Tender document for VARIOUS CIVIL MAINTENANCE works to be carried out for NID Campus at Ahmedabad. (Including labor, materials, tools, plants, scaffolding etc. complete)

Client:
National Institute of Design
Paldi, Ahmedabad 380 007 India
Tele: 079 26629500, 079 26629600
National Institute of Design (NID) invites online tenders (through e-tendering) from established & reputed firms / bidders with proven experience for various civil maintenance works at NID’s Ahmedabad. Tender Notices & Tender documents are available on website https://nid.nprocure.com for downloading. Any modification / corrigendum etc. in the Tender Notice will be available on this website. Tender document can also be downloaded from www.nid.edu/tenders

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>NIT No.</th>
<th>Name of work &amp; Location</th>
<th>Estimated cost put to bid in Rs.</th>
<th>EMD in Rs.</th>
<th>Period of completion</th>
<th>Last date &amp; time of bid, EMD, e-tender processing fee &amp; online submission</th>
<th>Time &amp; date Of opening of technical bid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>Various Civil Maintenance works at NID Ahmedabad</td>
<td>33.00 Lakh</td>
<td>66,000/-</td>
<td>6 months</td>
<td>17-06-2016 up to 15.00 hrs.e-Tender fees Rs. 2500/-On line submission -17-06-2016 up to 15.00 hrs</td>
<td>20-06-2016 At 17.00 hrs</td>
</tr>
</tbody>
</table>

NID reserves the right to accept or reject any or all the offers without assigning any reason.
ESTIMATED VALUE OF VARIOUS CIVIL MAINTENANCE WORKS TO BE CARRIED OUT FOR NID’S AHMEDABAD CAMPUS IS AS UNDER:

[1] Civil Works for Railway Design Centre : RS. 06.00 LAKH

[2] Civil works for repairs, renovation and upgradation of guest house E-4 and faculty quarter D – 6 : RS. 10.26 LAKH

[3] Civil works for repairs, renovation and upgradation of toilets of Girl’s Hostel Block C : Rs. 16.50 LAKH

Total : RS. 32.76 LAKH
Say : RS. 33.00 LAKH
CONTENTS

1. Tender Notice

2. General Conditions

3. Appendix
   - Appendix - 1
   - Appendix - 2
   - Appendix - 3
   - Appendix - 4

4. Specifications

5. Special Conditions of Contract

6. Bills of quantities (All inclusive)
NATIONAL INSTITUTE OF DESIGN, PALDI, AHMEDABAD

To,

______________________
______________________
______________________
______________________

TENDER FOR CARPENTRY WORKS TO BE CARRIED OUT FOR NID CAMPUS, AHMEDABAD.

GENERAL CONDITIONS

Dear Sirs,

1) NID takes great pleasure in inviting you to quote for the above mentioned work. The building is located at the premises of NID, Ahmedabad.

2) The draft for the agreement, conditions of Contract, and specifications are attached herewith for study and reference. The type of work, finishes and various conditions to be observed while quoting the work are also attached h/w. The site should be seen by the Contractor thoroughly before quoting. It is also desirable for the contractor to visit the site for availability of space for stacking the material etc.

3) The bidders shall have to deposit an amount of Rs. 66,000/- as an Earnest Money Deposit (EMD) along with the submission of tender documents through a pay order of any Nationalized / Scheduled bank in favor of "National Institute of Design" payable at Ahmedabad. On award of the work, he will have to deposit 5% of the total accepted contract value (including earnest money deposit) as security deposit in the name of NID by Demand Draft only.

4) NID reserves the right to reject any or all the tenders without assigning any reason to do so.

5) The bidder shall have experience of carrying out similar works and shall produce attested documents for the same.

6) The bidder shall get done the specialized work given in BOQ through specialized agencies approved by NID.

7) The successful bidder shall be notified of the acceptance of his tender within 30 days of the opening of the tenders. He shall execute the contract within 15 days following such notification. The tender will be valid for a period of 90 days from the date of opening of tenders.

8) The date of commencement of the work shall be within two weeks from the date of letter of intent / work order.

Yours faithfully,

Secretary & Head, General Administration.
## CONDITION OF CONTRACT

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date of commencement</strong></td>
<td>within 15 (fifteen) days of issue of Work order to commence the work.</td>
</tr>
<tr>
<td><strong>Period of completion</strong></td>
<td>6 months</td>
</tr>
<tr>
<td><strong>Defects liability period</strong></td>
<td>12 (twelve) months from completion of the Work and handing over to NID.</td>
</tr>
<tr>
<td><strong>Liquidated Damage for delay completion</strong></td>
<td>point five percent (0.5%) per week of the contract value or part subject to maximum five percent of the contract value</td>
</tr>
<tr>
<td><strong>Minimum amount of Running bill</strong></td>
<td>Rs. 5 lakh</td>
</tr>
<tr>
<td><strong>Percentage retention</strong></td>
<td>ten percent (10%) will be deducted from the gross value of the work done against each RA Bill</td>
</tr>
<tr>
<td><strong>Period of final settlement</strong></td>
<td>2 (two) months from the date of final bill and valuation date of bill submission.</td>
</tr>
<tr>
<td><strong>Security Deposit (SD)</strong></td>
<td>five percent of the total contract value including EMD</td>
</tr>
<tr>
<td><strong>Labor Cess:</strong></td>
<td>If applicable, would be paid at the applicable rate by the approved bidder and Voucher / challan must be submitted to NID. No separate charges would be paid for labor cess; it should be included in the rate.</td>
</tr>
<tr>
<td><strong>Release of Retention and Security Deposit</strong></td>
<td>On completion of defects liability period of 12 months from the date of completion of building / handing over the building to NID whichever is late duly certified by NID - without interest.</td>
</tr>
</tbody>
</table>

There must be two separate offers (Technical and Commercial). Both the offers must be submitted at the same time, giving full particulars on website [www.nprocure.com](http://www.nprocure.com) on or before 17.00 hours on 17.06.2016. Please note that identical hardcopy of only technical offer in sealed envelopes must submitted on or before 17.00 hours on 17.06.2016 at NID's address. Offers received after the date and time specified in this tender will not be accepted. Commercial offer must be submitted online on [www.nprocure.com](http://www.nprocure.com) only. Commercial offer submit in any other form will not considered and rejected.

Note: Technical Offer (including all Annexure), EMD, Tender fees, and etc. should be submitted on or before 17th June 2016 at 5:00 pm.
3.2 Taking up of deposit works

(1) The work shall be executed in accordance with the procedures laid down for the Central works. However, the norms regarding plinth areas and specifications of the client department may be adopted even if such norms are at variance with CPWD norms. In such cases the client should be intimated beforehand about the government norms and financial repercussions.

(2) The Central PWD should normally decline to undertake as deposit work the maintenance of buildings that were not originally constructed by CPWD, and maintenance of mechanical/electrical equipment’s that were not originally procured and installed by CPWD. Maintenance works of such buildings and installations may, however, be undertaken with prior approval of DG, CPWD if it is in the interest of Government to do so, e.g. when the Body or Institution is financed largely from Government grants and defects in construction or maintenance might lead to demand for further financial assistance from the Government, or where the buildings concerned are Government buildings, which, if and when vacated by the Body or Institution occupying the same, could be used for Government purposes or leased at a profit.

However, the buildings constructed by CCU, MoEF shall be maintained by CPWD.

3.3 Powers to undertake deposit works

(1) The officers of the Central P.W.D. have been delegated powers to undertake deposit works as shown in Appendix-I. No deposit work should be undertaken without the prior approval of the competent authority.

(2) Before acceptance of any deposit by the Executive Engineer, it is essential that an estimate should be sent to the client Department/Body/Institution after fully ascertaining all necessary site details, technical feasibility, topographical details, ownership of land etc. In case any preliminary works like soil testing, site survey/contour etc., are to be done before hand, a small estimate may be sent to the client and deposits received.

(3) The Chief Engineers in CPWD are fully authorised to accept/undertake deposit works of Food Corporation of India and Indian Council of Agricultural Research, irrespective of their monetary value. Realization of deposits

(1) Whenever a deposit work is to be undertaken, the deposit should be realised before any liability is incurred on the work. 1% of the anticipated project cost should be realised before preparation of preliminary estimates. In addition to the outlay on the work in the preliminary estimate, departmental charges at such percentages as are prescribed by the Government of India from time to time shall also be realized in advance. No interest will be allowed on sums deposited from any source, including private contributions.

(2) In the case of deposit works of autonomous bodies which are financed entirely from Government grants, and from whom receipt of deposits is assured, 33-1/3% of the estimated cost of the work or 10% of the estimated cost of the work at the time of requisition/issue of A/A & E/S and balance amount i.e. 23-1/3% of the estimated cost of the work before award of work maybe got deposited in advance. Thereafter, the expenditure incurred may be got reimbursed through monthly bills simultaneously with rendering of monthly accounts on the progress of work. The deposit of 33-1/3% obtained as mentioned above should be retained for adjustment against the last portion of the estimated expenditure.

(3) Where delays are experienced in obtaining deposits, and where the expenditure has to be incurred out of the 33-1/3% reserve to keep the works going, the matter should be brought to the notice of Superintending Engineer/Chief Engineer promptly for taking up the matter with the client. No expenditure shall be incurred on deposit works out of CPWD grants and vice-versa.

(4) To enable the client to provide additional funds in time whenever the expenditure is anticipated to exceed the preliminary estimate figure, a revised preliminary estimate should be submitted to the client well in time during the execution of work.

(5) Where a client has defaulted in making the required deposit, and where the outstanding amount exceeds Rs.10 lakhs,
or where the works outlay is predominantly for purchase of capital equipment’s and machineries, the entire deposit including departmental charges should be realized in advance.

(6) In no case deposits received from a client department for its work should be diverted to other works.

(7) The client is to be clearly made to understand that the Central PWD does not bind itself to complete the work within the amount of the preliminary estimate, and that they should agree to pay for the excess expenditure that may occur. An acknowledgement of this clear understanding shall be obtained from the client before the deposit work is taken in hand.

(8) The Executive Engineer should ensure that at any time during the progress of the work, the expenditure is not more than the deposits received for the work. Where the Executive Engineer is doubtful about the timely receipt of deposits, he should notify the client that if further deposit is not received, the work would be stopped, and any contractual liability arising out of such stoppage of work will be borne by the client. He should also bring this to the notice of his higher officers for taking up the matter with the client.

(9) While submitting preliminary estimates for deposit works for obtaining administrative approval and expenditure sanction, a copy of the terms and conditions under which the works would be taken up by CPWD, as given in Appendix 3, should also be enclosed.

3.5 Transfer of deposits

It is incumbent on the part of the carpentry/Electrical/Horticulture Divisions to transfer to the concerned Electrical/Civil/Horticulture Divisions a part of the same in proportion of the E&M/carpentry/Horticulture works to the whole work as per the preliminary estimate. This transfer of deposit should be made at an appropriate stage so that at no stage the progress of work is hampered.

3.6 Execution of deposit works and settlement of accounts

(1) With regard to design, estimate and execution of work, instructions as contained above should be followed. The scope of work should not be altered without written permission of the client.

(2) The Executive Engineers shall send to their Accounts Officers every month the Statement of Expenditure in Form CPWA 65A along with the Schedule of Deposit Works in Form CPWA 65, for transmission to the concerned client after verification. These should indicate against each work, the amount of the estimate, the total deposit received and the expenditure incurred, both during the month and up to date. The Executive Engineers should invariably endorse a copy of this Statement to the concerned client.

(3) The Executive Engineers should regularly send these statements to enable the adjustment of outstanding amounts in the books of the clients, and to avoid difficulties in reconciliation of accounts relating to deposit works after passage of time.

(4) The Executive Engineers should also send a quarterly report to the clients showing the amount deposited and the expenditure incurred against each of the works for settlement of accounts.

(5) It is necessary that the Executive Engineers settle their accounts against the deposit works expeditiously so that the amount in the books of the audit as well as the client does not remain unsettled for long

5.2.3 Responsibility for quality of work

(1) The officer who records/test checks the measurements for an item of work will be responsible for the quality, quantity and dimensional accuracy of the work.

(2) The Assistant Engineer should make special efforts to be present at site when concreting is going on and must ensure quality of the concrete in work through appropriate fineness module of fine aggregate, proper grading of coarse aggregate in relation to the grade of cement used, and an appropriate water-cement ratio depending on the temperature at which the concrete is laid, laying and curing, to obtain the designed or desired strength of concrete.

(3) Paras 53.4 and 53.17 of this Manual may also be seen in this regard.

5.3 Deviations from architectural drawings

Any change from the provisions in the drawings issued by the Senior Architect that becomes necessary during the execution of the work due to any practical difficulty, shall be brought to the notice of the Technical Sanctioning authority and Senior Architect, and their approval obtained.

5.4 Critical situations
5.4.1 Situations for calling spot quotations - competent authority

(1) Wherever a work is to be taken up, or a material is to be procured under critical situations, such as in the case of a break-down of an essential service, or works which brooks no delay, spot quotations may be collected from reputed and established agencies dealing with the work or supply of material, and the work awarded or supply order placed immediately.

(2) In case of a situation where there is a shortage of a critical material that is required to be arranged departmentally for the execution of a work, and its rate is not stable, and there is a wide day-to-day fluctuation in its rate in the market, spot quotations may be collected from reputed and established agencies dealing with the material, and supply order may be placed immediately for such quantities of material that are immediately required, and as are available with the agency. Spot quotations should be collected by EE or AE only.

(3) Prior approval of such authority should be obtained, in oral if not in writing, before awarding the work or placing the supply order. Reference thereof should be mentioned while forwarding the case for obtaining the written approval of this authority, and the same should be sought at the earliest possible opportunity but not later than 10 days.

5.5 Progress reports - submission by the contractor

(1) Apart from the progress reports which are being compiled and submitted to higher authorities from various levels in the department, there should be a stipulation in the contract for large value works, say, Rs.15 crores and above, or as may be decided by the NIT approving authority, for the contractor to submit monthly progress report of the work in a computerised 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.
(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 up to 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.

(2) The progress report submitted by the contractor shall be checked and certified by the Junior Engineer and the Assistant Engineer, and has to be reviewed by the Executive Engineer and the Superintending Engineer, over their dated signatures.

(3) All works costing Rs. 15 crores and above, and any work of unique importance and character irrespective of the value of the work, should have videography undertaken 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.
SECTION 27

Annexure –III
Performa for Mandatory Tests To Be Attached With Running Bills
[Reference para 53.7(ix)]

Name of the work: ……………………………. Name of contractor………………... Agreement no. and date …………………... R/A Bill No…………………………..

<table>
<thead>
<tr>
<th>Sl.no.</th>
<th>Item</th>
<th>Quantities as per agreement</th>
<th>Frequency as per specification</th>
<th>No. of tests required</th>
<th>Upto date quantity</th>
<th>No. of tests required</th>
<th>No. of tests actually done</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

Note: If the number is less than that required, then reasons shall be recorded.

Signature of Junior Engineer

Signature of Assistant Engineer

Signature of Executive Engineer
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 application forms or not giving it in clear terms or making any change in the prescribed forms or deliberately suppressing the information may result in the bid being summarily disqualified.

1.3 The bid should be type-written. The bidder should sign each page of the application.

1.4 Overwriting should be avoided. Correction, if any, should be made by neatly crossing it, initialling, dating and rewriting. Pages of the eligibility criteria document should be 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 complete the envisaged work successfully. He is, however, advised not to furnish superfluous information. No information shall be entertained after submission of eligibility criteria document unless it is called for by the Employer.

1.7 The credentials submitted in respect of pre-qualification of the tender/tender for specialised work by the first lowest bidder after opening of the financial bid shall be verified before award of work. Any information furnished by the bidder found to be incorrect either immediately or at a later date would render him liable to be debarred from tendering/taking up of work in CPWD. If such bidder happens to be enlisted contractor of any class in CPWD, his name shall also be removed from the approved list of contractors.

2.0 Definitions:

2.1 In this document the following words and expressions have the meaning hereby assigned to them.

2.2 Employer: Means the competent Authority of NID, acting through the Sr. Engineer, L,B & Maintenance

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 application shall be signed by him above his full type written name and current address.

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

3.3 If the bidder is a firm in partnership, the application shall be signed by all the partners of the firm above their full typewritten 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 application. In both cases a certified copy of the partnership deed and current address of all the partners of the firm should accompany the application.

3.4 If the bidder is a limited company or a corporation, the application shall be signed by a duly authorized person holding power of attorney for signing the application 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 and 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 to collect all information that he considers necessary for proper assessment of the prospective assignment.

7.0 Initial criteria for eligibility
7.1 The Bidder should have satisfactorily completed works during the last seven years ending previous day of last date of submission of tenders. For this purpose, cost of work shall mean gross value of the completed work including cost of material supplied by the Government/Client but excluding those supplied free of cost. This should be certified by an officer not below the rank of Executive Engineer/Project Manager or equivalent.

(i) Three similar works each costing not less than Rs.………………., or completed two similar works each costing not less than Rs.………………., or completed one similar work costing not less than Rs.……………….

(ii) One work of any nature (either part of (i) above or a separate one) costing not less than Rs.………………. with Central/State Government/Central Autonomous Body/Central Public Sector Undertaking.

Similar work shall mean works of …………………

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of seven percent per annum; calculated from the date of completion to last date of receipt of applications for tenders.

7.2 At the time of purchase of tender, the tender shall have to furnish an affidavit as under:

“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 from tendering in CPWD contracts in future forever. Also, if such a violation comes to the notice of Department before start date of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.”

7.3 The bidder should have had average annual financial turn over (gross) of Rs.……….. on Civil/Electrical construction work during the last available three consecutive balance sheets (may range from six to eighteen months) duly audited by Chartered Accountant. Year in which no turnover is shown would also be considered for working out the average.

7.4 The bidder should not have incurred any loss in more than two years during available last five consecutive balance sheets, duly certified and audited by the Chartered Accountant.

7.5 The bidding capacity of the contractor should be equal to or more than the estimated cost of the work put to tender. The bidding capacity shall be worked out by the following formula:

Bidding Capacity = (\{(A\times N)\times 2\}-B) Where,

A = Maximum turnover in construction works executed in any one year during the last five years taking into account the completed as well as works in progress. The value of completed works shall be brought to current costing level by enhancing at a simple rate of seven percent per annum (as mentioned in Para 7.1 of Appendix-20).

N = Number of years prescribed for completion of work for which bids has been invited.

B = Value of existing commitments and ongoing works to be completed during the period of completion of work for which bids have been invited.

7.6 The bidder should have a solvency of Rs. …………………. certified by his Bankers. (Not required if applicant is a Class-I (Civil) registered contractor of CPWD) *

7.7 The bidder should own constructions equipment as per list required for the proper and timely execution of the work. Else, he should certify that he would be able to manage the equipment by hiring etc., and submit the list of firms from whom he proposes to hire.

7.8 The bidder should have sufficient number of Technical and Administrative employees for the proper execution of the
contract. The bidder should submit a list of these employees stating clearly how they would be involved in this work.

7.9 The bidder’s performance for each work completed in the last seven years and on hand should be certified by an officer not below the rank of Executive Engineer or equivalent and should be obtained in sealed cover.

   * May be struck off for works with estimated cost more than Rs. 25 Crores.

8.0 Evaluation criteria
8.1 The details submitted by the bidders will be evaluated in the following manner:

8.1.1 The initial criteria prescribed in para 7.1 to 7.5 above in respect of experience of similar class of works completed, bidding capacity and financial turn over etc. will first be scrutinized and the bidder’s eligibility for the work will be determined.

8.1.2 The bidders qualifying the initial criteria as set out in para 7.1 to 7.5 above will be evaluated with the following criteria by scoring method on the basis of details furnished by them.

   (a) Financial strength (Form ‘A’ & ‘B’) Maximum 20 marks
   (b) Experience in similar nature of work during last seven years Maximum 20 marks
   (c) Performance on works (Form ‘E’) – Time over run Maximum 20 marks
   (d) Performance on works (Form ‘E’) – Quality Maximum 15 marks
   (e) Personnel and Establishment (Form “F”&”G”) Maximum 10 marks
   (f) Plant & Equipment (Form “H”) Maximum 15 marks

   Total 100 marks

To become eligible for short listing the bidder must secure at least fifty percent marks in each and sixty percent marks in aggregate.

The department, however, reserves the right to restrict the list of such qualified contractors to any number deemed suitable.

8.2 Even though any bidder may satisfy the above requirements, he would be liable to disqualification if he has:

   (a) made misleading or false representation or deliberately suppressed the information in the forms, statements and enclosures required in the eligibility criteria document,
   (b) record of poor performance such as abandoning work, not properly completing the contract, or financial failures / weaknesses etc.

9.0 Financial information
Bidder should furnish the following financial information:

   Annual financial statement for the last five year 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:

   (a) List of all works of similar nature successfully completed during the last seven years in (Form “C”).
   (b) List of the projects under execution or awarded in (Form “D”).

10.2 Particulars of completed works and performance of the bidder duly authenticated/certified by an officer not below the rank of Executive Engineer or equivalent should be furnished separately for each work completed or in progress in (Form “E”).

10.3 Information in (Form “D”) should be complete and no work should be left out.

11.0 Organisation information
Bidder is required to submit the information in respect of his organization in Forms “F” & “G”

12.0 Construction plant and equipment
Bidder should furnish the list of construction plant and equipment including steel shuttering, centering and scaffolding to be used in carrying out the work. (in Form “H”). Details of any other plant & equipment required for the work not included available with the applicant may also be indicated.

13.0 Letter of transmittal
The bidder should submit the letter of transmittal attached with the document.
14.0 Opening of Price 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 bid shall remain valid for a period mentioned below:

1. For specialized work involving three envelope system - 120 days from the date of opening of technical bids.
2. Normal works involving two/three envelope system - 90 days from the date of opening of technical bids.

15.0 Award criteria
15.1 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 the applications without assigning any reason.

15.2 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

NID
A 'bad

Subject: Submission of bids for the work of ............................................

Sir,

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

1. I/we hereby certify that all the statement made and information supplied in the enclosed forms A to H 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 Sr. Engineer: Land, Bldg., Maintenance NID, A'bad to approach the Bank for issuing the solvency certificate to confirm the correctness thereof. I/we also authorize Sr. Engineer, LMB, NID, A'bad 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 works:

Name of work

Certificate from

Enclosures:
Seal of bidder

Date of submission:

Signature(s) of Bidder(s).
FORM ‘A’
FINANCIAL INFORMATION

I. Financial Statements – Details to be furnished duly supported by figures in balance sheet/ profit & loss account 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>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

(i) Gross Annual turnover on construction works. (ii) Profit/Loss.

II. Financial arrangements for carrying out the proposed work.

III. Solvency Certificate from Bankers of the bidder 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./Sh…………………………………………………………. 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 officers.

(Signature)
For the Bank

NOTE

(1) Bankers certificates should be on letter head of the Bank, sealed in cover addressed to tendering authority.
(2) In case of partnership firm, certificate should include names of all partners as recorded with the Bank.

Certified that the above list of works is complete and no work has been left out and that the information given is correct to my knowledge and belief.

Signature of Bidder(s)
**FORM ‘C’**

**DETAIL OF ALL WORKS OF SIMILAR CLASS COMPLETED DURING THE LAST FIVE YEARS ENDING LAST DAY OF THE MONTH........**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of work/project and location</th>
<th>Owner or sponsoring organization</th>
<th>Cost of work</th>
<th>Date of commencement as per contract</th>
<th>Stipulated date of completion</th>
<th>Actual date of completion</th>
<th>Litigation/arbitration cases pending/in progress with details*</th>
<th>Name and address/telephone number of officer to whom reference can be made</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Signature of Bidder(s)
**FORM ‘D’**

**PROJECTS UNDER EXECUTION OR AWARDED**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of work/project and location</th>
<th>Owner or sponsoring organization</th>
<th>Cost of work</th>
<th>Date of commencement as per contract</th>
<th>Stipulated date of completion</th>
<th>Upto date percentage of the progress of work</th>
<th>Slow Progress if any and reasons thereof</th>
<th>Name and address/telephone number of officer to whom reference can be made</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Certified that the above list of works is complete and no work has been left out and that the information given is correct to my knowledge and belief.

Signature of Bidder(s)
FORM ‘E’

PERFORMANCE REPORT OF WORKS REFERRED TO IN FORMS “C” & “D”

1. Name of work/project & location

2. Agreement no.

3. Estimated cost

4. Tendered cost

5. Date of start

6. Date of completion
   (i) Stipulated date of completion
   (ii) Actual date of completion

7. Amount of compensation levied for delayed completion, if any

8. Amount of reduced rate items, if any

9. Performance Report
   (1) Quality of work
   (2) Financial soundness
   (3) Technical Proficiency
   (4) Resourcefulness
   (5) General Behavior

   Very Good/Good/Fair/Poor

Dated: 

Executive Engineer or Equivalent
FORM “F”

STRUCTURE & ORGANISATION

1. Name & address of the bidder
2. Telephone no./Telex no./Fax no./e-mail address.
3. Legal status of the bidder (attach copies of original document defining the legal status)
   (a) An Individual
   (b) A proprietary firm
   (c) A firm in partnership
   (d) A limited company or Corporation
4. Particulars of registration with various Government Bodies (attach attested photocopy)

<table>
<thead>
<tr>
<th>Organization/Place of registration</th>
<th>Registration No. with class category, if any</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>

5. Names and titles of Directors & Officers with designation to be concerned with this work.
6. Designation of individuals authorized to act for the organization
7. Was the bidder ever required to suspend construction for a period of more than six months continuously after he commenced the construction? If so, give the name for the project and reasons for suspension of work.
8. Has the bidder, or any constituent partner in case of partnership firm, ever abandoned the awarded work before its completion? If so, give name of the project and reasons for abandonment.
9. Has the bidder, or any constituent partner in case of partnership firm, ever been debarred/blacklisted for tendering in any organization at any time? If so, give details
10. Has the bidder, or any constituent partner in case of partnership firm, ever been convicted by the court of law? If so, give details.
11. In which field of Civil Engineering, the bidder has specialization and interest?
12. Any other information considered necessary but not included at above.

Signature of Bidder(s)
FORM ‘G’

DETAILS OF TECHNICAL & ADMINISTRATIVE PERSONNEL TO BE EMPLOYED
FOR THE WORK

<table>
<thead>
<tr>
<th>S.No</th>
<th>Designation</th>
<th>Total number</th>
<th>Number available for this work</th>
<th>Name</th>
<th>Qualifications</th>
<th>Professional experience and details of work carried out</th>
<th>How He/she would be involved in this work</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signature of Bidder(s)
<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of equipment</th>
<th>Nos.</th>
<th>Capacity or type</th>
<th>Age</th>
<th>Condition</th>
<th>Ownership status</th>
<th>Current location</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
</tr>
</tbody>
</table>
1. Name of Work
2. Committed date of completion of the work (Project) based on PE & A/A & E/S

3. Ref. to administrative approval and expenditure sanction
   (i) Authority ..............................................................
   (ii) No. & date ...........................................................
   (iii) Amount ..............................................................
   (iv) Corresponding amount available for the work included in the present tender ..............................................................
   (v) Total No. of packages ................................................
   (vi) Details of other packages ...........................................

<table>
<thead>
<tr>
<th>Package Number</th>
<th>Contents of Package</th>
<th>Corresponding amount available</th>
<th>Status including amount of work awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Position of balance items of works/Projects (Not included in the tender) as per A/A & E/S in the following format.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description of sub-head/items</th>
<th>Amount as per A/A &amp; E/S</th>
<th>Present Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Ref. to technical sanction
   (i) Scope of work ..................................................
   (ii) Authority .....................................................
   (iii) No. & date ...................................................
   (iv) Amount .......................................................... 

6. Scope of work for which tenders have been called for, clearly indicating the items omitted from the sanctioned estimate and how the omitted items shall be executed.

7. Ref. to approval of N.I.T.
   (i) Authority .....................................................
   (ii) No. & date ...................................................
   (iii) Estimated amount put to tender ..............................

8. Ref. to publicity:
   (i) Date on which notice inviting tenders was placed on notice board in Divisional Office/ on website ..................................................
   (ii) Date on which it was circulated to other offices ..........................
   (iii) Name of newspapers/ website (with date) in which the notice inviting tenders was actually advertised/ published and the details of NID identification number. ..........................................................

9. (i) The date and time at which tenders were due to be received in Divisional Office/ uploaded on website ..................................................
    (ii) Reasons for postponement .................................................
(iii) Reference to publicity in regard to postponement of tenders

10(A). The date from which the tenders available for sale to the contractors/website

10(B). Pre Bid Conference

(i) Date and time of probed conference.

(ii) Name of Contractor present in the probed conference.

(iii) Decisions taken in the probed conference.

(i) Have all the contractors deposited earnest money in proper form?

(ii) List of the persons who submitted the technical bids

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of the Bidder</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i).</td>
<td></td>
</tr>
<tr>
<td>(ii).</td>
<td></td>
</tr>
<tr>
<td>(iii).</td>
<td></td>
</tr>
<tr>
<td>(iv).</td>
<td></td>
</tr>
</tbody>
</table>

(vii) Reference, date and authority who approved the technical bids.

(viii) List of the bidders whose technical bid approved.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of the Bidder</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i).</td>
<td></td>
</tr>
<tr>
<td>(ii).</td>
<td></td>
</tr>
<tr>
<td>(iii).</td>
<td></td>
</tr>
</tbody>
</table>

(ix) List of the bidders who are not qualified

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of the Bidder</th>
<th>Reasons for disqualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ii).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iii).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) Opening of financial bids:

(i) Date and time at which financial bids were due to be opened.

(ii) (a) Date and time at which financial bids were actually opened.

(b) Name & Designation of officer who actually opened the financial bids.

(iii) Name of contractors present at time of opening of financial bids.

(iv) Name and designation of any other person present.

12.2.B - For three envelop system.

(a) Opening of eligibility criteria:

(i) Date and time at which eligibility criteria were due to be opened.

(ii) (a) Date and time at which eligibility criteria were actually opened.

(b) Name & Designation of officer who actually opened the eligibility criteria.

(iii) Name of contractors present at time of opening of eligibility criteria.

(iv) Name and designation of any other person present.

(v) Have all the contractors deposited earnest money in proper form?

(vi) List of the persons who submitted the eligibility criteria

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of the Bidder</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i).</td>
<td></td>
</tr>
<tr>
<td>(ii).</td>
<td></td>
</tr>
<tr>
<td>(iii).</td>
<td></td>
</tr>
</tbody>
</table>
(vii) Reference, date and authority to approve the eligibility criteria

(viii) List of the bidders whose eligibility criteria approved.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of the Bidder</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i).</td>
<td></td>
</tr>
<tr>
<td>(ii).</td>
<td></td>
</tr>
<tr>
<td>(iii).</td>
<td></td>
</tr>
</tbody>
</table>

(ix) List of the bidders who are not qualified

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of the Bidder</th>
<th>Reasons for disqualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ii).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) Opening of technical bids:

(i) Date and time at which technical bids were due to be opened.
(ii) (a) Date and time at which technical bids were actually opened.
   (b) Name & Designation of officer who actually opened the technical bids.
(iii) Name of contractors present at time of opening of technical bids.
(iv) Name and designation of any other person present.
(v) List of the persons who submitted the technical bids

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of the Bidder</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i).</td>
<td></td>
</tr>
<tr>
<td>(ii).</td>
<td></td>
</tr>
<tr>
<td>(iii).</td>
<td></td>
</tr>
</tbody>
</table>

(vi) Reference, date and authority to approve the technical bids

(vii) List of the bidders whose technical bid approved.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of the Bidder</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i).</td>
<td></td>
</tr>
<tr>
<td>(ii).</td>
<td></td>
</tr>
<tr>
<td>(iii).</td>
<td></td>
</tr>
</tbody>
</table>

(viii) List of the bidders who are not qualified

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of the Bidder</th>
<th>Reasons for disqualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ii).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iii).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(c) Opening of financial bids:

(i) Date and time at which financial bids were due to be opened.
(ii) (a) Date and time at which financial bids were actually opened.
   (b) Name & Designation of officer who actually opened the financial bids.
(iii) Name of contractors present at time of opening of financial bids.
(iv) Name and designation of any other person present.
10. List of persons who tendered for the job, with their tendered amount

<table>
<thead>
<tr>
<th>Name of contractor</th>
<th>Tendered amount percentage above or below</th>
<th>Net tendered amount after negotiations, if any</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

14. Justified percentage as worked out by CE

15. Date on which validity/extended validity of tender of lowest expires

16. Important information
   (i) Availability of site
   (ii) Availability of stipulated materials
   (iii) Approval to layout plan
   (iv) Approval to buildings plan clearance from DUAC/Local body
   (v) Comment on the capabilities of lowest tenderer including financial and technical resources
   (vi) List of works in hand with lowest tenderer indicating the name of works, tendered amount, date of start, stipulated period, progress made, and remarks
   (vii) Is this the first call of tenders? If not, details of previous calls and results
   (viii) Status of Architectural working drawings and programme
   (ix) Status of structural drawings and programme of same
   (x) Status of services drawings and programme of same
      (a) Internal Electrical Installation.
      (b) Internal Water Supply and Sanitary.
      (c) External Electrical services.
         (i) Street light cabling.
         (ii) Substation Equipment’s
      (d) External Water Supply and Sanitary Lines/Installations.
      (e) Fire Fighting System including fire alarm system.
      (f) Lifts, Air Conditioning
      (g) Sewage treatment Plant.
      (h) Water treatment plant.
   (xi) Time period of completion of
      (a) the total Project
      (b) the work
   (xii) **Details of available funds**
   (xiii) Justification
   (xiv) Any other information*

   (d) SE (Elect)

19. Plant/Equipment required for each activities as assessed by CE and minimum requirement indicated in tender/or during negotiation.

20. Details of milestones of activity (not included in tender for withholding payment but for execution of project).

Details of milestones.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description of milestones</th>
<th>Time allowed in days (from date of start)</th>
<th>Amount to be withheld in case of non-achievement of milestones</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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 NID Authority within the time specified in Schedule ‘F’ viz., schedule of quantities and in accordance in all respect with the specifications, designs, drawing and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respect of accordance with, such conditions so far as applicable.

We agree to keep the tender open for thirty/ forty five/ sixty/ ninety (30/45/60/90) days from the due date of its opening in case of single bid system / Ninety(90) days from the date of opening of technical bid in case tenders are invited on 2 bid/envelop system/ One hundred twenty(120) days from the date of opening of technical bid in case bids are invited on 3 bid/envelop system
for specialized work (strike out as the case may be) and not to make any modification in its terms and conditions.

A sum of Rs.66,000/- is hereby forwarded in cash/demand draft of a scheduled bank.
I/We agree that the said NID Authority 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 NID Authority or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

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

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

I/We hereby declare that I/We shall treat the tender documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived there from to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated
Address:                         Signature of Contractor
Witness:                        Postal Address

Occupation:

ACC E P T A N C E

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

………….. (Rupees..........................................................)

………….. (Rupees..........................................................)

………….. (Rupees..........................................................)

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

(a)

(b)

(c) For & on behalf of the NID Authority

Signatures..........................
GENERAL CONDITIONS OF CONTRACT

1. All work proposed for execution by contract will be notified in a form of invitation to tender pasted in public places and signed by the officer inviting tender or by publication in Newspapers or posted on website as the case may be. This form will state the work to be carried out, as well as the date for submitting and opening tenders and the time allowed for carrying out the work, also the amount of earnest money to be deposited with the tender, and the amount of the security deposit and Performance Guarantee to be deposited by the successful tenderer and the percentage, if any, to be deducted from bills. Copies of the specifications, designs and drawings and any other documents required in connection with the work signed for the purpose of identification by the officer inviting tender shall also be open for inspection by the contractor at the office of officer inviting tender during office hours.

2. In the event of the tender being submitted by a firm, it must be signed separately by each partner 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, 1952.

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

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

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

In case the lowest tendered amount (worked out on the basis of quoted rate of Individual items) of two or more contractors is same, then such lowest contractors may be asked to submit sealed revised offer quoting rate of each item of the schedule of quantity for all subsections/sub heads as the case may be. The revised quoted rate of each item of schedule of quantity for all sub sections/sub heads should not be higher than their respective original rate quoted already at the time of submission of tender. The lowest tender shall be decided.

If the revised tendered amount (worked out on the basis of quoted rate of individual items) of two or more contractors received in revised offer is again found to be equal,
then the lowest tender, among such contractors, shall be decided by draw of lots in the presence of and the authorised officers/concerned officers of NID the lowest contractors those have quoted equal amount of their tenders.

In case of any such lowest contractor in his revised offer quotes rate of any item more than their respective original rate quoted already at the time of submission of tender, then such revised offer shall be treated invalid. Such case of revised offer of the lowest contractor or case of refusal to submit revised offer by the lowest contractor shall be treated as withdrawal of his tender before acceptance and fifty percent of his earnest money shall be forfeited.

In case all the lowest contractors those have same tendered amount (as a result of them quoted rate of individual items), refuse to submit revised offers, then tenders are to be recalled after forfeiting fifty percent of EMD of each lowest contractor.

Contractor, whose earnest money is forfeited because of non-submission of revised offer, or quoting higher revised rate(s) of any item(s) than their respective original rate quoted already at the time of submission of his bid shall not be allowed to participate in the retendering process of the work.

4 A. Applicable for Percentage Rate Tender only (CPWD-7)

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

1. The contractor does not quote percentage above/below on the total amount of tender or any section/sub head of the tender.

2. The percentage above/below is not quoted in figures & words both on the total amount of tender or any section/sub head of the tender.

3. The percentage quoted above/below is different in figures & words on the total amount of tender or any section/sub head of the tender.

Tenders, which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort including conditional rebates, will be summarily rejected. No single tender shall include more than one work, but contractors who wish to tender for two or more works shall submit separate tender for each. Tender shall have the name and number of the works to which they refer, written on the envelopes.

4B. In case the lowest tendered amount (estimated cost + amount worked on the basis of percentage above/below) of two or more contractors is same, such lowest contractors will be asked to submit sealed revised offer in the form of letter mentioning percentage above/ below on estimated cost of tender including all sub sections/sub heads as the case may be, but the revised percentage quoted above/below on tendered cost or on each sub section/ sub head should not be higher than the percentage quoted at the time of submission of tender. The lowest tender shall be decided on the basis of revised offers.

In case any of such contractor refuses to submit revised offer, then it shall be treated as withdrawal of his tender before acceptance and fifty percent of earnest money shall be forfeited.

If the revised tendered amount of two more contractors received in revised offer is again found to be equal, the lowest tender, among such contractors, shall be decided by draw of lots in the presence of [SE of the circle, EE(s) in charge of major & minor component(s)]
And the authorise and the authorised officers/concerned officers of NID the lowest contractors those have quoted equal amount of their tenders 
In case all the lowest contractors those have quoted same tendered amount, refuse to submit revised offers, then tenders are to be recalled after forfeiting 50% of EMD of each contractor.

Contractor(s), whose earnest money is forfeited because of non-submission of revised offer, shall not be allowed to participate in the re-tendering process of the work.

5. The officer inviting tender or his duly authorized assistant, will open tenders in the presence of any intending contractors who may be present at the time, and will enter the amounts of the several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, a receipt for the earnest money shall thereupon be given to the contractor who shall thereupon for the purpose of identification sign copies of the specifications and other documents mentioned in Rule-I of general conditions of contract. In the event of a tender being rejected, the earnest money shall thereupon be returned to the contractor remitting the same, without any interest.

6. The officer inviting tenders shall have the right of rejecting all or any of the tenders and will not be bound to accept the lowest or any other tender.

7. The receipt of an accountant or clerk for any money paid by the contractor will not be considered as any acknowledgment or payment to the officer inviting tender and the contractor shall be responsible for seeing that he procures a receipt signed by the officer inviting tender or a duly authorized Cashier.

8. The memorandum of work tendered for and the schedule of materials to be supplied by the department and their issue-rates, shall be filled and completed in the office of the officer inviting tender before the tender form is issued. If a form is issued to an intending bidder without having been so filled in and incomplete, he shall request the officer to have this done before he completes and delivers his tender.

9. The bidders shall sign a declaration under the officials Secret Act 1923, for maintaining secrecy of the tender documents drawings or other records connected with the work given to them. The unsuccessful bidders shall return all the drawings given to them.

9A Use of correcting fluid, anywhere in tender document is not permitted. Such tender is liable for rejection.

10. In the case of Item Rate Tenders, only rates quoted shall be considered. Any tender containing percentage below/above the rates quoted is liable to be rejected. Rates quoted by the contractor in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures and words. However, if a discrepancy is found, the rates which correspond with the amount worked out by the contractor shall unless otherwise proved be taken as correct. If the amount of an item is not worked out by the contractor or it does not correspond with the rates written either in figures or in words, then the rates quoted by the contractor in words shall be taken as correct. Where the rates quoted by the contractor in figures and in words tally, but the amount is not worked out correctly, the rates quoted by the contractor will unless otherwise proved be taken as correct and not the amount. 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.
10. In case of Percentage Rate Tenders only percentage quoted shall be considered. Any tender containing item rates is liable to be rejected. Percentage quoted by the contractor in percentage rate tender shall be accurately filled in figures and words, so that there is no discrepancy.

11. In the case of any tender where unit rate of any item/items appear unrealistic, such tender will be considered as unbalanced and in case the tenderer is unable to provide satisfactory explanation, such a tender is liable to be disqualified and rejected.

12. All rates shall be quoted on the tender form. The amount for each item should be worked out and requisite totals given. Special care should be taken to write the rates in figures as well as in words and the amount in figures only, in such a way that interpolation is not possible. The total amount should be written both in figures and in words. In case of figures, the word ‘Rs.’ should be written before the figure of rupees and word ‘P’ after the decimal figures, e.g. ‘Rs. 2.15 P’ and in case of words, the word ‘Rupees’ should precede and the word ‘Paisa’ should be written at the end. Unless the rate is in whole rupees and followed by the word ‘only’ it should invariably be upto two decimal places. While quoting the rate in schedule of quantities, the word ‘only’ should be written closely following the amount and it should not be written in the next line.

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

13. (i) The Contractor whose tender is accepted, will be required to furnish performance guarantee of 5% (Five Percent) of the tendered amount within the period specified in Schedule F. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs. 10,000/-) or /Demand Draft of any scheduled bank/Pay order of any scheduled bank.

(ii) The contractor whose tender is accepted will also be required to furnish by way of Security Deposit for the fulfillment of his contract, an amount equal to five percent of the tendered value of the work. The Security deposit will be collected by deductions from the running bills as well as final bill of the contractor at the rates mentioned above. The Security amount will also be accepted of a Scheduled Bank demand draft.

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

15. Sales-tax/VAT (except service tax), purchase tax, turnover tax or any other tax applicable in respect of this contract shall be payable by the Contractor and Government will not entertain any claim whatsoever in respect of the same. However, in respect of and labour cess same shall be paid by the contractor to the concerned department on demand and it will be reimbursed to him by the Engineer-in-Charge after satisfying that it has been actually and genuinely paid by the contractor.

16. The contractor shall give a list of NID employees related to him.

17. The tender for the work shall not be witnessed by a contractor or contractors who himself/ themselves has/have tendered or who may and has/have tendered for the same work. Failure to observe this condition would render, tenders of the contractors tendering, as well as witnessing the tender, liable to summary rejection.

18. The tender for composite work includes, in addition to building work, all other works such as sanitary and water supply installations drainage installation, electrical work, horticulture work, roads and paths etc. The bidder apart from being a registered contractor (B&R) of appropriate class, must associate himself with agencies of
appropriate class which are eligible to tender for sanitary and water supply drainage, electrical and horticulture works in the composite tender.

19. The contractor shall submit list of works which are in hand (progress) in the following form:

<table>
<thead>
<tr>
<th>Name of work</th>
<th>Name and particulars of Division/officer where work is being executed</th>
<th>Value of work</th>
<th>Position of works in progress</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2.</td>
<td>3.</td>
<td>4.</td>
<td>5.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Definitions

1. The **Contract** means the documents forming the tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of the authority conditions, the specifications, designs, drawings and instructions issued from time to time by the Engineer-in-Charge and all these documents taken together, shall be deemed to form one contract and shall be complementary to one another.

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

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

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

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

   (iv) The **Engineer-in-charge** means the Engineer Officer who shall supervise and be In-charge of the work and who shall sign the contract on behalf of the NID Authority as mentioned in Schedule ‘F’ hereunder.

   (v) **NID or NID Authority** shall mean the NID Authority.

   (vi) **Accepting Authority** shall mean the authority mentioned in Schedule ‘F’.

   (vii) **Excepted Risk** are risks due to riots (other than those on account of contractor’s employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, NID, damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority or causes solely due to use or occupation by Government of the part of the works in respect of which a certificate of completion has been issued or a cause solely due to Government’s faulty design of works.

   (viii) **Market Rate** shall be the rate as decided by the Engineer-in-Charge on the basis of the cost of materials and labor at the site where the work is to be executed plus the percentage mentioned in Schedule ‘F’ to cover, all overheads and profits.

   (viii) Schedule(s) referred to in these conditions shall mean the relevant schedule(s) annexed to the tender papers or the standard Schedule of Rates of the NID mentioned in Schedule ‘F’ hereunder, with the amendments thereto issued upto the date of receipt of the tender.
Scope and Performance

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

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

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

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

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

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

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

(i) Description of Schedule of Quantities.
(ii) Particular Specification and Special Condition, if any.
(iii) Drawings.
(iv) CPWD Specifications.
(v) Indian Standard Specifications of B.I.S.
8.2 If there are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intention of the document and his decision shall be final and binding on the contractor.

8.3 Any error in description, quantity or rate in Schedule of Quantities or any omission there from shall not vitiate the Contract or release the Contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from any of his obligations under the contract.

9. The successful bidder /contractor, on acceptance of his tender by the Accepting Authority, shall, within 15 days from the stipulated date of start of the work, sign the contract consisting of:

(i) the notice inviting tender, all the documents including drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.

(ii) Standard C.P.W.D. Form as mentioned in Schedule ‘F’ consisting of:

(a) Various standard clauses with corrections up to the date stipulated in Schedule ‘F’ along with annexure thereto.

(b) C.P.W.D. Safety Code.

(c) Model Rules for the protection of health, sanitary arrangements for workers employed by CPWD or its contractors.

(d) CPWD Contractor’s Labor Regulations.

(e) List of Acts and omissions for which fines can be imposed.

(iii) No payment for the work done will be made unless contract is signed by the contractor.
DRAFT FOR THE AGREEMENT

CLAUSE 1

(i) The contractor shall submit an irrevocable Performance Guarantee of 5% (Five percent) of the tendered amount in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (notwithstanding and/or without prejudice to any other provisions in the contract) within period specified in Schedule ‘F’ from the date of issue of letter of acceptance. This period can be further extended by the Engineer-in-Charge up to a maximum period as specified in schedule ‘F’ on written request of the contractor stating the reason for delays in procuring the Performance Guarantee, to the satisfaction of the Engineer-in-Charge. This guarantee shall be in the form of Cash (in case guarantee amount is less than Rs. 10,000/-) or Deposit at Call receipt of any scheduled bank/Banker’s Cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay Order of any scheduled bank (in case guarantee amount is less than Rs. 1,00,000/-).

(ii) The Performance Guarantee shall be initially valid up to the stipulated date of completion plus 60 days beyond that. In case the time for completion of work gets enlarged, the contractor shall get the validity of Performance Guarantee extended to cover such enlarged time for completion of work. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor, without any interest. However, in case of contracts involving maintenance of building and services/any other work after construction of same building and services/other work, then 50% of Performance Guarantee shall be retained as Security Deposit. The same shall be returned year wise proportionately.

(iii) The Engineer-in-Charge shall not make a claim under the performance guarantee except for amounts to which the NID Authority is entitled under the contract (notwithstanding and/or without prejudice to any other provisions in the contract agreement) in the event of:

(a) Failure by the contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Engineer-in-Charge may claim the full amount of the Performance Guarantee.

(b) Failure by the contractor to pay NID Authority any amount due, either as agreed by the contractor or determined under any of the Clauses/Conditions of the agreement, within 30 days of the service of notice to this effect by Engineer-in-Charge.

(iv) In the event of the contract being determined or rescinded under provision of any of the Clause/Condition of the agreement, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of the NID Authority.

CLAUSE 1 A

The person/persons whose tender(s) may be accepted (hereinafter called the contractor) shall permit NID Authority at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 10% of the gross amount of each running bill.
unless he/they has/have deposited the amount of Security at the rate mentioned above in cash or in the form of Government Securities or fixed deposit receipts. In case a fixed deposit receipt of any Bank is furnished by the contractor to the NID Authority as part of the security deposit and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the NID Authority to make good the deficit.

All compensations or the other sums of money payable by the contractor under the terms of this contract may be deducted from, or paid by the sale of a sufficient part of his security deposit or from the interest arising therefrom, or from any sums which may be due to or may become due to the contractor by NID Authority on any account whatsoever and in the event of his Security Deposit being reduced by reason of any such deductions or sale as aforesaid, the contractor shall within 10 days make good in cash or fixed deposit receipt tendered by the State Bank of India or by Scheduled Banks or Government Securities (if deposited for more than 12 months) endorsed in favor of the NID Authority, any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof. The security deposit shall be collected from the running bills and the final bill of the contractor at the rates mentioned above.

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

In case of contracts involving maintenance of building and services/any other work after construction of same building and services/other work, then 50% of Performance Guarantee shall be retained as Security Deposit. The same shall be returned year wise proportionately.

**Note-1:** NID papers tendered as security will be taken at 5% (five per cent) below its market price or at its face value, whichever is less. The market price of NID paper would be ascertained by the Divisional Officer at the time of collection of interest and the amount of interest to the extent of deficiency in value of the NID paper will be withheld if necessary.

**Note-2:** Government Securities will include all forms of Securities mentioned in Rule No. 274of the G.F. Rules except fidelity bond. This will be subject to the observance of the condition mentioned under the rule against each form of security.

**Note-3:** Note 1 & 2 above shall be applicable for both clause 1 and 1A

**CLAUSE 2**

If the contractor fails to maintain the required progress in terms of clause 5 or to complete the work and clear the site on or before the contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the NID Authority on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below as the authority specified in schedule ‘F’ (whose decision in writing shall be final and binding) may decide on the amount of tendered value of the work for every completed day/month (as applicable) that the progress remains below that specified in Clause 5 or that the work remains incomplete.

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

(i) Compensation for delay of work @0.5 % per week of delay to be computed on per week basis
Provided always that the total amount of compensation for delay to be paid under this Condition
shall not exceed 5% of the approved Tendered Value of work or of the Tendered Value of
the item or
group of items of work for which a separate period of completion is originally given.

The amount of compensation may be adjusted or set-off against any sum payable to the
Contractor under this or any other contract with the NID Authority. In case, the contractor
does not achieve a particular milestone mentioned in schedule F, or the re-scheduled
milestone(s) in terms of Clause 5.4, the amount shown against that milestone shall be
withheld, to be adjusted against the compensation levied at the final grant of Extension of
Time. With-holding of this amount on failure to achieve a milestone, shall be automatic
without any notice to the contractor. However, if the contractor catches up with the progress
of work on the subsequent milestone(s), the withheld amount shall be released. In case the
contractor fails to make up for the delay in subsequent milestone(s), amount mentioned
against each milestone missed subsequently also shall be withheld. However, no interest,
whatsoever, shall be payable on such withheld amount.

**CLAUSE 2A**

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, 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’.

**CLAUSE 3**

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

(i) If the contractor having been given by the Engineer-in-Charge a notice in writing to
rectify, reconstruct or replace any defective work or that the work is being performed
in an inefficient or otherwise improper or unworkman like manner shall omit to
comply with the requirement of such notice for a period of seven days thereafter.

(ii) If the contractor has, without reasonable cause, suspended the progress of the work
or has failed to proceed with the work with due diligence so that in the opinion of the
Engineer-in-Charge (which shall be final and binding) he will be unable to secure
completion of the work by the date for completion and continues to do so after a
notice in writing of seven days from the Engineer-in-Charge.

(iii) If the contractor fails to complete the work within the stipulated date or items of work
with individual date of completion, if any stipulated, on or before such date(s) of
completion and does not complete them within the period specified in a notice given
in writing in that behalf by the Engineer-in-Charge.

(iv) If the contractor persistently neglects to carry out his obligations under the contract
and/ or commits default in complying with any of the terms and conditions of the
contract and does not remedy it or take effective steps to remedy it within 7 days
after a notice in writing is given to him in that behalf by the Engineer-in-Charge.

(v) If the contractor shall offer or give or agree to give to any person in NID Authority
service or to any other person on his behalf any gift or consideration of any kind as
an inducementor reward for doing or forbearing to do or for having done orforborne to
do any act in relation to the obtaining or execution of this or any for NID.

(vi) If the contractor shall enter into a contract with NID in connection with which
commission has been paid or agreed to be paid by him or to his knowledge, unless
the particulars of any such commission and the terms of payment thereof have
be previously disclosed in writing to the Engineer-in-Charge.

(vii) If the contractor had secured the contract with NID as a result of wrong tendering or other non-bona fide methods of competitive tendering or commits breach of Integrity Agreement.

(viii) If the contractor being an individual, or if a firm, any partner thereof shall at any time be adjudged insolvent or have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any Insolvency Act for the time being in force for the sequestration of his estate or if a trust deed be executed by him for benefit of his creditors.

(ix) If the contractor being a company shall pass a resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager on behalf of a creditor shall be appointed or if circumstances shall arise which entitle the court or the creditor to appoint a receiver or a manager or which entitle the court to make a winding up order.

(x) If the contractor shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 days.

(xi) If the contractor assigns, transfers, sublets (engagement of labor on a piece-work basis or of labor with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer, sublet or otherwise parts with the entire works or any portion thereof without the prior written approval of the Engineer-in-Charge.

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

(a) To determine the contract as aforesaid (of which termination notice in writing to the contractor under the hand of the Engineer-in-Charge shall be conclusive evidence). Upon such determination, the Security Deposit already recovered and Performance Guarantee under the contract shall be liable to be forfeited and shall be absolutely at the disposal of the Government

(b) After giving notice to the contractor to measure up the work of the contractor and to take such whole, or the balance or part thereof, as shall be un-executed out of his hands and to give it to another contractor to complete the work. The contractor, whose contract is determined as above, shall not be allowed to participate in the tendering process for the balance work.

In the event of above courses being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of the contract. And in case action is taken under any of the provision aforesaid, the contractor shall not be entitled to recover or be paid any sum for any work thereof or actually performed under this contract unless and until the Engineer-in-Charge has certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified.
CLAUSE 3A

In case, the work cannot be started due to reasons not within the control of the contractor within 1/8th of the stipulated time for completion of work or one month whichever is higher, either party may close the contract. In case contractor wants to close the contract, he shall give notice to the department stating the failure on the part of department. In such eventuality, the Performance Guarantee of the contractor shall be refunded within following time limits:

(i) If the Tendered value of work is up to Rs. 45 lacs: 15 days.
(ii) If the Tendered value of work is more than Rs. 45 lacs and up to Rs. 2.5 Crore: 21 days.
(iii) If the Tendered value of work exceeds Rs. 2.5 Crore: 30 days.

If Performance Guarantee is not released within prescribed time limit, then a simple interest @ 0.25% per month shall be payable on Performance Guarantee amount to the contractor from the date of expiry of prescribed time limit.

A compensation for such eventuality, on account of damages etc. shall be payable @ 0.25% of tendered amount subject to maximum limit of Rs. 10 lacs.

CLAUSE 4

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

CLAUSE 5

The time allowed for execution of the Works as specified in the Schedule ‘F’ or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the works shall commence from such time period as mentioned in schedule ‘F’ or from the date of handing over of the site whichever is later. If the Contractor commits default in commencing the execution of the work as aforesaid, NID shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the performance guarantee absolutely.

5.1 As soon as possible after the Contract is concluded, the Contractor shall submit a Time and Progress Chart for each mile stone and get it approved by the Engineer-in-charge. 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 by 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 programmer has been agreed upon) complete the work as per milestones given in Schedule ‘F’.

(a) Project Management shall be done by using project management software for works costing more than Rs. 5 Crore.

(b) The project management shall be done using M.S. Project software for works costing more than Rs. 5 Crore and up to Rs. 20 Crore.
   For works costing more than Rs. 20 Crore, project management shall be done using Primavera Software.

PROGRAMME CHART

(i) The Contractor shall prepare an integrated programmer chart in MS Project/Primavera software for the execution of work, showing clearly all activities from the start of work to completion, with details of manpower, equipment and machinery required for the fulfillment of the programmer within the stipulated period or earlier and submit the same for approval to the Engineer-in-Charge within ten days of award of the contract. A recovery of Rs. 2500/- (for works costing Upto Rs. 20 Crores) / Rs. 5000/- (for works costing more than Rs. 20 Crores) shall be made on per day basis in case of delay in submission of the above programmer.

(ii) The programmer chart should include the following:
   (a) Descriptive note explaining sequence of the various activities.
   (b) Network (PERT / CPM / BAR CHART).
   (c) programmer for procurement of materials by the contractor.
   (d) programmer of procurement of machinery / equipment's having adequate capacity, commensurate with the quantum of work to be done within the stipulated period, by the contractor. In addition to above, to achieve the progress of Work as per programmer, the contractor must bring at site adequate shuttering material required for cement concrete and R.C.C. works etc. for three floors within one month from the date of start of work till the completion of RCC work as per requirement of work. The contractor shall submit shuttering schedule adequate to complete structure work within laid down physical milestone.

(iii) If at any time, it appears to the Engineer-in-Charge that the actual progress of work does not conform to the approved programmer referred above or after rescheduling of milestones, the contractor shall produce a revised programmer within 7 (seven) days, showing the modifications to the approved programmer to ensure timely completion of the work. The modified schedule of programmer shall be approved by the Engineer-in-Charge. A recovery of Rs. 2500/- (for works costing upto Rs. 20 Crores) / Rs. 5000/- (for works costing more than Rs. 20 Crores) shall be made on per day basis in case of delay in submission of the modified programmer.

(iv) The submission for approval by the Engineer-in-Charge of such programmer or such particulars shall not relieve the contractor of any of the duties or responsibilities under the contract. This is without prejudice to the right of Engineer-in-Charge to take action against the contractor as per terms and conditions of the agreement.
(v) The contractor shall submit the progress report using MS Project/Primavira software with base line programmer referred above for the work done during previous month to the Engineer-in-charge on or before 5th day of each month failing which a recovery Rs. 2500/- (for works costing upto Rs. 20 Crores) / Rs. 5000/- (for works costing more than Rs. 20 Crores) shall be made on per day basis in case of delay in submission of the monthly progress report.

5.2 If the work(s) be delayed by:

(i) force majeure, or

(ii) abnormally bad weather, or

(iii) serious loss or damage by fire, or

(iv) civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or

(v) delay on the part of other contractors or tradesmen engaged by Engineer-in-Charge in executing work not forming part of the Contract, or

(vi) non-availability of stores, which are the responsibility of NID to supply or

(vii) non-availability or break down of tools and Plant to be supplied or supplied by NID or

(viii) any other cause which, in the absolute discretion of the Engineer-in-Charge is beyond the Contractor’s control.

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

5.3 Request for rescheduling of Milestones and extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen days of the happening of the event causing delay on the prescribed form to the authority as indicated in Schedule ‘F’. The Contractor may also, if practicable, indicate in such a request the period for which extension is desired.

5.4 In any such case the authority as indicated in Schedule ‘F’ may give a fair and reasonable extension of time and reschedule the milestones for completion of work. Such extension or rescheduling of the milestones shall be communicated to the Contractor by the authority as indicated in Schedule ‘F’ in writing, within 3 months or 4 weeks of the date of receipt of such request respectively. Non application by the contractor for extension of time/ rescheduling of the milestones shall not be a bar for giving a fair and reasonable extension/ rescheduling of the milestones by the authority as indicated in Schedule ‘F’ and this shall be binding on the contractor.

CLAUSE 6

Engineer-in-Charge shall, except as otherwise provided, ascertain and determine by measurement, the value in accordance with the contract of work done.

All measurement of all items having financial value shall be entered in Measurement Book and/or level field book so that a complete record is obtained of all works performed under the contract.

All measurements and levels shall be taken jointly by the Engineer-in-Charge or his authorized representative and by the contractor or his authorized representative from time to time during the progress of the work and such measurements shall be signed and dated by the Engineer-
in-charge and the contractor or their representatives in token of their acceptance. If the contractor objects to any of the measurements recorded, a note shall be made to that effect with reason and signed by both the parties.

If for any reason the contractor or his authorized representative is not available and the work of recording measurements is suspended by the Engineer-in-Charge or his representative, the Engineer-in-Charge and the Institute shall not entertain any claim from contractor for any loss or damages on this account. If the contractor or his authorized representative does not remain present at the time of such measurements after the contractor or his authorized representative has been given a notice in writing three (3) days in advance or fails to countersign or to record objection within a week from the date of the measurement, then such measurements recorded in his absence by the Engineer-in-Charge or his representative shall be deemed to be accepted by the Contractor.

The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for measurements and recording levels.

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

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

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

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

CLAUSE 6A

Engineer-in-Charge shall, except as otherwise provided, ascertain and determine by measurement the value of work done in accordance with the contract. All measurements of all items having financial value shall be entered by the contractor and compiled in the shape of the Computerized Measurement Book having pages of A-4 size as per the format of the Institute so that a complete record is obtained of all the items of works performed under the contract. All such measurements and levels recorded by the contractor or his authorized representative from time to time, during the progress of the work, shall be got checked by the contractor from the Engineer-in-Charge or his authorized representative as per interval or program fixed in consultation with Engineer-in-Charge or his authorized representative. After the necessary corrections made by the Engineer-in-Charge, the measurement sheets shall be returned to the
contractor for incorporating the corrections and for resubmission to the Engineer-in-Charge for the dated signatures by the Engineer-in-Charge and the contractor or their representatives in token of their acceptance.

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

The final, fair, computerized measurement book given by the contractor, duly bound, with its page’s machine numbered, should be 100% correct, and no cutting or over-writing in the measurements would thereafter be allowed. If at all any error is noticed, the contractor shall have to submit a fresh computerized MB with its pages duly machine numbered and bound, after getting the earlier MB cancelled by the Institute. Thereafter, the MB shall be taken in the Office records, and allotted a number as per the Register of Computerized MBs. This should be done before the corresponding bill is submitted to the Office for payment. The contractor shall submit two spare copies of such computerized MB’s for the purpose of reference and record by the various officers of the Institute.

The contractor shall also submit to the department separately his computerized Abstract of Cost and the bill based on these measurements, duly bound, and its page’s machine numbered along with two spare copies of the “bill. Thereafter, this bill will be processed by the Office and allotted a number as per the computerized record in the same way as done for the measurement book meant for measurements.

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

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

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

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

**CLAUSE 7**

No payment shall be made for work, estimated to cost Rs. Twenty thousand or less till after the whole of the work shall have been completed and certificate of completion given. For works estimated to cost over Rs. Twenty thousand, the interim or running account bills shall be submitted by the contractor for the work executed on the basis of such recorded measurements on the format of the Institute in triplicate on or before the date of every month fixed for the same by the Engineer-in-Charge. The contractor shall not be entitled to be paid any such interim payment if the gross work done together with net payment/adjustment of advances for material collected, if any, since the last such payment is less than the amount specified in Schedule ‘F’, in which case the interim bill shall be prepared on the appointed date of the month after the requisite progress is achieved. Engineer-in-Charge shall arrange to have the bill verified by taking or causing to be taken, where necessary, the requisite measurements of the work. In the event of the failure of the contractor to submit the bills, Engineer-in-Charge shall prepare or cause to be prepared such bills in which event no claims whatsoever due to delays on payment including that of interest shall be payable to the contractor. Payment on account of amount admissible shall be made by the Engineer-in-Charge certifying the sum to which the contractor is considered entitled by way of interim payment at such rates as decided by the Engineer-in-Charge. The amount admissible shall be paid by 10th working day after the day of presentation of the bill by the Contractor to the Engineer-in-Charge or his Asstt. Engineer together with the account of the material issued by the Institute, or dismantled materials, if any. In the case of works outside the headquarters of the Engineer-in-Charge, the period of ten working days will be extended to fifteen working days.

All such interim payments shall be regarded as payment by way of advances against final payment only and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be rejected, removed, taken away and reconstructed or re-erected. Any certificate given by the Engineer-in-Charge relating to the work done or materials delivered forming part of such payment, may be modified or corrected by any subsequent such certificate(s) or by the final certificate and shall not by itself be conclusive evidence that any work or materials to which it relates is/are in accordance with the contract and specifications. Any such interim payment, or any part thereof shall not in any respect conclude, determine or affect in any way powers of the Engineer-in-Charge under the contract or any of such payments be treated as final settlement and adjustment of accounts or in any way vary or affect the contract. Pending consideration of extension of date of completion, interim payments shall continue to be made as herein provided without prejudice to the right of the department to take action under the terms of this contract for delay in the completion of work, if the extension of date of completion is not granted by the competent authority.
Payments in composite Contracts

The Engineer-in-Charge in his sole discretion on the basis of a certificate from the Asstt. Engineer to the effect that the work has been completed up to the level in question make interim advance payments without detailed measurements for work done (other than foundations, items to be covered under finishing items) up to lintel level (including sunshade etc.) and slab level, for each floor working out at 75% of the assessed value. The advance payments so allowed shall be adjusted in the subsequent interim bill by taking detailed measurements thereof.

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

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

Completion Certificate and Completion Plans

CLAUSE 8

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

CLAUSE 8A

When the annual repairs and maintenance of works are carried out, the splashes and droppings from white washing, colour washing, painting etc., on walls, floor, windows, etc. shall be removed and the surface cleaned simultaneously with the completion of these items of work in the individual rooms, quarters or premises etc. where the work is done: without waiting for the actual completion of all the other items of work in the
contract. In case the contractor fails to comply with the requirements of this clause, the Engineer-in-Charge shall have the right to get this work done at the cost of the contractor either departmentally or through any other agency. Before taking such action, the Engineer-in-Charge shall give ten days’ notice in writing to the contractor.

**CLAUSE 8B**

The contractor shall submit completion plan as required vide General Specifications for Electrical works (Part-I internal) 2005 and (Part-II External) 1994 as applicable within thirty days of the completion of the work.

In case, the contractor fails to submit the completion plan as aforesaid, he shall be liable to pay a sum equivalent to 2.5% of the value of the work subject to a ceiling of Rs. 15,000 (Rs. Fifteen thousand only) as may be fixed by the Superintending Engineer-in-charge and in this respect the decision of the Director NID shall be final and binding on the contractor.

The contractor shall submit completion plan for water, sewerage and drainage line plan within thirty days of the completion of the work.

In case, the contractor fails to submit the completion plan as aforesaid, the department will get it done through other agency at his cost and actual expenses incurred plus Rs. 15,000/- for the same shall be recovered from the contractor.

**CLAUSE 9**

The final bill shall be submitted by the contractor in the same manner as specified in interim bills within three months of physical completion of the work or within one month of the date of the final certificate of completion furnished by the Engineer-in-Charge whichever is earlier. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payments of those items of the bill in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by Engineer-in-Charge will, as far as possible be made within the period specified herein under, the period being reckoned from the date of receipt of the bill by the Engineer-in-Charge or his authorized Asstt. Engineer, complete with account of materials issued by the Institute and dismantled materials.

(i) If the Tendered value of work is up to Rs. 45 lacs: 2 months
(ii) If the Tendered value of work is more than Rs. 45 lacs and up to Rs. 2.5 Crore: 3 months
(iii) If the Tendered value of work exceeds Rs. 2.5 Crore: 6 months

In case of delay in payment of final bills after prescribed time limit, a simple interest @ 7.5% per annum shall be paid to the contractor from the date of expiry of prescribed time limit which will be compounded on yearly basis, provided the final bill submitted by the contractor found to be in order.

**CLAUSE 9A**

Payments due to the contractor may, if so desired by him, be made to his bank, registered financial, co-operative or thrift societies or recognized financial institutions instead of direct to him provided that the contractor furnishes to the Engineer-in-Charge (1) an authorization in the form of a legally valid document such as a power of attorney conferring authority on the bank; registered financial, co-operative or thrift societies or recognized financial institutions to receive payments and (2) his own acceptance of the correctness of the amount made out as being due to him by NID or his signature on the bill or other claim preferred against NID before settlement by the Engineer-in-Charge of the account or claim by payment to the bank, registered financial, co-operative or thrift societies or recognized financial institutions. While the receipt given by such banks; registered financial, co-operative or thrift societies or recognized financial institutions shall constitute a full and sufficient discharge for the payment, the contractor shall whenever possible present his bills duly receipted and discharged through his bank, registered financial, co-operative or thrift societies or recognized financial institutions.
Nothing herein contained shall operate to create in favor of the bank; registered financial, co-operative or thrift societies or recognized financial institutions any rights or equities vis-a-vis the NID Authority.

**CLAUSE 10**

Materials which NID will supply are shown in Schedule ‘B’ which also stipulates quantum, place of issue and rate(s) to be charged in respect thereof. The contractor shall be bound to procure them from the Engineer-in-Charge.

As soon as the work is awarded, the contractor shall finalize the programmer for the completion of work as per clause 5 of this contract and shall give his estimates of materials required on the basis of drawings/schedule of quantities of the work. The Contractor shall give in writing his requirement to the Engineer-in-Charge which shall be issued to him keeping in view the progress of work as assessed by the Engineer-in-Charge, in accordance with the agreed phased programmer of work indicating monthly requirements of various materials. The contractor shall place his indent in writing for issue of such materials at least 7 days in advance of his requirement.

Such materials shall be supplied for the purpose of the contract only and the value of the materials so supplied at the rates specified in the aforesaid schedule shall be set off or deducted, as and when materials are consumed in items of work (including normal wastage) for which payment is being made to the contractor, from any sum then due or which may therefore become due to the contractor under the contract or otherwise or from the security deposit. At the time of submission of bills, the contractor shall certify that balance of materials supplied is available at site in original good condition.

The contractor shall submit along with every running bill (on account or interim bill) material wise reconciliation statements supported by complete calculations reconciling total issue, total consumption and certified balance (diameter/section-wise in the case of steel) and resulting variations and reasons therefore. Engineer-in-Charge shall (whose decision shall be final and binding on the contractor) be within his rights to follow the procedure of recovery in clause 42 at any stage of the work if reconciliation is not found to be satisfactory.

The contractor shall bear the cost of getting the material issued, loading, transporting to site, unloading, storing under cover as required, cutting assembling and joining the several parts together as necessary. Notwithstanding anything to the contrary contained in any other clause of the contract and (or the CPWA Code) all stores/materials so supplied to the contractor or procured with the assistance of the NID shall remain the absolute property of NID and the contractor shall be the trustee of the stores/materials, and the said stores/materials shall not be removed/disposed off from the site of the work on any account and shall be at all times open to inspection by the Engineer-in-Charge or his authorized agent. Any such stores/materials remaining unused shall be returned to the Engineer-in-Charge in as good a condition in which they were originally supplied at a place directed by him, at a place of issue or any other place specified by him as he shall require, but in case it is decided not to take back the stores/materials the contractor shall have no claim forcompensation on any account of such stores/materials so supplied to him as aforesaid and not used by him or for any wastage in or damage to such stores/materials.

On being required to return the stores/materials, the contractor shall hand over the stores/materials on being paid or credited such price as the Engineer-in-Charge shall determine, having due regard to the condition of the stores/materials. The price allowed for credit to the contractor, however, shall be at the prevailing market rate not exceeding the amount charged to him, excluding the storage charge, if any. The decision of the Engineer-in-Charge shall be final and conclusive. In the event of breach of the aforesaid condition, the contractor shall in addition to throwing himself open to account for contravention of the terms of the licences or permit and/or for criminal breach of trust, be liable to NID for all advantages or profits resulting or which in the usual course would have resulted to him by reason of such breach. Provided that the contractor shall in no case be entitled to any compensation or damages on account of any delay in supply or non-supply thereof all or any such materials and stores provided further
that the contractor shall be bound to execute the entire work if the materials are supplied by the NID within the original scheduled time for completion of the work plus 50% thereof or schedule time plus 6 months whichever is more if the time of completion of work exceeds 12 months, but if a part of the materials only has been supplied within the aforesaid period, then the contractor shall be bound to do so much of the work as may be possible with the materials and stores supplied in the aforesaid period. For the completion of the rest of the work, the contractor shall be entitled to such extension of time as may be determined by the Engineer-in-Charge whose decision in this regard shall be final and binding on the contractor.

The contractor shall see that only the required quantities of materials are got issued. Any such material remaining unused and in perfectly good/original condition at the time of completion or determination of the contract shall be returned to the Engineer-in-Charge at the stores from which it was issued or at a place directed by him by a notice in writing. The contractor shall not be entitled for loading, transporting, unloading and stacking of such unused material except for the extra lead, if any involved, beyond the original place of issue.

CLAUSE 10A
The contractor shall, at his own expense, provide all materials, required for the works other than those which are stipulated to be supplied by NID.

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

The Contractor shall at his risk and cost submit the samples of materials to be tested or analyzed and shall not make use of or incorporate in the work any materials represented by the samples until the required tests or analysis have been made and materials finally accepted by the Engineer-in-Charge. The Contractor shall not be eligible for any claim or compensation either arising out of any delay in the work or due to any corrective measures required to be taken on account of and as a result of testing of materials.
The contractor shall, at his risk and cost, make all arrangements and shall provide all facilities as the Engineer-in-Charge may require for collecting, and preparing the required number of samples for such tests at such time and 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. The Engineering-Charge or his authorized representative shall at all times have access to the works and to all workshops and places where work is being prepared or from where materials, manufactured articles or machinery are being obtained for the works and the contractor shall afford every facility and every assistance in obtaining the right to such access.

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

The contractor shall at his own expense, provide a material testing lab at the site for conducting routine field tests. The lab shall be equipped at least with the testing equipment as specified in schedule F.

**CLAUSE 10B**

- **Secured Advance on Non-perishable Materials**
  - (i) Deleted

- **Mobilization Advance**
  - Deleted

- **Plant Machinery & Shuttering Material Advance**
  - (ii) Deleted

- **Interest & Recovery**
  - (iii) Not Applicable

**CLAUSE 10C**

- **Payment on Account of Increase in Prices/Wages due to Statutory Order(s)**
  - Deleted.
CLAUSE 10 CA

Payment due to variation in prices of materials after receipt of tender

Deleted.

CLAUSE 10 D

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

CLAUSE 11

The contractor shall execute the whole and every part of the work in the most substantial and workmanlike manner both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractor shall also conform exactly, fully and faithfully to the design, drawings and instructions in writing in respect of the work signed by the Engineer-in-Charge and the contractor shall be furnished free of charge one copy of the contract documents together with specifications, designs, drawings and instructions as are not included in the standard specifications of Central Public Works Department specified in Schedule ‘F’ or in any Bureau of Indian Standard or any other, published standard or code or, Schedule of Rates or any other printed publication referred to elsewhere in the contract.

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

CLAUSE 12 :

The Engineer-in-Charge shall have power (i) to make alteration in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and (ii) to omit a part of the works in case of non-availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Engineer-in-Charge and such alterations, omissions, additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.
The completion cost of any agreement for Maintenance works including works of upgradation, aesthetic, special repair, addition/alteration shall not exceed 1.25 times of Tendered amount.

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

(i) In the proportion which the additional cost of the altered, additional or substituted work, bears to the original tendered value plus

(ii) 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Engineer-in-Charge.

12.2 A. For Project and original works:

In the case of extra item(s) (items that are completely new, and are in addition to the items contained in the contract), the contractor may within fifteen days of receipt of order or occurrence of the item(s) claim rates, supported by proper analysis, for the work and the engineer-in-charge shall within prescribed time limit of the receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

12.3 For the purpose of operation of Schedule “F”, the following works shall be treated as works relating to foundation unless & otherwise defined in the contract:

(i) For Buildings: All works up to 1.2 meters above ground level or up to floor 1 level whichever is lower

(ii) For abutments, piers and well staining: All works up to 1.2 m above the bed level.

(iii) For retaining walls, wing walls, compound walls, chimneys, overhead reservoirs/tanks and other elevated structures: All works up to 1.2 meters above the ground level.

(iv) For reservoirs/tanks (other than overhead reservoirs/tanks): All works up to 1.2 meters above the ground level.

(v) For basement: All works up to 1.2 m above ground level or up to floor 1 level whichever is lower.

(vi) For Roads, all items of excavation and filling including treatment of subbase.

12.4 Any operation incidental to or necessarily has to be in contemplation of Tenderer while filing tender, or necessary for proper execution of the item included in the Schedule of quantities or in the schedule of rates mentioned above, whether or not, specifically indicated in the description of the item and the relevant specifications, shall be deemed to be included in the rates quoted by the tenderer or the rate given in the said schedule of rates, as the case may be. Nothing extra shall be admissible for such operations.
Clause 13

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

The contractor shall be paid at contract rates, full amount for works executed at site and, in addition, a reasonable amount as certified by the Engineer-in-Charge for the items here under mentioned which could not be utilized on the work to the full extent in view of the foreclosure:

(i) Any expenditure incurred on preliminary site work, e.g. temporary access roads, temporary labour huts, staff quarters and site office; storage accommodation and water storage tanks.

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

(iii) If any materials supplied by NID are rendered surplus, the same except normal wastage shall be returned by the contractor to NID at rates not exceeding those at which these were originally issued, less allowance for any deterioration or damage which may have been caused whilst the materials were in the custody of the contractor. In addition, cost of transporting such materials from site to NID stores, if so required by NID, shall be paid.

(iv) Reasonable compensation for transfer of T & P from site to contractor’s permanent stores or to his other works, whichever is less. If T & P are not transported to either of the said places, no cost of transportation shall be payable.

(v) Reasonable compensation for repatriation of contractor’s site staff and imported labour to the extent necessary.

The contractor shall, if required by the Engineer-in-Charge, furnish to him, books of account, wage books, time sheets and other relevant documents and evidence as may be necessary to enable him to certify the reasonable amount payable under this condition.

The reasonable amount of items on (i), (iv) and (v) above shall not be in excess of 2% of the cost of the work remaining incomplete on the date of closure, i.e. total stipulated cost of the work as per accepted tender less the cost of work actually executed under the contract and less the cost of contractor’s materials at site taken over by the NID as per item (ii) above. Provided always that against any payments due to the contractor on this account or otherwise, the Engineer-in-Charge shall be entitled to recover or be credited with any outstanding balances due from the contractor for advance paid in respect of any tool, plants and materials and any other sums which at the date of termination were recoverable by the NID from the contractor under the terms of the contract.

A compensation for such eventuality, on account of damages etc. shall be payable @ 0.5% of cost of work remaining incomplete on date of closure i.e. total stipulated cost of the work less the cost of work actually executed under the contract shall be payable.
### Carrying out part Clause 14

**If contractor:**
- at any time makes default during currency of work or does not execute any work with due diligence and continues to do so even after a notice in writing of 7 days in this respect from the Engineer-in-Charge; or
- Commits default in complying with any of the terms and conditions of the contract and does not remedy it or takes effective steps to remedy it within 7 days even after a notice in writing is given in that behalf by the Engineer-in-Charge; or
- Fails to complete the work(s) or items of work with individual dates of completion, on or before the date(s) so determined, and does not complete them within the period specified in the notice given in writing in that behalf by the Engineer-in-Charge.

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

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

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

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

Any excess expenditure incurred or to be incurred by NID in completing the part work / part incomplete work of any item(s) or the excess loss of damages suffered or may be suffered by NID as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to NID in law or per as agreement be recovered from any money due to the contractor on any account, and if such money is insufficient, the contractor shall be called upon in writing and shall be liable to pay the same within 30 days.

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

In the event of above course being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements or made any advance on any account or with a view to the execution of the work or the contract.
CLAUSE 15

Suspension of Work

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

(a) on account of any default on the part of the contractor or;
(b) for proper execution of the works or part thereof for reasons other than the default of the contractor; or
(c) for safety of the works or part thereof.

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

(ii) If the suspension is ordered for reasons (b) and (c) in sub-para (i) above:

(a) the contractor shall be entitled to an extension of time equal to the period of every such suspension PLUS 25%, for completion of the item or group of items of work for which a separate period of completion is specified in the contract and of which the suspended work forms a part, and;

(b) If the total period of all such suspensions in respect of an item or group of items or work for which a separate period of completion is specified in the contract exceeds thirty days, the contractor shall, in addition, be entitled to such compensation as the Engineer-in-Charge may consider reasonable in respect of salaries and/or wages paid by the contractor to his employees and labour at site, remaining idle during the period of suspension, adding thereto 2% to cover indirect expenses of the contractor provided the contractor submits his claim supported by details to the Engineer-in-Charge within fifteen days of the expiry of the period of 30 days.

(iii) If the works or part thereof is suspended on the orders of the Engineer-in-Charge for more than three months at a time, except when suspension is ordered for reason (a) in sub-para (i) above, the contractor may after receipt of such order serve a written notice on the Engineer-in-Charge requiring permission within fifteen days from receipt by the Engineer-in-Charge of the said notice, to proceed with the work or part thereof in regard to which progress has been suspended and if such permission is not granted within that time, the contractor, if he intends to treat the suspension, where it affects only a part of the works as an omission of such part by NID or where it affects whole of the works, as an abandonment of the works by NID, shall within ten days of expiry of such period of 15 days give notice in writing of his intention to the Engineer-in-Charge. In the event of the contractor treating the suspension as an abandonment of the contract by NID, he shall have no claim to payment of any compensation on account of any profit or advantage which he might have derived from the execution of the work in full but which he could not derive in consequence of the abandonment. He shall, however, be entitled to such compensation, as the Engineer-in-Charge may consider reasonable, in respect of salaries and/or wages paid by him to his employees and labour at site, remaining idle in consequence adding to the total thereof 2% to cover indirect expenses of the contractor provided the contractor submits his claim supported by details to the Engineer-in-Charge within 30 days of the expiry of the period of 3 months.
CLAUSE 15 A

Compensation in case of Delay of Supply of Material by NID.

The contractor shall not be entitled to claim any compensation from NID for the loss suffered by him on account of delay by NID in the supply of materials in schedule 'B' where such delay is covered by the difficulties relating to the supply of wagons, force majeure or any reasonable cause beyond the control of the NID.

This clause 15 A will not be applicable for works where no material is stipulated.

CLAUSE 16

Action in case Work not done as per Specifications

All works under or in course of execution or executed in pursuance of the contract, not done authorized subordinates in charge of the work and all the superior officers, officer of the Quality Assurance Unit of the Department or any organization engaged by the NID for Quality Assurance and of the Chief Technical Examiner’s Office, and the contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of such officers has been given to the contractor, either himself be present to receive orders and instructions or have a agent duly accredited in writing, present for that purpose. Orders given to the Contractor’s agent shall be considered to have the same force as if they had been given to the contractor himself.

If it shall appear to the Engineer-in-charge or his authorized subordinates in charge of the work or to the Chief Engineer in charge of Quality Assurance or his subordinate officers or the officers of the organization engaged by the NID for Quality Assurance or to the Chief Technical Examiner or his subordinate officers, that any work has been executed with unsound, imperfect, or unskillful workmanship, or with materials or articles provided by him for the execution of the work which are unsound or of a quality inferior to that contracted or otherwise not in accordance with the contract, the contractor shall, on demand in writing which shall be made within twelve months (six months in the case of work costing Rs. 10 Lac and below except roadwork) of the completion of the work from the Engineer-in-Charge specifying the work, materials paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of the failing to do so within a period specified by the Engineer-in-Charge in his demand aforesaid, then the contractor shall be liable to pay compensation at the same rate as under clause 2 of the contract (for non-completion of the work in time) for this default. In such case the Engineer-in-Charge may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates as the authority specified in schedule 'F' may consider reasonable during the preparation of on account bills or final bill if the item is so acceptable without detriment to the safety and utility of the item and the structure or he may reject the work outright without any payment and/or get it and other connected and incidental items rectified, or removed and re-executed at the risk and cost of the contractor. Decision of the Engineer-in-Charge to be conveyed in writing in respect of the same will be final and binding on the contractor.

CLAUSE 17

Contractor Liable for Damages, defects during defect liability period

If the contractor or his working people or servants shall break, deface, injure or destroy any part of building in which they may be working, or any building, road, road kerb, fence, enclosure, water pipe, cables, drains, electric or telephone post or wires, trees, grass or grassland, or cultivated ground contiguous to the premises on which the work or any part is being executed, or if any damage shall happen to the work while in progress, from any cause whatever or if any defect, shrinkage or other faults appear in the work within twelve months (six months in the case of work costing Rs. 10 lacs and below except road work) or of a sufficient portion thereof. The security deposit of the contractor shall not be refunded before the expiry of twelve months (six months in the case of work costing Rs. 10 lacs and below except road work) after the issue of the certificate final or otherwise, of completion of
work, or till the final bill has been prepared and passed whichever is later. Provided that in the case of road work, if in the opinion of the Engineer-in-Charge, half of the security deposit is sufficient, to meet all liabilities of the contractor under this contract, half of the security deposit will be refundable after six months and the remaining half after twelve months of the issue of the said certificate of completion or till the final bill has been prepared and passed whichever is later.

In case of Maintenance and Operation works of E&M services, the security deposit deducted from contractors shall be refunded within one month from the date of final payment or within one month from the date of completion of the maintenance contract whichever is earlier.

**CLAUSE 18**

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

**CLAUSE 18 A**

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

**CLAUSE 18 B**

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

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

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

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

**CLAUSE 19A**

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

**CLAUSE 19 B**

Payment of wages:

(i) The contractor shall pay to labor employed by him either directly or through subcontractors, wages not less than fair wages as defined in the C.P.W.D. Contractor’s Labour Regulations or as per the provisions of the Contract Labor (Regulation and Abolition) Act, 1970 and the contract Labor (Regulation and Abolition) Central Rules, 1971, wherever applicable.

(ii) The contractor shall, notwithstanding the provisions of any contract to the contrary, cause to be paid fair wage to labour indirectly engaged on the work, including any labour engaged by his sub-contractors in connection with the said work, as if the labour had been immediately employed by him.

In respect of all labour directly or indirectly employed in the works for performance of the contractor’s part of this contract, the contractor shall comply with or cause to be complied with the Central Public Works Department contractor’s Labour Regulations made by Government from time to time in regard to payment of wages, wage period, deductions from wages recovery of wages not paid and deductions unauthorized made, maintenance of wage books or wage slips, publication of scale of wages and other terms of employment, inspection and submission of periodical returns and all other matters of the like nature or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.

(iv) (a) The Engineer-in-Charge concerned shall have the right to deduct from the moneys due to the contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfillment of the conditions of the contract for the benefit of the workers, non-payment of wages or of deductions made from his or their wages which are not justified by their terms of the contract or non-observance of the Regulations.

(b) Under the provision of Minimum Wages (Central) Rules, 1950, the contractor is bound to allow to the labors directly or indirectly employed in the works one-day rest for 6 days’ continuous work and pay wages at the same rate as for duty. In the event of default, the Engineer-in-Charge shall have the right to deduct the sum or sums not paid on account of wages for weekly holidays to any labors and pay the same to the persons entitled thereto from any money due to the contractor by the Engineer-in-Charge concerned.

In the case of Union Territory of Delhi, however, as the all-inclusive minimum daily wages fixed under Notification of the Delhi Administration No.F.12(162) MWO/DAB/43884-91, dated 31-12-1979 as amended from time to time are...
inclusive of wages for the weekly day of rest, the question of extra payment for weekly holiday would not arise.


(vi) The contractor shall indemnify and keep indemnified NID against payments to be made under and for the observance of the laws aforesaid and the C.P.W.D. Contractor’s Labour Regulations without prejudice to his right to claim indemnity from his sub-contractors.

(vii) The laws aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a breach of this contract.

(viii) Whatever is the minimum wage for the time being, or if the wage payable is higher than such wage, such wage shall be paid by the contractor to the workmen directly without the intervention of Jamadar and that Jamadar shall not be entitled to deduct or recover any amount from the minimum wage payable to the workmen as and by way of commission or otherwise.

(ix) The contractor shall ensure that no amount by way of commission or otherwise is deducted or recovered by the Jamadar from the wage of workmen.

CLAUSE 19C
In respect of all labour directly or indirectly employed in the work for the performance of the contractor’s part of this contract, the contractor shall at his own expense arrange for the safety provisions as per C.P.W.D. Safety Code framed from time to time and shall at his own expense provide for all facilities in connection therewith. In case the contractor fails to make arrangement and provide necessary facilities as aforesaid, he shall be liable to pay a penalty of Rs.200/- for each default and in addition, the Engineer-in-Charge shall be at liberty to make arrangement and provide facilities as aforesaid and recover the costs incurred in that behalf from the contractor.

CLAUSE 19D
The contractor shall submit by the 4th and 19th of every month, to the Engineer-in-Charge, a true statement showing in respect of the second half of the preceding month and the first half of the current month respectively:

1. the number of laborers employed by him on the work,
2. their working hours,
3. the wages paid to them,
4. the accidents that occurred during the said fortnight showing the circumstances under which they happened and the extent of damage and injury caused by them.
5. the number of female workers who have been allowed maternity benefit according to Clause 19F and the amount paid to them.

Failing which the contractor shall be liable to pay to NID, a sum not exceeding Rs.200/- for each default or materially incorrect statement. The decision of the NID Authorities shall be final in deducting from any bill due to the contractor, the amount levied as fine and be binding on the contractor.

CLAUSE 19E
In respect of all labour directly or indirectly employed in the works for the performance of the contractor’s part of this contract, the contractor shall comply with or cause to be complied with all the rules framed by NID from time to time for the protection of health and sanitary arrangements for workers employed by the contractors.
CLAUSE 19 F

Leave and pay during leave shall be regulated as follows:

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

2. Pay:
   (i) in the case of delivery - leave pay during maternity leave will be at the rate of the women's average daily earnings, calculated on total wages earned on the days when full time work was done during a period of three months immediately preceding the date on which she gives notice that she expects to be confined or at the rate of Rupee one only a day whichever is greater.
   (ii) in the case of miscarriage - leave pay at the rate of average daily earning calculated on the total wages earned on the days when full time work was done during a period of three months immediately preceding the date of such miscarriage.

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

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

CLAUSE 19 G

In the event of the contractor(s) committing a default or breach of any of the provisions of the Central Public Works Department, Contractor's Labour Regulations and Model Rules for the protection of health and sanitary arrangements for the workers as amended from time to time or furnishing any information or submitting or filing any statement under the provisions of the above Regulations and Rules which is materially incorrect, he/they shall, without prejudice to any other liability, pay to the NID a sum not exceeding Rs.200/- for every default, breach or furnishing, making, submitting, filing such materially incorrect statements and in the event of the contractor(s) defaulting continuously in this respect, the penalty may be enhanced to Rs.200/- per day for each day of default subject to a maximum of 5 per cent of the estimated cost of the work put to tender. The decision of the Engineer-in-Charge shall be final and binding on the parties.

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

CLAUSE 19 H

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

(i) (a) The minimum height of each hut at the eaves level shall be 2.10m (7 ft.) and the floor area to be provided will be at the rate of 2.7 sq.m. (30 sq.ft.) for each member of the worker’s family staying with the laborers.

(b) The contractor(s) shall in addition construct suitable cooking places having a minimum area of 1.80m x 1.50m (6'x5') adjacent to the hut for each family.

(c) The contractor(s) shall also construct temporary latrines and urinals for the use of the laborers each on the scale of not less than four per each one hundred of the total strength, separate latrines and urinals being provided for women.

(d) The contractor(s) shall construct sufficient number of bathing and washing places, one unit for every 25 persons residing in the camp. These bathing and washing places shall be suitably screened.

(ii) (a) All the huts shall have walls of sun-dried or burnt bricks laid in mud mortar or other suitable local materials as may be approved by the Engineer-in-Charge. In case of sun-dried bricks, the walls should be plastered with mud gobri on both sides. The floor may be kutch but plastered with mud gobri and shall be at least 15 cm (6") above the surrounding ground. The roofs shall be laid with thatch or any other materials as may be approved by the Engineer-in-Charge and the contractor shall ensure that throughout the period of their occupation, the roofs remain water-tight.

(b) The contractor(s) shall provide each hut with proper ventilation.

(c) All doors, windows, and ventilators shall be provided with suitable leaves for security purposes.

(d) There shall be kept an open space of at least 7.2m (8 yards) between the rows of huts which may be reduced to 6m (20 ft.) according to the availability of site with the approval of the Engineer-in-Charge. Back to back construction will be allowed.

(iii) Water Supply - The contractor(s) shall provide adequate supply of water for the use of laborers. The provisions shall not be less than two gallons of pure and wholesome water per head per day for drinking purposes and three gallons of clean water per head per day for bathing and washing purposes. Where piped water supply is available, supply shall be at stand posts and where the supply is from wells or river, tanks which may be of metal or masonry, shall be provided. The contractor(s) shall also at his/ their own cost make arrangements for laying pipe lines for water supply to his/ their labour camp from the existing mains wherever available, and shall pay all fees and charges therefore.

(iv) The site selected for the camp shall be high ground, removed from jungle.

(v) Disposal of Excreta - The contractor(s) shall make necessary arrangements for the disposal of excreta from the latrines by trenching or incineration which shall be according to the requirements laid down by the Local Health Authorities. If trenching or incineration is not allowed, the contractor(s) shall make arrangements for the removal of the excreta through the Municipal Committee/authority and inform it about the number of laborers employed so that arrangements may be made by such Committee/authority for the removal of the excreta. All charges on this account shall be borne by the contractor and paid direct by him to the Municipality/authority. The contractor shall provide one sweeper for every eight seats in case of dry system.

(vi) Drainage - The contractor(s) shall provide efficient arrangements for draining away silage water so as to keep the camp neat and tidy.
The contractor(s) shall make necessary arrangements for keeping the camp area sufficiently lighted to avoid accidents to the workers.

**Sanitation** - The contractor(s) shall make arrangements for conservancy and sanitation in the labour camps according to the rules of the Local Public Health and Medical Authorities.

**CLAUSE 19 I**

The Engineer-in-Charge may require the contractor to dismiss or remove from the site of the work any person or persons in the contractors' employ upon the work who may be incompetent or misconduct himself and the contractor shall forthwith comply with such requirements. In respect of maintenance/repair or renovation works etc. where the labour have an easy access to the individual houses, the contractor shall issue identity cards to the laborers, whether temporary or permanent and he shall be responsible for any untoward action on the part of such labour. AE/JE will display a list of contractors working in the colony/Blocks on the notice board in the colony and also at the service center, to apprise the residents about the same.

**CLAUSE 19J**

It shall be the responsibility of the contractor to see that the building under construction is not occupied by anybody unauthorized during construction, and is handed over to the Engineer-in-Charge with vacant possession of complete building. If such building though completed is occupied illegally, then the Engineer-in-Charge shall have the option to refuse to accept the said building/buildings in that position. Any delay in acceptance on this account will be treated as the delay in completion and for such delay, a levy Upto 5% of tendered value of work may be imposed by the NID Authority whose decision shall be final both with regard to the justification and quantum and be binding on the contractor. However, the NID Authority, through a notice, may require the contractor to remove the illegal occupation any time on or before construction and delivery.

**CLAUSE 19K**

The contractor shall, at all stages of work, deploy skilled/semi-skilled tradesmen who are qualified and possess certificate in particular trade from CPWD Training Institute/Industrial Training Institute/National Institute of construction Management and Research (NICMAR)/National Academy of Construction, CIDC or any similar reputed and recognized Institute managed/ certified by State/Central Government. The number of such qualified tradesmen shall not be less than 20% of total skilled/semi-skilled workers required in each trade at any stage of work. The contractor shall submit number of man days required in respect of each trade, its scheduling and the list of qualified tradesmen along with requisite certificate from recognized Institute to Engineer in charge for approval. Notwithstanding such approval, if the tradesmen are found to have inadequate skill to execute the work of respective trade, the contractor shall substitute such tradesmen within two days of written notice from Engineering- Charge. Failure on the part of contractor to obtain approval of Engineer-in-Charge or failure to deploy qualified tradesmen will attract a compensation to be paid by contractor at the rate of Rs. 100 per such tradesman per day. Decision of Engineer in Charge as to whether particular tradesman possesses requisite skill and amount of compensation in case of default shall be final and binding.

Provided always, that the provisions of this clause, shall not be applicable for works with estimated cost put to tender being less than Rs. 5 crores.

**CLAUSE 19L**

The ESI and EPF contributions 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 reimbursed by the Engineer-in-charge to the contractor on actual basis.
CLAUSE 20
The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, and Contract Labour (Regulation and Abolition) Act, 1970, amended from time to time and rules framed there under and other labour laws affecting contract labour that may be brought into force from time to time.

CLAUSE 21
The contract shall not be assigned or sublet without the written approval of the paid by contractor at the rate of Rs. 100 per such tradesman per day. Decision of Engineer in Charge as to whether particular tradesman possesses requisite skill and amount of compensation in case of default shall be final and binding. And if the contractor shall assign or sublet his contract, or attempt to do so, or become insolvent or commence any insolvency proceedings or make any composition with his creditors or attempt to do so, or if any bribe, gratuity, gift, loan, perquisite, reward or advantage pecuniary or otherwise, shall either directly or indirectly, be given, promised or offered by the contractor, or any of his servants or agent to any public officer or person in the employ of NID in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Engineer-in-Charge on behalf of the NID Authority shall have power to adopt the course specified in Clause 3 hereof in the interest of NID and in the event of such course being adopted, the consequences specified in the said Clause 3 shall ensue.

CLAUSE 22
All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of NID without reference to the actual loss or damage sustained and whether or not any damage shall have been sustained.

CLAUSE 23
Where the contractor is a partnership firm, the previous approval in writing of the Engineering-Charge shall be obtained before any change is made in the constitution of the firm. Where the contractor is an individual or a Hindu undivided family business concern, such approval as aforesaid shall likewise be obtained before the contractor enters into any partnership agreement where under the partnership firm would have the right to carry out the works hereby undertaken by the contractor. If previous approval as aforesaid is not obtained, the contract shall be deemed to have been assigned in contravention of Clause 21 hereof and the same action may be taken, and the same consequences shall ensue as provided in the said Clause 21.

CLAUSE 24
All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Engineer-in-Charge who shall be entitled to direct at what point or points and in what manner they are to be commenced, and from time to time carried on.
CLAUSE 25

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

(i) If the NID Authority fails to give his instructions or decision in writing within the aforesaid period or if the contractor is dissatisfied with the instructions or decision of the NID Authority, the contractor may, within 15 days of the receipt of NID Authority decision, appeal to the Building committee / Standing committee who shall afford an opportunity to the contractor to be heard, if the latter so desires, and to offer evidence in support of his appeal. The Chief Engine Building committee / Standing committee er shall give his decision within 30 days of receipt of contractor’s appeal. Building committee / Standing committee, the contractor may within 30 days from the receipt of the Building committee / Standing committee decision, appeal before the give notice to the Building committee / Standing committee for appointment of arbitrator on prescribed perform as per Appendix XV, failing which the said decision shall be final binding and conclusive and not referable to adjudication by the arbitrator.

It is a term of contract that each party invoking arbitration must exhaust the aforesaid mechanism of settlement of claims/disputes prior to invoking arbitration.

(ii) Except where the decision has become final, binding and conclusive in terms of Sub Para (i) above, disputes or difference shall be referred for adjudication through arbitration by a sole arbitrator appointed by the Building committee / Standing committee, CPWD, in charge of the work the arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever, another sole arbitrator shall be appointed in the manner aforesaid. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor.

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

It is also a term of this contract that no person, other than a person appointed by such building committee / standing committee, as aforesaid, should act as arbitrator and if for any reason that is not possible, the matter shall not be referred to arbitration at all.

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

The arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 (26 of 1996) or any statutory modifications or re-enactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceeding under this clause.
It is also a term of this contract that the arbitrator shall adjudicate on only such disputes as are referred to him by the appointing authority and give separate award against each dispute and claim referred to him and in all cases where the total amount of the claims by any party exceeds Rs. 1,00,000/-, the arbitrator shall give reasons for the award.

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

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

**CLAUSE 26**

**Contractor to indemnify NID against Patent Rights**

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

**CLAUSE 27**

**Lump sum Provisions in Tender**

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

**CLAUSE 28**

**Action where no Specifications are specified**

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

**CLAUSE 29**

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

It is an agreed term of the contract that the sum of money or moneys so withheld or
retained under the lien referred to above by the Engineer-in-Charge or NID will be kept
withheld or retained as such by the Engineer-in-Charge or NID till the claim arising out of or
under the contract is determined by the arbitrator (if the contract is governed by the
arbitration clause) by the competent court, as the case may be and that the contractor will
have no claim for interest or damages whatsoever on any account in respect of such
withholding or retention under the lien referred to above and duly notified as such to the
contractor. For the purpose of this clause, where the contractor is a partnership firm or a
limited company, the Engineer-in-Charge or the NID shall be entitled to withhold and also
have a lien to retain towards such claimed amount or amounts in whole or in part from any
sum found payable to any partner/limited company as the case may be, whether in his
individual capacity or otherwise.

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

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

CLAUSE 29A

Lien in respect of claims in other Contracts

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

It is an agreed term of the contract that the sum of money so withheld or retained
under this clause by the Engineer-in-Charge or the NID will be kept withheld or
retained as such by the Engineer-in-Charge or the NID or till his claim arising out of the
same contract or any other contract is either mutually settled or determined by the
arbitration clause or by the competent court, as the case may be and that the
contractor shall have no claim for interest or damages whatsoever on this account or
on any other ground in respect of any sum of money withheld or retained under this
clause and duly notified as such to the contractor.
CLAUSE 30  Deleted

Employment of coal mining or controlled area labour not permissible

CLAUSE 31
The contractor(s) shall make his/their own arrangements for water required for the work and nothing extra will be paid for the same. This will be subject to the following conditions.

(i) That the water used by the contractor(s) shall be fit for construction purposes to the satisfaction of the Engineer-in-Charge.

(ii) The Engineer-in-Charge shall make alternative arrangements for supply of water at the risk and cost of contractor(s) if the arrangements made by the contractor(s) for procurement of water are in the opinion of the Engineer-in-Charge, unsatisfactory.

CLAUSE 31 A
Water if available may be supplied to the contractor by the department subject to the following conditions:

(i) The water charges @ 1 % shall be recovered on gross amount of the work done.

(ii) The contractor(s) shall make his/their own arrangement of water connection and laying of pipelines from existing main of source of supply.

(iii) The Department do not guarantee to maintain uninterrupted supply of water and it will be incumbent on the contractor(s) to make alternative arrangements for water at his/their own cost in the event of any temporary break down in the NID water main so that the progress of his/their work is not held up for want of water. No claim of damage or refund of water charges will be entertained on account of such break down.
CLAUSE 32
(i) Where there is no piped water supply arrangement and the water is taken by the contractor from the wells or hand pump constructed by the NID, no charge shall be recovered from the contractor on that account. The contractor shall, however, draw water at such hours of the day that it does not interfere with the normal use for which the hand pumps and wells are intended. He will also be responsible for all damage and abnormal repairs arising out of his use, the cost of which shall be recoverable from him. The Engineer-in-Charge shall be the final authority to determine the cost recoverable from the contractor on this account and his decision shall be binding on the contractor.

(ii) The contractor shall be allowed to construct temporary wells in NID land for taking water for construction purposes only after he has got permission of the Engineer-in-Charge in writing. No charges shall be recovered from the contractor on this account, but the contractor shall be required to provide necessary safety arrangements to avoid any accidents or damage to adjacent buildings, roads and service lines. He shall be responsible for any accidents or damage caused due to construction and subsequent maintenance of the wells and shall restore the ground to its original condition after the wells are dismantled on completion of the work.

CLAUSE 33
Notwithstanding anything contained to the contrary in this contract, where any materials for the execution of the contract are procured with the assistance of NID either by issue from NID stocks or purchase made under orders or permits or licences issued by NID, the contractor shall hold the said materials economically and solely for the purpose of the contract and not dispose of them without the written permission of the NID and return, if required by the Engineer-in-Charge, all surplus or unserviceable materials that may be left with him after the completion of the contract or at its termination for any reason whatsoever on being paid or credited such price as the Engineer-in-Charge shall determine having due regard to the condition of the materials. The price allowed to the contractor however shall not exceed the amount charged to him excluding the element of storage charges. The decision of the Engineer-in-Charge shall be final and conclusive. In the event of breach of the aforesaid condition, the contractor shall in addition to throwing himself open to action for contravention of the terms of the licence or permit and/or for criminal breach of trust, be liable to NID for all moneys, advantages or profits resulting or which in the usual course would have resulted to him by reason of such breach.

CLAUSE 34
(i) The contractor shall arrange at his own expense all tools, plant, machinery and equipment (hereinafter referred to as T&P) required for execution of the work except for the Plant & Machinery listed in Schedule ‘C’ and stipulated for issue to the contractor. If the contractor requires any item of T&P on hire from the T&P available with the NID over and above the T&P stipulated for issue, the NID will, if such item is available, hire it to the contractor at rates to be agreed upon between him and the Engineer-in-Charge. In such a case, all the conditions hereunder for issue of T&P shall also be applicable to such T&P as is agreed to be issued.

(ii) Plant and Machinery when supplied on hire charges shown in Schedule ‘C’ shall be made over and taken back at the departmental equipment yard/shed shown in Schedule ‘C’ and the contractor shall bear the cost of carriage from the place of issue to the site of work and back. The contractor shall be responsible to return the plant and machinery with condition in which it was handed over to him, and he shall be responsible for all damage caused to the said plant and machinery at the site of work or elsewhere in operation and otherwise during transit including damage to or loss of plant and for all losses due to his failure to return the same soon after the completion of the work for which it was issued. The Divisional Engineer shall be the sole judge to determine the liability of the contractor and its extent in this regard and his decision shall be final and binding on the contractor.
The plant and machinery as stipulated above will be issued as and when available and if required by the contractor. The contractor shall arrange his programmer of work according to the availability of the plant and machinery and no claim, whatsoever, will be entertained from him for any delay in supply by the NID.

(iv) The hire charges shall be recovered at the prescribed rates from and inclusive of the date the plant and machinery made over Upto and inclusive of the date of the return in good order even though the same may not have been working for any cause except major breakdown due to no fault of the contractor or faulty use requiring more than three working days continuously (excluding intervening holidays and Sundays) for bringing the plant in order. The contractor shall immediately intimate in writing to the Engineer-in-Charge when any plant or machinery gets out of order requiring major repairs as aforesaid. The Engineer-in-Charge shall record the date and time of receipt of such intimation in the log sheet of the plant or machinery. Based on this if the breakdown before lunch period or major breakdown will be computed considering half a day’s breakdown on the day of complaint. If the breakdown occurs in the post lunch period of major breakdown will be computed starting from the next working day. In case of any dispute under this clause, the decision of the NID Authority shall be final and binding on the contractor.

(v) The hire charges shown above are for each day of 8 hours (inclusive of the one-hour lunch break) or part thereof.

(vi) Hire charges will include service of operating staff as required and also supply of lubricating oil and stores for cleaning purposes. Power fuel of approved type, firewood, kerosene oil etc. for running the plant and machinery and also the full time chowkidar for guarding the plant and machinery against any loss or damage shall be arranged by the contractor who shall be fully responsible for the safeguard and security of plant and machinery. The contractor shall on or before the supply of plant and machinery sign an agreement indemnifying the Department against any loss or damage caused to the plant and machinery either during transit or at site of work.

(vii) Ordinarily, no plant and machinery shall work for more than 8 hours a day inclusive of one-hour lunch break. In case of an urgent work however, the Engineer-in-Charge may, at his discretion, allow the plant and machinery to be worked for more than normal period of 8 hours a day. In that case, the hourly hire charges for overtime to be borne by the contractor shall be 50% more than the normal proportionate hourly charges (1/8th of the daily charges) subject to a minimum of half day’s normal charges on any particular day. For working out hire charges for overtime, a period of half an hour and above will be charged as one hour and a period of less than half an hour will be ignored.

(viii) The contractor shall release the plant and machinery every seventh day for periodical servicing and/or wash out which may take about three to four hours or more. Hire charges for full day shall be recovered from the contractor for the day of servicing/ wash out irrespective of the period employed in servicing.

(ix) The plant and machinery once issued to the contractor shall not be returned by him on account of lack of arrangements of labour and materials, etc. on his part, the same will be returned only when they are required for major repairs or when in the opinion of the Engineer-in-Charge, the work or a portion of work for which the same was issued is completed.
(x) Log Book for recording the hours of daily work for each of the plant and machinery supplied to the contractor will be maintained by the NID and will be countersigned by the contractor or his authorized agent daily. In case the contractor contests the correctness of the entries and/or fails to sign the Log Book, the decision of the Engineer-in-Charge shall be final and binding on him. Hire charges will be calculated according to the entries in the Log Book and will be binding on the contractor. Recovery on account of hire charges for road rollers shall be made for the minimum number of days worked out on the assumption that a roller can consolidate per day and maximum quantity of materials or area surfacing as noted against each in the annexed statement (see attached annexure).

(xi) In the case of concrete mixers, the contractors shall arrange to get the hopper cleaned and the drum washed at the close of the work each day or each occasion.

(a) In case rollers for consolidation are employed by the contractor himself, log book for such rollers shall be maintained in the same manner as is done in case of departmental rollers, maximum quantity of any items to be consolidated for each roller-day shall also be same as in Annexure to Clause 34(x). For less use of rollers, recovery for the less roller days shall be made at the stipulated issue rate.

(xii) The contractor shall be responsible to return the plant and machinery in the condition in which it was handed over to him and he shall be responsible for all damage caused to the said plant and machinery at the site of work or elsewhere in operation or otherwise or during transit including damage to or loss of parts, and for all losses due to his failure to return the same soon after the completion of the work for which it was issued. The Engineer-in-charge shall be the sole judge to determine the liability of the contractor and its extent in this regard and his decision shall be final and binding on the contractor.

(xiii) The contractor will be exempted from levy of any hire charges for the number of days he is called upon in writing by the Engineer-in-Charge to suspend execution of the work, provided NID plant and machinery in question have, in fact, remained idle with the contractor because of the suspension.

(xiv) In the event of the contractor not requiring any item of plant and machinery issued by NID though not stipulated for issue in Schedule ‘C’ any time after taking delivery at the place of issue, he may return it after two days written notice or at any time without notice if he agrees to pay hire charges for two additional days without, in any way, affecting the right of the Engineer-in-Charge to use the said plant and machinery during the said period of two days as he likes including hiring out to a third party.

**CLAUSE 35**

(i) The contractor undertakes to make arrangement for the supervision of the work by the firm supplying the tar or bitumen used.

(ii) The contractor shall collect the total quantity of tar or bitumen required for the work as per standard formula, before the process of painting is started and shall hypothecate it to the Engineer-in-Charge. If any bitumen or tar remains unused on completion of the work on account of lesser use of materials in actual execution for reasons other than authorized changes of specifications and abandonment of portion of work, a corresponding deduction equivalent to the cost of unused materials as determined by the Engineer-in-Charge shall be made and the material return to the contractors. Although the materials are hypothecated to Government, the contractor undertakes the responsibility for their proper watch, safe custody and protection against all risks. The materials shall not be removed from site of work without the consent of the Engineer-in-Charge in writing.
(iii) The contractor shall be responsible for rectifying defects noticed within a year from the date of completion of the work and the portion of the security deposit relating to asphaltic work shall be refunded after the expiry of this period.

CLAUSE 36
Contractors Superintendence, Supervision, Technical Staff & Employees

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

The contractor shall immediately after receiving letter of acceptance of the tender and before commencement of the work, intimate in writing to the Engineer-in-Charge, the name(s), qualifications, experience, age, address(s) and other particulars along with certificates, of the principal technical representative to be in charge of the work and other technical representative(s) who will be supervising the work. Minimum requirement of such technical representative(s) and their qualifications and experience shall not be lower than specified in Schedule 'F'. The Engineer-in-Charge shall within 3 days of receipt of such communication intimate in writing his approval or otherwise of such a representative(s) to the contractor. Any such approval may at any time be withdrawn and in case of such withdrawal, the contractor shall appoint another such representative(s) according to the provisions of this clause. Decision of the tender accepting authority shall be final and binding on the contractor in this respect. Such a principal technical representative and other technical representative(s) shall be appointed by the contractor soon after receipt of the approval from Engineer-in-charge and shall be available at site before start of work.

All the provisions applicable to the principal technical representative under the Clause will also be applicable to other technical representative(s). The principal technical representative and other technical representative(s) shall be present at the site of work for supervision at all times when any construction activity is in progress and also present himself/themselves, as required, to the Engineer-in-Charge and/or his designated representative to take instructions. Instructions given to the principal technical representative or other technical representative(s) shall be deemed to have the same force as if these have been given to the contractor. The principal technical representative and other technical representative(s) shall be actually available at site fully during all stages of execution of work, during recording/checking/test checking of measurements of works and whenever so required by the Engineer-in-Charge and shall also note down instructions conveyed by the Engineer-in-Charge or his designated representative(s) in the site order book and shall affix his/their signature in token of noting down the instructions and in token of acceptance of measurements/ checked measurements/ test checked measurements. The representative(s) shall not look after any other work. Substitutes, duly approved by Engineer-in-Charge of the work in similar manner as aforesaid shall be provided in event of absence of any of the representative(s) by more than two days.

If the Engineer-in-Charge, whose decision in this respect is final and binding on the contractor, is convinced that no such technical representative(s) is/are effectively appointed or is/are effectively attending or fulfilling the provision of this clause, a recovery (non-refundable) shall be effected from the contractor as specified in Schedule ‘F’ and the decision of the Engineer-In-Charge as recorded in the site order book and measurement recorded checked/test checked in Measurement Books shall be final and binding on the contractor. Further if the contractor fails to appoint suitable technical Principal technical representative and/or other technical representative(s) and if such appointed persons are not effectively present or are absent by more than two days without duly approved
substitute or do not discharge their responsibilities satisfactorily, the Engineer-in-Charge shall have full powers to suspend the execution of the work until such date as suitable other technical representative(s) is/are appointed and the contractor shall be held responsible for the delay so caused to the work. The contractor shall submit a certificate of employment of the technical representative(s) (in the form of copy of Form-16 or CPF deduction issued to the Engineers employed by him) along with every on account bill final bill and shall produce evidence if at any time so required by the Engineer-in-Charge.

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

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

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

CLAUSE 37
(i) Sales Tax/VAT (except Service Tax), Building and other Construction Workers Welfare Cess or any other tax or Cess in respect of this contract shall be payable by the contractor and NID shall not entertain any claim whatsoever in this respect. Of this contract shall be payable by the contractor and NID shall not entertain any claim whatsoever in this respect. However, in respect of service tax, same shall be paid by the contractor to the concerned department on demand and it will be reimbursed to him by the Engineer-in-Charge after satisfying that it has been actually and genuinely paid by the contractor.

(ii) The contractor shall deposit royalty and obtain necessary permit for supply of the red bajri, stone, kankar, etc. from local authorities.

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

CLAUSE 38
(i) All tendered rates shall be inclusive of all taxes and levies (except Service Tax) payable under respective statutes. However, if any further tax or levy or cess is imposed by Statute, after the last stipulated date for the receipt of tender including extensions if any and the contractor thereupon necessarily and properly pays such taxes/levies/cess, the contractor shall be reimbursed the amount so paid, provided such payments, if any, is not, in the opinion of the NID Authority (whose decision shall be final and binding on the contractor) attributable to delay in execution of work within the control of the contractor.

(ii) The contractor shall keep necessary books of accounts and other documents for the purpose of this condition as may be necessary and shall allow inspection of the same by a duly authorized representative of the NID and/or the Engineer-in-Charge and shall also furnish such other information/document as the Engineer-in-Charge may require from time to time.
Termination of Contract on death of contractor

If relative working in CPWD then the contractor not allowed to tender

No Gazette Engineer to work as Contractor within one year of retirement

Return of material & recovery for excess material issued.

(iii) The contractor shall, within a period of 30 days of the imposition of any such further tax or levy or cess, give a written notice thereof to the Engineer-in-charge that the same is given pursuant to this condition, together with all necessary information relating thereto.

CLAUSE 39

Without prejudice to any of the rights or remedies under this contract, if the contractor dies, the Engineer-in-charge on behalf of the NID Authority shall have the option of terminating the contract without compensation to the contractor.

CLAUSE 40

The contractor shall not be permitted to tender for works in the NID responsible for award and execution of contracts in which his near relative is posted as in charge or as an officer in any capacity between the grades of the Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to NID. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of NID. If however the contractor is registered in any other department, he shall be debarred from tendering in CPWD for any breach of this condition.

NOTE: By the term “near relatives” is meant wife, husband, parents and grandparents, children and grandchildren, brothers and sisters, uncles, aunts and cousins and their corresponding in-laws.

CLAUSE 41

No engineer of gazette rank or other gazette officer employed in engineering or administrative duties in an engineering department of the NID shall work as a contractor or employee of a contractor for a period of one year after his retirement from NID service without the previous permission of NID in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission of NID as aforesaid, before submission of the tender or engagement in the contractor’s service, as the case may be.

CLAUSE 42

(i) After completion of the work and also at any intermediate stage in the event of no reconciliation of materials issued, consumed and in balance - (see Clause 10), theoretical quantity of materials issued by the NID for use in the work shall be calculated on the basis and method given hereunder:

(a) Quantity of cement & bitumen shall be calculated on the basis of quantity of cement & bitumen required for different items of work as shown in the Schedule of Rates mentioned in Schedule ‘F’. In case any item is executed for which standard constants for the consumption of cement or bitumen are not available in the above mentioned schedule/statement or cannot be derived from the same shall be calculated on the basis of standard formula to be laid down by the Engineer-in-Charge.

(b) Theoretical quantity of steel reinforcement or structural steel sections shall be taken as the quantity required as per design or as authorized by Engineer-in-Charge, including authorized lap pages, chairs etc. plus 3% wastage due to cutting into pieces, such theoretical quantity being determined and compared with the actual issues each diameter wise, section wise and category wise separately.
(c) Theoretical quantity of G.I. & C.I. or other pipes, conduits, wires and cables, pig lead and G.I./M.S. sheets shall be taken as quantity actually required and measured plus 5% for wastage due to cutting into pieces (except in the case of G.I./M.S. sheets it shall be 10%), such determination & comparison being made diameter wise & category wise.

(d) For any other material as per actual requirements.

(ii) Over the theoretical quantities of materials so computed a variation shall be allowed as specified in Schedule ‘F’. The difference in the net quantities of material actually issued to the contractor and the theoretical quantities including such authorized variation, if not returned by the contractor or if not fully reconciled to the satisfaction of the Engineer-in-Charge within fifteen days of the issue of written notice by the Engineer-in-Charge to this effect shall be recovered at the rates specified in Schedule ‘F’, without prejudice to the provision of the relevant conditions regarding return of materials governing the contract. Decision of Engineer-in-Charge in regard to theoretical quantities of materials, which should have been actually used as per the Annexure of the standard schedule of rates and recovery at rates specified in Schedule ‘F’, shall be final and binding on the contractor.

For nonscheduled items, the decision of the NID Authority regarding theoretical Quantities of materials which should have been actually used, shall be final and binding on the contractor.

(iii) The said action under this clause is without prejudice to the right of the NID to take action against the contractor under any other conditions of contract for not doing the work according to the prescribed specifications.

**CLAUSE 43**

The work (whether fully constructed or not) and all materials, machines, tools and plants, scaffolding, temporary buildings and other things connected therewith shall be at the risk of the contractor until the work has been delivered to the Engineer-in-Charge and a certificate from him to that effect obtained. In the event of the work or any materials properly brought to the site for incorporation in the work being damaged or destroyed in consequence of hostilities or warlike operation, the contractor shall when ordered (in writing) by the Engineer-in-Charge to remove any debris from the site, collect and properly stack or remove in store all serviceable materials salvaged from the damaged work and shall be paid at the contract rates in accordance with the provision of this agreement for the work of clearing the site of debris, stacking or removal of serviceable material and for reconstruction of all works ordered by the Engineer-in-Charge, such payments being in addition to compensation up to the value of the work originally executed before being damaged or destroyed and not paid for. In case of works damaged or destroyed but not already measured and paid for, the compensation shall be assessed by the Divisional Officer upto Rs. 5,000/- and by the NID Authority concerned for a higher amount. The contractor shall be paid for the damages/destruction suffered and for restoring the material at the rate based on analysis of rates tendered for in accordance with the provision of the contract. The certificate of the Engineer-in-Charge regarding the quality and quantity of materials and the purpose for which they were collected shall be final and binding on all parties to this contract.

Provided always that no compensation shall be payable for any loss in consequence of hostilities or warlike operations (a) unless the contractor had taken all such precautions against air raid as are deemed necessary by the A.R.P. Officers or the Engineer-in-Charge

(b) for any material etc. not on the site of the work or for any tools, plant, machinery, scaffolding, temporary building and other things not intended for the work.
In the event of the contractor having to carry out reconstruction as aforesaid, he shall be allowed such extension of time for its completion as is considered reasonable by the Engineer-in-charge.

**CLAUSE 44**

The contractor shall comply with the provisions of the Apprentices Act, 1961 and rules and orders issued there under from time to time. If he fails to do so, his failure will be considered as breach of the contract and the NID Authority may, in his discretion, cancel the contract.

The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.

**CLAUSE 45**

Release of Security Deposit of the work shall not be refunded till the contractor produces a clearance certificate from the Labour Officer. As soon as the work is virtually complete, the contractor shall apply for the clearance certificate to the Labour Officer under intimation to the Engineer-in-Charge. The Engineer-in-Charge, on receipt of the said communication, shall write to the Labour Officer to intimate if any complaint is pending against the contractor in respect of the work. If no complaint is pending, on record till after 3 months after completion of the work and/or no communication is received from the Labour Officer to this effect till six months after the date of completion, it will be deemed to have received the clearance certificate and the Security Deposit will be released if otherwise due.

**NOTE:**

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

In case of any ambiguity / anomaly on this the decision of Engineer-In Charge / NID Authority will be final and binding.

_________________________________________  ______________________________
Contractor                                      National Institute of Design
Date :                                          Date :
SECTION A

MATERIALS

These specifications provide general requirements regarding quality, testing, handling, storing of materials required for construction. The materials shall be tested as per relevant IS codes.

All materials or workmanship shall be of the best description and to the entire satisfaction of the Architects and the contractor shall immediately remove from the site any materials and/or workmanship which in the opinion of the Architects is defective or unsuitable and substitute proper materials and/or workmanship forthwith.

The contractor shall submit to the Architects immediately on starting of work, the samples of the materials proposed to be used in the work and get them tested as and when desired by the Architects and get approval of Architects.

The Contractor shall allow in his rates for all the wastage in all materials. Storage of materials shall be done by the contractor as described in IS:4082.

1) Earth

Selected Earth used for filling in plinth shall be free from all rubbish, organics or vegetable growth including roots, weeds etc. All clods shall be broken down. Black cotton soil shall not be used for plinth filling in any case. It shall be got approved by the Architect before taken into use.

2) Cement

Cement shall be Portland Pozzolana cement conforming to IS:1489, if specified by LEED Consultant and or fresh portland cement conforming to IS:269,14/89,8112, ur 12269 and shall have the required standard tensile and compressive strength and fineness.

If required and approved by the Architects, rapid hardening Portland cement conforming to IS:8041, Portland Pozzolana cement conforming to IS : 1489, low heat Portland cement conforming to IS : 269, white portland cement conforming to IS : 8042, high strength ordinary portland cement conforming to IS : 8112, shall be used.

The contractor shall always keep a sufficient quantity of cement at site to allow for each consignment being tested as required. The test results shall be approved by the Architects.

The contractor shall provide well built store for storing the cement at site. The cement bags shall be protected from moisture, sun, wind or any weather effects.

The Architects, may reject any cement as a result any tests thereof not withstanding the manufacturer’s certificate or which has deteriorated owing to the inadequate protection from moisture or due to intrusion of foreign matter or other causes, including longer storage time.

Portland Pozzolana Cement (PPC) Gr.1, (Fly ash Base) (IS:1489-1991) as specified

3) Coarse Aggregates

The coarse aggregates shall be approved gravel or machine crushed from igneous stone (black trap or basalt) and shall consist of black trap metal known as metal, kapachi and grit in varying sizes. They shall be well graded and of cubical shape. The proportion of grit and kapachi shall be made as directed by Architects or as prescribed in the mix design for desired grade of concrete.
Coarse aggregate for concrete shall conform to IS: 383 and IS:515 as the case may be. For reinforced concrete work, aggregate having a maximum size of 20 mm shall generally be used and shall be approved by the Architects. They shall be brought from Sevalia, Vadagam, or other quarry approved by the Architects.

Aggregates shall be chemically inert, hard, strong, dense, durable, clean and free from veins and adherent coatings and of limited porosity. Flaky and elongated pieces shall not be used. Whenever required by the Architects, the aggregates shall be washed by the contractor before use in the work. For concreting during hot days, the temperature of aggregate shall be brought down by sprinkling clean water. Compensatory reduction in water to be added to the concrete mix shall be made to control water/cement ratio.

4) Sand

Sand to be used in construction work shall be of standard specifications confirming generally to IS:383 Sand of grading Zone IV will not be used for structural concrete work.

Sand shall be clean, coarse and free from any alkali, organic or vegetable matters. It shall be washed with water, if required by the Architect.

5) Water

Potable water shall be used in construction work for mixing, curing, etc. Water shall be clean and free from any organic or inorganic impurities. Water shall be tested in approved laboratory, if required.

Where water is found to contain any sugar or an excess of acid, alkali or salt, the Architects may refuse to permit its use. In case of doubt, the Architects may require that concrete mixed with water proposed to be used, should not have compressive strength, lower than 90 percent of the strength of concrete mixed with distilled water.

6) Reinforcement

The reinforcement in concrete work shall be of Mild steel bars or Deformed bars or TMT bars as specified. Mild steel conforming to IS:432 and deformed bars conforming to IS:1139 or IS:1786 as the case may be. TMT bars conforming to relevant IS should be used and get tested before use. The test results should be shown to Architect.

All reinforcement used in R.C.C. work shall be free from loose mill scales, loose rust and coats of paints, oil, mud or other coating which may destroy or reduce bond.

7) Bricks

All bricks shall be table moulded and of quality approved by the Architect and shall conform to IS:1077. It shall be free from grit and other impurities such as lime, iron and other deleterious materials. They shall be well burnt, sound, hard, square, and with sharp edges and shall have ringing sound when struck with a mallet. They shall be of uniform size (9" x 4" x 2 3/4"). No brick after 24 hours immersion in water shall absorb more than 20% of its weight. It shall have compressive strength not less than 35 Kg/Cm2. Bricks for paving shall be overburnt and of fairly uniform colour.

8) Polished Kotah Stone / Rough Kotah Stone

They shall be brought from approved quarries and shall be free from flakes, flaws, cracks, cavities etc. and shall be of uniform texture and colour and thickness as specified. They shall be machine-polished, and/or left rough as specified.
9) **Glazed / Ceramic tiles**

They shall be size as specified, of approved make and white or colour desired. They shall be truly flat, uniform in size and shape and free from flaws like cracks, craze, specs, spots, chipped corners etc. The tiles shall be of uniform thickness, glaze and colour and shall conform to IS:777.

10) **Doors/windows fittings and Hardware**

The type of fittings to be provided shall be as specified by the Architect.

Fittings shall be of iron, brass, aluminium or as specified. The fittings may be finished bright or oxidized or chromium plated or anodized or powder coated as desired by the Architect.

The screws shall be from reputed manufacturers and may be oxidized or chromium plated as specified. The finish of the screws shall match the colour and material of the fittings. Appropriate size of screws shall be fixed. Screws shall not be hammered in but fixed with a screw driver.

Fittings include the following:

a) **Hinges**: They shall be made up of brass or stainless steel or as specified and of the following types, as appropriately directed by the architects.
   i) Butt type.
   ii) Parliamentary type.
   iii) Spring type - single or double acting
   iv) Piano type.

b) **Stoppers**: They shall be of stainless steel or brass or as specified.

c) **Hook & eye**: They shall be of stainless steel or as specified.

d) **Handles**: They shall be of brass or stainless steel or as specified. They shall be used as specified by the Architect for each door & window.

   Hold fasts for doors and windows shall be made of M.S. Flat, and they shall be screwed with the frame.

11) **Closed structural sections – Tabular tubes**

The tabular sections shall be from reputed manufacturer like Tata of approved quality. They shall be of specified sizes and sections of RHS / SHS closed structural sections of Tata and conform to relevant I.S. 4923.

12) **Structural Steel**

The steel shall comply with the IS specifications No.226.

13) **Admixtuers**

(a) Admixtures may be used in concrete only with the approval of engineer based upon evidence that, with the passage of time, neither the compressive strength nor its durability reduced. Calcium chloride shall not be used for accelerating setting of the cement for any concrete accelerating setting of the cement for any concrete containing reinforcement, or embedded steel parts. When calcium chloride is permitted to be used, such as in mass concrete works, it shall be dissolved in water and of the volume of the cement in concrete. When admixtures are used, the designed concrete mix shall be corrected instructions and in the manner and with the control specified by engineer.
(b) **Air Entraining agent**
Where specified and approved by engineer, neutralised vinyl resin or any other approved air-entraining agent may be used to produce the specified amount of air in the concrete mix and these agents shall conform to the requirements of ASTM standard 6260, air entraining admixtures for concrete. The recommended total air content of the concrete is 4% plus minus 1%. The method of measuring air content shall be as per IS 1199.

(c) **Water reducing admixtures**
Where specified and approved by engineer water reducing lignosulfonate mixture shall be added in quantities specified by engineer. The admixtures shall be added in the form of a solution.

(d) **Retarding admixtures**
Where specified and approved by engineer, retarding agents shall be added to the concrete mix in quantities specified by engineer.

(e) **Water proofing agent**
Where specified and approved by engineer, water proofing agent conforming to IS : 2645 shall be added in quantities specified by engineer.

15) **Cinder**

Cinder should be well burnt furnace residue, which has been fused or contred into lumps of varying sizes. Cinder aggregates shall be well burnt furnace residue obtained from furnace using coal fuel only. It shall be sound clean and free from clay, dirt ash or other deleterious matter.

The average grading for cinder aggregates shall be as mentioned below

<table>
<thead>
<tr>
<th>IS Siever designation</th>
<th>% Passing</th>
<th>IS Desugbation</th>
<th>% Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 mm</td>
<td>100</td>
<td>4.75 mm</td>
<td>70</td>
</tr>
<tr>
<td>10 mm</td>
<td>86</td>
<td>2.36 mm</td>
<td>52</td>
</tr>
</tbody>
</table>
Section B
TRADES

1  EXCAVATION

The excavation shall be carefully get out to the levels, shapes and dimensions as shown or figured on the drawing to receive foundation concrete. Should any of the excavations be taken down below the proper levels the Contractor shall fill in such excavation at his own expense with foundation concrete; filling in with excavated material shall not be permitted for this purpose.

If the trenches are made broad or longer than directed, the extra breadth and length shall be filled in after the foundations are built with earth, rammed hard. The contractor shall, at his own cost and expenses, and without any extra charges, make provisions for all shoring. The foundation trenches shall be inspected and passed by the Architect before foundation concrete fillings is commenced.

The excavated earth shall be used for filling up the sides of the foundations and between the plinth-walls in layers not exceeding 30 cm properly rammed and watered.

The measurements of the work shall be exact height and width of the lowest step of the footings according to the drawings or the Architect's instructions and the depth measured vertically. It shall be measured in cubic meter as per IS:1200 (Part-I).

If any excavations are taken deeper than the heights mentioned in the schedule or if any pumping out or bailing out of water is resorted to, they shall be measured and paid for separately.

1.1  Earth/Sand fillings

The fillings of sand or earth brought from outside will be done in layers not exceeding 30 cm properly leveled and watered to ensure full compaction.

The measurements for the carting away of the earth will be actual earth excavated or if truck measurement are taken then 60% of the actual truck measurement shall be taken allowing 40% deduction for voids in the volume of the earth. It shall be measured in cubic meter as per I.S. 1200 (Part I).

2  CONCRETE

2.1  Brick bat cement concrete

B.B.C.C. shall be of the specified mix, mixed in the mixture machine and laid as above. The concrete will be rammed hard at the same time of pouring. No ramming shall be done after the concrete is set. The work shall be watered twice a day for a week. Measurement of work done shall be in cubic meter according to I.S. 1200 (II) as shown in the drawing or as directed by Architect.

2.2  Cement Concrete in Foundation

The aggregates and cement shall be accurately proportioned by volume as specified and mixed in a mixing machine, adding sufficient water to get required consistency. The metal used shall not be larger than 40 mm.

It shall be deposited in trenches through height not more than 1.50 m and in horizontal layers not more than 30 cm. It shall be well rammed, all loose pits covered with cement mortar while concrete is till wet, to obtain an even surface at top. The work shall be cured for seven days.
Measurement for all concrete shall be exact length, breadth and depth directed by the Architects or as shown in the drawing according to I.S. 1200 (II) and after the concrete is consolidated and cured.

2.3 Plain and Reinforced Cement Concrete

All plain and reinforced concrete work shall be carried out generally in conformity with the IS 456. All work should be carried out with proper scientific knowledge and practice under the supervision of qualified and competent Engineer.

The materials used in concrete are cement, fine aggregates, coarse aggregates and water. Reinforced cement concrete shall consists of cement, sand and coarse aggregates in required proportion with reinforcement and necessary shuttering. Suitable admixtures shall also be added in concrete if specified or if required for the economic design of the concrete mix.

All materials used in concrete shall be tested according to relevant IS Codes as specified by Structural Consultant and shall conform to relevant Indian Standard Specification and as per specifications given in each separate item under "Materials" specification in this tender.

The grades of concrete to be used in the work shall be as directed. The concrete shall be in grades designated as below in the conforming with IS:456.

As per IS:456 in proportioning concrete, the quantity of cement and aggregates shall be determined by mass. Water shall be either measured by volume or weighed; Batching plant shall be used conforming to IS:4925. All measuring equipment should be maintained in a clean serviceable condition and their accuracy should be periodically checked. It should be ensured that the aggregates used in construction shall be properly graded in uniform quality and shall be maintained over the whole period of work. The proportion of materials used for concrete shall be done by weigh batching and if it is volume batching, periodic checks are made on mass/volume relationships of the materials to the satisfaction of the Architects. If fine aggregate is moist, allowance shall be made for bulking as per IS:2386 (Part-III).

The water cement ratio shall be maintained as its correct value as specified. The quantity of water in a concrete mix shall be as per IS:456 or as directed and must be sufficient to complete the hydration of cement and to give the mixture just that degree of workability required for proper placing and compaction. For the determination of quantity of water required for the mix, the amount of moisture contents in both fine and coarse aggregate shall be considered in conformity with IS:2386 (Part-III).

The concrete shall have a consistency such that it will be workable in the required position. It shall be of such consistency that when properly vibrated, it will flow smoothly. Use of approved admixture will be permitted.

The concrete shall be mixed in an approved type of mechanical concrete mixer. The aggregates, cement and sand shall be mixed dry in a mixer as directed, then water is added controlling the required water cement ratio, and mixing shall be continued until there is a uniform distribution of the materials and the mass is uniform in colour and consistency to the satisfaction. The entire batch shall be discharged on a water tight platform without segregation. If there is segregation after unloading from the mixer, the concrete should be remixed. The mixing time of the mixer shall be 1.5 to 2 minutes as specified. Workability of concrete shall be controlled by direct measurement of water content and shall be checked at frequent intervals.

In exceptional circumstances hand mixing of concrete shall be permitted subject to adding 10 percent extra cement as per the direction of Architects. Mixing shall be carried out on a water tight
platform and care shall be taken to ensure that mixing is continued until the concrete is uniform in colour and consistency to the satisfaction of Architects.

No concreting is done without prior approval of Architects. For all major / structural concreting, the pour card, in standard proforma as specified by Architect, shall be filled in by the contractors and got approved and signed by the Resident Engineer before starting the concreting. All concrete shall be conveyed from the mixer to the place of final deposit in suitable buckets, dumpers, containers, conveyers as directed. During hot or cold weather, special precautions shall be taken as required. Concrete shall be placed and compacted in its final position within its initial setting time in conformity with IS specifications. Concrete that has been standing and become stiffened before final placing, should not be used by contractors. All equipment used for transporting and placing of concrete shall be maintained in clean condition.

Concrete shall in no case be dropped from a height of over 1.50M and it shall be carefully laid in position. Before depositing the concrete, all debris and dirt shall be removed from the place of depositing. Form work and reinforcement shall be checked and approved by the Architects before pouring the concrete. During the placing of concrete, care shall be taken to ensure that there is no loss of liquid from concrete and no segregation of aggregates takes place. Also it shall ensured by Contractor that all reinforcement have clear cover to the bottom and sides. (as per IS:456). In general, the whole work of placing and compacting shall be done to the satisfaction of Architects.

In normal circumstances, concreting shall be done in a single operation continuously. If it is not possible, the concreting shall be ceased at construction joints, or as per Architect’s direction, and surface shall be allowed roughened to get good bond as directed. On the next day, the old surface shall be cleaned and roughened, wetted with clean water and then just before placing concrete it shall be wetted with cement slurry to ensure good bond and water tightness between old & new surface.

Concrete shall not be started unless inserts, electrical conduits or any other piping wherever required are laid by concerned agency. The contractor shall afford all the facilities and maintain co-ordination of work with other agencies engaged in electrical and such other work as directed.

Concrete shall be placed in successive horizontal layers as directed. Each layer of concrete shall be thoroughly compacted by means of mechanical vibrator. The vibrator shall be the internal or immersion type complying with IS: 2505, IS 2506, IS:2514, IS: 4656 with a speed of not less than 7000 RPM when immersed in the concrete. Over vibration or vibration of very wet mixes should be avoided. Under vibration also shall not be permitted.

The vibrator shall penetrate the layer being placed and also penetrate the layer below, while the under layer is still plastic to ensure good bond and homogeneity between two layers. Vibrator shall be immersed vertically in concrete till cement slurry comes up and it shall be withdrawn slowly. Vibrator shall be inserted at certain intervals and not continuously. In any case, vibrator shall be not used in a concrete which is just stiffened. Vibrator is a must for compaction but in exceptional case hand tamping may be permitted after getting the necessary approval of the Architect/Resident Engineer.

During placing of concrete, care shall be exercised to provide construction joints, key blocks, expansion joints, pockets, shear connectors, water stops, separation joints etc. as directed by Architects. No extra shall be paid for construction joints and key blocks.

Curing of concrete shall be in accordance with IS:456. Concrete shall be cured by keeping it moist for the period of at least 7 days or as directed by Architects. Curing shall be done by ponding or by covering with a layer of sacking, canvass, hessian, gunny bags, or similar, materials and concrete
shall be kept constantly wet. Curing of concrete shall start after 8 hours of placement as directed. During hot or cold weathers special care shall be taken in curing as per Architect’s guidance.

Cubes of the concrete shall be taken on site as specified in IS codes and test result shall be submitted to Architect/ Employer periodically as per standard norms specified in BIS codes.

All concrete work shall be measured as per IS:1200 (Part II). The unfinished net sections as shown in the drawings and details shall be measured and paid for.

3 Form Work

Form for concrete shall be of wood, plywood or steel or as directed by Architects and give smooth and even surface after removal thereof.

The contractor shall supply all necessary shuttering, staging, centering including steel forms of standard size, props, bracings, nails, wires, ties etc. as required and all necessary labour, plant and machinery etc. for fixing the centering and boxing, fixing for the various members and also the labour and tools required for striking and removing the shuttering.

Forms shall conform to the shapes, lines, grades and dimensions to get even and smooth surface to the satisfaction of the Architects. Resin bound water proof plywood or plastic coated plywood shall be used, if specified, in form work construction.

The form work shall be designed and constructed to the shapes, lines and dimensions as per details or drawing as directed within the tolerances given in IS code 456.

The centering shall be true and rigid and adequately braced both horizontally and diagonally. The forms shall be sufficiently strong to carry without deformation, the dead weight of concrete as a liquid as well as working load, wind load etc. Where the concrete is vibrated, the form work shall be strong enough to withstand the effect of vibrations practically without any deflection, bulging, distortion or loosening of its components.

All rubbish particularly chipping, shavings and sawdust, shall be removed from the interior of the forms before the concrete is placed and the form work in contact with the concrete shall be thoroughly cleaned and treated with an approved quality of shuttering oil (Mould Release Agent) so as not to stain surface of exposed concrete.

Metal tie roads, tie wires shall be used as directed. All corners and angles shall be formed with 45 degree moulding to form chamfers or fillets on the finished concrete. If required joints in forms shall be sufficiently tight to prevent any leakage of grout. Planks for form work shall be of uniform thickness of best wood of approved quality, straight and without any defects. All panels of planks shall be fit jointless. M.S. steel plates with angle iron frames of standard sizes shall be used as a form, unless otherwise specified/directed. Members for frame work shall be of adequate size of battens to withstand thrust of concrete while pouring and shall be deodor, sal or equivalent approved wood.

Props shall be round, straight and made up of steel or approved wood to withstand vertical loads. As far as possible, props will have no joints. If joined, such joints will be firm and rigid by adequate lapping pieces. Grooves, notches, opening, holes, fillets etc.; wherever necessary shall be carefully provided using timber strips as directed. Forms for beams etc. shall be cambered as directed. Before reuse, all forms shall be thoroughly scrapped, cleaned, examined and when necessary repaired and reoiled before resetting. Form work shall not be used/reused, if it is unserviceable in the opinion of the Architects.

Connection of form work shall be so constructed to permit easy removal and shall be nailed, screwed, bolted, clamped, wired or otherwise secured to be strong enough to retain correct shape on
consolidation of concrete, tie-rods being provided where necessary. Provision shall be made to check deflection, line and level during concreting.

The surface obtained after striking form work shall be uniform in appearance without any minor defects, honeycombing air holes and shall have all edges with straight profiles.

Forms shall not be struck until the concrete has reached a strength at least twice the stress to which the concrete may be subjected at the time of removal of form work. The permission of the Engineer shall be taken before striking the form.

On striking the form work the exposed surface shall be cleaned of extra mortar, grit etc. by carefully chipping or rubbing. Uniform texture and smooth surface shall be ensured. In case of defects, it shall be immediately rectified as per Architect's direction. No extra shall be paid for repairs. When Architecturally exposed concrete surface is required, such defects shall be made good to the Architect's satisfaction and no extra will be paid.

Generally the measurements of form work shall be included in the concrete work. But if separately measured, it shall be measured in square meters as the actual surface in contact with the concrete as per the IS:1200 (Part-V).

3.1 Shuttering for architecturally exposed concrete work

This shall be made of steel forms as specified in the schedule by the Architect. It should give smooth and even surface after removal. They shall be built in pattern as per the drawings or as directed by the Architect to obtain desired Architecturally exposed concrete surface. Shuttering shall be thoroughly cleaned and treated with colourless releasing agents to ensure uniform texture and smooth surface of the concrete. Care should be taken that the exposed edges of the concrete surfaces are sharp and the edges do not chip. The rate shall include to make good the blemishes of exposed concrete surface wherever required to match with adjoining surface.

3.2 False Staging – Double staging

The height of propping and centering between supporting floors to ceiling exceeds 4.5m or as specified in BOQ, the payment shall be made for the false staging work. This will be paid only if there is no slab/platform in between in extra staging is necessary. Extra over and above the payment made for formwork of slab in relevant items. The work of false staging shall be measured and paid per Smt. The rate includes the cost of providing stone or masonry temporary pillars for supporting, as required without any extra cost.

4 Reinforcement

The reinforcement in concrete work shall be of TMT bars or mild steel bars or deformed bars or as specified. Mild steel conforming to IS: 432 and deformed bars and TMT bars conforming to IS:1139 or IS:1786 or relevant IS as the case may be.

If required, welding of reinforcement shall be done in accordance with the recommendation of IS:2751 as per Architects guidance.

The reinforcement shall be placed in position after the form work has been checked in line and level by the Architects and after getting their approval.

All the reinforcement shall be placed and maintained in the position shown in the drawings or as directed.
In any circumstances, concrete cannot be poured without prior checking of reinforcement by the structural engineer and their approval.

Reinforcement shall have clear concrete cover as directed.

In general, all reinforcement shall be built, placed in position, bent, hooked, joined etc. as per relevant IS specifications or as per drawings or as per structural engineers’ guidance.

The reinforcement shall be measured in M.T. as per I.S. 1200 (Part-VIII). The reinforcement used in the works shall be the calculated weight, which shall be computed from the size and length of the bar described on the drawings. Space bars and chairs shall be measured. Laps shall be paid extra and laps shall be payable, provided on inspection they are found to be actually required and used. The weight of binding wires shall not be considered for payment and measurement. The weights shall be calculated on the basis of unit weights as per IS standards. Allowance shall be made in the rates for cutting wastes, unnecessary laps, rolling margin, extra lengths or other such tolerances. Nothing extra whatsoever shall be admissible on bars, rolled in weights higher than the standard weights even if such steel may be supplied by the employer on acutal weight basis. The contractor is deemed to have taken this factor into consideration and quoted accordingly. The rate shall also include the cost of providing and placing appropriate PVC covers.

i) Bar and wire reinforcement:

Bar reinforcement described as ‘Mild steel’ shall be plain round hot rolled steel bars.

With respect to manufacture, quality, physical properties and related requirements, mild steel reinforcement of the foregoing description shall comply with appropriate parts of IS – 432 for grade and IS – 226 for composition.

ii) Certificates and test for reinforcement:

For each consignment of reinforcement bars used in the works, the contractor shall, if required, supply a certificate giving the ultimate strength, yield stress and elongation, and the result of the cold bend test for each type and each size of bar or wire. Tests for the purpose of obtaining the information on these certificates shall comply with the procedure specified in the appropriate Indian Standards.

For each consignment of cold worked steel bars used in the works, the contractor shall supply the clerk-of-works with a further certificate warranting that all the bars in the consignment are made from steel complying with IS specification. If reinforcement be supplied, for which the manufacturer’s test sheets or opinion of the clerk-of-works the material has been subject to corrosion or other deleterious effects, the clerk-of-works shall select as many test pieces as he deems necessary, and the contractor, shall supply and deliver the test pieces free of cost and without any reimbursement and shall also pay for the cost of preparing and testing them.

iii) Dimensions of reinforcement:

The size of a reinforcement bar or wire described on the working drawings or elsewhere shall be the minimum and the rolling margin and other tolerances shall be wholly above the sizes. The length of a reinforcement bar shall not be less than the length shown on the drawing or elsewhere and shall not be more than 50 mm in excess length shall not be taken as a precedent. It shall be permitted only to save unnecessary wastage and additional labour of cutting.

iv) Measurement and rate for reinforcement

For the purpose of ascertaining payments due to the contractor, the basis of measurements of the bar and wire reinforcement used in the works shall be the calculated weight, which shall be computed
from the size and lengths of the bars and wires described on the construction drawings or elsewhere. Spacer bars and laps shall be payable, provided on inspection they are found to be actually required and used. The cost and weight of binding wires shall not be considered for payment and measurement. The cost of binding wire shall be included in the rate for reinforcement. The weights shall be calculated on the basis of unit weight as per IS standards. Allowance shall be made in the rates for cutting wastes, unnecessary laps, rolling margin, extra lengths or other such tolerances. Nothing extra whatsoever shall be admissible on bars, rolled in weights higher than the standard weight even if such steel may have been procured by the employer and issued to the contractor directly from the market on actual weight basis. The contractor is deemed to have taken this factor into consideration and quoted accordingly in his tender.

The contractor’s rates for unit weights of reinforcement bars shall be deemed to include all allowances omitted in calculating the weights and for any other tolerances, extra for short-lengths, and for providing binding wire and cover blocks as specified here in after and for carriage, handling, cutting, bending, hooking and cranking, and for fixing and maintaining in the correct position in the works. The standard laps of length as shown on the drawings or as instructed at site shall be admissible. Laps provided due to the contractor’s own faults or because of use of short bars shall not be paid for. Standard hook (9 times dia. for each hook) shall be added to the finished length to arrive at the length of the bar for cutting and measurement, if actually provided for. No hooks shall be provided for cold worked steel bars. Waste steel shall not be accepted back by the employer. The contractor shall have to bear the cost of steel wastage (pieces below 3.0 meters length) and labour charges for straightening of coils, if and as supplied by the employer.

v) Bending reinforcement
The contractor shall prepare bar bending schedules from the structural drawings supplied to him and have it approved from the structural specialist.

Bars shall be cut and bent correctly to the size and shape as shown in the bar bending schedules or as directed by the clerk-of-works.

Reinforcement bars shall be carefully and accurately bent by approved means producing a gradual and even motion as specified in IS – 2502 and to the shapes shown on the structural drawings.

Bars incorrectly bent shall be reused only if the means adopted for straightening and rebending be such as shall not injure the material. Any reinforcement bar which is in position in the works shall not be bent further in place, whether partially embedded or not embedded in hardened concrete.

Bends shall comply to the dimensions described on the drawings. Overall dimensions of bent bars or internal dimensions at bends or like shall be within the allowable tolerance of 6mm. Any discrepancies or errors in the documents shall be immediately reported to the clerk-of-works, whose interpretation and requirements relating there to shall be accepted.

The internal radius of hooks and other end anchorage bends shall not be less than twice the diameter of the bar unless described to the contrary on the bending lists, or elsewhere in this document. The internal radius of bends at the corners of binders or of stirrups or of links shall half of the size of the bar embraced by the binder, stirrup or link.

Bars crossing one another shall be tied together at every intersection with two strands of annealed steel wire, size 1.00 mm to 1.60 mm. Twisted tight to make the skeleton of steel work rigid, so that the reinforcement does not get displaced during the deposition of concrete. Tack welding may be permitted if specifically asked for as a special case and only if the contractor has suitable facilities and subject to approval by the structural specialist.
The bars shall be kept in position by the following methods:

- In the case of beams and slabs, precast blocks in cement mortar (1:2) about 40 mm x 40 mm in section and the thickness equal to the specified cover.
- In case of cantilever and doubly reinforced beams and slabs, the vertical distance between horizontal bars shall be maintained by chair spacers or support bars at 1.0m to 1.2 m centres. The dia. of such bars shall not be below 12 mm or above 25 mm as the case may be.
- In case of columns and walls the vertical bars shall be kept in position by means of timber templates with slots, accurately cut. The templates shall be removed after the concrete has been poured.
- In case of complicated RCC structures all the above methods or a combination of these may be used.

Only bars of full required length shall be used. Where this is not possible, overlapping of bars will be permitted subject to approval of the RCC specialist.

Overlapping bars shall be bound with annealed steel wire size 1.0mm to 1.6mm, twisted tight. The overlaps shall be staggered for different bars and located at points along the span where neither shear force nor bending moment is maximum. At any junction, the lapping shall preferably be not more than 33%. The overlaps shall be sufficient to transfer the stress between by bond.

vi) **Fixing reinforcement**

Reinforcement shall be accurately fixed by approved means and maintained in the position as shown on the drawings. Bars intended to be in contact shall be securely wired together at all such points with 1.0mm to 1.6mm size annealed soft iron steel wires. Binders, stirrups and links shall tightly embrace the bars with which they are intended to be in contact and shall be securely wired, or, if approved, tack welded thereto.

Reinforcement shall be lapped, jointed or spliced only at the positions shown. Splices and the like found to be necessary elsewhere shall be formed only if and as instructed. If required, welded laps shall have to be provided. Not more than 33% of the bars or as specified on the drawing shall be lapped at one section. Where practicable bars in each member shall be assembled and fixed in the form of a rigid cage or skeleton before placing in the moulds or the shuttering.

Immediately before concreting, the reinforcement shall be checked for position and cleanliness, and freed from rust or retarding liquid. If the bars are coated with rust of other impurities like the oil used on Formwork, they shall be cleared with gunny bags or with water and in special cases with kerosene or petrol. A cement slurry shall be applied on such affected bars before concreting. Nothing extra shall be paid for this. Steps shall be taken to ensure that reinforcement remains correctly in position during the placing and consolidation of the concrete.

Reinforcement projecting from work being concreted or already concreted shall not be bent out of its correct position for any reason whatsoever unless approved and shall be protected from deformation or other damage. Reinforcement left projecting for binding with future extensions shall be thoroughly coated with cement slurry or encased in concrete or otherwise protected from corrosion as instructed.

The contractor shall provide approved types of supports for the free movement of the workers in such a way that the reinforcement i.e. bottom bars, top bars may not be disturbed. This arrangement should be such that it can be adjusted easily in the progress of the casting.

vii) **Welded Joints**

Welded joints in reinforcement bars may be used, but in all cases of important connections, tests shall be made to prove that the joints are of the full strength of bars connected. Welding of reinforcements shall be
done in accordance with the recommendations of IS 2751 and the IS recommendations for welding cold worked steel bars for reinforcement concrete construction.

viii) **Cover of concrete and Spacing of bars:**

   Unless otherwise mentioned the clear cover of concrete over the reinforcement shall be as follows:

   **a) Internal work**

   Horizontal, vertical or inclined slabs: for all bars, 15-mm thick cover or the size of the bars or the wires, whichever is greater.

   **b) Beams**

   For main bars: 25mm thick or the size of the main bars whichever is greater.

   For binders and links: 15 mm minimum.

   **c) Columns**

   Main bars for columns not exceeding 300 mm in width or breadth of diameter: 25m thick cover.

   Main bars in columns not exceeding 300 mm in width or breadth or diameter: 37mm thick or the size of the main bars whichever is greater.

   Rectangular binders or links or helical binding: 15 mm thick minimum.

ix) **Construction Joints**

   (a) Construction joints shall be made in position hereinafter specified or else where as approved. Joint shall be truly vertical or horizontal as the case may be except that in an inclined or curved member the joint shall be exactly at right angles to the axis of the member.

   (b) Construction joint shall be rebated to an approved profile, and where described and approved GI sheets/rubber stop shall be inserted in to the joints.

   (c) Construction joints shall be made horizontally at the to of the foundations and 75mm below the lowest beam soffit at the head of the columns. Concrete in the slabs and the ribs or small tee and all beams shall be placed in one operation but for large beams concrete in the rib up to a level of 25mm below the soffit shall be placed first. Concrete in haunches or splays on beams or braces and concrete in the head or adjoining portion of the column at the same time as that in the beam braces. Concrete in the splays at junctions of the walls and the slab shall be placed at the same time as that in the slab.

   (d) Construction joint in the length of the beam shall be avoided where possible, but where joints are unavoidable, they shall be made vertically at mid-span at the center of the beam width.

   (e) For columns, construction joints shall be horizontal and 10 to 15 cm. below the bottom of the beam.

   (f) For slabs, either at the centre of the beam or where S.F. is maximum.

   (g) For beams where S.F. is minimum or the column vertical joints.

   (h) Where water tightness is required in vertical construction joints some form of mortice joints with continuous keyway shall be provided. Before placing new concrete against concrete already set,
the face of the old concrete shall be chipped, cleaned and scum removed. The face shall be 
roughened and any loose aggregate removed therefore. When a construction joint is formed 
provision shall be made for interlocking with the succeeding layer.

(i) Water stops shall be of rubber of PVC bars of approved make. These shall be provided at 
locations indicated on drawing. Water stops shall be lapped 100 mm and hot sealed to obtain 
continuity. Water stops shall be cleaned and be free from grease etc. projected portion of water 
stops shall be cleaned thoroughly of all concrete and mortar coating as directed before resuming 
concrete work. Water stops shall be long in length to avoid joints as far as possible.

(ii) Mode of Measurement 
GI sheets or rubber stop provided in the joints shall be paid separately. No separate payment will 
be made to the contractor for chipping, cleaning the old concrete surface and applying cement slurry prior 
to concreting.

x) Expansion Joints 
(a) Expansion joints shall be provided as per the structural drawing or as directed by the engineer. 
The material to be provided in the joints shall be as per the item specifications.
(b) The joint width shall be uniform throughout and special care shall be taken to ensure proper 
bonding of the expansion joints. The expansion joints shall be filled with premoulded joint fillers 
and sealed with mastic compound.
(c) Mode of measurement 
The fitting of the joint with GI sheet, bitumen fillers, bitumen felt, shalitex board etc. whichever is 
indicated shall be paid in SQM/R.M. as specified in the respective item description in the schedule of 
quantities.

5 BRICK WORK 

5.1 Brick work – Foundation, Plinth & Super structure 

Cement Mortar 
Cement mortar shall be composed of 1 part of portland cement to 6 parts of sand unless 
otherwise specified, the ingredients shall be accurately gauged by measure and shall be well and 
evenly mixed together in a mixer machine or on platform, care being taken not to add more water than 
is required. No mortar that has begun to set shall be used.

Brick Work 
The brick work is to be carried out with all necessary setbacks, projections, cuttings, toothings, 
offsets, splayed ends, etc. which are shown on and in strict conformity with the drawings. The fly ash 
bricks shall be cut out to shape as required.

Brick Layer 
All brick layers employed on the work shall be first class tradesmen of mature age and 
experience, and necessary tools, long straight edges, plumb bobs, lines and accurate spirit levels shall 
be kept fully in use on the work. The bricks shall be laid with the frogs upwards. The brickwork shall be 
laid in English/Flemish bond as specified or instructed.

All uneven irregular and bad brickwork shall be demolished if deemed necessary by the 
Architects and rebuilt at Contractor's expenses.
Joints

All joints of brickwork to be plastered or pointed, shall be properly raked out to a depth of 12 mm as the work proceeds. In no case mortar shall be removed from joints by hammering, chiseling or in such a manner so as to cause damage to the bricks, but shall be raked out with a suitable metal tool before the mortar sets, to form keys with new mortar.

Every brick shall be thoroughly soaked in water before using, till the bubbles cease to come up. No broken bricks shall be used except as closures. The course shall be truly horizontal and the work strictly in plumb, joints shall be broken vertically and they shall not exceed 10 mm in thickness. The brickwork shall not be raised by more than 10 single course per day. Tables shall be formed at every tenth course and kept full in water. The brickwork shall be carried out in bonds as detailed in drawings.

Curing

The work shall be well watered for 7 days. The work shall be protected during the rains as directed.

Fairface

All 3", 41/2" and 9" walls will be built fair faced on one side only. All walls of greater thickness shall be built without exception with fairface to both sides.

5.2 Brick Partition Work:

Half brick masonry partition walls with C.M. 1:4 having crushing strength not less than 50 kg/Sq.Cm laid as described above but including 10cm thk PCC 1:4:8 bedding laid in every 10th course throughout the wall including scaffolding, watering etc complete.

5.3 Brick on Edge Partition Work:

Brick masonry partition walls laid in plan with brick on edge with C.M. 1:4 having crushing strength not less than 50 kg/Sq.Cm laid as described above but including 10cm thk PCC 1:4:8 bedding laid in every 10th course throughout the wall including scaffolding, watering etc complete. The thickness of the wall in plan is equal to the lowest dimension of the brick size.

5.4 Exposed Brick Work:

The work shall be carried out in a similar way as described above using selected bricks of approved quality. The brickwork shall be carried out in the bond and pattern given in the drawing or as directed. The basic two courses of the brick work shall be first got approved by the Architect before further work in taken in hand. All horizontal & vertical joints shall be uniform in respective thickness and height of every brick course uniformly maintained. The exposed faces and arrises of the brick shall be full and not chipped. The joints shall be raked if required to be pointed or flush finished (Simultaneously pointed) as instructed by the Architects. The mortar used for brick work shall not flow over the faces of brick work and deface it.

Rate

The rate for the brickwork shall be for all shapes & sizes in plan & elevation as specified by Architect or in detail drawing and shall be inclusive of all necessary single or double scaffolding, watering and cutting of bricks, corbels, projections, etc.

Measurement
The brickwork shall be measured in cubic meter if the thickness of the wall is 23 cm (9") or more than 23 cm (9"), otherwise it shall be measured in square meter.

All brickwork shall be as pr I.S. 1200. The unfinished net sections as shown in the drawings or as directed by the Architect shall be measured and paid for.

6 PLASTER AND POINTING

6.1 Smooth Cement plaster.

The joints shall be raked out to a depth of 12 mm and the surface shall be cleared off all dust and dirt. The brick work shall be thoroughly watered. Portland cement and coarse sand, screened as directed, shall be mixed in proportion of 1:4, water, then, shall be added gradually to make the mixture homogeneous.

The mortar, then shall finally be applied on the surface to be plastered and made even in line and level as required. The surface then will be finished smooth with a thin layer of neroo (lime cream putty) while the mortar is still wet. The surface shall be finished to the smoothness required by working on it with a trowel. Plaster shall be started from top and gradually worked down towards floor. The work shall be properly cured for 7 days. The work shall be measured in square meter, as per I.S. 1200 (Part XII)

6.2 Rendered Sandface Plaster

The joints shall be raked out to a depth of 12 mm as required. The surface shall be cleaned off all dust and dirt and brick work shall be thoroughly watered. The joints shall be raked out to a depth of 12 mm as required. The backing coat of minimum 12 mm thickness with cement mortar 1:4 shall be prepared and key shall be formed on the surface. After curing the backing coat for two days continuously, the finishing coat of 6 mm thickness with cement mortar 1:3 consisting of cement, coarse sand, screened as directed to give a uniform thickness shall be applied and finished to the desired texture by using sponge or ‘Gutka’ as directed. Water proofing compound of approved make shall be added in the mortar of final coat as per manufacturer’s specifications, as directed by the Architect. The plaster shall be thoroughly cured for 7 days.

The measurement shall be in square meter, as per I.S. 1200 (Part XII)

6.3 Mala Plaster

a) Single Coat

The surface to be plastered shall be prepared above. A spray of cement slurry (1:2) then be applied and allowed to dry. Cement mortar (1:4 mix) will be applied on this and worked to obtain smooth even surface. The surface then be finished smooth with a steel float-mala-to get even textured smooth surface. The plaster will be cured for a minimum period of 7 days.

b) Double coat

After preparing the surface a backing coat of minimum 12 mm thick shall be applied in cement mortar 1:4 and finished in line and level. Keys will be formed and surface properly cured. A finishing coat of cement mortar 1:3 will be applied and worked to get smooth even / textured surface with the help of steel float. The plaster will be cured for 7 days.

The measurement shall be in square meters as per I.S. 1200 (Part XII)

6.4 Cement Pointing
The joints of brickwork shall be raked out to a depth of 12 mm. The dust shall be brushed out of the joints and the surface shall be well wetted. The pointing shall be made with portland cement and sand mixed in proportion 1:2. The joints of the pointed work shall be neatly finished as directed.

The pointing shall be of flush type or recess type as specified. If there is recess type pointing, care should be taken to see that the depth and width of the recess is uniform. After pointing, stains and any mortar sticking to the surface shall be removed. The work shall be cured properly at least for seven days. If desired by the Architects, pointing shall be simultaneously one while working of the brick work. The joints shall be finished flush with the same mortar. Utmost care will be taken to see that the mortar used for the brick work is not too wet to deface the bricks. The measurement shall be in sq. meters as per I.S. 1200 (XII).

**Grooves**

Grooves in plaster of various types as described in the schedule of qualities, shall be paid for separately for the extra labour involved. No deductions of the area of such grooves shall be made from plaster quantity.

**Drip mould/Tapak**

This item shall be separately measured and paid for. No extra rate will be paid for plaster work for beam soffits, chajja soffits, column sides etc.

**7 FLOORING**

**7.1 Floor-bedding.**

The floor bedding of cement concrete in specified proportion, using 20mm size coarse aggregate, shall be laid to thickness, grades and levels required. The brick soling or rubble soling shall be thoroughly wetted before the concrete is laid. The work shall be watered and cured thoroughly.

**7.2 Rough Stone Flooring**

The rough stone shall be dressed to get uniform size of the Stones or in different sizes as directed. The setting shall be done on cement mortar bedding with neat cement floating, in pattern as per drawing. The work shall be measured in sq.meters.

**7.3 Polish Stone flooring**

Polished stone shall be of best quality and shall be free from veins and cracks. The stone shall be of uniform colour. The stone shall be of thickness between 25mm to 40 mm. The stones shall be hand dressed to uniform sizes and edges made smooth by rubbing on girders and grinding with wet sand.

The bedding of the lime/cement mortar to the required thickness shall be provided in line and level. All joints shall be hairline thickness and grouted well with cement and the surface produced to near jointless perfection. The stone shall be laid as per the pattern and details given by the Architect. It shall be machine polished with three or more courses of graded emery stones and finally polished with Lac emery to produce smooth and even surface.

The work shall be measured in Sq.meters. The skirting shall have fine chiseled edge and hand polished. It shall be measured in running meters.

**7.4 I.P.S. Flooring**
This shall consists of specified thickness cement concrete in proportion as directed, laid in line and level and in bays as per drawings (not exceeding 2m x 2m), as required. If specified, the top surface shall be finished smooth with 'Ironite' or approved equivalent hardening compound added to concrete mix as per manufacturer's specifications.

The concrete shall be laid in alternative bays if directed. The edges of the first cast bays shall be true and even using Angle-iron form or planed wooden form to get as sharp and true line. The edges of the two adjacent bays shall be painted with cold plastic bitumen or approved chemical before the concrete of the adjacent bays shall be filled in with cement mortar if directed by the Architect.

If specified by Architect, Power trowlling shall be carried out as directed by TREMIX machine.

7.5 IPS skirting

The specification is same as that of IPS flooring except that the thickness is 19mm or as specified. The height of the skirting shall be as per the drawing/instruction of the engineer/as specified by Architect.

7.6 White/Coloured glazed tile flooring:

The glazed tiles shall be of make as approved by the Architects. It shall be laid over 1:6 cement mortar bedding for floor and backing coat of plaster in C.M 1:6 for dado. The tiles shall then be laid in a neat thin cement paste in a proper line and level in a pattern approved by the Architect. The joints shall be finished with white/coloured cement. All joints shall be uniform and thin. The tiles shall be cleaned well with dilute acid and made clean without any spots or dirt.

The work shall be measured in Sq. meters.

7.7 Ceramic tile flooring:

Ceramic tiles shall be from approved manufacturer and shall be of specified size, thickness, colour and shade without warp and with straight edges. The laying ceramic tiles & dado will be carried as described above in white glazed tiles item.

The work will be measured in square metre of surface area.

7.8 Marbo-Granite flooring:

Marbo-granite tiles shall be from approved manufacturer and shall be of specified size, thickness, colour and shade without warp and with straight edges. The laying of tiles in floor will be carried as described above in white glazed tiles item.

The work will be measured in square metre of surface area.

7.9 Vitrified Granamite tile flooring:

Vitrified granamite mirror finish tiles of 1st quality of approved manufacture of specified size of any desired shade & colour, thickness and with straight edges. They shall be without bend/warp in any direction. The laying of tiles in floor will be carried as described above in glazed tiles item.

The work will be measured in square metre of surface area.

7.10 Brick paving.
Over burnt bricks shall be used for the purpose. The brick shall be laid flat or on edge as required and set on cement mortar (1:6) bedding with uniform joints to give leveled surface to the required grades. The joints shall be pointed with cement mortar 1:2. The work shall be properly cured. Measurement of the work is in square meter of the actual area laid.

7.11 FACTORY MADE CEMENT CONCRETE INTERLOCKING PAVER BLOCK

1 Base Interlocking paver block to be fixed on the bed 50 mm or specified otherwise thick of coarse sand of approved specification and filling the joints with the sand of approved type and quality or as specified and as directed by Engineer-in-charge.

2 Interlocking Paver Block Factory made precast paver block of M-30 or otherwise specified grade to be used. Paver blocks to be of approved brand and manufacturer and of approved quality. Minimum strength as prescribed by manufacturer and as per direction of Engineer-in-Charge for the grade specified to be tested as per method mentioned in specification of subhead cement concrete of CPWD Specification 2009 Vol. I.

3 Measurement & Rates Area provided with paver block to be measured in sqm. correct up to two places of decimal. The rate include the cost of the material, labour, tools etc. required in all the operations described above.

8 DOORS, WINDOWS, GRILL & GLAZING

i) Flush doors.

Shutters shall be of 35mm thick or as specified, solid cored with teak Veneer or Cedar or commercial or an approved quality waterproof plywood faced as specified on both faces or laminated on either side as specified in BOQ and shall be of approved manufacturers. It shall be lipped with t.w. lining to minimum depth of 55 mm on all exposed sides as directed. The frame shall be of size or as specified in the drawings of teak wood of an approved quality. Anti-termite treatment shall be applied to the frames as directed. Fixture and fastening of approved quality shall be used. Door shall be painted with three coats of approved synthetic enamel paint with desired colour and shade over a coat of wood primer. The work shall be measured in square meters as per I.S. 1200. If specified by the Architect the standard 'EZ' section steel frame or aluminium frame of approved manufacture shall be used.

9 MISCELLANEOUS WORK:

9.1 Anti - Termite treatment

The work consists of a chemical treatment to be given to the foundation pits and trenches, the back fill soil, the fill within the plinth and all work in contact with the wall, the ground and ground floor. The treatment shall provide a complete chemical barrier all round which shall prevent the termite from reaching the super structure of the building and its contents.

The Anti-termite treatment shall be given to column pits, wall trenches, basement excavations, back fill earth, the top surface of plinth filling, at junction of walls and floor, to the soil along the external perimeter of the building and surrounding water pipes, waste pipes and conduits and all woodwork in contact with wall / ground by means of spraying equipment. The work shall be carried out as per I.S. 6313. Payment shall be on per sq. mt. basis of the plinth area (Ground floor only).

9.2 Integral Water Proofing Work

The work consists of cement base integral Water proofing work on terrace slab by laying brick bats 25mm to 100mm sizes over 20mm thick layer of cement mortar of mix 1:5 admixed with proprietary
water proofing compound conforming to IS 2645 and filling the joints with cement mortar 1:5 admixed with proprietary water proofing compound conforming to IS 2645 to required slope and treating similarly the adjoining walls up to 300 mm height including rounding of junctions of walls and slabs. The rate shall include curing and ponding test etc complete.

The work shall be carried out through approved specialised firm of repute. The work shall also include treatment of the parapet up to vatah to a height as directed. The rate shall also include a guarantee as specified and decided by the Architect. All the openings, areas around pipe sleeves, rain water outlets, drains, etc. shall be specially treated to make joints water tight. A written Guarantee for performance of 10 years or as specified shall be given to the employer and/or Architect.

The work shall be measured in square meter of the actual area laid and no extra shall be paid for vatahs, rounding at junction of wall and floor and around water spouts, water outlets etc.

9.3 Water proofing treatment to Terrace by ‘Surface’ Method

The new terrace shall be treated with ‘Surface’ method which starts directly over the RCC slab and includes the brick-bat coba to provide the necessary gradient for the easy flow of rain water.

The coba will be finally covered with “Cetroof” jointless waterproof plaster finished smooth with trowel in cement colour, with false markings of 300mm (one foot) squares. The treatment shall be carried along the vertical surface of the parapets and other adjoining walls, upto a height of about 300mm (1 ft.) in the shape of round vata. The average thickness of treatment will be 110mm (4 ½”) , the thickness at rain water outlet points being 75mm (3”) with a slope of one in 120.

The surface provided will be hard and tough suitable for all normal domestic purposes.

It due to the location of rain water pipes being far apart and due to the span being wider than 30 ft. or 9 metres and the water is required to travel on one side only then the thickness of the treatment shall be increased proportionately to maintain the gradient for the easy flow of rain water.

Floor & Wall of Toilets (Bathroom & Water closets) & kitchen Mori by Surface method

The floors and walls of toilet and kitchen mori shall be treated with “surface” method before work in the floor and wall is done, all chasing or cutting in the floor and/or wall shall be done by the plumber. Then a layer of ‘Centroof’ plaster shall be put about 35mm [1 ½’] thick in the floor area of the depression and about 25mm (1”) thick on the side walls of the depression upto flor level. The waterproof plaster about 18mm (3/4”) thick shall then be continued on the walls above the proposed finished floor level upto a height of 600mm (93 feet) with surface suitable and even to receive tiles. In shower areas in the bathrooms, the treatment shall be for the full height of the walls.

The plumber shall then finish all his plumbing work i.e. of laying and fixing of pan, pipes, and traps etc. without any further breaking or disturbing all treatment. The depression then will be filled with ‘Cetroof’ waterproof brickbat coba upto the level for putting tiles the surface being finished even and suitable to receive tiles.

The rates shall be quoted separately for the waterproof plaster as one item and filling in the depression as second item. No deduction in the floor and wall areas for pans, and other fittings and fixtures will be made in the measurement.
10 Structural Steel Work

Structural steel work of TATA SHS or RHS sections of approved quality and shall conform to IS: 800 or latest edition and shall be free from defects impairing strength, durability or appearance and shall be of the best quality for the purposes specified, and possessing structural properties to withstand safely stresses to which these shall be normally subjected. The Contractor shall bear the costs of all tests.

All structural steel members brought by the contractor shall be handled with care, stacked on edge and supported evenly.

The structural steel and rivet bars shall conform to latest edition of IS : 226. Before any fabrication work is commenced all plates shall be flattened and all bars and sections be straightened or otherwise trued and made free from twist or other distortion. Method adopted for the purpose shall be such as not to injure the material.

Cutting shall be effected by shearing, cropping or sawing and shall be clean, reasonably square and free from distortion. If directed the edges shall be ground. Gas cutting by mechanically controlled torch shall be permitted for mild steel only with approval of the Architect.

It shall be the responsibility of the contractor to submit shop drawings to the Architect/Consultant. All shop drawings shall be prepared in advance of the drawings actual fabrication. These shall show full size sections and all joints and connections, thickness of materials used and details of welds, bolts, rivets etc. Shop drawings shall clearly distinguish between, shop and field rivets, bolts and welds. Drawings shall be made in conformity with the I.S. Code for shop drawings and with due regard to speed and economy in fabrication and erection. A marking diagram allotting distinct identification marks to each separate piece of steel shall be prepared. The diagram shall be sufficient to ensure convenient assembly and erection at site. All shop drawings shall show temporary bracing and connections required during fabrication and erection.

Bolting:

All turned and fitted bolts shall be parallel throughout the barrel within the tolerance of only minus 0.13mm and faces of heads and nuts bearing on steel work shall be machined. All such bolts shall be provided with washers of standard size so that the nut when turned shall not bear on the unthreaded body of the bolt. Heads and nuts shall be hexagonal Whitworth screws and shall be well formed. Where the full bearing area of the rivet is to be developed, the threaded portion of the bolt shall not be within the thickness of the parts bolted together. Threaded portion of each bolt shall project beyond the nut at least by one thread. Tapered washers shall be provided for all heads and nuts bearing on beveled surfaces.

Welding:

Welding wherever indicated shall conform to latest edition of IS : 814-1963 unless otherwise specified. Welding shall be carried out by experienced welders only, who if necessary, shall produce testimonials about their work or if required by Architect/Consultant shall have to undergo qualifying tests as prescribed in latest edition of IS : 1181. Welding work shall be carried out as per latest edition of IS : 816.

Welding shall be done in flat position wherever possible and adequate steps shall be taken to maintain the correct arc length, rate of travel, current and polarity for the type of electrode and nature of work.

Steel shall not be painted or oiled and any areas where welding is to be performed shall be well cleaned to remove any paint, scale or rust immediately before welding for a distance of at least 2cm (3/4") on either side.
The work shall be securely held in position by means of tack welds, service bolts, clamps or jigs before commencing the welding so as to prevent any relative movement due to distortion, wind or other causes. When welding is liable to cause distortion, the work shall be securely held in approved frames or jigs.

Parts to be fillet welded shall be brought in as close contact as practicable and in no event shall be separated more than 4.75mm (3/16”). If the separation is 1.6mm (1/16”) or greater, the size of the fillet welds shall be increased by the amount of the separation.

The separation between facing surfaces of lap joints shall not exceed 1.6mm (1/16”). The fit of joints at contact surfaces which are not completely sealed by welds, shall be close enough to exclude water after painting.

Abutting parts to be butt welded shall be carefully aligned. Misalignment greater than 3mm (1/8”) shall be corrected and in making the correction, the parts shall not be drawn into a sharper slope than two degrees (11mm in 30cm or 7/16” in 12”).

The sequence of welding shall be such that when possible the members which offer the greatest resistance to compression are welded first.

Welded joints showing slag inclusion or lack of proper penetration shall be cut and rewelded overlap of the toe of the weld and under-cutting of the parent metal should be avoided and where present to a serious extent shall be rectified.

All slag shall be removed from each run before another run is superimposed. When cold the final run shall be protected with clean boiled linseed oil and shall not be painted until approved by the Architect/Consultant or his representative.

Grinding of finished weld is permitted provided the weld is not reduced below the prescribed section. All exposed welds shall be ground smooth. Welds which have not been ground shall be scrubbed with a 10% solution of Hydrochloric acid which shall be washed off with water before paint is applied an alkali resisting paint is used.

Measurements:

All fabricated trusses, frames, gantry girders, crane rails, fish plates, clamps, square or round bars etc. Stanchions, built girders and purlins shall be calculated on the basis of standard net weight according to I.S.I. Code. Net weight of cleats, brackets, packing pieces, rivets, bolts cutting or notching ends of sections or intermediate points for making connections. Weight for the bolts and nuts shall be measured but the weight of the weld shall not be considered.
SECTION : C

SPECIFICATION FOR WATER SUPPLY AND SANITARY WORKS

1.0 **SCOPE OF WORK**:

The general character and the scope of work to be carried out under this contract is illustrated in the drawings and specifications. The Contractor shall carry out and complete the said work under this contract in every respect in conformity with the rules and regulations of the local authority. The Contractor shall furnish all labour, supply and install all materials, appliances, tools, equipments etc, necessary for the complete provision and testing of the whole plumbing services installation as specified herein as per the relevant ISI codes and shown on the drawings. This also includes any material, appliances, equipment not specifically mentioned herein or noted on the drawings as being furnished or installed but which are necessary and customary to make a complete installation as shown on the drawings or described herein, properly connected and in working order. In general, the work to be performed under this contract shall comprise of the following:

1.1 All incident jobs connected with plumbing services installation, such as excavation in trenches and back filling, cutting chases in concrete, brick etc. and making good, cutting/drilling holes through walls, floors, and grouting for embedding of fixtures, equipment, etc.

1.2 Furnish and install a complete workable, plumbing services installation as shown on the drawings and described in this specification and as per the latest ISI specifications including all that which is reasonably inferred.

1.3 Complete installation of internal and external water supply system.

1.4 Complete installation of the sewerage & sewerage appurtenances internally and around the building.

1.5 Complete installation of all sanitary and plumbing fixtures.

1.6 Co-operation with other crafts in putting the installation in places. Any work done without regard or consultation with other trades, shall be removed by the Contractor without any additional cost to the Employer, to permit the proper installation of all other work, as desired by the Employer.

1.7 Repair all damage done to the premises as a result of his installation and remove all debris left by those engaged for this installation to the satisfaction of Employer.

1.8 Cleaning of all plumbing fixtures, testing and showing satisfactory performance of all the fixtures at the time of handing over to the Employer.

1.9 Take care of all the fixtures fitted until the time of handing over to the Employer.

1.10 Assume full responsibility of all required applications and costs, to connect to Municipal water mains, sewers and storm water drains, to the extent these are applicable to this installation.

2.0 **REGUALTIONS AND STANDARDS** :-

2.1 The installation shall conform in all respects to the following broad list of standards in general:

IS 1726 - 1991 : Code for cast iron manhole frame and cover.


IS 1172 - 1971 Code of Basic requirements for water supply, drainage & sanitation (revised)


IS 4111 - 1967 : Code of Practice for Ancillary structures in Sewerage system.

IS 3989 - 1984 : Centrifugally cast spun iron and socket soil and ventilating pipe, fittings and accessories.

IS 1239 - 1990 : Specifications for mild steel tube, tubular and other steel pipe fittings.

IS 554 – 1975 : Dimensions for pipe threads where pressure tight joint are required on the threads.


IS 13592 - 1992 : UPVC pipes for soil & waste discharge system inside buildings including ventilation and rain water system.


IS 1626 - 1960 : Specifications for AC building pipes, gutters & fittings ( Spigot & Socket type ).


2.2 The installation shall also be in conformity with the byelaws and requirements of the local authority in so far as these become applicable to the installation. Wherever this specification calls for a higher standard of materials and/or workmanship than those required by any of the above regulations and standards, then this specification shall take precedence over the said regulations and standards. Wherever drawings and specifications require something, which will violate the regulations, the regulations shall govern.

3.0 FEES, PERMITS AND TESTS :

The Contractor shall obtain and pay for any and all fees and permits required for the installation of this work. On completion of the work, the Contractor shall obtain and deliver to the Employer, certificates of final inspection and approval by the local authority. The Employer shall have full power to require the
materials of work to be tested by an independent agency at the Contractor's expenses in order to prove their soundness and adequacy.

4.0 **DRAWINGS AND SPECIFICATIONS**:

4.1 The drawings and specifications shall be considered as part of this contract and any work or materials shown on the drawings and not called for in the specifications or vice versa shall be executed as if specifically called for in both. The contract drawings indicated the extent and general arrangement of the fixtures, drainage system etc., and are essentially diagrammatic. The drawings indicate the points of supply and termination of pipe runs and broadly suggest the routes to be followed. The work shall be installed as indicated on the drawings, however any changes found essential to co-ordinate this work with other trades shall be made without any additional cost. The date given herein and on the drawings is as exact as could be secured, but its complete accuracy is not guaranteed. The drawings and specifications are of the assistance and guidance of the Contractor, and exact location distance and levels will be governed by the individual building and site condition therefore approval at the architects shall be obtained before commencement of work.

4.2 At the completion of the work, Contractor shall furnish final completion drawings to the Employer on tracing paper including all product catalogues, maintenance manual in the desired format.

4.3 **MANUFACTURER'S INSTRUCTION**:

Where manufacturers have furnished specified instructions, relating to the materials used in this job, covering points not specifically mentioned in these documents, these instructions shall be followed in all cases.

4.4 **CHANGE IN DIMENSIONS**:

If the size of the fixtures mentioned is not available then the nearest available size shall be fixed with due consent of the Employer.

5.0 **MATERIALS**:

5.1 Materials shall be of the best approved quality obtainable and unless otherwise specified they shall conform to the respective Indian Standards Specification.

5.2 Samples of all materials shall be as per the list of approved brand manufacture. The samples shall be got by the Project Managers approved before placing order and the approved samples shall be deposited with the Employer.

5.3 In case of non-availability of materials in metric sizes, the nearest size of FPS units shall be provided with prior approval of the Architects, for which no extra will be paid.

6.0 **DRAINAGE**:

6.1.1 **PVC PIPE AND FITTINGS**:

PVC pipe and fittings shall comply, with IS 4985 - 1988 in every respect and all PVC pipes, bends, etc., shall be of the best variety. Pipes shall be jointed using good quality rubber lubricant & tested for leakage as per class of pipe.

6.2 **LAYING AND JOINTING PVC / SW PIPES**:

6.2.1 Laying: The pipes shall be carefully laid to the levels and gradients shown on the plans and sections by making use of sight rails and boning rods, with socket up the gradient.
6.2.2 **JOINTING:**

For PVC pipes jointing shall be carried out with solvent cement. A uniform coat of solvent cement shall be applied on outer surface of the pipe and internal surface of fitting. The spigot of the pipes must be forced well home into its socket, and rotated to ensure even and proper spreading of the solvent cement. The excess solvent cement shall be removed.

All such joints shall be further protected on the outside by a layer of Chopped Strand matt Fiber Glass Paste. **No rubber ring joints shall be permitted.**

6.2.3 **Testing:** All lengths of the sewer and drain shall be fully tested for water tightness by means of water pressure maintained for not less than 30 minutes. Testing shall be carried out from manhole / chamber to manhole / chamber. All pipes shall be subjected to a test pressure at least 1.5M head of water at the highest point of the section under test. The pipes shall be plugged preferably with standard drain plugs (with rubber rings) on both ends. The upper end shall, however be connected to a pipe for filling with water and getting the required head. The Contractor shall give water test to the drains and sewers at his own expenses and charges, as directed by the Architects.

6.3 **MODE OF MEASUREMENT:**

6.3.1 **PVC Pipes:** PVC / SW pipes shall be measured along the center line of the pipe line including the special in Rmt. The quoted rate shall be per Rmt. and shall include the following:

a) The cost of pipes, specials and other jointing materials.

b) Laying and jointing.

c) Testing and making good the defects if any.

7.0 **WATER SUPPLY:**

7.1 **CPVC PIPES AND FITTINGS** for Internal Plumbing & PVC Pipes for External Plumbing:

CPVC pipes & fittings shall be used for internal water supply lines and PVC pipes & fittings for external water supply lines conforming to ASTM D1784, ASTM D1785, ASTM D2466, ASTM D2467, ASTM D2564, ASTM F1498 & ASTM D2774 & ISO 7/1. they shall be of Astral flowguard, Ashirwad, Supreme or approved equivalent makes.

7.1.1 **Laying and Fixing:**

Where pipes have to be cut or threaded, ends shall be carefully filed out so that no obstruction to bore is offered. For internal work all pipes and fittings shall be fixed truly vertical and horizontal, either by means of standard pattern holder bat clamps keeping the pipes (12mm) clear of the wall everywhere or concealed as directed. Only NSF approved IPS weld on PVC 705 & PVC 717 solvent cements to join PVC pipes with fittings shall be used as directed.

For external work, PVC pipes and fittings shall be laid in trenches. The width of the trench shall be the minimum width required for working. The top level of pipes laid underground shall not be less than 60 cms from the finished ground level. The work of excavation and refilling shall be done as specified elsewhere, or concealed as directed.
7.1.2 **Mode of Measurements**: PVC pipes above and below ground shall be measured along the center line of the pipes and fittings. The quoted rate for respective item shall be per Rmt and shall include the following:

a) Cost of respective pipes and all specials.
b) laying, fixing and jointing with necessary threading, solvents, etc. as directed/c

c) Cutting holes and chases in walls, floors, etc, and making good the same.

d) Testing and making good the defects, if any.

7.2 **SOIL, WASTE PIPES INSIDE THE TOILET**

7.2.1 **SOIL, WASTE PIPES INSIDE THE TOILET**: 

All soil, waste and anti-siphonage pipes and fittings used within sunken floor areas or below floor slabs (suspended pipes). Shall be UPVC socket and spigot type pipes conforming to relevant IS 4985 and 13592 or its subsequent revision.

All 75mm/90mm/110mm/160mm pipes being laid below the floor, in earth or in sunken areas and also suspended from slabs shall be of 6 kg/cm² classification. These shall be supported within sunken areas by slab, shall be done so by using 3mm dia hot dip galvanized Hi Tech Supports and anchored by means of Anchor fasteners.

Where specified rigid PVC/ SWR PVC pipes & fittings may be used for vent, condensate, waste pipes. Rigid PVC pipes shall be of best of quality confirming to IS 4985 – 1988. PVC pipes shall be jointed by using good quality rubber lubricant & tested for leakage as per the class of pipe.

7.2.2 **JOINTING**: 

Jointing shall be carried out with solvent cement. A uniform coat of solvent cement shall be applied on outer surface of the pipe and internal surface of fitting. The spigot of the pipes must be forced well home into its socket, and rotated to ensure even and proper spreading of the solvent cement. The excess solvent cement shall be removed.

All such joints shall be further protected on the outside by a layer of Chopped Strand matt Fiber Glass Paste. **No rubber ring joints shall be permitted within sunken floors/below slab.**

7.2.3 The sizes of the branch waste pipes for different fitting shall be generally as follows:

<table>
<thead>
<tr>
<th>Fitting</th>
<th>Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lavatory Basin</td>
<td>40 dia</td>
</tr>
<tr>
<td>Urinal</td>
<td>40 dia</td>
</tr>
<tr>
<td>Sink</td>
<td>40 dia</td>
</tr>
<tr>
<td>Nahani Trap</td>
<td>75 dia</td>
</tr>
<tr>
<td>Special Floor Trap</td>
<td>75 or 100 dia</td>
</tr>
</tbody>
</table>

as required with or without inlet receiving cap.

All waste pipes of 40mm/50mm/63mm/75mm shall be of 6 kg/cm² classification.
All such pipes shall be supported and clamped at 100cm c/c.

All waste pipes being connected to a floor trap, shall be connected only through an inlet receiving cap, with an inlet connection joint of appropriate diameter, capable of being pasted to the floor trap providing for a leak proof joint.

The inlet receiving pipes shall extend to the toilet finished floor where its joints with the floor shall be sealed with Silicone Sealant.

7.2.4  W.C. Pan connectors shall be as to suit the requirement with 75 dia, vent horn for connection to the antisiphonage pipe with pan connector of PVC.

7.2.5  Connection to the sewage or storm water collection sumps to be perfectly water tight and as specified in the drawing.

7.2.6  The floor traps for toilet blocks shall be molded PVC/CI or fabricated from UPVC 6 kg/cm2 pipes with or without an inlet receiving cap. The traps shall have a minimum water seals of 40mm to 50mm.

7.2.7  Bathroom CP grating shall be of SS of the cockroach free design, of the best approved standard and design.

7.2.8  The pipes shall be laid to a slope of minimum 1 in 100 and preferably in 1 in 50, and connected to the drain.

7.2.9  **SOIL, WASTE PIPE AND ANTI-SIPHONAGE VERTICAL, EXTERNAL PIPES**

All soil, waste and anti-siphonage pipes and fittings used as vertical external pipes within the shafts shall be PVC SWR Grade socket and spigot type pipes confirming to relevant IS or its subsequent revision.

All pipes being used on exposed surface shall be UV protected with a UV inhibitor built in during Molding / extrusion in case of PVC pipes.

All external pipes shall be mounted on special sliding brackets of Galvanized MS grouted to the Duct wall, with the pipes being held to it using GI “U” clamps. These brackets shall provide for a least 50mm clear working space behind the pipes.

7.3  **WATER FITTINGS OF JAQUARE CONTINENTAL (BIB COCK, STOP COCK, ETC.):**

7.3.1  All water fittings shall be of approved quality and design and shall generally comply to latest IS specifications. The fittings and joints shall be tested as specified for pipeline to ensure that the joints are leak proof. Defective fittings and the joints shall be repaired or re-done/replaced as directed.

7.3.2  **Mode of Measurement:** These items shall be measured in number unless not included in other items viz. wash basins, inlets to cisterns, etc, and shall include.

   a) cost of material.

   b) Cost of fixing accessories like bolts, nuts, washers.

7.4  **VALVES**:
The body covers of the valve shall be of tough, a cap of standard type, marked with an arrow to show the direction of turn for opening of the valve. It shall have flanged ends drilled to Indian Standard Specifications or screwed ends as specified.

The valves shall work easily and smoothly under all conditions and shall be water tight when closed.

The diameter of the water way, when the valve is fully opened shall not be less than the diameter of the pipe.

Fixing of the valve shall be done by means of bolts, nuts and 3 mm thick rubber insertions with flanges, for flanged ends and with GI collars and unions for screwed ends. Rate includes bolts, nuts, washers and insertion, if any.

**Mode of Measurements**

- Valve shall be per number only and shall include:
  - a) Cost of valve and jointing materials.
  - b) Fixing and jointing with necessary bolts, nuts, washers, rubber gaskets, insertion, etc.
  - c) Testing and making good the defects if any.

**7.5 MISCELLANEOUS ITEMS**

Supports, pedestals and base for inspection chambers, gully traps and pipes shall be in 1:2:4 cement concrete mix.

- **7.5.1** The floor traps for toilet blocks shall be PVC with SS grating, bolted down design. The traps shall be provided with minimum water seals of 2” to 2½”.

- **7.5.2** Bathroom CP grating shall be of bolted down design out of heavy cast brass with a chromium plating of the best approved standard.

**8.0 SANITARY INSTALLATION AND FIXTURES**

- **8.1** All fixtures shall be fixed in a neat workman like manner true to line and as recommended by the manufacturer or shown on the drawings. Care shall be taken to fix all fixtures, brackets and accessories by proper wooden cleats, rawl plugs, bolts and nuts as each fixtures will warrant with the correct size of screws, nuts or bolts.

- **8.2** Care shall be taken in fixing all approved chromium plated fixtures and accessories so as not to leave any tool marks or damages on the finish. all such fixtures shall be tightened with fixed spanners. Use of Stiltsion type pipe wrenches with toothed jaws shall not be allowed for this purpose.

- **8.3** All fixture shall be thoroughly tested after connecting up the drainage and water supply system. All fixtures shall be thoroughly finished and any leakage in piping, valves and waste fittings shall be corrected to the entire satisfaction of the Architects.

- **8.4** Upon completion of the work, remove all labels, stickers, plasters etc, from the fixtures and clean all fixtures with soap and water so as to present a neat and clean toilet.

- **8.5 INDIAN WATER CLOSET**
8.5.1 Indian Water Closet sets with 'P' or 'S' trap shall be the type as given in the schedule with 32 mm PVC flush pipes, high level cistern, PVC inlet connection and brass strip cock. India Water Closet and trap shall be set in lime surki concrete 1:4 and flush with the floor.

8.5.2 **Measurement**: Indian Water Closet shall be measured per number and quoted rate shall include,

   a) The cost of W.C pan with ‘P’ or ‘S’ trap, cistern, PVC inlet pipe, CP brass stop cock and pair of white glazed foot resets.

   b) Setting the closets in lime surki concrete including the cost of surki concrete.

   c) Painting the brackets and cistern.

8.6 **EUROPEAN TYPE WATER CLOSET**:

8.6.1 The closet shall be of vitreous China wall hung box rim pattern having back inlet and P/S trap. Each closet and cistern shall be provided with the following accessories:

   a) Seat: Double flapped heavy plastic seat cover of approved quality and color with rubber buffers with C.P brass bar and screws and fixed to the pan.

   b) 32 mm CP flush Valve set / Cistern.

   c) CI chair with bolts / bidet bolts for mounting the closet.

8.6.2 **MEASUREMENT**: These items shall be measured per number and the rate quoted shall be per number only. The quoted rate shall include:

   a) The cost of W.C pan, trap with brackets / bolts and C.P flush pipe, CP brass flush valve Set / Cistern.

   b) Plastic seat cover.

   c) Jointing and fixing material.

   d) Painting of brackets.

8.7 **WASH BASINS**:

8.7.1 These shall be of white vitreous China of best quality manufactured by an approved firm of size as specified in the schedule of quantities. The basins shall be supported on a pair of C.I brackets of approved design.

8.7.2 Each wash basin shall be provided with 1 No. 15 mm CP brass Pillar cock, 15 mm CP brass stopcock, 8 mm PVC/CP inlet pipe, 32 mm CP waste coupling, 32 mm CP bottle trap, GI pipe.

8.7.3 **Measurement**: This item shall be measured per number and the rate quoted shall be per number only. The quoted rate shall include:

   a) The cost of wash basin with bracket and other items stated above.

   b) Jointing and fixing materials.

   c) Painting of brackets.
9.0 **TOILET REQUISITES**:

9.1 **SHOWER**:

These shall be C.P finish swivel type as specified in Schedule of Quantities.

9.2 **BOTTLE TRAPS**:

Bottle traps (for wash basins, sinks etc.) shall be deep seal (minimum 6 cms seal) cast brass bottle traps, heavy chromium plated. All bottle traps shall be provided with suitable cleaning eye, extension piece, flare nuts all chromium plated. Bottle traps shall be of approved make and design. Traps for wash basins shall be 32mm for urinal and wash basin and 40mm for sinks.

9.3 **MEASUREMENT**:

All these items shall be measured per number and the quoted rate be per number only which shall include:

a) The cost of respective materials.

b) Necessary fixtures.

c) Fixing in position.
<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Materials</th>
<th>Vendor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cement – OPC – 53 G</td>
<td>Ambuja, Ultratech, ACC, or ISI marked as approved by the NID</td>
</tr>
<tr>
<td>2</td>
<td>Reinforcement – TMT</td>
<td>Tata, Sail, Vizag or ISI marked as approved by the NID</td>
</tr>
<tr>
<td>3</td>
<td>Structural steel – tabular / sections</td>
<td>Tata / SAIL /ZENITH / VIZAG or ISI marked as approved by the NID</td>
</tr>
<tr>
<td>4</td>
<td>Bricks</td>
<td>Exposed bricks Approved by NID</td>
</tr>
<tr>
<td>5</td>
<td>Glazed tiles</td>
<td>Somani, Kajaria, Bell, Johnson. Asian or approved equivalent</td>
</tr>
<tr>
<td>6</td>
<td>Ceramic tiles</td>
<td>Asian, Kajaria, Bell, Somani, Johnson or approved equivalent</td>
</tr>
<tr>
<td>7</td>
<td>Vitrified ceramic tiles mat finish</td>
<td>Asian, Bell, Johnson or approved equivalent</td>
</tr>
<tr>
<td>8</td>
<td>Flush doors and plywood</td>
<td>Anchore, Sudersan, Kit Ply, Century or approved equivalent</td>
</tr>
<tr>
<td>9</td>
<td>Water proof cement paints – Apex weather coat</td>
<td>Asian, Burger, Nerolac, Surfacoat, Snowcem Indocem or approved equivalent</td>
</tr>
<tr>
<td>10</td>
<td>PVC pipes</td>
<td>Finolex, Dutron, Supreme or ISI equivalent approved brand</td>
</tr>
<tr>
<td>11</td>
<td>CPVC pipes – Water supply</td>
<td>Astral, Ashirwad Flow Guard or ISI equivalent approved brand</td>
</tr>
<tr>
<td>12</td>
<td>Sluice valves.</td>
<td>Sant, Leader, Herision, Zoloto or ISI equivalent approved brand</td>
</tr>
<tr>
<td>13</td>
<td>C.P. Fittings</td>
<td>Jaquar continental or approved equivalent</td>
</tr>
<tr>
<td>14</td>
<td>W.C. Pans, Wash basins</td>
<td>Cera / Hindware / Hindustan / Parry-ware sapphire range as specified in BOQ</td>
</tr>
<tr>
<td>15</td>
<td>PVC Seats</td>
<td>Commander, Parry, or ISI equivalent approved brand</td>
</tr>
</tbody>
</table>

**NID reserves the right to choose any one of the make of materials and its decision is final & binding to all.**
ABSTRACT  OF VARIOUS CIVIL MAINTENACE WORKS TO BE CARRIED OUT FOR NID’S AHMEDABAD CAMPUS IS AS UNDER :

[1] Civil Works for Railway Design Centre : RS. ________________

[2] Civil works for repairs, renovation and up gradation of guest house E-4 and faculty quarter D – 6 : RS. ________________

[3] Civil works for repairs, renovation and up gradation of toilets of Girl’s Hostel Block C : Rs. ________________

Total : RS. ________________
<table>
<thead>
<tr>
<th>Item Number (upto 200 characters)</th>
<th>Item Description</th>
<th>Quantity</th>
<th>UNIT</th>
<th>Tender Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Excavation in all types of soil, soft / hard / murrum or sand, up to a depth of 1.50 m. from existing ground level including sorting out and stacking of useful materials and refilling the sides of trenches with excavated stuff as directed with all lead.</td>
<td>100</td>
<td>cmt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Cement concrete 1:4:8 in foundation laid in line &amp; level, well consolidated, cured, etc. complete. The rate shall also include the cost of side shuttering if required in foundation</td>
<td>30</td>
<td>cmt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Masonary works in plinth for walls, pillars etc. in CM 1:6 using bricks having crushing strength not less than 50 kg / sq cm laid to shape, sizes and thickness as per drawing, including raking out joints, watering etc. complete.</td>
<td>35</td>
<td>cmt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Masonary works in walls, columns, pilaster, etc. laid to any shape &amp; sizes as per drawing in super structure at all height &amp; levels in CM 1:6 as item above using bricks having crushing strength not less than 50 kg / sq cm, including scaffolding, watering etc. complete.</td>
<td>20</td>
<td>cmt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Providing and filling good quality of earth</td>
<td>30</td>
<td>cmt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Excavated earth refilling in foundation and</td>
<td>30</td>
<td>cmt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>R.C.C. work with controlled concrete for</td>
<td>6</td>
<td>cmt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>100 mm thick IPS flooring with cement</td>
<td>20</td>
<td>cmt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Providing and erecting centering and shuttering form works with necessary supporting frame work, staging, scaffolding, shuttering, proping, bracing etc complete. The rate shall cover the cost of providing necessary grooves etc.</td>
<td>40</td>
<td>smt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Description</td>
<td>Quantity</td>
<td>Unit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>------------------------------------------------------------------------------</td>
<td>----------</td>
<td>------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Steel reinforcement (TMT / Mild / Tor) including supplying, cutting, bending,</td>
<td>1000</td>
<td>KG</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>binding, fabricating and placing in the various items of concrete. The rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>to include cost of binding wire, welding if necessary and concrete / pvc</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>spacers of appropriate approved design.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Min. 12mm thick cement plaster in foundation and plinth walls or else where</td>
<td>50</td>
<td>smt</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>as directed using CM 1:4 and finished smooth with neroo, watering etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>complete No extra shall be paid for plaster bands and grooves as per details.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Providing and fixing 16mm dia - 600mm long anchor bolts in columns as per</td>
<td>40</td>
<td>nos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>detailed drawings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Providing and fixing of 60mm th. M30 grade rubber moulded interlocking paver</td>
<td>50</td>
<td>smt</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>blocks. Laid in line and level as per design and details. The rate shall</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>including the cost of the material, sand bedding, labour, tools etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>required in all the operations etc. Complete.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Providing and injecting Chemical emulsions for pre-construction / post construction anti-termite treatment and creating continuous chemical barrier under and all around the columns pits, wall trenches, top surface of plinth filling, junctions of wall &amp; floors, along the external perimeter of building, over the top surface of the consolidated earth on which plinth protection is to be laid, surrounding pipes and conduits etc. complete. Construction work in accordance with IS:6313 (Part-II) with using Chloropyriphos Emulsifiable concentrate 1.00%. (IS.: 8944-1978), Lindens 1.00% (IS.: 632).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>smt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- carried to Main Summary
Civil works for repairs, renovation and upgradation of guest house E-4 and faculty quarter D – 6

<table>
<thead>
<tr>
<th>Item Number (upto 200 characters)</th>
<th>Item Description</th>
<th>Quantity (only figures)</th>
<th>UNIT (upto 50 characters)</th>
<th>Tender Rate (Upto 2 Decimals)</th>
<th>Amount (Upto 2 Decimals)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Removing of existing plumbing fittings and sanitary ware items from toilet and bathrooms, stocking and disposal of unserviceable materials with all lead and lift.</td>
<td>5</td>
<td>Nos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Demoishing of existing wall tiles and plaster from toilet and bathrooms, Kitchen platform kota stone, stocking and disposal of unserviceable materials with all lead and lift.</td>
<td>250</td>
<td>smt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Demolishing of existing floor tiles and floor concrete from toilet and Bathrooms. Stocking and disposal of unserviceable materials with all lead and lift.</td>
<td>25</td>
<td>cmt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Laying light weight cinder concrete 1:5:10 in sunk area</td>
<td>25</td>
<td>cmt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Water proofing treatment of sunk</td>
<td>70</td>
<td>smt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Providing 15mm thick back coat</td>
<td>250</td>
<td>smt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Providing and fixing glazed tiles</td>
<td>250</td>
<td>smt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Providing and fixing glazed tiles</td>
<td>30</td>
<td>smt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Providing and laying vitrified tiles of 1st quality of specified size (600 x 600 mm) as per specified colour, shade and approved make, laid on floor with cement base chemical (i.e. Balendura Silver or equivalent ). All joints filled with colour / white cement putty and wiped to give sharp joints and washed clean on completion.</td>
<td>150</td>
<td>smt</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Quantity</td>
<td>Unit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------------------------------------------------</td>
<td>----------</td>
<td>------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Providing and fixing vitrified tile skirting (min 8cm height) including making zari in brick wall / RCC column/walls and after fixing the skirting with CM 1:3 and neatly finished with rich cement putty etc. complete to match with the adjoining surface.</td>
<td>100</td>
<td>rmt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Providing and fixing of Hindware or equivalent make white glazed European Water Closet Wall hung having back inlet and P/S trap and soil connection pipe up to wall, flush pipe connection etc. closet is mounted over CI chair bracket with bolt and nuts, PVC black/white seat cover with rubber buffers, flap, CP hinges, CP bolts and nuts etc. complete.</td>
<td>5</td>
<td>nos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Providing and fixing of Hindware or equivalent make white washbasin size 550 * 460 with C.I./M.S. bracket with 32mm CP waste coupling, 32mm CP bottle trap, 450mm long CP copper inlet connecting pipe with end nuts etc. complete.</td>
<td>5</td>
<td>nos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Providing and fixing 32mm CP Brass flush valve (push type) Jaquar make Matropole flush valve. Including all required material etc.</td>
<td>5</td>
<td>nos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Providing and fixing of Jaquar or equi. make Health faucet</td>
<td>5</td>
<td>nos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Providing and fixing 15mm CP Brass angle cock with wall flange and suitable length of CP brass extension pipe, Jaquar connectantle or equi. make</td>
<td>8</td>
<td>nos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Quantity</td>
<td>Unit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------</td>
<td>------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Providing and fixing 15mm CP Brass pillar cock with suitable length of CP brass extension pipe, Jaquar conntinantle or equi. make</td>
<td>5</td>
<td>nos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Providing and fixing 15mm CP brass bib cock with wall flange (jaquar continental or equi.make)</td>
<td>25</td>
<td>nos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Providing and fixing 15mm CP Brass two way bib cock with wall flange (Jaquar continental or Equi. make)</td>
<td>5</td>
<td>nos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Providing and fixing 15mm CP Brass concealed stop cock and suitable length of CP brass extension pipe with wall flange (Jaquar continental or Equi. make)</td>
<td>14</td>
<td>nos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Providing and fixing 15mm dia inlet overhead shower with revolving joint and 190mm long swivel shower arm and wall flange of Jaquar or Equi. make.</td>
<td>5</td>
<td>nos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Extra over above items for center point fittings of the fixtures in tile dado as directed.</td>
<td>80</td>
<td>nos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Providing and fixing rigid CPVC pipes confirming to ASTM SDR 11 and SCH 80 with necessary fittings, coupler, bends, tees etc including testing and fixed to wall / columns with PVC clamps with standard fitting joints to be filled with approved solution of CPVC solvent cement as directed and neatly finished. 1&quot; dia.</td>
<td>30</td>
<td>rmt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.1</td>
<td>3/4 &quot; dia</td>
<td>90</td>
<td>rmt</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Quantity</td>
<td>Unit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------</td>
<td>------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Extra over item above for concealed pipes including cutting chase in walls and/or concrete and fixing it with concrete and/or with cement mortar 1:3 to make the surface good to match with adjoining surface.</td>
<td>120</td>
<td>rmt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Extra over item above providing asbestos string for hot water lines of any diameter.</td>
<td>90</td>
<td>rmt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Providing and fixing sluice valve of 1&quot; dia of approved quality as directed.</td>
<td>5</td>
<td>nos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Providing and fixing rigid PVC pipes, 6 kg/sqcm with necessary SWR fittings, coupler, bends, tees etc. includes all standard fittings, Joints to be filled with approved solution so as to make water tight joints and finished with 10 mm fillet of epoxy putty as directed. The rate shall also include providing and fixing suitable adopter at the junction of two pipes.</td>
<td>50</td>
<td>rmt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26.1</td>
<td>4&quot; Dia.</td>
<td>36</td>
<td>rmt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Providing and fixing 10cm (4&quot;) dia PVC nanhi trap with jointing with waste pipe or plug band with ss jali at top including brick chamber with smooth finish etc. complete as directed. Joints filled with approved chemical solution.</td>
<td>15</td>
<td>nos</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total carried over Main Summary (2) Rs.**
<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item Description</th>
<th>Quantity (only figures)</th>
<th>UNIT</th>
<th>Tender Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Removing of existing plumbing fittings and sanitary ware items from toilet and bathrooms, stocking and disposal of unserviceable materials with all lead and lift.</td>
<td>25</td>
<td>Nos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Demoishing of existing wall tiles and plaster from toilet and bathrooms, stocking and disposal of unserviceable materials with all lead and lift.</td>
<td>450</td>
<td>SMT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Demolishing of existing floor tiles and floor concrete from toilet and Bathrooms. Stocking and disposal of unserviceable materials with all lead and lift.</td>
<td>225</td>
<td>SMT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Laying light weight cinder concrete 1:5:10 in sunk area with using of waterproofing compound in concrete.</td>
<td>100</td>
<td>CMT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Providing 15mm thick back coat</td>
<td>350</td>
<td>SMT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Providing and fixing glazed tiles /</td>
<td>300</td>
<td>SMT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Providing and fixing glazed tiles /</td>
<td>100</td>
<td>SMT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>15 cm thick cement concrete 1:4:8 for</td>
<td>225</td>
<td>SMT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Water proofing treatment of sunk / slabs including its sides using waterproofing agents / mortar and covering it with two coat of DISCHTAMENT DC (of MC Bouchemie or Equivalent make approved by NID)</td>
<td>180</td>
<td>SMT</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Quantity</td>
<td>Unit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------</td>
<td>------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Providing and fixing white glazed Orissa Pan WC 580 * 440 in size (Hind ware or equi.make) complete with traps with vent, 10cmt soil connection and 65mm dia white pvc anti syphonage pipe up to external wall, GI flush pipe concealed in wall up to wc fixture etc complete with necessary brick masonry around pan. the joint of pipe / trap under the floor to be filled with epoxy putty.</td>
<td>2</td>
<td>NOS.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Providing and fixing of Hindware or equi make white glazed European Water Closet Wall hung having back inlet and P/ S trap and soil connection pipe up to wall, flush pipe connection etc. closet is mounted over CI chair bracket with bolt and nuts, PVC black/white seat cover with rubber buffers, flap, CP hinges, CP bolts and nuts etc. complete.</td>
<td>6</td>
<td>Nos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Providing and fixing of Hindware or equivalent make white washbasin size 550 x 460 with C.I./M.S. bracket with 32mm CP waste coupling, 32mm CP bottle trap, 450mm long CP copper inlet connecting pipe with end nuts etc. complete.</td>
<td>8</td>
<td>Nos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Quantity</td>
<td>Unit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------</td>
<td>------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Providing and fixing 32mm CP Brass flush valve (push type) Jaquar make Matropole flush valve. Including all required material etc.</td>
<td>8</td>
<td>NOS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Providing and fixing of Jaquar or equi. make Health focet</td>
<td>8</td>
<td>NOS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Providing and fixing 15mm CP Brass angle cock with wall flange and suitable length of CP brass extension pipe, Jaquar continental or equi. make</td>
<td>12</td>
<td>NOS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Providing and fixing 15mm CP Brass pillar cock with suitable length of CP brass extension pipe, Jaquar continental or equi. make</td>
<td>8</td>
<td>NOS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Providing and fixing 15mm CP brass bib cock with wall flange (jaquar continental or equi.make)</td>
<td>20</td>
<td>NOS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Providing and fixing 15mm CP Brass two way bib cock with wall flange (Jaquar continental or Equi. make)</td>
<td>8</td>
<td>NOS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Providing and fixing 15mm CP Brass concealed stop cock and suitable length of CP brass extension pipe with wall flange (Jaquar continental or Equi. make)</td>
<td>15</td>
<td>NOS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Providing and fixing 15mm dia inlet overhead shower with revolving joint and 190mm long swivel shower arm and wall flange of Jaquar or Equi make.</td>
<td>8</td>
<td>NOS</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>QTY</td>
<td>Unit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>------------------------------------------------------------------------------</td>
<td>-----</td>
<td>-------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Extra over above items for center point fittings of the fixtures in tile dado as directed.</td>
<td>80</td>
<td>NOS.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Providing and fixing rigid CPVC pipes confirming to ASTM SDR 11 and SCH 80 with necessary fittings, coupler, bends, tees etc including testing and fixed to wall / columns with PVC clamps with standard fitting joints to be filled with approved solution of CPVC solvent cement as directed and neatly finished. (1) 1&quot; dia.</td>
<td>150</td>
<td>RMT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.1</td>
<td>3/4 &quot; dia</td>
<td>120</td>
<td>RMT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Extra over item above for concealed pipes including cutting chase in walls and/or concrete and fixing it with concrete and/or with cement mortar 1:3 to make the surface good to match with adjoining surface.</td>
<td>270</td>
<td>RMT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Extra over item above providing asbestos string for hot water lines of any diameter.</td>
<td>120</td>
<td>RMT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Providing and fixing sluice valve of 1&quot; dia of approved quality as directed.</td>
<td>5</td>
<td>NOS.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Description</td>
<td>Rate</td>
<td>Unit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>------------------------------------------------------------------------------</td>
<td>-------</td>
<td>------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Providing and fixing rigid PVC pipes, 6 kg/sqcm with necessary SWR fittings, coupler, bends, tees etc. includes all standard fittings, joints to be filled with approved solution so as to make water tight joints and finished with 10 mm fillet of epoxy putty as directed. The rate shall also include providing and fixing suitable adopter at the junction of two pipes. (1) 3&quot; Dia</td>
<td>150</td>
<td>RMT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26.1</td>
<td>4&quot; Dia.</td>
<td>150</td>
<td>RMT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Providing and fixing 36&quot; long GI brackets / GI nut bolts and clamps. The rate shall also include the labor charges for mounting on wall with jasti nails and grouting work etc. complete.</td>
<td>30</td>
<td>NOS.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Providing and fixing 10cm (4&quot;) dia PVC nanhi trap with jointing with waste pipe or plug band with ss jali at top including brick chamber with smooth finish etc. complete as directed. Joints filled with approved chemical solution.</td>
<td>20</td>
<td>NOS.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Providing and fixing 32mm thick flush shutters of standard approved factory make, using BWP ply on both side, with 12mm thick teak wood beading around and lock rails as per details, fixed to wood / aluminum frame with SS hinges, fixtures etc. complete</td>
<td>35</td>
<td>SMT</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Quantity</td>
<td>Rate</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------------------------------------------------------------------------</td>
<td>----------</td>
<td>------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Removing existing CI / PVC drainage lines service duct and stacking of serviceable materials at place including all lead and lift.</td>
<td>200</td>
<td>RMT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>Providing and erecting Necessary supporting scaffolding, shuttering, proping, bracing etc complete. For removing existing drainage lines.</td>
<td>6</td>
<td>NOS.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Making plinth connections of drainage lines.</td>
<td>15</td>
<td>NOS.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Carried to Summary (3) Rs.**