989
In order to ensure that adequate lead is poured properly into the joints and to control waste in use of lead for caulking of joints of SCI pipes and fittings, at the beginning of the work three or four sample joints shall be made and the quantum of lead per joint approved by the Engineer in charge. The actual consumption of lead should be within variation of 5% of the approved sample job. This variation includes allowances of wastage also. If the actual consumption of pig lead is less than the required consumption worked out on the above basis, the recovery on account of less use of lead shall be made from the contractor at market rate to be determined by the Engineer-in-charge, whose decision in the matter shall be final & binding.

6.0 FIXING OF SCI/CI PIPE
The SCI/CI pipes and G.I. pipes, wherever necessary, shall be fixed to RCC columns, beams etc. with rawl plugs, or appropriate fasteners as approved by Engineer-in-Charge, and nothing extra shall be payable on this account. GI pipes shall be wherever made to pass through wall / concrete then it shall be done using protective sleeves around the pipes to protect it from damage, nothing extra shall be payable on this account.

7.0 CONDITION FOR CEMENT :-
7.1 The Contractor shall procure 43 grade Ordinary Portland cement (conforming to IS : 8112) or Portland slag cement (conforming to IS : 455) or Portland Pozzolana Cement (PPC) (Fly ash based) – conforming to IS : 1489 (Part-I) as required in the work, from reputed manufacturers of cement such as ACC, Ultratech, Vikram, Shree Cement, Birla Gold, Ambuja & J.K. Cement or from any other reputed cement Manufacturer having a production capacity not less than one million tonnes per annum as approved by ADG for that sub 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 manufacture(s) which the contractor 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 manufacturer, given by the tenderer, fully or partially.

Supply of cement shall be taken 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 issue in accordance with provisions of relevant BIS codes. In case test results indicate that the cement arranged by the Contractor does not conform to the relevant BIS codes, 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.

If Portland Pozzolana cement or Portland slag cement is used, suitable modification in de-shuttering time etc. shall be done if need be as per specifications and standards and as directed by Engineer – in – charge and nothing extra shall be payable on this account.

No extra payment / deduction shall be made from the payment to the contractor for using any of the above type of cement.

7.2 The cement shall be brought at site in bulk supply of approximately 50 tonnes or as decided by the Engineer - in - charge.

7.3 For each grade / type, cement bags shall be stored in two separate godowns, one for tested cement and the other for fresh cement (under testing) constructed by the contractor at site of work as per sketch shown in General conditions of contract for CPWD works 2014 with weather proof roofs and walls, for which no extra payment shall be made. The size of the cement godown is indicated in the sketch for guidance only. The actual size of godown shall be as per site requirements and as per the direction of the Engineer in charge and nothing extra shall be paid for the same. The decision of the Engineer-in-charge regarding the capacity required/needed will be final. However, the capacity of each godown shall not be less than 100 tonnes. Each godown shall be provided with a single door with two locks. The keys of one lock shall remain with IIT Indore Engineer-in-charge or his authorized representative and that of other lock with the contractor at the site of work so that the cement is issued from godown according to the daily requirement with the knowledge of both the parties. The account of daily receipt and issue of cement shall be maintained in a register in the prescribed Proforma and signed daily by the contractor or his authorized agent in token of its correctness.

7.4 The cement shall be got tested by 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.

7.4.1 All other charges of sampling, packing and transportation of sample shall also be borne by the Contractor.

7.5 The actual issue and consumption of cement on work shall be regulated and proper accounts maintained separately for each type of cement, as provided in clause 10 of the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in Clause 42 of the contract and shall be governed by conditions laid therein. However, for consumption lesser beyond permissible theoretical variation recovery shall be made in accordance with conditions of contract at Schedule A to F (CPWD-8), without prejudice to action for acceptance of work/item at reduced rate or rejection as the case may be. In case of excess consumption no adjustment shall be made.

7.6 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.

8.0 **CONDITIONS FOR REINFORCEMENT STEEL :-**
8.1 The contractor shall procure TMT bars of Fe 500D grade from primary producers such as SAIL, Tata Steel Ltd., RINL, Jindal Steel & Power Ltd. and JSW Steel Ltd. or any other producer as adopted by CPWD who are using iron ore as the basic raw material / input and having crude steel capacity of 2.0 Million tonne per annum and above. In case of non-availability of steel from primary producers, use of TMT reinforcement bars procured from steel producers having integrated steel plants (ISPs) or secondary producers using iron ore as the basic raw material for production of crude steel which is further rolled into finish shapes in-house having crude steel capacity of 0.5 million tonne per annum or more will be allowed subject to fulfillment of following conditions:

a. The grade of the steel such as Fe 500D or other grade to be procured is to be specified as per BIS : 1786 - 2008.

b. The secondary producers must have valid BIS licence to produce HSD bars conforming to IS 1786 : 2008. In addition to BIS licence, the secondary producer must have valid licence from either of the firms Tempcore, Thermex, Evcon Turbo & Turbo Quench to produce TMT Bars.

c. The TMT bars procured from primary producers and ISPs shall conform to manufacturer’s specifications.

d. The TMT bars procured from secondary producers shall conform to the specifications as laid down by Tempcore, Thermex, Evcon, Turbo and Turboquench as the case may be.

e. TMT bars procured either from primary producers, ISPs or secondary producers, the specifications shall meet the provisions of IS 1786: 2008 pertaining to Fe 500D or other grade of steel as specified in the tender.

8.2 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 as defined under para (d) & (e) above, 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 of written orders from the Engineer-in-Charge to do so.

In case contractor is permitted to use TMT reinforcement bars procured from secondary producers then:

(i) The base price of TMT reinforcement bars as stipulated under schedule ‘F’ shall be reduced by Rs. 6700/- MT. However, for operation of provisions of clause 10CA in such case, the indices for TMT reinforcement bars of secondary producers will be considered same as for primary producers.

(ii) The rate of providing & laying TMT reinforcement bars as quoted by the contractor in the tender shall also be reduced by Rs. 8.00 per kg.

8.3 The steel reinforcement bars shall be brought at site in bulk supply of 25 tonnes or more as decided by the Engineer in charge.

8.4 The steel reinforcement bars shall be stored by the contractor at site of work in such a way as to prevent 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.

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

<table>
<thead>
<tr>
<th>Dia of bar</th>
<th>For consignment below 100tonnes</th>
<th>For consignment above 100tonnes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 10 mm</td>
<td>One sample for each 25 tonnes or part thereof</td>
<td>One sample for each 40tonnes or part thereof</td>
</tr>
<tr>
<td>10 mm to 16mm</td>
<td>One sample for each 35 tonnes or part thereof</td>
<td>One sample for each 45tonnes or part thereof</td>
</tr>
<tr>
<td>Over 16mm</td>
<td>One sample for each 45 tonnes or part thereof</td>
<td>One sample for each 50tonnes or part thereof</td>
</tr>
</tbody>
</table>
8.6 The contractor shall supply free of charge the steel required for testing including its transportation to testing laboratories. The cost of tests shall be borne by the contractor.
8.7 All other charges of sampling, packing and transportation of sample shall also be borne by the Contractor.
8.8 The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in clause 42 of the contract and shall be governed by conditions laid therein. In case the consumption is less than theoretical consumption including permissible variations, recovery at the rate so prescribed shall be made. In case of excess consumption no adjustment need to be made.
8.9 Steel brought to site and remaining unused shall not be removed from site without the written permission of Engineer-in-Charge.
8.9(i) Reinforcement including authorized spacer bars and lappages shall be measured in length for different diameters as actually used in the work nearest to a centimeter. Wastage and unauthorized overlaps shall not be measured.
(ii) The standard sectional weights referred to shall be as in Table 5.4 in para 5.3.4 in revised CPWD specifications 2009 Vol. I will be considered for conversion of length of various sizes of TMT bars in to standard weight.
(iii) Record of actual sectional weights shall also be kept dia wise and 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.
(a) If the derived weight as in sub-para (iii) above is less than the standard weight as in sub-para (ii) above, then the Derived Actual Weight shall be taken for payment.
(b) If the derived actual weight is found more than the standard weight, than standard weight as worked out in sub para (ii) above shall be taken for payment. Nothing shall be paid extra for the difference in Derived/ Actual Weight and standard weight.
8.10 Every care should be taken to avoid mixing different types of grades of bars in the same structural members as main reinforcement to satisfy relevant clause of IS: 456. In case of buildings, wherever the situation necessitates, the change over shall be permitted only from one level onwards. In case of foundations, all foundation elements (footings and grade beams) shall have the same kind of steel. In the case of columns, all structural elements up to the level of change, where the change over is taking place should have the same kind of steel as those in columns.
8.11 The reinforcing steel brought to site of work shall be stored on brick / timber platform of 30/40-cm height, nothing extra shall be paid on this account.

9.0 REINFORCED CEMENT CONCRETE WORK
9.1 DESIGN MIX CONCRETE
9.1.1 The RCC work shall be done with Design Mix Concrete unless otherwise specified. In the nomenclature of items wherever letter M has been indicated, the same shall imply for the Design Mix Concrete. For the nominal mix in RCC, CPWD Specifications shall be followed. The Design Mix Concrete will be designed based on the principles given in IS: 456-2000. The contractor shall design mixes for each grade of concrete indicating that the concrete ingredients and proportions will result in concrete mix meeting requirements specified. In case of use of admixture and or white cement, the mix shall be designed with these ingredients as well.
9.1.2 The concrete mix design will be carried out by the contractor through one of the following laboratories / Test houses and ready mix concrete shall conform to accepted design mix. a) MANIT, Bhopal. b) Govt. Engineering College, Ujjain. c) I.I.T., Bombay. d) Govt. Engineering College, Raipur. e) National Council for Cement & Building Materials, Ballabhgarh, Haryana, f) MITS, Gwalior g) Govt. Engineering College, Jabalpur, h) SGSITS Indore
9.1.3 In the event of all the above laboratories being unable to carry out the requisite design / testing the contractor shall have to get the same done from any other laboratory with prior approval of the Engineer-in-Charge.

9.1.4 The contractor shall submit the mix design report from any of above approved laboratories for approval of Engineer-in-Charge within 45 days from the date of issue of letter of acceptance of the tender.

9.1.5 In case of white Portland cement and the likely use of admixtures where CC/RCC is done with concrete pumps in concrete with ordinary Portland/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.

9.1.6 Each time when there is change of source or characteristic properties of the ingredients used in the concrete mix during the work, a revised mix design shall be done and approval obtained from the approved Laboratory or as per the direction of the Engineer-in-Charge. Preferably only single source of cement shall be kept for the work. In case contractor decides to use more than one source of approved cement brand then for each brand separate design mix shall be done and got approved by Engineer-in-charge.

9.1.7 The Mix shall be designed to produce the grade of concrete having required workability and characteristic strength not less than as specified.

9.1.8 The mix design for a specified grade of concrete shall be done for a target mean compressive strength \( T_{ck} = F_{ck} + 1.65 \sigma \)

Where,
\( F_{ck} \) = Characteristic compressive strength at 28 days.
\( \sigma \) = Standard deviation

The standard deviation for each grade of concrete shall be calculated separately. The degree of quality control for this work is “Good” for which the standard deviation \( (\sigma) \) obtained for different grades of concrete shall be as follows:-

<table>
<thead>
<tr>
<th>Grade of Concrete</th>
<th>For “Good” quality of control</th>
</tr>
</thead>
<tbody>
<tr>
<td>M 20</td>
<td>4.0</td>
</tr>
<tr>
<td>M 25</td>
<td>4.0</td>
</tr>
<tr>
<td>M 30</td>
<td>5.0</td>
</tr>
<tr>
<td>M 35</td>
<td>5.0</td>
</tr>
</tbody>
</table>

9.1.9 Out of the six specimen of each set, three shall be tested at seven days and remaining three at 28 days. The preliminary tests at seven days are intended only to indicate the strength likely to be attained at 28 days. All cost of mix designing and testing connected therewith including charges payable to laboratory shall be borne by the Contractor.

9.1.10 The samples of cement, aggregate (fine & coarse) to be sent to the laboratories shall be sealed in the presence of the Engineer- in-Charge and shall have his signature and cost of packaging, sealing, transportation, loading, unloading, cost of samples and the testing charges for Mix design in all cases shall be borne by the contractor.

9.1.11 Notwithstanding the approval granted by Engineer-in-Charge in aforesaid manner, the contractor shall be fully responsible for quality of concrete including input control, transportation and placement etc.

9.1.12 The Engineer-in-Charge reserves the right to exercise control over the ingredients, water and admixtures, purchased, stored and to be used in the concrete including conducting of tests for checking quality of materials fit or unfit for use in production of mix.

9.1.13 The Contractor shall submit the test data of the material used for concrete mix-design in the laboratories, so the material being used at site can be compared with those data / size etc.

9.1.14 In case of change of parameters of ingredients (fine aggregate, cement, coarse aggregate) fresh concrete mix-design to be done as mentioned in paras 9.1.1, 9.1.2 & 9.1.6 to 9.1.10 above and got approved from the Engineer-in-Charge before execution.

9.1.15 The contractor shall make arrangement to install a mini laboratory at site for accelerated testing of design mix concrete as per IS : 9013. The department reserves right to take samples of design mix concrete from the mass production of the concrete for testing and compare with the laboratory’s results.
9.1.16 Nothing shall be paid extra for installation and cost of batching plant and other arrangement for making necessary test of design mix concrete.

9.1.17 The item of design mix cement concrete shall be inclusive of all the ingredients including admixtures if required, labour, machinery T & P etc. (except shuttering which will be measured & paid for separately) required for a design mix concrete of required strength and workability. The rate quoted by the agency shall be net & nothing extra shall be payable on account of change in quantities of concrete ingredients like aggregates and admixtures as per the approved mix design.

9.1.18 Concrete shall be handled from the place of mixing to the place of final deposit / placement by methods, which prevent segregation, or loss of any ingredients and contamination.

9.1.19 Where concrete is conveyed by chutes, the chute shall be made of metal or fitted with metal lining. The approval of the Engineer-in-charge shall be obtained for the use of chutes in excess of 3 metres length and in such cases the concrete shall be remixed if so required by the Engineer-in-Charge or closed bottom buckets shall be used. If concrete is placed by pumping, the conduit shall be primed properly. Once pumping is started, it shall not be interrupted as far as possible. Concrete shall not be dropped into place from a height more than 1.5m.

9.1.20 Concreting of any portion of the work shall be done in presence of the representative of the Engineer-in-Charge and shall be done only after approval of the Engineer-in-Charge.

9.1.21 Concreting shall be carried out continuously between constructions joints shown on the drawings or as agreed by the Engineer-in-Charge. The contractor shall closely follow the sequence of concreting where it is specified in the drawings. If concreting is interrupted before reaching the predetermined joint an approved construction joint shall be provided. Construction joints shall be minimized as far as possible. These shall be set at right angles to the general direction of the member. The surface film of the first placed concrete should preferably be removed while the concrete is still green to expose the aggregate and leave a sound irregular surface. However care shall be taken not to disturb the concrete already laid.

9.1.22 Admixtures : Wherever required, admixtures of approved quality only shall be mixed with concrete as specified. The admixtures shall conform to IS: 9103. The chloride content in the admixture shall satisfy the requirements of BS: 5075. The total amount of chlorides in the admixture mixed concrete shall also satisfy the requirements of IS 456-2000.

9.1.23 Use of ready mixed concrete (RMC) may also be permitted, with prior approval of Engineer –in – Charge, without any extra payment. Separate account of design mix concrete and RMC shall however be kept. The ready mixed concrete shall conform to the requirement of durability, workability and strength as laid down for design mix concrete.

9.2 Use of Fly Ash and Fly Ash Blended Cements in RCC Structures :

9.2.1 General

9.2.1.1 IS : 456-2000 Code of Practice for plain and Reinforced Concrete (as amended up to date) shall be followed in regard to Concrete mix Proportion and its production as under :-

9.2.1.1.1 The concrete mix design shall be done as “Design Mix Concrete” as prescribed in clause – 9 of IS 456 mentioned above.

9.2.1.1.2 Concrete shall be manufactured in accordance with clause 10 of above mentioned IS : 456 covering quality assurance measures both technical and organizational, which shall also necessarily require a qualified Concrete Technologist to be available during manufacture of concrete for certification of quality of concrete.

9.2.1.2 Minimum M25 grade of concrete shall be used in all structural elements made with RCC both in load bearing and framed structure.

9.2.1.3 The mechanical properties such as modulus of elasticity, tensile strength, creep and shrinkage of flyash mixed concrete or concrete using flyash blended cements (PPCs) should not likely to be significantly different and their values are to be taken same as those used for concrete made with OPC. Fly ash when used in the production of concrete shall be strictly in conformity with IS : 3812 (Para 1 & 10).

9.2.1.4 To control higher rate of carbonation in early ages of concrete both in flyash admixed as well as PPC based concrete, water / binder ratio shall be kept as low as possible, which shall be closely monitored during concrete manufacture. If necessitated due to low water / binder ratio, required workability shall be achieved by use of chloride free chemical admixtures conforming to IS : 9103.
The compatibility of chemical admixtures and supper plasticizers with each set OPC, fly ash and / or PPC received from different sources shall be ensured by trials. 9.2.1.5 In environment subjected to aggressive chloride or sulphate attack in particular, use of flyash admixed or PPC based concrete is recommended. In cases, where structural concrete is exposed to excessive magnesium sulphate, flyash substitution / content shall be limited to 18% by weight. Special type of cement with low C3A content may also be alternatively used. Durability criteria like minimum binder content and maximum water / binder ratio also need to be given due consideration in such environment.

9.2.1.6 Wet curing period shall be enhanced to a minimum of 10 days or its equivalent. In hot and arid regions, the minimum curing period shall be 14 days or its equivalent.

9.2.2. Use of Flyash Admixed Cement Concrete (FACC) in RCC Structures: There shall be no bar on use of FACC in RCC structures subject to following additional conditions: -

9.2.2.1 Flyash shall have its chemical characteristics and physical requirements etc. conforming to IS : 3812 (Part-10) and shall be duly certified.

9.2.2.2 To ensure uniform blending of flyash with cement in conformity with IS : 456, a specific facility needs to be created at site with complete computerized automated process control to achieve design quality or with similar facility from Ready Mix concrete (RMC) plants.

9.2.2.3 As per IS : 1489 (Part-I), Maximum 35% of OPC by mass is permitted to be substituted with flyash conforming to IS : 3812 (Part-I) and same is reiterated.

9.2.2.4 Separate storage for dry flyash shall be provided. Storage bins or silos shall be weather proof and permit a free flow and efficient discharge of flyash. The filter or dust control system provided in the bins or silos shall be of sufficient size to allow delivery of flyash maintained at specified pressure to prevent undue emission of flyash dust, which may interfere weighing accuracy.

9.2.3. Use of Fly Ash Blended Cements in Cement Concrete (PPCC) in RCC structures

9.2.3.1 Subject to General Guidelines detailed out as above, PPC manufactured conforming to IS : 1489 (Part-I) shall be treated at par with OPC for manufacture of Design Mix Concrete for structural use in RCC.

9.2.3.2 Till the time, BIS makes it mandatory to print the %age of flyash on each bag of cement, the certificate from the PPC manufacturer indicating the same shall be insisted upon before allowing use of such cements in works.

9.2.3.3 While using PPC for structural concrete work, no further admixing of fly ash shall be permitted.

10.0 PARTICULAR SPECIFICATIONS FOR AAC BLOCK MASONRY:

10.1 The AAC Blocks shall be procured from approved manufacturers.

10.2 The blocks shall be stored at site in stacks on a level dry surface.

10.3 The mortar used for joining the blocks shall be mixed in the proportion 1:4 (1 Cement : 4 coarse sand) by volume.

10.4 The thickness of joints in the masonry shall not exceed 10 mm and shall be of uniform thickness.

10.5 Maximum height of wall built on any day shall not be more than 1.2 metres (i.e. 6 layers).

10.6 The joints in the masonry shall be recessed and no flush pointing shall be done.

10.7 A slip membrane with PVC sheet shall be introduced as per the recommendation of blocks manufacturer before laying the first course on the plinth beam.

10.8 The blocks shall not be soaked in water and instead they shall be dipped in water and taken out immediately to have only moist surface.

10.9 The vertical joints of the masonry shall be broken to have a minimum overlap of 100 mm.

10.10 Bed joint 2 Nos 6mm dia reinforcement bars may be placed in the joints after every 3rd course in two successive layers as per the recommendation of the manufacturers to have good lateral stability.

10.11 It shall be ensured that the lintels are rest at either end of window opening only on full block and on half or part blocks reinforcement shall be placed in the sill course of window openings in two successive horizontal joints and extend the same at least to 600 mm on either side of the jamb surface.

10.12 At a RCC column interface an MS anchor ("L" shape) may be placed and fixed with screws at every 4th course so as to anchor the wall with RCC column for better lateral stability. The anchor shall be got approved from Engineer-in-Charge.
10.13 Curing of the masonry shall be done only by spraying water and no flooding shall be
done by water jets / buckets.

10.14 The chases in the wall surface for electrical conduits shall be done only by means of
electrically operated saw to cut two parallel lines and the portion between the cuts
shall be chiseled carefully. The depth of vertical chases should be limited to 1/3 rd of
wall thickness and horizontal chases should not be more than 1/6th of wall
thickness. The chases have to be properly packed with cement mortar 1:4 (1
cement : 4 sand) between pipes and chases.

10.15 The blocks shall be cut using a carpenter saw to have half blocks or any other
suitable size block to close the masonry course or to break the vertical joint from the
bottom course. Hammer or a masons trowel shall not be used to cut the blocks.

10.16 GI wire mesh shall be fixed on all column wall and beams- wall junctions before
taking up the plaster work.

10.17 The rates of the item include all the elements described above.

11.0 EQUIPMENTS AND PLANTS (Refer Clause 18 of Schedule ‘F’)

11.1 The contractor has to deploy necessary tools & plants in required numbers to ensure smooth
& timely execution of work, at his own cost & risk as per the requirement of work at different
stages. The decision of Engineer-in-Charge shall be final regarding use of particular T&P(s)
at a particular time(s) & the contractor has to adhere to the same strictly. The following
description & quantum of T&P is given for general guidance which is not mandatory.
However, the successful contractor shall give a list of tools and plants which he proposes to
deploy to ensure smooth and timely execution as per different milestone fixed and timely
completion of work while submitting the programme and progress chart.

<table>
<thead>
<tr>
<th>I.</th>
<th>Fully Automatic Batching Plant (15.00 cum)</th>
<th>1 No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>II.</td>
<td>Steel Centring and shuttering</td>
<td>3000 sqm</td>
</tr>
<tr>
<td>III.</td>
<td>Excavator Cum Loader.</td>
<td>2 No.</td>
</tr>
<tr>
<td>IV.</td>
<td>Concrete mixer with hopper.</td>
<td>3 Nos.</td>
</tr>
<tr>
<td>V.</td>
<td>Plate Vibrator.</td>
<td>2 No.</td>
</tr>
<tr>
<td>VI.</td>
<td>Needle Vibrator.</td>
<td>5 Nos.</td>
</tr>
<tr>
<td>VII.</td>
<td>Bar Bending Machine.</td>
<td>1 No.</td>
</tr>
<tr>
<td>VIII</td>
<td>Bar Cutting Machine.</td>
<td>1 No.</td>
</tr>
<tr>
<td>IX</td>
<td>Compressor 5 cmm.</td>
<td>2 No.</td>
</tr>
<tr>
<td>X</td>
<td>Earth compactor 2 T</td>
<td>2 No.</td>
</tr>
<tr>
<td>XI</td>
<td>Floor grinding machine</td>
<td>4 Nos.</td>
</tr>
<tr>
<td>XII</td>
<td>Welding machine</td>
<td>2 No.</td>
</tr>
<tr>
<td>XIII</td>
<td>DG Set(63 KVA)</td>
<td>2 No.</td>
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<tr>
<td>XIV</td>
<td>Grinder, Drilling machine etc.</td>
<td>2 Nos.</td>
</tr>
<tr>
<td>XV</td>
<td>Water Pump</td>
<td>3 Nos.</td>
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<tr>
<td>XVI</td>
<td>Chase cutter</td>
<td>2 Nos.</td>
</tr>
<tr>
<td>XVII</td>
<td>Concrete Pump</td>
<td>1 No.</td>
</tr>
</tbody>
</table>

11.2 To achieve the program of work as per programme the contractor must bring at site the
required shuttering materials required for cement concrete and RCC work etc. within 30
days from the date of start of work. All other equipments shall be brought, installed and
commissioned at site of work at least one week before their actual planned use at site.
Work shop facilities for fabrication/addition and alterations, and other allied works shall be
arranged by the contractor at his own cost.

11.3 The list of equipment/T&P/machinery as per para 11.1 is for general guidance. In addition to
these, machinery / equipment as required shall be arranged by the contractor in case the
requirement at any stage exceeds as per the programme finalized at his own cost and
nothing extra whatsoever on this account shall be paid. This include equipment for
arrangement of concrete from RMC producing plants also.

11.4 All the equipment, T&P and machinery shall be kept in good condition.
12.0 SAFETY MEASURES AT CONSTRUCTION SITE
In order to ensure safe construction, following shall be adhered for strict compliance at the site:

(i) The work site shall be properly barricaded.
(ii) Adequate signages indicating ‘Work in Progress – Inconvenience caused is Regretted’ or Diversion Signs shall be put on the sites conspicuously visible to the public even during night hours. These are extremely essential where works are carried out at public places in use by the public.
(iii) The construction muck at site shall be regularly removed on daily basis.
(iv) All field officials and the workers must be provided with safety helmets, safety shoes and safety belts.
(v) Proper MS pipe scaffoldings with work–platforms and easy-access ladders shall be provided at site to avoid accidents.

Necessary First-Aid kit shall be available at the site.

The above provisions shall be followed in addition to the provisions of General Condition of Contract.

13.0 LIST OF EQUIPMENT FOR SITE LABORATORY TO BE MADE AVAILABLE BY THE CONTRACTOR AT HIS OWN COST (Refer Clause 10 A of Schedule ‘F’)
Laboratory testing instruments.

(1) Balances
   i. 7 Kg. to 10 Kg. capacity, semi-self indicating type – accuracy 10 gm.-1 No.
   ii. 500 gm. Capacity, semi-self indicating type – accuracy 1 gm.- 1 No.
   iii. Pan balance – 5 Kg. capacity – accuracy 10 gms.-1 No.

(2) Ovens–electrically operated, thermostatically controlled upto 110$^\circ$ C–sensitivity 1$^\circ$ C. – 1 No.

(3) Sieves : as per IS 460 – 1962.
   i. I.S. sieves – 450 mm internal dia, of sizes 100mm, 80 mm, 63 mm, 50mm, 40 mm, 25mm, 20 mm, 12.5 mm, 10 mm, 6.3mm, 4.75 mm, 2.36mm complete with lid and pan. – 1 Set
   ii. I.S. sieves - 200 mm internal dia (brass frame) consisting of 2.36 mm, 1.18 mm, 600 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns with lid and pan. – 1 Set

(4) Sieve shaker capable of 200 mm and 300 mm dia sieves, manually operated with timing switch assembly - 1 No.

(5) Equipment for slump test–slump cone, steel plate, tamping rod, steel scale, scoop-2sets

(6) Dial gauges, 25 mm travel – 0.01 mm / division least count – 2 Nos.

(7) 100 tones compression testing machine, electrical cum manually operated. – 1 No.

(8) Graduated measuring cylinders 200 ml capacity – 6 Nos.

(9) Enamel trays (for efflorescence test for bricks).
   i. 300 mm X 250 mm X 40 mm – 2 Nos.  
   ii. Circular plates of 2850 mm dia – 4 Nos.

B. Field testing instruments.(Following instruments in sufficient quantity as directed by the Engineer- in- Charge shall be made available by the contractor. It shall be ensured that the instruments always remain in serviceable condition else the same will be replaced.

(1) Steel tapes – 3 m.
(2) Vernier Calipers.
(3) Micrometer screw 25 mm gauge.
(4) A good quality plumb bob.
(5) Spirit level, minimum 30 cms long with 3 bubbles for horizontal vertical.
(6) Wire gauge (circular type) disc.
(7) Foot rule.
(8) Long nylon thread .
(9) Rebound hammer for testing concrete
(10) Dynamic penetrometer.
(11) Magnifying glass
(12) Screw driver 30 cms long
(13) Ball pin hammer, 100 gms.
(14) Plastic bags for taking samples
(15) Moisture meter for timber
(16) Earth resistance tests (for Electrical Divisions)
(17) Meggar (for Electrical Divisions)
(18) Total station

14.0 SPECIFICATIONS FOR FLY ASH BRICKS - All fly ash bricks as brought to the site shall conform to the strength & durability parameters as prescribed in the tender and CPWD specifications.

15.0 The contractor shall submit ‘Method Statement’ for the approval soon after the award of work. ‘Method Statement’ is a statement by which the construction procedures for important activities of construction are stated, checked and approved. Method Statement shall have description of the item with elaborate procedures in steps to implement the same. The specification of the materials involved their testing and acceptance criteria, equipments to be used, precautions to be taken, mode of measurements etc.

16.0 TESTING OF MATERIALS.
16.1 The contractor shall arrange carrying out of all tests required under the agreement through the laboratory as approved by the Engineer-in-Charge and shall bear all charges in connection therewith including fee for testing unless specified otherwise. In all cases cost of samples and to & fro carriage shall be borne by the contractor. Contractor shall establish a laboratory at site of work at his own cost. The laboratory shall be equipped with all necessary equipment as per requirement of specification or as per direction of Engineer-in-Charge. A list of laboratory equipments to be maintained by the contractor is enclosed at para 13 page 49 & 50. Establishing the laboratory at site shall not absolve the contractor from fulfilling the criteria of getting the test done in independent approved laboratories as per DG/MAN/308. The decision of the Engineer-in-Charge of allowing any test in the site laboratory shall be final.
16.2 Even ISI marked materials may 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/material. Whenever ISI marked materials are brought to the site of work the contractor shall, if required by the Engineer-in-charge, furnish manufacturer test certificate or test certificate from approved testing laboratory to establish that the material procured by the contractor for incorporation in the work satisfy the provisions if IS codes relevant to the material and/or the work done.
16.3 Sub-standard Material/Work : In case any material/work is found substandard the same shall be rejected by the Engineer-in-Charge and the same shall be removed from the site of work within 48 hour, failing which the same shall be got removed by the Engineer-in-Charge at the risk and cost of the contractor without giving any further notice and time.

17.0 CONDITIONS OF CONTRACT SPECIFIC TO GREEN BUILDING PRACTICES
The contractor shall strictly adhere to the following conditions as part of his contractual obligations:

17.1 SITE
17.1.1 The contractor shall ensure that adequate measures are taken for the prevention of erosion of the top soil during the construction. The contractor shall prepare and implement the Erosion and Sedimentation Control Plan (ESCP) provided to him after approval by the Engineer-in-Charge as part of the larger Construction Management Plan (CMP). The contractor shall obtain the Erosion and Sedimentation Control Plan (ESCP) Guidelines if required from the Engineer in Charge and then prepare “working plan” for the following month’s activities as a CAD drawing showing the construction management, staging & ESCP. At no time soil should be allowed to erode away from the site and sediments should be trapped where necessary. The contractor shall ensure that all the top soil excavated during construction works is neatly stacked and is not mixed with other excavated earth. The contractor shall take the clearance of the Engineer in Charge before any excavation. Top soil should be stripped to a depth of 20 cm (centimeters) from the areas to be disturbed, for example proposed area for buildings, roads, paved areas, external services and area required for construction activities etc. It shall be stockpiled to a maximum height of 40 cm in designated areas, covered or stabilized with temporary seeding for erosion prevention and shall be reapplied to site during plantation of the proposed vegetation.
or as directed by the engineer in charge. Top soil shall be separated from subsoil, debris and stones larger than 50 mm (millimetre) diameter. The stored top soil may be used as finished grade for planting areas.

17.1.2 The Contractor should follow the construction plan as proposed by the Architect / Engineer in Charge to minimize the site disturbance such as soil pollution due to spillage. If required use of staging and spill prevention and control plan to restrict the Spilling of the contaminating material on site needs to be resorted. Protection of top soil from erosion by collection storage and reapplication of top soil, constructing sediment basin, contour trenching, mulching etc., may also be directed by the engineer in charge.

17.1.3 No excavated earth shall be removed from the campus unless suggested otherwise by the Engineer in Charge. All subsoil shall be reused in backfilling/landscape, etc as per instructions of the Engineer in Charge. The surplus excavated earth shall be disposed of by the contractor as per the direction of the engineer in charge at his own cost for reuse. A certificate of reuse as required by the Engineer-in-Charge shall be submitted by the contractor.

17.1.4 The contractor shall not change the natural gradient of the ground unless specifically instructed by the Engineer in Charge. This shall cover all natural features like water bodies, drainage gullies, slopes, mounds, depressions, etc. Existing drainage patterns through or into any preservation area shall not be modified unless specifically directed by the Engineer-in-Charge.

17.1.5 The contractor shall not carry out any work which results in the blockage of natural drainage.

17.1.6 The contractor shall ensure that existing grades of soil shall be maintained around existing vegetation and lowering or raising the levels around the vegetation is not allowed unless specifically directed by the Engineer-in-Charge.

17.1.7 Contractor shall reduce pollution and land development impacts from automobiles use during construction.

17.1.8 Overloading of trucks is unlawful and creates the erosion and sedimentation problems, especially when loose materials like stone dust, excavated earth, sand etc. are moved. Proper covering shall be used by the contractor. Also, no overloading shall be permitted.

17.2 CONSTRUCTION PHASE AND WORKER FACILITIES

17.2.1 The contractor shall specify and limit construction activity in pre-planned/designated areas and shall start construction work after securing the approval for the same from the Engineer in Charge. This shall include areas of construction, storage of material and personnel movement.

17.2.2 Preserve and Protect Landscape during Construction

a The contractor shall ensure that no trees, existing or otherwise, shall be harmed and damage to roots. These shall be prevented during trenching, placing backfill, driving or parking heavy equipment, dumping of trash and protected from oil, paint, and other materials detrimental to plant health. These activities shall be restricted to the areas outside of the canopy of the tree, or, from a safe distance from the tree/plant by means of barricading. Trees will not be used for support; their trunks shall not be damaged by cutting and carving or by nailing posters, advertisements or other material. Lighting of fires or carrying out heat or gas emitting construction activity within the ground, covered by canopy of the tree is not at all permitted.

b The contractor shall take steps to protect trees or saplings if any identified for preservation within the construction site using tree guards of approved specification.

c Contractor should limit all construction activity within the specified area as per the Construction Management Plan (CMP) approved by Engineer in Charge.

d The contractor shall avoid cut and fill in the root zones, through delineating and fencing the drip line (the spread limit of a canopy projected on the ground) of all
the trees or group of trees. The zones of movement of heavy equipment, parking, or excessive foot traffic shall be separated from the fenced plant protection zones.

e The contractor shall ensure that maintenance activities during construction period shall be performed as needed to ensure that the vegetation remains healthy.

17.2.3 Contractor shall be required to develop and implement a waste management plan, quantifying material diversion goals. He shall establish goals for diversion from disposal in landfills and incinerators, if required, and adopt a construction waste management plan to achieve these goals. A project wide policy of “Nothing leaves the Site” shall be followed. The Contractor’s ingenuity is especially called towards meeting this prerequisite/credit (as per IGBC LEED India, New Construction v1.0 & GRIHA, MNRE) and may consider recycling cardboard, metal, brick, acoustical tile, concrete, plastic, clean wood, glass, gypsum wallboard, carpet and insulation, designating a specific area(s) on the construction site for segregated or commingled collection of recyclable material, and track recycling efforts throughout the construction process, identifying construction haulers and recyclers to handle the designated materials at his cost. The diversion may include donation of materials to charitable organizations and salvage of materials on-site.

17.2.4 Contractor shall collect all construction waste generated on site. He may consider at segregating wastes based on their utility and examine means of sending such waste to manufacturing units which use them as raw material or other site which require it for specific purpose. Typical construction debris could be broken bricks, steel bars, broken tiles, spilled concrete and mortar etc.

17.2.5 The contractor shall provide potable water and other amenities for all workers as per the contract.

17.2.6 The contractor shall provide the minimum level of sanitation and safety facilities for the workers at site as described in CPWD General Conditions of contract. The contractor shall ensure cleanliness of workplace with regard to the disposal of waste and effluent; provide clean drinking water and latrines and urinals as per applicable provisions. Adequate toilet facilities shall be provided for the workmen within easy access of their place of work. The total no. to be provided shall not be less than 1 per 30 employees in any one shift. Toilet facilities shall be provided from the start of building operations, connection to a sewer shall be made as soon as practicable. Every toilet shall be so constructed that the occupant is sheltered from view and protected from the weather and falling objects. Toilet facilities shall be maintained in a sanitary condition. A sufficient quantity of disinfectant shall be provided and natural or artificial illumination shall also be provided.

17.2.7 The contractor shall ensure that air pollution due to dust/generators is kept to a minimum, preventing any adverse effects on the workers and other people in and around the site. The contractor shall ensure proper screening, covering stockpiles, covering brick and loads of dusty materials, wheel-washing facility, gravel pit, and water spraying. Contractor shall also ensure the following activities to prevent air pollution during construction:
- Clear vegetation only from areas where work will start right away
- Vegetate / mulch areas where vehicles do not ply.
- Apply gravel / landscaping rock to the areas where mulching / paving is impractical
- Identify roads on-site if applicable that would be used for vehicular traffic. Upgrade vehicular roads (if these are unpaved) by increasing the surface strength by improving particle size, shape and mineral types that make up the surface & base and add surface gravel to reduce source of dust emission to limit amount of fine particles (smaller than 0.075mm) to 10 – 20 %
- Water spray, through a simple hose for small projects, to keep dust under control. Fine mists should be used to control fine particulate. However, this should be done with care so as not to waste water. Heavy watering can also create mud, which when
 tracked onto paved public roadways, must be promptly removed. Also, there must be an adequate supply of clean water nearby to ensure that spray nozzles don’t get plugged.

- Water spraying shall be done on:

17.2.7.1 Any dusty materials before transferring, loading and unloading
17.2.7.2 Area where demolition work is being carried out
17.2.7.3 Any un-paved main haul road
17.2.7.4 Areas where excavation or earth moving activities are to be carried out

- The contractor shall ensure that the speed of vehicles within the site is limited to 10 km/hr.
- 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.
- Spills of dirt or dusty materials will 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.
- Provide hoardings of not less than 3m high along the site boundary, next to a road or other public area at his cost.
- Provide dust screens, sheeting or netting to scaffold along the perimeter of the building at his cost.
- Cover stockpiles of dusty material with impervious sheeting at his cost.
- Cover dusty load on vehicles by impervious sheeting before they leave the site at his cost.

17.2.8 Contractor shall be required to provide an easily accessible area that serves the entire building and is dedicated to the separation, collection and storage of materials for recycling including (at a minimum) paper, corrugated cardboard, glass, plastics, and metals. He shall coordinate the size and functionality of the recycling areas with the anticipated collections services for glass, plastic, office paper, newspaper, and organic wastes to maximize the effectiveness of the dedicated areas. Consider employing cardboard balers, aluminium can crushers, recycling chutes, and collection bins at individual workstations to further enhance the recycling program.

17.2.9 The contractor shall ensure that no construction leachate (e.g. cement slurry etc.), is allowed to percolate into the ground. Adequate precautions will be taken to safeguard against this including reduction of wasteful curing processes, collection, basic filtering and reuse. The contractor shall follow requisite measures for collecting drainage water run-off from construction areas and material storage sites and diverting water flow away from such polluted areas. Temporary drainage channels, perimeter dike/swale, etc. shall be constructed to carry the pollutant-laden water directly to the treatment device or facility (municipal sewer line).

17.2.10 Staging (dividing a construction area into two or more areas to minimize the area of soil that will be exposed at any given time) should be done to separate undisturbed land from construction activity and material storage.

17.2.11 The contractor shall comply with the safety procedures, norms and guidelines (as applicable) as outlined in the document Part 7 Constructional practices and safety, 2005, National Building code of India, Bureau of Indian Standards. A copy of all pertinent regulations and notices concerning accidents, injury and first-aid shall be prominently exhibited at the work site. Depending upon the scope & nature of work, a person qualified in first-aid shall be available at work site to render and direct first-aid to causalties. A telephone may be provided to first-aid assistant with telephone numbers of hospitals displayed. Complete reports of all accidents and action taken thereon shall be forwarded to the competent authorities.

17.2.12 The contractor shall ensure the following activities for construction workers safety, among other measures at his cost.

- Guarding all parts of dangerous machinery.
- Precautionary signs for working on machinery
- Maintaining hoists and lifts, lifting machines, chains, ropes, and other lifting
tackles in good condition.
- Durable and reusable formwork systems to replace timber formwork and
ensure that formwork where used is properly maintained.
- Ensuring that walking surfaces or boards at height are of sound
construction and are provided with safety rails or belts.
- Provide protective equipment; helmets etc.
- Provide measures to prevent fires. Fire extinguishers and buckets of sand to
be provided in the fire-prone area and elsewhere.
- Provide sufficient and suitable light for working during night time.

17.2.13 The storage of material shall be as per standard good practices as specified in Part
Section 2 - Storage, Stacking and Handling practices, NBC 2005 and shall be to the
satisfaction of the Engineer in Charge to ensure minimum wastage and to prevent any
misuse, damage, inconvenience or accident. Watch and ward of the Contractor’s
materials shall be his own responsibility. There should be a proper planning of the
layout for stacking and storage of different materials, components and equipments with
access and proper maneuverability of the vehicles carrying the materials. While
planning the layout, the requirements of various materials, components and
equipments at different stages of construction shall be considered.

17.2.14 The contractor shall provide for adequate number of garbage bins around the
construction site and the workers facilities and will be responsible for the proper
utilization of these bins for any solid waste generated during the construction.
Separate bins should be provided for plastic, glass, metal, biological and paper waste and
labelled in both Hindi and English with suitable symbols.

17.2.15 The contractor shall prepare and submit ‘Spill prevention and control plans’ before
start of construction, clearly stating measures to stop the source of the spill, to
contain the spill, to dispose the contaminated material and hazardous wastes, and stating
designation of personnel trained to prevent and control spills. Hazardous wastes
include pesticides, paints, cleaners, and petroleum products.

17.2.15.1 Contractor shall collect & submit the relevant material certificates for materials if
directed by the Engineer in charge with high recycled (both post-industrial and
post-consumer) content, including materials like RMC mix with fly-ash, glass with
recycled content, calcium silicate boards etc.

17.2.16 Contractor shall collect the relevant material certificates for rapidly renewable
materials such as bamboo, wool, cotton insulation, agrifiber, linoleum, wheat board,
strawboard and cork etc.

17.2.17 Where possible, the contractor shall select materials / vendors, harvested and
manufactured regionally, within a 800-km radius of the project site.

17.2.18 Contractor shall adopt an IAQ (Indoor Air Quality) management plan to protect the
HVAC system during construction, control pollutant sources, and interrupt pathways
for contamination. He shall sequence installation of materials to avoid contamination of absorptive materials such as insulation, carpeting, ceiling tile, and
gypsum wallboard. He shall also protect stored on-site or installed absorptive materials from
damage.

17.2.19 The contractor shall ensure that a flush out of all internal spaces is conducted prior
to handover. hi shall comprise an opening of all doors and windows for 14 days to vent
out any toxic fumes due to paints, varnishes, polishes, etc.

17.2.20 Contractor shall make efforts to reduce the quantity of indoor air contaminants that
are odorous or potentially irritating harmful to the comfort and well-being of installer
and building occupants. Contractor shall ensure that the VOC (Volatile Organic
Compounds) content of paints, coatings and primers used must not exceed the 
VOC content limits mentioned below in case items of such paints are/is available in 
schedule of quantities.

**Paints**
Non-flat - 150 g/L Flat (Mat) - 50, g/L Anti corrosive/ anti rust - 250 g/L

**Coatings / Clear wood finishes**
Varnish - 350 g/L Lacquer - 550 g/L Floor coatings - 100 g/L Stains - 250 g/L

**Sealers**
Waterproofing sealer - 250 g/L Sanding sealer - 275 g/L Other sealers - 200 g/L

17.2.21 The VOC (Volatile Organic Compounds) content of adhesives and sealants used if 
 prescribed in the schedule of quantities must be less than VOC content limits 
 mentioned: **Architectural Applications VOC Limit (g/l less water)**
Indoor Carpet adhesives - 50 g/L, Carpet Pad Adhesives - 50 g/L, Wood Flooring 
Adhesive - 100 g/L, Rubber Floor Adhesives - 60 g/L, Sub Floor Adhesives – 50 g/L, 
Ceramic Tile Adhesives - 65 g/L, VCT and Asphalt Tile adhesives - 50 g/L, Dry Wall 
and Panel Adhesives - 50 g/L, Structural Glazing Adhesives - 100 g/L, Multipurpose 
Construction Adhesives – 70 g/L, Substrate Specific Application VOC Limit (g/l less 
water), Metal to Metal - 30 g/L, Plastic Foams - 50 g/L, Porous material (except 
wood) - 50 g/L, Wood - 30 g/L, Fiber Glass – 80 g/L

17.2.22 Wherever required, Contractor shall meet and carry out documentation of all 
activities on site, supplementation of information, and submittals in accordance 
with IGBC LEED India New Construction v1.0 or GRIHA program standards and 
guidelines. Towards meeting the aforementioned building environmental rating 
standard(s) expert assistance shall be provided to him up on request.

17.2.23 Water Use during Construction Contractor should spray curing water on concrete 
structure and shall not allow free flow of water. Concrete structures should be kept 
covered with thick cloth / gunny bags and water should be sprayed on them. 
Contractor shall do water ponding on all sunken slabs using cement and sand mortar.

17.2.24 The Contractor shall remove from site all rubbish and debris generated by the Works 
and keep Works clean and tidy throughout the Contract Period. All the serviceable and 
non-serviceable (malba) material shall be segregated and stored separately. The malba 
obtained during construction shall be collected in well formed heaps at properly 
selected places, keeping in a view safe condition for workmen in the area. Materials which are 
likely to cause dust nuisance or undue environmental pollution in any other way, shall 
be removed from the site at the earliest and till then they shall be suitable covered. Glass 
& steel should be dumped or buried separately to prevent injury. The work of removal of 
debris should be carried out during day. In case of poor visibility artificial light may 
be provided.

17.2.25 The contractor shall provide O & M Manuals wherever applicable.

17.2.26 The contractor shall make himself conversant with the Site Waste Management 
Program Manual and actively contribute to its compilation by estimating the nature 
and volume of waste generated by the process/installation in question.

17.2.27 MATERIALS & FIXTURES FOR THE PROJECT

a) Contractor will produce wherever feasible certificate regarding distance of the source of the relevant material.

b) Unless otherwise stated cement used at site for reinforced concrete, precast members, 
mortar, plaster, building blocks, etc shall be PPC (Portland Puzzolana Cement). The PPC 
must meet the requirements of IS 1489 (Part I) as regards to fly ash content in cement The 
contractor shall obtain from the PPC manufacturer the certificate regarding fly ash content 
in the PPC in each batch of consignment.

c) The contractor has to comply as per MoEF issued notification 8.0.763(E) dated 14th 
Sept.1999 containing directive for greater fly ash utilization. Every construction agency
engaged in the construction of buildings within a radius of 50 km radius of a Thermal Power Plant, have to use of 100% fly ash based bricks/blocks in their construction.

d) The contractor shall ensure that all paints, polishes, adhesives and sealants used both internally and externally, on any surface, shall be Low VOC products. The contractor shall get prior approval from the Engineer in Charge before the application of any such material.

e) All plumbing and sanitary fixtures installed shall be as per the prescription of the Engineer in Charge and shall adhere to the minimum LPM (litres per minute) and LPF (litres per flush) mentioned. The contractor shall employ 100% zero ODP (ozone depletion potential) insulation; HCFC (hydro-chlorofluorocarbon)/ and CFC (chlorofluorocarbon) free HVAC and refrigeration equipments and / halon-free fire suppression and fire extinguishing systems.

f) The contractor shall ensure that all composite wood products/agro-fibre products used for cabinet work, etc do not contain any added urea formaldehyde resin.

17.2.28 RESOURCES CONSUMED DURING CONSTRUCTION
a. The contractor shall ensure that the water and electricity is not wasted during construction. The Engineer in Charge can bring to the attention any such wastage and the contractor will have to ensure that such bad practices are corrected.

b. The contractor shall install necessary meters and measuring devices to record the consumption of water, electricity and diesel on a monthly basis for the entire tenure of the project.

c. The contractor shall ensure that all run-off water from the site, during construction is collected and reused to the maximum.

d. The contractor shall use treated recycled water of appropriate quality standards for construction, if available.

e. No lights shall be turned on during the period between 6:00 AM to 6:00 PM, without the permission of the Engineer in Charge.

17.2.29 CONSTRUCTION WASTE
Contractor shall ensure that wastage of construction material is within 3%.

a) All construction debris generated during construction shall be carefully segregated and stored in a demarcated waste yard. Clear, identifiable areas shall be provided for each waste type and measures employed to segregate the waste on site into inert, chemical, or hazardous wastes.

b) All construction debris shall be used for road preparation, back filling, etc, used if described in the schedule of quantities and as per the instructions of the Engineer in Charge, with necessary activities of sorting, crushing, etc.

c) No construction debris shall be taken away from the site, without the prior approval of the Engineer in Charge.

d) The contractor shall recycle the unused chemical/hazardous wastes such as oil, paint, batteries, and asbestos.

e) If and when construction debris is taken out of the site, after prior permissions from the Engineer in Charge, then the contractor shall ensure the safe disposal of all wastes and will only dispose of any such construction waste in approved dumping sites.

17.2.30 Documentation
a) The contractor shall, during the entire tenure of the construction phase, submit the following records to the Engineer in Charge on a monthly basis:

i) Water consumption in litres

ii) Electricity consumption in ‘kwh’ units
iii) Diesel consumption in litres

iv) Quantum of waste (volumetric/weight basis) generated at site and the segregated waste types divided into inert, chemical and hazardous wastes.

v) Digital photo documentation to demonstrate compliance of safety guidelines as specified here and in the Appendix on Safety Conditions.

b) The contractor shall, during the entire tenure of the construction phase, submit the following records to the Engineer in Charge on a fortnightly basis:

i) Quantities of material brought into the site, including the material issued to the contractor by the Engineer in charge.

ii) Quantities of construction debris (if at all) taken out of the site

iii) Digital photographs of the works at site, the workers facilities, the waste and other material storage yards, pre-fabrication and block making works, etc as guided by the Engineer in Charge.

c) The contractor shall submit a document after construction of the buildings, a brief description along with photographic records to show that other areas have not been disturbed during construction. The document should also include brief explanation and photographic records to show erosion and sedimentation control measures adopted. (Document CAD drawing showing site plan details of existing vegetation, existing buildings, existing slopes and site drainage pattern, staging and spill prevention measures, erosion and sedimentation control measures and measures adopted for top soil preservation during construction

d) The contractor shall submit to the Engineer in Charge after construction of the buildings, a detailed as built quantification of the following:

i. Total materials used,
ii. Total top soil stacked and total reused
iii. Total earth excavated
iv. Total waste generated,
v. Total waste reused,
vi. Total water used,
vii. Total electricity, and
viii. Total diesel consumed.

e) The contractor shall submit to the Engineer in Charge, before the start of construction, a site plan along with a narrative to demarcate areas on site from which top soil has to be gathered, designate areas where it will be stored, measures adopted for top soil preservation and indicate areas where it will be reapplied after construction is complete.

f) The contractor shall submit to the Engineer in Charge, a detailed narrative (not more than 250 words) on provision for safe drinking water and sanitation facility for construction workers and site personnel.

g) Provide supporting document from the manufacturer of the cement specifying the fly-ash content in PPC used in reinforced concrete.

h) Provide supporting document from the manufacturer of the pre-cast building blocks specifying the fly ash content of the blocks used in an infill wall system.

i) The contractor shall, at the end of construction of the buildings, submit to the Engineer in Charge, submit following information, for all material brought to site for construction purposes, including manufacturer’s certifications, verifying information, and test data, where
Specifications sections require data relating to environmental issues including but not limited to:

i) Source of products: Supplier details and location of the supplier.

ii) Project Recyclability: Submit information to assist Owner and Contractor in recycling materials involved in shipping, handling, and delivery, and for temporary materials necessary for installation of products.

iii) Recycled Content: Submit information regarding product post industrial recycled and post consumer recycled content. Use the “Recycled Content Certification Form”, to be provided by the Commissioning Authority appointed for the Project.

iv) Product Recyclability: Submit information regarding product and product’s component’s recyclability including potential sources accepting recyclable materials where ever applicable.

j) Provide final certification of well-managed forest of origin to provide final documentation of certified sustainably harvested status: Acceptable wood “certified sustainably harvested” certifications shall include:
   a) Wood suppliers’ certificate issued by one of the Forest Stewardship Council-accredited certifying agencies;
   b) Suppliers’ invoice detailing the quantities of certified wood products for project;
   c) Letter from one of a certifying agency corroborating that the products on the wood supplier’s invoice originate from certified well-managed forests.

(i) Clean tech: Provide pollution clearance certificates from all manufacturers of materials

ii) Indoor Air quality and Environmental Issues: Submit emission test data, sourced from the manufacturers, produced by acceptable testing laboratory listed in Quality Assurance Article for materials as required in each specific Specification section.
   a) Certifications from manufacturers of Low VOC paints, adhesives, sealant and polishes used at this particular project site.
   b) Certification from manufacturers of composite wood products/agro fibre products on the absence of added urea formaldehyde resin in the products supplied to them to this particular site.
   c) Submit environmental and pollution clearance certificates for all diesel generators installed as part of this project.

Provide total support to Engineer in Charge and Green Building Consultants appointed by the Engineer- in-Charge in completing all Green Building Rating related formalities, including signing of forms, providing signed letters in the contractor’s letterhead whenever required.

17.2.31 EQUIPMENT

a) To ensure energy efficiency during and post construction all pumps, motors and engines used during construction or installed, shall be subject to approval and as per the specifications of the Engineer in Charge.

b) All lighting installed by the contractor around the site and at the labour quarters during construction shall be CFL bulbs of the appropriate illumination levels. This condition is a must, unless specifically prescribed.
The contractor is expected to go through all other conditions of the LEED & GRIHA rating stipulations.

Failure to adhere to any of the above mentioned items, without approval of the Engineer in Charge, shall be deemed as a violation of contract and the contractor shall be held liable for penalty as per terms of the agreement.

18.1 Formwork for exposed concrete surfaces:-

18.1.1 Where it is specifically shown on the drawings to have original fair face finish of concrete surface without any rendering of plastering, formwork shall be carried put by using plywood on steel plates of approved quality.

18.1.2 The forms shall be constructed so as to produce a uniform and consistent texture and pattern on the face of the concrete. The formwork shall be placed so that all horizontal are constructed of lumber and are not paneled and the formwork joints shall be staggered.

18.1.3 To achieve a finish which shall be free of board marks, the formwork shall be faced with plywood or equivalent material in large sheets. The sheets shall be arranged in an approved pattern. Whenever possible, joints between sheets shall be arranged to coincide with architectural feature, sills, window heads or change in direction of surface. All joints between panels shall be vertical or horizontal unless otherwise directed. Suitable joints shall be approved between sheets. The joints shall be arranged and fitted so that no blemish or mark is imparted to the finished surfaces.

18.1.4 Forms for exposed concrete surfaces shall be constructed with grade strips (the underside of which indicate top of pour) at horizontal constructions joints, unless the use of groove strips is specified on the drawings. The reset forms shall be tightened against the concrete so that the forms will not be spread and permit abrupt irregularities or loss of mortar. Supplementary form ties shall be used as necessary to hold the reset forms tight against the concrete.

18.1.5 For fair faced concrete, the position of through bolts will be restricted and generally as indicated on the drawings.

18.1.6 Plywood and steel plates used in the formwork for obtaining exposed surfaces shall be got approved from Engineer-in-Charge on each use. However no forms will be allowed for reuse if it is doubtful to produce desired texture of exposed concrete.

18.1.7 Cement of only approved shade shall be used preferably of single lot to achieve integrity of texture.

18.2 Class of Surface Finish:-

18.2.1 For Beams & Slabs:
The finish shall be uniform, dense and smooth. no grout, no grain pattern, no crazing and no major blemishes shall be permitted. Abrupt irregularities not exceeding 3mm and gradual irregularities less than 5mm in 2m length only shall be permitted.

18.2.2 For Columns/Wall/Fins:
The finish shall be uniform and smooth leveling the surface of the compacted concrete shall be done with a screed board with power floating the surface and over that steel trowelling the surface under firm pressure characteristics of finish shall be brush marks < 3mm gradual irregularities less than 10mm in 2m.

18.3 Tolerance in Finished Concrete:-
The formwork shall be so made as to produce a finished concrete true to shape, lines, level, plumb and dimensions as shown in the drawings subject to the following tolerance unless otherwise specified in this specification or drawings.

18.4 WALL/COLUMN/FINS:

17.4.1 Variation from the plumb ± 6mm Upto 3m height

18.4.2 Variation from the plumb of ± 6mm Upto 6m height
18.4.3 Variation in the size of wall openings
   (+) 15mm
   (-) 6mm

18.4.4 Variation in parapet wall thickness (a) Upto 30cm thickness ± 6mm

18.5 SLAB, BEAM & GIRDER FORMS:
18.5.1 Variation from the level or from the specified grid for beam soffit before removal of shores,
   (a) In any 3m ± 6mm
   (b) In any 6m ± 10mm

All the tolerances mentioned above shall apply to concrete dimensions only, and not to positioning of vertical steel or dowels. The tolerances given above are specified for local aberration in the finished concrete surface and should not be taken as tolerance for the entire structure taken as whole for the setting and alignment of formwork. Any error, within the above tolerance limits, or any other if noticed in any of the structure after part or portion stripping of forms, shall be corrected in the subsequent work to bring back the structure to its true line, level and alignment.

19.0 Ultrasonic pulse velocity method test for RCC as per technical circular No. 18 issued vide CE(CSQ) letter No. G-2/SE(QA)/CSQ/69 dated 12.02.2013 shall be carried out as a routine test to assess the homogeneity and uniformity of concrete. The fulfilling criteria and other conditions shall be as detailed, as per the method stated in the aforesaid circular.
**FORMAT OF RECEIPT OF DEPOSITION OF ORIGINAL EMD ALONGWITH NIT :-**

| Receipt of deposition of original EMD  
<table>
<thead>
<tr>
<th>(Receipt No. ............./ date.........)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of work : Construction of Storm water line at road no-15 to rain water harvesting pond near sports complex at Indian Institute of Technology Indore. (M.P.)</td>
</tr>
<tr>
<td>1. NIT No. IITI/ES/PR/Storm water line/MOW/2019-20/12</td>
</tr>
<tr>
<td>2. Estimated Cost Rs. 45,00,000 /-</td>
</tr>
<tr>
<td>3. Amount of Earnest money Deposit ₹90,000/-</td>
</tr>
<tr>
<td>4. Last date of submission of bid June 06, 2019 upto 3.00PM</td>
</tr>
</tbody>
</table>

1. Name of contractor.....
2. Form of EMD...........
3. Amount of Earnest Money Deposit ..........
4. Date of submission of EMD...........

Signature, Name and Designation of EMD receiving officer (along with stamp)
GUARANTEE TO BE EXECUTED BY CONTRACTORS FOR REMOVAL OF DEFECT AFTER COMPLETION IN RESPECT OF WATER PROOFING WORKS

The Agreement made this ............day of .............two thousand and ......... between ............son of ..............of ...........(hereinafter called the Guarantor of the one part) and the Director IIT Indore (hereinafter called 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 said contract recited completely water and leak – proof.

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

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

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

(a) Misuse of roof shall mean any operation which will damage water 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 shall be final.

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

That if Guarantor fails to execute the water proofing or commits breach thereunder 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 WITNESS WHEREOF these presents have been executed by the Obligor ............. and by ............. and for and on behalf of the Director IIT Indore on the day, month and year 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. .................
SCHEDULES

SCHEDULE ‘A’
Schedule of quantities (As per PWD-3) (Enclosed)

SCHEDULE ‘B’
Schedule of materials to be issued to the contractor.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Description</th>
<th>Quantity</th>
<th>Place of Issue</th>
<th>Rates in figures &amp; words at which the material will be charged to the contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
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<tr>
<td>3</td>
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<tr>
<td>4</td>
<td></td>
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<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SCHEDULE ‘C’
Tools and plants to be hired to the contractor

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description</th>
<th>Hire charges per day</th>
<th>Place of Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NIL
Extra schedule for specific requirements/documents for the work, if any. -----Nil-----

General Conditions of Contract Works, 2014 as amended upto CON/2 95

Name of work: “Construction of signage at various locations Indian Institute of Technology Indore.

Estimated cost of work: Cost: ₹ 45,00,000/-

(i) Earnest money: ₹ 90,000/- (To be returned after receiving

(ii) Performance guarantee: 5% of tendered value

(iii) Security Deposit: 2.5% of tendered Value

General Rules & Directions:

Officer inviting tender - PIC, IIT Indore

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

Engineer-in-Charge For Civil Component: PIC, IIT Indore

Director, IIT Indore

15% (Fifteen per cent)

Delhi Schedule of rate 2016 (Civil) issued upto date of receipt of tender.

CPWD Form 8 (Print edition - 2014) as modified & corrected upto DG/CON/ 295

 Delhi Schedule of rate 2016 (Civil) issued upto date of receipt of tender.
Time allowed for submission of performance guarantee, programme chart (Time & 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

Maximum allowable extension with late fee @ 0.10% per day of performance guarantee amount beyond the period as provided in (i) above : 1 to 15 days

Clause 2
[Clause 2 के तहत प्रतिक्रिया निषेध करने वाला प्राधिकरण]

Authority for fixing compensation under clause 2

PIC, IIT Indore

Clause 2A
व्या खण्ड 2 के लाभ, होगा

Whether clause 2A shall be applicable

Yes

Clause 5
कार्य आयाम की तारीख की गणना के लिए स्वीकृति पत्र के तारीख होने की तारीख से दिनों की संख्या

No. of days from the date of issue of letter of acceptance for reckoning date of start

25 days.

Milestone(s) : - as per Table given below

<table>
<thead>
<tr>
<th>S No</th>
<th>Description of Milestone (Physical)</th>
<th>Time allowed (From date of start)</th>
<th>Amount to be withheld in case of non-achievement of milestone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Completion of Excavation work</td>
<td>1 (one) months</td>
<td>@ 1.5% (one point five percent) of the tender amount will be withheld for each milestone subjected to maximum 5% of tender amount.</td>
</tr>
<tr>
<td>2.</td>
<td>Completion of laying of Pipe line works</td>
<td>2 (Two months)</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Complete all the works including pipe line work</td>
<td>3 (Three ) months</td>
<td></td>
</tr>
</tbody>
</table>

कार्य निष्पादित करने के लिए अनुमति समय

Time allowed for execution of work

Authority to decide

(i) Extension of Time

PIC, IIT Indore

(ii) Rescheduling of mile stones

Dean of planning , IIT Indore

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

Dean of planning , IIT Indore

Clause 6, 6A

खण्ड लागू-(6 या 6 क) Clause applicable

6 A

Clause 7

अन्तर्गत मुद्रा के लिए पत्र होने के लिए अंतिम ऐसे मुद्रा के बाद कुल मुद्रा एकजित समयीयों के अंतिम के समायोजन सहित किया जाने वाला कुल कार्य
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

₹25 Lakhs

Weather clause 7 A shall be applicable

Yes

Contractor at site lab.

See P 49 & 50 Para 13.0 (Part – B)

Whether clause 10B (ii) shall be applicable

Yes / No

Component of labour expressed as

N.A.

Percent of value of work

Yes

<table>
<thead>
<tr>
<th>Material covered under this clause</th>
<th>Nearest materials (Other than cement*, reinforcement bars and structural steel) for which All India Whole Sale Price Index is to be followed.</th>
<th>Base Price of all materials covered under clause 10 CA *</th>
<th>Period of base Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Cement</td>
<td>NA</td>
<td>1. Rs. 5810/- per MT</td>
<td>April 2019</td>
</tr>
<tr>
<td>2 Steel reinforcement</td>
<td>NA</td>
<td>2. Rs. 45000/- per MT</td>
<td></td>
</tr>
<tr>
<td>3 Structural steel, such as tees,</td>
<td>NA</td>
<td>3. Rs. 48000/- per MT</td>
<td></td>
</tr>
<tr>
<td>angles, channels and R.S. joists</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Includes cement component used in RMC brought at site from outside approved RMC plants, if any.

Clause 10CC

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

Component of Civil (except materials covered under clause 10 CA)

value of work : 

(Xm) - 75%

Component of Labour-

expressed as percent of total value of work

(Y) - 25%
Clause 11

For Civil : CPWD specification 2009, Volume-I & II

Specifications to be followed for execution of work with correction slips up to date of receipt of tender.

Clause 12

Type of Work

Original Work

12.2 & 12.3

Deviation limit beyond which clauses 12.2 & 12.3 shall apply for building work (Other than foundation) 50%

12.5

(i) Deviation limit beyond which clauses 12.2 & 12.3 shall apply for foundation work 50%

(ii) Deviation limit for items in earth work subhead of DSR or related items 100%

Clause 16

For Civil Work:

Competent Authority for deciding PIC, IIT Indore reduced rates.

Clause 18

List of mandatory machines, tools and plants to be deployed by the contractor at site.

See Page 48-49 Para 11.0 (Part – B)

Clause 25

For Total Claim above Rs. 25 Lakhs

<table>
<thead>
<tr>
<th>Designation</th>
<th>Constitution of Dispute Redressal Committee (DRC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairman</td>
<td>Director IIT Indore will nominate the names</td>
</tr>
<tr>
<td>Member</td>
<td></td>
</tr>
<tr>
<td>Member</td>
<td></td>
</tr>
<tr>
<td>Presenting Officer</td>
<td>Superintending Engineer, Indore Central Circle, CPWD, Indore.</td>
</tr>
</tbody>
</table>

For Total Claim up to Rs. 25 Lakhs

<table>
<thead>
<tr>
<th>Designation</th>
<th>Constitution of Dispute Redressal Committee (DRC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairman</td>
<td>Director IIT Indore will nominate the names</td>
</tr>
<tr>
<td>Member</td>
<td></td>
</tr>
<tr>
<td>Member</td>
<td></td>
</tr>
<tr>
<td>Presenting Officer</td>
<td>Executive Engineer, IIT Indore</td>
</tr>
</tbody>
</table>
Clause 31

Whether clause 31 shall be applicable
Yes

Clause 36(i)

"Requirement of Technical Representative(s) and Recovery Rate

<table>
<thead>
<tr>
<th>SN</th>
<th>Minimum Qualification of Technical Representative</th>
<th>Disciplines</th>
<th>Designation (Principal Technical / Technical representative)</th>
<th>Minimum Experience</th>
<th>Numbe r</th>
<th>Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of Clause 36(i)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Graduate Engineer Or Diploma Engineer</td>
<td>CIVIL</td>
<td>Project / Site Engineer</td>
<td>5-Years OR 10 Years</td>
<td>ONE</td>
<td>Rupees Twenty Five Thousand Per Month each</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Rupees Twenty Five Thousand Per Month each</td>
</tr>
</tbody>
</table>

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.

Clause 42

I) Schedule/statement for determining Theoretical quantity of cement & bitumen

On the basis of Delhi Schedule of Rates 2014 printed by C.P.W.D. with correction slips issued up to date of receipt of tender.

Variations permissible on theoretical quantities.

Cement for works with estimated cost put to tender not more than Rs. 5 lakhs

Not Applicable
for works with estimated cost put to tender more than Rs. 5 lakhs

a) बिटुमन सभी कार्यों के लिए 2 विधिपत्र विकल्प जमा और घटाते हें शुद्ध फी.
b) Bitumen for all works 2.5% plus only & Nil on minus side.

g) इत्यादि प्रत्येक व्याख्यान, कोटे और श्रेणी के लिए पूर्ववर्तित और संख्यात्मक इत्यादि कार्य 2 विधिपत्र जमा और घटाते हें शुद्ध फी.

V) Steel Reinforcement and structural steel sections for each diameter, section and category 2% plus/minus

d) All other materials शुल्क नहीं

आम्नेस्तिक विनियम से अविधि की मात्राओं के लिए वसूली दें

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

<table>
<thead>
<tr>
<th>क्रम</th>
<th>मद विकरण</th>
<th>अंकों और शब्दों में वह दर जिस पर भेंट के आदेश से वसूली की जाएगी</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sl.</td>
<td>Description of item</td>
<td>Rates in figures and words at which Recovery shall be made from the Contractor</td>
</tr>
<tr>
<td>No.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>क्रम</th>
<th>मद विकरण</th>
<th>अंकों और शब्दों में वह दर जिस पर भेंट के आदेश से वसूली की जाएगी</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>सीमेंट Cement</td>
<td>N.A. Rs. 6391/- per MT</td>
</tr>
<tr>
<td>2.</td>
<td>ईंस्पात Steel Reinforcement</td>
<td>N.A. Rs. 47280/- per MT</td>
</tr>
</tbody>
</table>
ANNEXURE – ‘A’

FORM OF EARNEST MONEY DEPOSIT (BANK GUARANTEE BOND)

WHEREAS, contractor ........................................... (Name of contractor) (hereinafter called "the contractor") has submitted his tender dated ....................... (date) for the construction of .................................................. (name of work) (hereinafter called "the Tender")

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

SEALED with the Common Seal of the said Bank this .......................................................... day of .......................................................... 20.......................................................... .

THE CONDITIONS of this obligation are:

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

(2) If the contractor having been notified of the acceptance of his tender by the Engineer-in-Charge:
   (a) fails or refuses to execute the Form of Agreement in accordance with the Instructions to contractor, if required; OR
   (b) fails or refuses to furnish the Performance Guarantee, in accordance with the provisions of tender document and Instructions to contractor.

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

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

DATE .......................................................... SIGNATURE OF THE BANK

WITNESS .......................................................... SEAL

(SIGNATURE, NAME AND ADDRESS)

*Date to be worked out on the basis of validity period of 6 months or more from last date of receipt of tender.
LIST OF APPROVED MATERIALS (CIVIL)

Note:
1. Unless otherwise specified, the brand/make of the material as specified in the item nomenclature or in the particular specifications or in the list of approved materials attached in the tender, shall be used in the work.
2. The Contractor shall obtain prior approval from the Engineer-in-charge before placing order for any specific material/Brand/Make.
3. Whenever the specified brand of material is not available than, the Engineer-in-charge may approve any material equivalent to that specified subject to proof being offered by the Contractor for its equivalence and its non-availability to his satisfaction.

MATERIALS:

<table>
<thead>
<tr>
<th>MATERIALS</th>
<th>BRAND/MAKE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Acrylic Emulsion Paint and primer</td>
<td>Asian, akzonobel, Berger,</td>
</tr>
<tr>
<td>2 Admixtures &amp; Epoxy</td>
<td>FOSROC, Aquomix, BAL-ENDURA</td>
</tr>
<tr>
<td>3 Aluminium Composite Panel</td>
<td>Alpolic, Aluco Bond, Reynobond, Euro bond, Alstrong</td>
</tr>
<tr>
<td>4 Aluminium Extrusions</td>
<td>Hindalco, Indalco, Jindal, silvercoin</td>
</tr>
<tr>
<td>5 Aluminium Sections</td>
<td>Jindal, Hindalco, Indalco</td>
</tr>
<tr>
<td>6 Annealed Float Glass</td>
<td>Saint Gobain, Modi Guard</td>
</tr>
<tr>
<td>7 Centrifugally Cast Iron Pipe &amp; Fittings</td>
<td>NECO, SKF, BIC, RIF KEPCO, KAPILANS</td>
</tr>
<tr>
<td>8 Ceramic Tiles</td>
<td>Kajaria, Somany, Nitco, Orient Bell, Johnson</td>
</tr>
<tr>
<td>9 Chequered tiles</td>
<td>Nitco, Somany, Nitco, Orient Bell, Johnson</td>
</tr>
<tr>
<td>10 CP Bottle Trap</td>
<td>Parryware, Hindware, Jaquar, Somany gebriet</td>
</tr>
<tr>
<td>11 CP Brass Bibcock, Pillarcock, Stopcock, Angle Valve, Concealed Stop Cock, hand faucet</td>
<td>Marc, Jaquar, Grohe, Kohler, Somany gebriet</td>
</tr>
<tr>
<td>12 CP fittings</td>
<td>Jaquar, Grohe, Kohler, Marc</td>
</tr>
<tr>
<td>13 CP Waste Coupling</td>
<td>Jaquar, Marc, Grohe, Kohler</td>
</tr>
<tr>
<td>14 Curtain Carrier</td>
<td>Vista levlor or equivalent.</td>
</tr>
<tr>
<td>15 Dash fastener, Expansion Bolt</td>
<td>Hilti, Fischer</td>
</tr>
<tr>
<td>16 Door closer, Floor springs, Hydraulic Door Closer, Hydraulic Floor spring</td>
<td>Dorma, Hafle, Hardwyn, Falcon, neki, kich.</td>
</tr>
<tr>
<td>17 Drapery Rod</td>
<td>Vista Levlor or equivalent.</td>
</tr>
<tr>
<td>18 EPDM Gasket</td>
<td>Anand Lescuyer, Hanu or equivalent.</td>
</tr>
<tr>
<td>19 Epoxy Primer &amp; Paints</td>
<td>Berger, Pidilite, CICO, BASF, SIKA, UltraTech</td>
</tr>
<tr>
<td>20 Float Glass</td>
<td>Modi Float, Saint Gobain, Asahi</td>
</tr>
<tr>
<td>21 Flush Doors (ISI Mark only)</td>
<td>Anchor, Century, green ply.</td>
</tr>
<tr>
<td>22 Flush Valve</td>
<td>Marc, Jaquar, Grohe, Kohler, Somany gebriet.</td>
</tr>
<tr>
<td>23 Galvanized/Stainless Steel Anchor Fasteners</td>
<td>Hilti, Fischer</td>
</tr>
<tr>
<td>24 GI fitting</td>
<td>Tata, Jindal, Zenith, Prakash Surya</td>
</tr>
<tr>
<td>25 GI Pipe</td>
<td>Tata, Zenith, Jindal, Prakash Surya</td>
</tr>
<tr>
<td>26 Gun Metal Gate Valve</td>
<td>Zoloto, Leader, SAINT</td>
</tr>
<tr>
<td>27 Gypsum Board / False Ceiling</td>
<td>Boral Gypsum / Lafarge/ St. Gobain</td>
</tr>
<tr>
<td>28 Hardner</td>
<td>Hard crete of Snowcem India, MC Deritop F.H.</td>
</tr>
<tr>
<td>29 Jet Assembly for EWC</td>
<td>Parryware, Jaquar, Grohe, Kohler or equivalent</td>
</tr>
<tr>
<td>30 Laminate and Veneers</td>
<td>Marino, Greenlam, Formica, , Durian, Ventura</td>
</tr>
<tr>
<td>31 Melamine Polish</td>
<td>Asian, Pidilite, Burger, akzonobel</td>
</tr>
<tr>
<td>32 Metal False Ceiling</td>
<td>Armstrong / Durlum / Lafarge/ Hunter Douglas</td>
</tr>
<tr>
<td>MATERIALS:</td>
<td>BRAND/MAKE</td>
</tr>
<tr>
<td>-----------</td>
<td>------------</td>
</tr>
<tr>
<td>33 Mineral Fibre Ceiling</td>
<td>Armstrong / Nitobo / Daikin</td>
</tr>
<tr>
<td>34 Modular SS Railing System</td>
<td>Neki, Kich, Godrej.</td>
</tr>
<tr>
<td>35 M.S. Pipe (Railing)</td>
<td>Jindal / Tata, RINL</td>
</tr>
<tr>
<td>36 Marine Plywood / BWP Ply</td>
<td>Kitply / Duro / Century / Greenlam</td>
</tr>
<tr>
<td>37 Ply Wood,</td>
<td>Kitply, Green ply, Century</td>
</tr>
<tr>
<td>38 Pre-laminated Particle Board</td>
<td>Ecoboard, Kitlam, Action-Tesa or equivalent ISI marked.</td>
</tr>
<tr>
<td>39 Prelaminated MDF Board</td>
<td>Greenply, Archid or equivalent</td>
</tr>
<tr>
<td>40 PVC Rain Water Pipe &amp; Fitting, waste pipe</td>
<td>Finolax, Supreme</td>
</tr>
<tr>
<td>41 PVC Shutter including frame</td>
<td>Rajshri, Sintex</td>
</tr>
<tr>
<td>42 Stainless steel Sink with or without Draining board.</td>
<td>Nirali, Hindware, Frankee, Neelkanth, Jaquar</td>
</tr>
<tr>
<td>43 Stainless steel Door/Window fittings &amp; Fixtures (SS 304 grade)</td>
<td>Dorma, Hettich, niki, kich, Divine</td>
</tr>
<tr>
<td>44 Structural steel section</td>
<td>TATA, SAIL, RINL</td>
</tr>
<tr>
<td>45 Multicoat Synthetic Plaster/ Textured Exterior wall paint</td>
<td>Spectrum, Heritage, Ultratech, bakelite hylam</td>
</tr>
<tr>
<td>46 Towel Ring/Towel Rod/Towel Rack</td>
<td>Marc, Jaquar, Grohe, Kohler or equivalent.</td>
</tr>
<tr>
<td>47 Vitreous China Sanitaryware, Fittings &amp; Fixtures</td>
<td>Hindware, Parryware, Jaquar, Somany or equivalent.</td>
</tr>
<tr>
<td>48 Vitrified Tile (full body/double charge)</td>
<td>Kajaria, restile RAK</td>
</tr>
<tr>
<td>49 Waste Pipe</td>
<td>Kamal, Viking or equivalent</td>
</tr>
<tr>
<td>50 Water Proofing Compound (Liquid)</td>
<td>Pidilite, Cico, Impermo, ARDEX – ENDURA, fosroc</td>
</tr>
<tr>
<td>51 White Cement</td>
<td>JK, Birla or equivalent.</td>
</tr>
<tr>
<td>52 CPVC Pipes</td>
<td>Astral Flowguard, Prince, Supreme</td>
</tr>
<tr>
<td>Existing provision</td>
<td>Modified provision</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td><strong>Clause 25(ii) 5&lt;sup&gt;th&lt;/sup&gt; Paragraph</strong>&lt;br&gt;The arbitration shall be conducted in accordance with the provisions of the Arbitration and conciliation Act-1996 [26 of 1996] or any statutory modification or reenactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceeding under this clause.</td>
<td><strong>Clause 25(ii) 5&lt;sup&gt;th&lt;/sup&gt; Paragraph</strong>&lt;br&gt;The arbitration shall be conducted in accordance with the provisions of the Arbitration and conciliation Act-1996 [26 of 1996] / The Jammu &amp; Kashmir Arbitration and conciliation Act, 1997 (35 of 1997) (as the case may be) or any statutory modification or reenactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceeding under this clause.</td>
</tr>
</tbody>
</table>

**C.P.W.D. Contractor’s Labour Regulations 5. Payment of Wages**

vi) Wages due to every worker shall be paid to him direct or to other person authorized by him in this behalf.

vii) All wages shall be paid in current coin or currency or in both.

x) It shall be the duty of the contractor to ensure the disbursement of wages in the presence of the Junior Engineer or any other authorized representative of the Engineer-in-Charge who will be required to be present at the place and time of disbursement of Wages by the contractor to workmen.

xi) The contractor shall obtain from the Junior Engineer or any other authorized representative of the Engineer-in-Charge as the case may be, a certificate under his signature at the end of the entries in the "Register of Wages" or the "Wage – cum – Muster Roll" as the case may be in the following form:

"Certified that the amount shown in column No. .......... has been paid to the workman concerned in my presence on ...... at ......"

<table>
<thead>
<tr>
<th>C.P.W.D. Contractor’s Labour Regulations 5. Payment of Wages</th>
<th>C.P.W.D. Contractor’s Labour Regulations 5. Payment of Wages</th>
</tr>
</thead>
<tbody>
<tr>
<td>vi) Wages due to every worker shall be paid to him direct by contractor through Bank or ECS or online transfer to his bank account.</td>
<td>vi) Wages due to every worker shall be paid to him direct through Bank or ECS or online transfer.</td>
</tr>
<tr>
<td>vii) All wages shall be paid through Bank or ECS or online transfer.</td>
<td>vii) All wages shall be paid through Bank or ECS or online transfer.</td>
</tr>
<tr>
<td>x) It shall be the duty of the contractor to ensure the disbursement of wages through Bank account of labour.</td>
<td>x) It shall be the duty of the contractor to ensure the disbursement of wages through Bank account of labour.</td>
</tr>
</tbody>
</table>
| xi) The contractor shall obtain from the Junior Engineer or any other authorized representative of the Engineer-in-Charge as the case may be, a certificate under his signature at the end of the entries in the "Register of Wages" or the "Wage – cum – Muster Roll" as the case may be in the following form:-

"Certified that the amount shown in column No. .......... has been paid to the workman concerned through bank account of labour on ...... at ......" |

**Clause 5.1**

As soon as possible after the Contract is concluded, the Contractor shall submit a Time and Progress Chart for each mile stone and get it approved by the Department. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary agreement between the Engineer – in – charge and the Contractor within the limitations of time imposed in the Contract documents, and further to ensure good progress during the execution of the
work, the contractor shall in all cases in which the time allowed for any work, exceeds one month (save for special jobs for which a separate programme has been agreed upon) complete the work as per milestones given in Schedule ‘F’.

<table>
<thead>
<tr>
<th>Clause 7 A</th>
<th>No provision</th>
</tr>
</thead>
</table>

| Clause 19 | The contractor shall obtain a valid license under the Contract Labour (R&A) Act, 1970 and the Contract Labour (Regulation and Abolition) Central Rules, 1971 before the commencement of the work, and continue to have a valid license until the completion of the work. |

| Clause 19 L | The ESI and EPF contribution on the part of employer in respect of this contract shall be paid by the contractor. These contributions on the part of the employer paid by the contractor shall be reimbursement by the Engineer-in-Charge to the contractor on actual basis. |

| General Rules & Directions | General Rules & Directions of GCC 2014: 10. In the case of Item Rate Tenders, only rates ......correct and not the amount. In event no rate has been quoted for any item(s), leaving space both in figure(s), word(s), and amount blank, it will be presumed that the |

| Clause 19 | The contractor shall obtain a valid license under the Contract Labour (R&A) Act, 1970 and the Contract Labour (Regulation and Abolition) Central Rules, 1971 before the commencement of the work, and continue to have a valid license until the completion of the work. |

| Clause 19 | The contractor shall also comply with provisions of the Inter –State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 197. |

| General Rules & Directions | General Rules & Directions of GCC 2014: 10. In the case of Item Rate Tenders, only rates ......correct and not the amount. In event no rate has been quoted for any item(s), leaving space both in figure(s), word(s), and amount blank, it will be presumed that the |
| Contractor has included the cost of this / these item(s) in other items and rate for such item(s) will be considered as zero and work will be required to be executed accordingly. Contractor has included the cost of this / these item(s) in other items and rate for such item(s) will be considered as zero and work will be required to be executed accordingly. However, if a tenderer quotes nil rates against each item in item rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer. |
|---|---|
| **General Rules & directions (Page 5)** 2. In the event of tender being submitted by a firm, it must be signed separately by each partner thereof or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power of attorney authorizing him to do so, such power of attorney to be produces with the tender, and it must disclose that the firm is duly registered under the Indian partnership Act 1952. **General Rules & directions (Page 5)** 2. In the event of tender being submitted by a firm, it must be signed separately by each partner thereof or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power of attorney authorizing him to do so, such power of attorney to be produced with the tender, and it must disclose that the firm is duly registered under the Indian partnership Act 1932. |
| **Clause 2A Incentive for early completion** In case, the contractor completes the work ahead of updated stipulated date of completion considering the effect of extra work (to be calculated on pro-rata basis as cost of extra work X stipulated period / tendered cost), a bonus @ 1% (one per cent) of the tendered value per month computed on per day basis, shall be payable to the contractor, **Clause 2A Incentive for early completion** In case, the contractor completes the work ahead of updated stipulated date of completion considering the effect of extra work (to be calculated on pro-rata basis as cost of extra work X stipulated period / tendered cost) but excluding any hindrance whatsoever on the part of either party, a bonus shall be payable to the contractor by the following formula:  
\[
B = \frac{Tv \times \left(\frac{Ts + (Fv - Tv) \times Ta}{Ts} - Ta\right)}{5 \times Ts} 
\]  
where  
\[
B = \text{Bonus payable to the contractor in Rs. subject to a maximum of 5 percent of the tendered value.}  
Tv = \text{ Tendered value of the work in Rs.}  
Ts = \text{ Time allowed for execution of work as mentioned in schedule F in number of days.}  
Ta = \text{ Actual time taken to complete the entire work including deviations / variations in the work and inclusive of all hindrances (for any reason whatsoever) in number of days.}  
Fv = \text{ Value of gross work done as per final bill in Rs.}  
\]  
Subject to a maximum limit of 5% (five per cent) of the tendered value. The amount of bonus, if payable, shall be paid along with final bill after completion of work. Provided always that provision of the Clause 2A shall be applicable only when so provided in 'Schedule F'. Subject to a maximum limit of 5% (five per cent) of the tendered value. The amount of bonus, if payable, shall be paid along with final bill after completion of work. Provided always that provision of the Clause 2A shall be applicable only when so provided in 'Schedule F'. |