Name of Work: **Construction of Type "A" School Buildings Staff Quarters for Kendriya Vidyalaya at Reckongpeo, Distt. Kinnour (HP). SH: - Balance Development Works.**

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Assistant Engineer (P)(C)
CPWD, Shimla Circle.

NIT approved for Rs. 2,85,66,574/- (Rs. Two Crore Eight Five Lakh Sixty-Six Thousand Five Hundred & Seventy-Four Only) and containing pages 1 to 100.

Superintending Engineer,
CPWD, Shimla Circle

Correction—Nil Deletion—Nil Insertion—Nil Overwriting--Nil

PART-A

(Form CPWD - 6 & 7, Schedule A to F)

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

The **Executive Engineer, Shimla Division-II, C.P.W.D., Shimla** on behalf of President of India invites online **Percentage rate bids** from approved and eligible contractors of CPWD in appropriate class in composite category (now B&R category) for following work:

Sl. No.	NIT NO.	Name of work and location	Estimated cost put to bid	Earnest Money	Period of Completion	Pre-Bid Meeting	Last date & time of submission of bid, and other Documents as specified in the bid document	Time & date of opening of uploaded documents of bidders	Time & Date of opening of Price Bid	Time period allowed for submission of originals of all the scanned & uploaded documents as specified in NIT by the lowest bidder.
1	2	3	4	5	6	7	8	9	10	11
1	**15/SE/Shimla/2026-27**	**Construction of Type "A" School Buildings Staff Quarters for Kendriya Vidyalaya at Reckongpeo, Distt. Kinnour (HP). SH:- Balance Development Works.**	**Rs. 2,85,66,574/-**	**Rs. 5,71,332/-**	**04 (Four) Months**	05-11-2026 at 11:30 AM	Up5to -3.00 PM on *13-11-2026	At 3.30 PM on 13-11-2026	To be intimated at later Stage	Within a week of opening of the financial bid in the office of tender opening authority.

1. The contractor submitting the tender should read **the schedule of quantities, additional conditions, additional specifications, particular specifications, CPWD- 6 and other terms and conditions** given in the NIT. The bidder should also read the **CPWD General Conditions of Contract for Construction Works 2023** with up-to-date correction slips, which is available as Government of India Publications. **However, provisions included in the tender document shall prevail over the provisions contained in the standard form**. The set of drawings and NIT shall be available in the office of **Executive Engineer, Shimla Division-II, CPWD, Shimla.** The contractor should also visit the site of work and acquaint himself with the site conditions before tendering. He should only submit his tender if he considers himself eligible and he is in possession of all the required documents.

****-**-2026 - To be filled by EE at the time of uploading of NIT.**

The following conditions, which already form part of the tender conditions, are specially brought to his notice for compliance while submitting the tender online. They are requested to comply following instructions: -

a) Tenders with any condition including that of conditional rebates shall be rejected forthwith.

b) The successful bidder shall be required to submit **within 07 days of issue of letter of intent**:-

(i) **Performance Guarantee of 5% (Five Percent) of the Estimated Cost put to tender (ECPT) or tendered value, whichever is higher.**

and

(ii) **where the tendered amount is less than Eighty Percent (80%) of the Estimated Cost put to tender (ECPT), Additional Performance Guarantee equal to difference between Eighty Percent (80%) of the ECPT and the tendered value shall also to be submitted.**

This period can be further extended by Engineer-in-Charge up to a **maximum period of 07 days** on the written request of the contractor and with late fee as defined in Schedule F.

(c) GST, Labour-Cess and any other tax etc. as applicable on the last date of submission of tender, including extension, if any, shall be borne by the contractor himself. The contractor shall quote his rates considering all such taxes and hence their quoted rates should be inclusive of all the tax components.

d) It will be obligatory on part of the Contractor/ Bidder to tender for and sign the tender documents for all the component parts. The department reserves right to accept tender in full or in part without assigning any reasons.

2. The intending bidder must read the terms and conditions of CPWD - 6 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.

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

4. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen in the office of **Executive Engineer, Shimla Division-II, CPWD, Shimla** on all working days between 11.00 AM to 4.00 PM except Sunday and public holidays and downloaded from website **https://etender.cpwd.gov.in** free of cost. But the bid can only be submitted **after deposition of original either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission** and uploading the mandatory scanned documents such as Insurance Surety Bonds, Account Payee Demand draft or Banker's Cheque or Fixed Deposit Receipts or/ and Bank Guarantee including e- Bank Guarantee (for balance amount as prescribed) from any of the Commercial Bank towards EMD in favour of **"Executive Engineer, Shimla Division-II, CPWD, Shimla"** as mentioned in NIT, receipt of deposition of original

EMD to division office of any Executive Engineer, CPWD (including NIT issuing EE) and other documents as specified.

4. Those contractors who are not registered or have not updated their profile on the website mentioned above, are required to get registered/update their profile beforehand. The necessary training materials including the videos with step-to-step process are available on download section of **https://etender.cpwd.gov.in.**

5. The intending bidder must have valid Class-III digital signature certificate with encryption key (combo type) to perform any operations/transactions on the e-tendering portal / website and the bidder should download and install the eMsigner on their system as per instruction available on download section ofhttps://etender.cpwd.gov.in.

6. On opening date, the contractor can login and see the bid opening process. After opening of bids he will receive the competitor bid sheets.

7. Contractor can upload documents in the form of JPG format and PDF format.

8. Contractor must ensure to quote rate in the prescribed column(s) meant for quoting rate in figures appears in yellow colour and the moment rate is entered; it turns sky blue.

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

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

9. The enlistment of the contractors should be valid on the last date of submission of bids. In case the last date of submission of bid is extended, the enlistment of contractor should be valid on the original date of submission of bids.

10. **The online bids will be submitted upto 3:00 PM on 13-11-2026**. **The documents uploaded online by the bidder shall be opened at 3:30 PM on 13-11-2026**. **(However, date of opening of price bid shall be intimated to the bidders on e-tender portal at a later stage).**

11. The Contractor can deposit original EMD either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission. The contractor shall obtain the receipt of EMD from the concerned Executive Engineer in the prescribed format uploaded by NIT issuing Executive Engineer. The bid document as uploaded can be viewed and downloaded free of cost by anyone including intending bidder. ***But the bid can only be submitted after uploading the mandatory scanned documents such as Insurance Surety Bond, Demand Draft/ Account Payee Banker's Cheque / FDR/ Bank Guarantee of any commercial Bank against EMD in favour of respective Executive Engineer, copy of receipt of original EMD and other documents specified in the press notice.***

12. ***EMD shall be made/ issued only from the account of the bidder/ tenderer submitting the bid/ tender. EMD made/issued from the account other than that of the bidder/ tenderer submitting the bid, shall not be accepted and the bid shall be rejected.***

13. The Executive Engineer of any division of CPWD shall receive the original EMD for tender of other division/Divisions.

The following prescribed format of receipt of deposition of original EMD alongwith NIT shall be followed:

Receipt of deposition of original EMD		
	Receipt No.:……	Date:……..
1.	Name of work:	**Construction of Type "A" School Buildings Staff Quarters for Kendriya Vidyalaya at Reckongpeo, Distt. Kinnour (HP). SH:- Balance Development Works.**
2.	NIT No.:	**15/SE/Shimla/2026-27**
3.	Estimated cost:	**Rs. 2,85,66,574/-**
4.	Amount of Earnest Money Deposit:	**Rs. 5,71,332/-**
5.	Last date of submission of bid:	13-11-2026 03:00 PM
(**To be filled by EE at the time of issue of NIT and uploaded alongwith NIT)		
1.	Name of contractor:	
2.	Form of EMD:	
3.	Amount of Earnest Money Deposit:	
4.	Date of submission of EMD:	
	Signature, Name and designation of EMD receiving officer (EE/AE(P)/AE/AAO) alongwith office stamp	
(# To be filled by EMD receiving EE) ****-**-2026 -** To be filled by EE at the time of uploading of NIT		

14. The Executive Engineer receiving EMD in original form shall examine the EMD deposited by the bidder and shall issue a receipt of deposition of earnest money to the agency in a given format uploaded by tender inviting EE.

15. The original EMD receiving Executive Engineer shall release the EMD after verification from the e-tendering portal website (www.etender.cpwd.gov.in) that the particular contractor is not L-1 tenderer and work is awarded.

16. The tender inviting Executive Engineer will call for original EMD of the L-1 tenderer from EMD receiving Executive Engineer immediately.

17. The required documents meeting the criteria to qualify as “approved and eligible contractors of CPWD” and other documents under para “List of Documents to be scanned and uploaded within the period of bid submission” below, as uploaded by the agency and hard copies received subsequently shall be checked. The financial bid of only those agencies shall be opened who are found to be eligible agencies, as per this NIT. The financial bid of those bidders, whose documents are found deficient or improper or

uploaded less documents than prescribed in the NIT, their bid shall become invalid and rejected. The decision of tender opening authority shall be final and binding in this regard.

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

19. Pre-Bid conference shall be held in the office of SE, SHIMLA CIRCLE, CPWD, Kennedy Cottage, Shimla, HP at 11:30 Hrs. on **05-11-2026*** to clear the doubt of intending bidders, if any. Bidders should send by email all queries, before Pre-Bid conference, latest by 11:00 Hrs. of **05-11-2026*** to the office of the **Executive Engineer, Shimla Division-II, CPWD, Shimla** (Telephone No. 0177-2658637, Email id – eescd2.sml.cpwd@nic.in) & ~~**Executive Engineer (Electrical) Shimla Electrical Division, CPWD Shimla**, (Telephone No. 0177-2655193, Email id – eesced.sml.cpwd@nic.in)~~. After Pre-Bid conference, modifications/addendums/corrigendum, if required necessary, shall be uploaded on e-tender website only and shall not be published in any Newspaper. These modifications / additions /corrigendums shall become part of NIT and part of agreement after award of the work to the lowest bidder.

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

(i) Insurance Surety Bond /Demand Draft / Account Payee Banker's Cheque / FDR/ Bank Guarantee of any commercial Bank against EMD, in prescribed format as per **Annexure-I, (Page 38-39)** of NIT.

(ii) Valid Enlistment order of the appropriate **class for CPWD registered contractors**.

(iii) Copy of receipt of deposition of original EMD in prescribed format provided in NIT to Division Office of any Executive Engineer, CPWD (including NIT issuing EE).

(iv) **Certificate of Registration for GST, if already obtained by the bidder**. If the bidder has not obtained GST registration as applicable, then he shall scan and upload following undertaking along with bid documents "if work is awarded to me, I/we shall obtain GST registration certificate, as applicable, within one month from the date of receipt of award letter or before release of any payment by CPWD, whichever is earlier, failing which I/we shall be responsible for any delay in payments which will be due towards me/us on account of the work executed and/or for any action taken by CPWD or GST department in this regard".

(v) **Undertaking on Structural Stability and Soundness as per prescribed format Form "F" as per Annexure-III, Page 41** of NIT.

(vi) **ERP training Certificate regarding successful completion of ERP Training.**

~~**21.** In case of composite tenders, the contractor submitting the tender should read all Parts of the tender viz. Part-A, B, C & D which are containing schedule of quantities, additional & special conditions, additional specifications, particular specification and other terms and conditions given in the NIT and drawings for Major as well as Minor component of work. Details of these parts are summarized as under:~~

- **Part A :-** CPWD - 6, CPWD – 7 including schedule A to F for major component of the work, Standard General Conditions of Contract for CPWD 2023 as amended/ modified up to last date of submission of bid.
- **Part B :-** Conditions & specifications applicable to major component of the work.
- **Part C :-** Conditions and specifications applicable to minor component of the work.
- **Part D:-** Schedule of quantities (Annexure A & Annexure B).

The Major Component of work is Civil Work.

22. The bidders should also read the **General Conditions of Contract 2023 (Construction works)** modified and corrected upto previous day of the last date of submission of the tender, which is available as Govt. of India Publications and shall form part of bid document. However, this provision included in the tender document shall prevail over the provisions contained in GCC 2023.

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

24. The main contractor shall execute the minor component(s) also. He should be either an eligible contractor himself or associate with himself an eligible agency(s) for execution of electrical work as per CPWD-6 for e-tendering. The contractor shall indicate the names of upto three such agencies with in prescribed time as "Minor component agencies".

25. After acceptance of the tender by competent authority, the EE in charge of major component of the work shall issue letter of award on behalf of the President of India. After the work is awarded, the main contractor will have to enter into one agreement with EE in charge of major component and has also to sign two/or more copies of agreement depending upon number of EE's/DDH in charge of minor components. One such signed set of agreement shall be handed over to EE/DDH in charge of minor component. EE of **major component** will operate **Part A, B and D** of the agreement. EE in charge of **minor component(s)** shall operate **Part A, C and D** of the agreement.

26. The main contractor has to enter into agreement with the contractor(s) associated by him for execution of minor component(s). Copy of such agreement shall be submitted to EE/DDH in charge of minor component as well as to EE in charge of major component. In case of change of associate contractor, the main contractor has to enter into agreement with the new contractor associated by him.

27. Tenders with any condition including that of conditional rebates in the tender document shall be rejected forthwith.

28. The online percentage rate (s) must be quoted in decimal coinage. If bidder quotes the rate in other format, then the bid shall become invalid and rejected. Amount shall be calculated and rounded in full rupees by ignoring fifty paisa and considering more than fifty paisa as rupee one.

29. **The contractor shall have to execute guarantee bonds in respect of water proofing works as per Performa given in NIT**.

30. GST, Labour cess and any other taxes as applicable on the last date of submission of the bid / tender shall be paid by the contractor himself. The contractor shall quote his rates considering all such taxes.

31. Attention is also drawn to Clause 6 of General Condition of Contract for CPWD Works 2023, which prescribes the procedure for Electronic Measurement Book (EMB) through CPWD ERP Portal. Preparation of bill by contractor in EMB format is applicable for this work.

32. Recovery rates for less use of materials beyond permissible limits is given in Schedule 'F' of Part-A & C.

CPWD-6 FOR e-TENDERING

1 **Percentage rate bids** are invited on behalf of President of India from approved and eligible contractors of CPWD in appropriate class of composite category (now B&R category) for the work of

Name of Work: Construction of Type "A" School Buildings Staff Quarters for Kendriya Vidyalaya at Reckongpeo, Distt. Kinnour (HP). SH:- Balance Development Works.

The enlistment of the contractors should be valid on the last date of submission of bids. In case the last date of submission of bid is extended, the enlistment of contractor should be valid on the original date of submission of bids.

The work is estimated to cost **Rs. 2,85,66,574/-**

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

Online bid documents submitted by intending bidders shall be opened only of those bidders, whose "**EMD Deposition receipt**" and "other documents including eligibility documents as required as per this NIT" are found in order. The bid of only those agencies shall be opened who are found to be eligible agencies, as per this NIT. The financial bid of those bidders, whose documents are found deficient or improper or uploaded less documents than prescribed in the NIT, their bid shall become invalid and rejected. The decision of tender opening authority shall be final and binding in this regard.

2. Agreement shall be drawn with the successful bidder on prescribed Form No. **CPWD 7** (or other Standard Form as mentioned) which is available as a Govt. of India Publication and also available on web site www.cpwd.gov.in. Bidder shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.

3. The time allowed for carrying out the work will **04 (Four) Months** from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the bid documents.

4. (i) The site for the work is available. Contractor should also visit the site of work and acquaint himself with the site conditions before tendering.

(ii) The architectural drawings shall be submitted by the Contractor in phased manner, as per requirement of the same as per approved programme of completion submitted by the contractor after award of work and as per direction of the Engineer-in-charge. These drawings shall be issued by the Engineer-in-charge in phased manner after approval.

(iii) Vetted structural design and structural drawings shall be submitted by the contractor in phased manner, as per requirement of the same as per approved programme of completion submitted by the contractor after award of work. These drawings shall be issued by the Engineer-in-charge in phased manner after approval by the competent authority.

5. After submission of the bid the contractor can re-submit revised bid any number of times or withdraw it before last date and time of submission of bid as notified. No post tender modification is allowed by the tenderers except through negotiations, if required. In case, any tenderer, does so, the tender will be rejected and the tenderer will be debarred for future tendering in CPWD for two years by the concerned enlisting authority (in case of CPWD enlisted contractor) and by the concerned CE/SE (in case of non-enlisted contractor).

6. Earnest Money in the form of Insurance Surety Bond, Demand Draft/ Account Payee Banker's Cheque / FDR/ Bank Guarantee including e-Bank Guarantee (for balance amount prescribed) of any commercial Bank against EMD (drawn in favour of **Executive Engineer, Shimla Division-II, CPWD, Shimla** shall be scanned and uploaded to the e-tendering website within the period of bid submission. The original EMD should be deposited either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission. The EMD receiving Executive Engineer (including NIT issuing EE) shall issue a receipt of deposition of earnest money deposit to the bidder in a prescribed format(enclosed) uploaded by tender inviting EE in the NIT.

   The receipt of deposition of EMD in the prescribed format shall also be uploaded to the e-tendering website by the intending bidder up to the specified bid submission date and time.

   EMD shall be made/ issued only from the account of the bidder/tenderer submitting the bid/ tender. EMD made/issued from the account other than that of the bidder/ tenderer submitting the bid, shall not be accepted and the bid shall be rejected.

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

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

7. Copy of Enlistment Order ~~and certificate of work experience (if required as per NIT)~~ and other documents as specified in the notice inviting e-tender shall be scanned and uploaded to the e-tendering website within the period of bid submission. **However, certified copy of all the scanned and uploaded documents as specified in the e-tender notice shall have to be submitted by the lowest bidder within a week physically in the office of tender opening authority.**

   Price bid submitted by intending bidders shall be opened only for those bidders, **whose all documents scanned and uploaded are found in order as per NIT conditions.**

   The documents uploaded by the bidders shall be opened online at 03:30 PM on **13-11-2026**

****-**-2026 -** To be filled by EE at the time of uploading of NIT

8. The bid submitted shall become invalid if:

(i) The bidder is found ineligible.

(ii) **The bidder does not deposit original EMD with division office of any Executive Engineer, CPWD.**

(iii) **If bidder upload/submit EMD made/issued from the account other than that of the bidder/tenderer submitting the bid.**

(iv) The bidder does not upload scanned copies of all documents stipulated in the bid document.

(v) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest bidder in the office of tender opening authority.

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

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

(viii) Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub-soil, the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidder

shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidder shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other Services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

9. The competent authority on behalf of the President of India does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.

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

11. The competent authority on behalf of President of India reserves to himself the right of accepting the whole or any part of the bid and the bidder shall be bound to perform the same at the rate quoted.

12. GST, Labour cess and any other taxes applicable as on last date of submission of bid for this contract shall be payable by the Contractor. Government will not entertain any claim whatsoever in respect of the same.

13. The contractor shall not be permitted to bid for works in the CPWD Circle (Division in case of contractors of Horticulture/Nursery category) responsible for award and execution of contracts, in which his near relative is posted a Divisional Accountant or as an officer in any capacity between the grades of 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 any gazette officer in the Central Public Works Department or in the Ministry of Housing and Urban Affairs. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.

14. No Engineer of gazetted rank or other gazetted officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the previous permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.

15. The bid for the works shall remain open for acceptance for a period of **45 (Forty-Five) days** from the date of opening of price bid. Further

(i) If any tenderer withdraws his tender within 7 days after last date and time (24 hours basis) of submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to forfeit 50% of the earnest money absolutely irrespective of letter of acceptance for the work is issued or not.

(ii) If any tenderer withdraws his tender after expiry of 7 days after last date and time (24 hours basis) of submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to forfeit 100% of the earnest money absolutely irrespective of letter of acceptance for the work is issued or not.

(iii) Withdrawal of the tender, by the tenderer only be made through e-tender portal. Any other method i.e. through letter / e-mail etc. shall not be considered.

(iv) In case of forfeiture of earnest money as prescribed in para (i) and (ii) above, the bidders shall not be allowed to participate in the rebidding process of the same work.

18. This Notice Inviting Bid shall form a part of the contract document. The successful bidder/contractor, on acceptance of his bid 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 Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.

(ii) Standard C.P.W.D. **Form 7** or other Standard C.P.W.D. Form as mentioned.

In case of extension of agreement due to delay and/or reduction in scope of work due to foreclosure, no claim on account of reduction in value of work, loss of

business, loss of profit, consequently overheads, any type of interest etc. shall be entertained.

(iii) **GCC 2023 (Construction works)** as modified and corrected upto previous day of the last date of submission of tender.

19. If the exigencies of the work so demand, the engineer-in-charge may allow payment to a third party, who is creditor to the contractor, after fulfilling the conditions under clause 7B.

20. ~~For Composite Bids~~

~~(i) The Executive Engineer in charge of the major component will call bids for the composite work. The Earnest Money will be fixed with respect to the combined estimated cost put to tender for the composite bid.~~

~~(ii) The bid document will include following four components:~~

~~Part A: - CPWD-6, CPWD-7 including schedule A to F for **major component** of the work, Standard General Conditions of Contract for **CPWD 2023** as amended/ modified up to previous day of last date of submission of bid.~~

~~Part B: General/specific conditions & specifications applicable to **major component** of the work.~~

~~Part C: Schedule A to F specifications & conditions of **minor component** of the work.~~

~~Part D: Schedule of quantities for major works & Schedule of quantities for minor works.~~

~~(iii) The bidders must associate with himself, agencies of the appropriate class eligible to bid for each of the minor component individually, within the prescribed time limit given in NIT.~~

~~(iv) The eligible bidders shall quote rates for all items of major component as well as for all items of minor components of work.~~

~~(v) After acceptance of the bid by competent authority, the EE in charge of major component of the work shall issue letter of award on behalf of the President of India. After the work is awarded, the main contractor will have to enter into one agreement with EE in charge of major component and has also to sign two or more copies of agreement depending upon number of EE's/DDH in charge of minor components. One such signed set of agreement shall be handed over to EE/DDH in charge of minor component. EE of major component~~

will operate part A, part B & part D (Annexure A) of the agreement. EE/DDH in charge of minor component(s) shall operate Part A, Part C & Part D (Annexure B) of the agreement.

(vi) Entire work under the scope of composite bid including major and all minor components shall be executed under one agreement.

(vii) Security Deposit will be worked out separately for each component corresponding to the estimated cost of the respective component of works.

(viii) The main contractor has to associate agencies for specialized component(s) conforming to eligibility criteria as defined in the bid document and has to submit detail of such agency(s) to Engineer-in-Charge of relevant component(s) within prescribed time. Name of the agency(s) to be associated shall be approved by Engineer-in-Charge of relevant component(s).

(ix) In case the main contractor intends to change any of the above agency/agencies during the operation of the contract, he shall obtain prior approval of Engineer-in- Charge of relevant specialized component(s).

The new agency/agencies shall also have to satisfy the laid down eligibility criteria. In case Engineer-in-Charge is not satisfied with the performance of any agency, he can direct the contractor to change the agency executing such items of work and this shall be binding on the contractor.

(x) The main contractor has to enter into MoU with agency(s) associated by him. Copy of such MoU shall be submitted to EE/ DDH in charge of each relevant component as well as to EE-in-charge of major component. In case of change of associate contractor, the main agency(s) has to enter into MoU/agreement with the new contractor associated by him.

(xi) Running payment for the major component shall be made by EE of major discipline to the main contractor. Running payment for minor components shall be made by the Engineer-in-charge of the discipline of minor component directly to the main contractor. The EMB shall be maintained independently by Engineer-in-charge of major and minor component.

(xii) (a) The composite work shall be treated as complete when all the components of the work are complete. The completion certificate of the composite work shall be recorded by competent authority mentioned in Schedule F / Engineer-in-charge of major component after record of completion certificate of all other components.

~~(b) Final bill of whole work shall be finalized and paid by the EE of major component. Engineer(s) in charge of minor component(s) will prepare and pass the final bill for their component of work and pass on the same to the EE of major component for including in the final bill for composite contract.~~

Signature of the Divisional Officer,
For and on behalf of the President of India.

GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT

STATE	**H.P.**	**CIRCLE**	**Shimla Circle**
BRANCH	**B&R**	**DIVISION**	**Shimla Division-II & ShED**
Region	**Region, Chandigarh**	**SUB DIVISION**	

PERCENTAGE RATE BID AND CONTRACT FOR WORKS

Name of Work: Construction of Type "A" School Buildings Staff Quarters for Kendriya Vidyalaya at Reckongpeo, Distt. Kinnour (HP). SH:- Balance Development Works.

i) The bid to be submitted online by 3.00 PM on **13-11-2026**

ii) The documents uploaded by the bidders shall be opened online in presence of tenderers who may be present at 3.30 PM on **13-11-2026** in the office of the **Executive Engineer, Shimla Division-II, C.P.W.D., Shimla.**

TENDER

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

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

We agree to keep the tender open for a period of **45** (**Forty-Five)** days from the date of opening of price bid and not to make any modifications in its terms and conditions.

I/we have deposited EMD for the prescribed amount in the office of Executive Engineer as per the bid document.

A copy of earnest money deposit receipt of prescribed amount deposited in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee (as prescribed) issued by a Commercial Bank, is scanned and uploaded. If I/we, fail to furnish the prescribed performance guarantee or fail to commence the work within prescribed period I/we agree that the said President of India or his successors in office shall without prejudice to any other right or remedy be at liberty to forfeit the said earnest money absolutely. Further, if I/we fail of commence work as specified, I/we agree that President of India or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards

security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, up to maximum of the percentage mentioned in Schedule 'F' and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

Further, I/We agree that in case of forfeiture of earnest money or both Earnest Money & 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:

Signature of Contractor

Witness:

Postal Address

Address:

Occupation:

****-**-2026 -** To be filled by EE at the time of uploading of NIT.

ACCEPTANCE

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

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

a _____

b _____

c _____

For & on behalf of the President of India

Dated _____

Signature_____
Designation _____

Correction—Nil Deletion—Nil Insertion—Nil Overwriting--Nil

List of Mandatory Documents to be scanned and uploaded within the period of bid submission:

i. Insurance Surety Bond /Demand Draft/ Account Payee Banker's Cheque / FDR/ Bank Guarantee of any commercial Bank against EMD, in prescribed format as per **Annexure-I, (Page 38-39)** of NIT.

ii. Valid Enlistment order of the appropriate **class for CPWD registered contractors**.

iii. Copy of receipt of deposition of original EMD in prescribed format provided in NIT to Division Office of any Executive Engineer, CPWD (including NIT issuing EE).

iv. **Certificate of Registration for GST, if already obtained by the bidder**. If the bidder has not obtained GST registration as applicable, then he shall scan and upload following undertaking along with bid documents "if work is awarded to me, I/we shall obtain GST registration certificate, as applicable, within one month from the date of receipt of award letter or before release of any payment by CPWD, whichever is earlier, failing which I/we shall be responsible for any delay in payments which will be due towards me/us on account of the work executed and/or for any action taken by CPWD or GST department in this regard".

v. **Undertaking on Structural Stability and Soundness as per prescribed format Form "F" as per Annexure-III, Page 41** of NIT.

vi. **ERP training Certificate regarding successful completion of ERP Training.**

Brief Scope of Work

(a) Brief Scope of Work includes: -

1. **C/o Plum Concrete Walls at required locations in the Campus.**
2. **C/o Storm Water Drain at various locations in the Campus with 1:2:4 CC base, Clay Brick Walls and MS Grating.**
3. **C/o 01 No. Guard Room in the Campus with RCC framed structure with Profile sheet roofing on Truss, Deodar Frames for Window and Doors, Deodar Window Shutters, Flush Doors, Kota Stone flooring.**
4. **C/o 01 No. Canteen in the Campus in RCC Framed Structure with Profile sheet roofing on Truss, Deodar Frames for Window and Doors, Deodar Window Shutters, Flush Doors, Kota Stone Flooring.**
5. **C/o Staircases at required locations in the Campus in RCC with Chequrred tile flooring and MS Railing.**
6. **C/o MS Main Gate of the Campus.**
7. **C/o MS Railing around Playground, Parking Area & Staircases.**
8. **Providing and fixing Concertina Coil Fencing over Chain link fencing near Staff Quarters.**
9. **C/o Vacuum Dewatered Cement Concrete Approach Road over Granular Sub-Base (GSB) & PCC and GRC Cobble Stone for Pathways to the Blocks.**
10. **Balance Boundary Wall in RCC Frame & Brick infill near Entry Gate with Concertina Coil.**

(b) The site is located in steep undulating terrain with the works of school building and staff quarters in progress inside the site. The contractor has to work with close coordination with ongoing other works. Complete care should be taken not to hinder the ongoing other works.

The work of development is partially complete and the contractor has to continue with the balance work. Nothing extra shall be paid for Surface Preparation, making connections with existing work, cleaning of existing work, removal of malba/scrap etc. The contractor may be required to use chemical adhesives, epoxy adhesives, cement slurry etc. for proper bonding and connection with existing works for which nothing extra shall be payable.

The work is located in undulating terrain and may require shifting of stacked material several times for which nothing extra shall be payable.

The school session may start while this work is in progress. In such a condition there may be regular movement of school children. The contractor shall erect proper barricading of minimum height of 4.5 meters around the work in progress as his own cost for safety and security. Nothing extra shall be payable on this account.

After completion of all work, the Excess Earth in the complete campus shall be neatly levelled & dressed as per the levels decided by Engineer-in-Charge at site and to fill all gaps around construction work and make the complete ground level and remove all small stone, debris, malba, etc. from site. Nothing extra shall be payable on this account.

The site is located in area which experiences extreme cold climate in winter season. The work usually starts at the end of February. The Engineer-in-Charge shall direct the contractor in writing to start the work as soon as the temperature at site reaches reasonable levels. The contractor shall be well prepared in advance with the complete set of required structural drawings and

arrangements at site for men, material and machinery to start the work. Nothing extra shall be payable for stoppage of the work due to extreme cold conditions and due to any other adverse weather conditions such as rainfall, snowfall, landslide, soil erosion, water stagnation etc.

The contractor shall be responsible for the safety of the adjoining structure and shall not damage the same. In case of any damage by the contractor the same shall be made good by the contractor without any additional cost payable. There is likely chance of water logging, landslides, erosion of soil etc. at the site. There may be frequent requirement of dewatering from foundation pit or any other pit constructed for the work and making approaches to the site of construction, etc. The contractor shall be responsible for making the approaches including removal of vegetation, shrubs, trees etc. to all areas all the time. The Contractor shall be responsible for transportation of all materials required such as Cement Concrete (C.C.), Reinforcement Cement Concrete (R.C.C.), TMT Steel, Reinforcement, Structural Steel, Aggregates, Cement, Primer, Paint, Concertina Coil, Bricks, Blocks and other construction materials/resources required for the work to the location of work/site. The contractor shall take into account all these adverse conditions and other parameters like limited working season (generally March to October) at site, while quoting the rate. Nothing extra other than the quoted rate shall be payable to the contractor on these accounts.

Therefore, the bidder is advised to visit the site of work at his own cost and examine its surroundings to himself, collect all information that he considers necessary for proper assessment of the prospective assignment. Nothing extra shall be paid for any adverse site conditions such as limited working season, rocky strata, thick vegetation, making approaches several times, dewatering, landslides, soil erosion, water logging, snowfall, rainfall and transportation of materials to site, etc.

(c) <u>Followings are also included in scope of the work: -</u>

Barricading of site and Providing Safety Net	Barricading upto a height of 4.5 m for the complete site and Providing Safety Net shall be carried out by the agency. The contractor shall get the structural design done for the Barricading with Galvanised Iron Profile Sheets/CGI sheets with suitable MS framework and submit to Engineer-in-Charge for approval. The barricading shall be designed and installed before starting of the work. Nothing extra shall be payable to the agency on this account and shall be included in the quoted cost by the contractor.

Architectural Drawings, Structural Designs and Drawings	After clearance of debris, preparation of architectural drawings and structural design for all structures as per scope of work shall be carried out by the agency by engaging expert structural designers as approved by the Engineer-in-charge. The agency shall submit Architectural and Structural Drawings for approval of the Engineer-in-charge and after approval/ concurrence of the Engineer-in-charge. Vetting of the structural designs and drawings shall be carried out from any NIT or IIT. **Quoted rate of the contractor shall be inclusive of these items except vetting charges and Nothing extra shall be payable to the agency on this account. However, cost of vetting of structural design and drawings shall be borne by the department.**

Note:-

Contractors are advised to visit the site and quote their rates after seeing the site conditions. All quoted rates for all items shall be inclusive of all leads all lifts, head load and carriage of all materials, T&P, Machinery, labour and cost involved in making approach road to the site etc. Nothing extra shall be paid for any lead, lift, carriage and approach road etc.

SCHEDULE 'A' TO 'F'

SCHEDULE 'A'
Schedule of Quantities: For Civil work **Page No 94 to 99.**

SCHEDULE 'D'
Extra schedule for specific requirements/ documents for the work, if any.

Civil:

1	General Conditions.	-	As per NIT
2.	Additional Conditions	-	As per NIT
3.	Additional Specifications	-	As per NIT
4.	Particular Specifications (Civil Works)	-	As per NIT
5.	Material Specifications, Quality Control System & Guarantee Bond	-	As per NIT

SCHEDULE 'E'

Reference to General Conditions of Contract		Applicable GCC is **General Conditions of Contract 2023 (Construction Works)** as modified and corrected upto previous day of the last date of submission of tender
1.1	Name of Work:	**Construction of Type "A" School Buildings Staff Quarters for Kendriya Vidyalaya at Reckongpeo, Distt. Kinnour (HP). SH:- Balance Development Works.**
1.2	Estimated Cost of work: -	**Rs. 2,85,66,574/-**
1.3	Earnest Money: -	**Rs. 5,71,332/- (to be returned after receiving performance guarantee)**
1.4	Performance Guarantee	**(a) 5% of tendered value or Estimated Cost Put to Tender (ECPT) (whichever is higher).** **(b) Where, the tendered amount is less than eighty percent (80%) of the Estimated Cost Put to Tender (ECPT), the Performance Guarantee, in addition to the requirement under (a) above, shall be increased by an amount equal to the difference between Eighty percent (80%) of the ECPT and the tendered amount.**
1.5	Security Deposit	**2.5% of the tendered value**

SCHEDULE 'F':-

	General Rules & Directions: -		
	Officer Inviting Tender	**:**	Executive Engineer, Shimla Division-II, C.P.W.D., Shimla
	Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3		See below
	Definitions: -		
2 (vi)	Engineer-In-Charge (for civil work)	**:**	For Civil component - Executive Engineer, Shimla Division-II, CPWD, Shimla or his successor thereof.
2 (viii)	Accepting Authority	**:**	SE, Shimla Circle, CPWD, Shimla or his successor thereof
2 (x)	Percentage on cost of materials and labour to cover all overheads and profits	**:**	15%
2 (x)(a)	Standard Schedule of Rates (Civil)	**:**	**For Civil Works:-** **Delhi Schedule of Rates 2023** with upto date correction slips issued upto previous day of last date of receipt of tender & Market Rates for NS (Market Rate) items. **For Non-Scheduled (Market Rate) Items:** - IS codes, NBC (latest) & Manufacture's specifications in order of precedence if CPWD Specifications are not available for any component of the item.
2 (xi)	Department	**:**	Central Public Works Department
9(ii)	Standard CPWD Contract (Civil)	**:**	**Form GCC 2023 (Construction work),** CPWD Form 7 as modified and corrected upto previous day of the last date of submission of the tender.

Clause-1:-			
(i)	Time allowed for submission of performance guarantee, Programme Chart (Time and progress) and applicable Labour licenses, registration with EPFO, ESIC and BOCW Welfare Board including provident fund Code No. or proof of applying thereof from the date of letter of acceptance.		**7** days
(ii)	Maximum allowable extension with late fee @ **0.10 % per day** of performance guarantee amount beyond the period as provided in (i) above		**7** days
Clause-2	Authority for fixing compensation under clause-2.		Superintending Engineer, Shimla Circle, CPWD, Shimla, or his successor thereof
Clause-2 A	Whether clause-2A shall be applicable.		**Not Applicable**
Clause-5(i)	Number of days from the date of issue of letter of acceptance for reckoning date of start.		10 days
(ii)	Mile Stone.	**:**	Table of Milestones as mentioned in NIT at **Page No. 31.**
(iii)	Time allowed for execution of work	**:**	**04 Months**
(iv)	Recovery on account of Non submission progress chart and progress report on or before 5th day of each month.		**Rs. 25,000/- Per Month**
Authority to decide.			
(i)	Authority to convey the decision of shifting of milestone and extension of time.	**:**	**Executive Engineer, Shimla Division-II, CPWD, Shimla** or his successor thereof.
ii)	Authority to decide rescheduling of milestone and extension of time.	**:**	Superintending Engineer, Shimla Circle, CPWD, Shimla or his successor thereof.
(iii)	Shifting of date of start in case of delay in handing over of site.	**:**	Superintending Engineer, Shimla Circle, CPWD, Shimla or his successor thereof.

Schedule of handing over of site			
Part	**Portion of site**	**Description**	Time Period for handing over reckoned from date of issue of letter of intent.
Part A	Portion without any hindrance	100%	7 days
Part B	Portions with encumbrances	NIL	N.A.
Part C	Portions dependent on work of other agencies	NIL	N.A.
	Applicable Clause -5 / Clause-5A		Clause 5

Clause-6:-	Mode of measurement: -		**EMB (Through CPWD ERP Portal)**
Clause-7:-	Gross work to be done together with net payment / adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment.		**Rs. 60 lacs for Civil work**
Clause-7A:-	Whether Clause 7A shall be applicable		**Yes Applicable**
Clause 8	Competent authority to inspect and issue completion certificate		Executive Engineer, Shimla Division-II, CPWD, Shimla or his successor thereof.
Clause 8A	Authority to decide compensation on account if contractor fails to submit completion plans		Executive Engineer, Shimla Division-II, CPWD, Shimla or his successor thereof.
Clause-10A:-	List of testing equipment to be provided by the contractor at site lab.		As mentioned in Tender Document at **page 34-35** of NIT
Clause-10-B	Whether clause 10-B (ii) shall be applicable.		**Not Applicable**
Clause-10C:-	Component of labour expressed as percentage of value of work.		**Applicable, 20%**
Clause-10-CC: -	Clause 10CC		**Not Applicable**

Clause-11:- (i) Specifications to be followed for Execution of-

For Civil Work

C.P.W.D. Specifications 2019 Vol. I & II with upto date correction slips (Here in after called CPWD specification) and as per manufacture specification i/c special conditions & particular specifications with upto date corrections slips issued upto last date of receipt of tenders.

Clause-12:-	Type of work	**Original work**
12.2 (c) (i)	Deviation limit beyond which Clause 12.2 (c) shall apply for building work:	**100%**
(ii)	Deviation limit beyond which Clause 12.2 (c) shall apply for foundation work (except earth work sub head in DSR & related items)	**100%**
(iii)	Deviation limit for items mentioned in Earth work Subhead of DSR & related items.	**100%**

Clause-16: - Competent Authority for deciding reduced rates. — The Superintending Engineer**,** Shimla CPWD, Shimla or Successor thereof

Clause 18 **LIST OF MACHINERY, TOOLS & PLANTS TO BE DEPLOYED BY THE CONTRACTOR AT SITE AS & WHEN REQUIRED: - AS PER LIST ATTACHED IN NIT at Page 32-33 for Civil Work.**

Clause19 Competent Authority to decide penalty for each default–

Clause 19C	Competent Authority to decide penalty for each default	Engineer-In-Charge of respective component of the work.
Clause 19D	Competent Authority to decide penalty for each default	Engineer-In-Charge of respective component of the work.
Clause 19G	Competent Authority to decide penalty for each default	Engineer-In-Charge of respective component of the work
Clause 19K	Competent Authority to decide penalty for each default	Engineer-In-Charge of respective component of the work.

Clause 25

(i) Conciliator — **ADG (Region Chandigarh) or his successor thereof.**

(ii) Arbitrator appointing authority — **SE, Shimla Circle, CPWD, Shimla or his successor thereof.**

(iii) Place of Arbitration — **Shimla (HP).**

CLAUSE 32

Requirement of Technical Representative (s) and Recovery Rate

Estimated Cost of work (Rs. In Crore)	**Requirement of Technical staff**		**Minimum Experience (Years)**	**Designation**	**Rate at which recovery shall be made from the contractor in the event of not fulfilling**
	Qualification (Civil)	**No.**			
More than Rs. 1.50 Crore to Rs 5.00 Crore	*Graduate Engineer or Diploma Engineer*	*2 Nos.*	*2 or 5 Respectively*	*Project Manager cum Planning / Quality/Site/ Billing Engineer*	*Rs. 15,000/- per Month per Person*

- **Assistant Engineers retired from Government Services that are holding Diploma will be treated at par with Graduate Engineers.**

- **Diploma holder with minimum 10 years relevant experience with a reputed construction co. can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineers.** The contractor shall submit a certificate of such 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 account bill/final bill and shall produce evidence if at any times so required by the Engineer-in-charge.

Clause-38:-

(i) Schedule / Statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates	**As per Delhi Schedule of Rates 2023** with amendments upto last of submission of bids**.**
(ii) Variations permissible on theoretical Quantities.	
a) Cement for works with estimated cost put to tender for more than Rs. 25 Lacs.	2% plus / minus.
b) Steel Reinforcement and structural Steel sections for each diameter, section and category.	2% plus / minus.
c) All other materials.	Nil.
d) Bitumen for all work.	2.5% Plus only & Nil of minus side.

TABLE OF MILE STONE (S)

Name of work: **Construction of Type "A" School Buildings Staff Quarters for Kendriya Vidyalaya at Reckongpeo, Distt. Kinnour (HP). SH: - Balance Development Works.**

Mile stone/Bar Chart(s)- As per construction programme given below

Mile stones of the Contract

Para (A) in Physical Terms.

Sl. No. of Mile Stone	Description of Milestone	Time Allowed (From date of start)	Amount to be withheld in case of non-achievement of milestone
1.	Barricading of site, Providing Safety Net, Submission of Architectural Drawings, Structural Design and Drawings. Completion of Plum Concrete Walls adjoining the main gate and Plum Concrete Walls in front of School.	1 Month	1.25 % of accepted tendered amount
2.	Completion of Road Work & RCC Work upto Plinth level for Canteen & Guard Room.	2 Months	1.25 % of accepted tendered amount
3	Completion of Staircase between level +125 m & +133 m and +119 m to existing Retaining Wall along with MS Railing, Boundary Wall towards Police ground, Complete RCC Work of Canteen & Guard Room and Drain Work.	3 Months	1.25 % of accepted tendered amount
4.	Completion of Staircase between level +113 m to +136 m and +136 m to +139 m, Road Work for Staff Quarter & Pathway, Gate at back side of campus, Concertina Coil over Boundary Wall. Complete finishing of Canteen & Guard Room, Removal of Malba, Muck & Debris from site. Completion of work as per Scope of Work.	4 Months	1.25 % of accepted tendered amount

NOTE: - The withheld amount due to non-achievement of mile stone may be released if the subsequent mile stone is achieved in the specified time.

Mile stones shall be applicable for ~~both~~ **Major Component (Civil Work)** ~~of the~~ work as attached. The ~~main~~ contractor will ensure that ~~electrical components of~~ the work are executed in time without giving any chance for slippages of mile stones on account of delay in execution of ~~associated electrical~~ work by him. However, in case mile stones are not achieved by the contractor for the work, the amount shown against milestone shall be withheld by the Executive Engineer in charge of the ~~major component~~ of the work.

LIST OF MACHINERY, TOOLS & PLANTS		
Sl. No.	**Equipment**	**Numbers (Minimum)**
1	Excavator cum loader (JCB 3D model or equivalent).	1
2	Compressor Machine minimum 200 cfm with rock breaker.	1 (If required)
3.	DG set of minimum capacity 62.5 KVA.	1
4	Automatic Concrete Batching plant (Min 4 cum./hr.) with computerized printing of batch mix slips.	1 (If required)
5	Transit mixer.	1 (If required)
6	Concrete pump (minimum capacity 5 cum/hr. & head 30 m).	1 (If required)
7	Concrete Mixer.	1
8	Steel Shuttering.	100 sqm
9	Needle Vibrators.	1
10	Plate Vibrators.	1
11	Dumper.	1 (If required)
12	Reinforcement bending machine.	1
13	Reinforcement cutting machine.	1
14.	Power driven earth rammer (Soil compactor).	1
15.	Total station.	1 (If required)
16.	Auto level & staff.	1
17.	Tractor with trolley.	1 (If required)
18.	Water tanker.	1
19.	Welding machine 400 Ampere.	1
20.	Screener for coarse and fine sand.	2
21.	Centrifugal Mono Block Water Pump minimum Capacity 2 HP.	1
22.	Air compressor	1
~~23.~~	~~Building Hoist~~	~~1~~
24.	Water pump set for curing.	1
25.	½ Tonne Roller	As per requirement
26.	Wooden or Steel Rammer.	As per requirement
27.	Hopper Mixer for preparing Mix for Cement Mortar, Plastering etc.	1
28.	Truck mounted Road water sprinkler	1 (If required)

~~29.~~	~~Drill Rig~~	~~2 Nos. (Whenever required at site)~~
~~30.~~	~~Rotary Grouting Adaptor~~	~~2 Nos. (Whenever required at site)~~
31.	Any other machinery, T & P etc. required for completion of the work as per decision of Engineer-in-charge. Decision of Engineer-in-charge shall be final and binding on the contractor in this regard.	As per Actual requirement

Note: -

1. Workshop facilities for fabrication/addition and alterations, and other allied works shall be arranged by the contractor at his own cost.
2. The list of equipment/T&P/machinery as per above is for general guidance. In addition to these, machinery / equipment of required capacity to complete the work within the stipulated time, shall be arranged by the contractor in case the requirement at any stage exceeds as per the programme finalized at his own cost and nothing extra whatsoever on this account shall be paid. The decision of Engineer-in-charge shall be final and binding on the contractor in this regard. This includes equipment for arrangement of concrete from RMC producing plants also.
3. All the equipment, T&P and machinery shall be kept in good working conditions.
4. Any Equipment, T&P like batching plant, concrete pump excavators/Transit mixer etc. shall be moved away from the site when the same are no longer required at site of work after getting approval from the Engineer-in-charge. The decision of Engineer-in-charge shall be final and binding on the contractor in this regard.
5. Machineries, Tool and Plants not relevant for this work may be exempted by the Engineer-in-Charge on the written request of the agency. Decision of the Engineer-in-charge shall be final and binding on the contractor in this regard.

LIST OF EQUIPMENTS FOR SITE LABORATORY

Sl. No.	Equipment	Numbers (Minimum)
1.	Oven – Electrically operated, thermostatically controlled, range upto 200 C Sensitivity 1 C	1 No.
2.	Platform balance 100 kg capacity	1 No.
3.	Balance 20 kg capacity-self indicating type	1 No.
4.	Electronic Balance 5 kg capacity accuracy 0.5 gm.	1 No.
5.	Water bath-electrically operated and thermostatically controlled with adjustable shelves, sensitivity 1 C.	1 No.
6.	Thermometers: Mercury-in-glass thermometer range 0 to 250C Mercury-in-Steel thermometer with 30 cm stem, range upto 300C	2 Nos.
7.	Kerosene or gas stove or electric hot plate	1 No.
8.	Glasswares, spatulas, wire gauzes, steel scales, measuring tape, casseroles, Karahis, enameled trays of assorted sizes, pestle-mortar, porcelain dishes, gunny bags, plastic bags, chemicals, digging tools like pickaxes, shovels etc.	As required
9.	Set of IS sieves with lid and pan : 450 mm diameter : 63mm, 53mm, 37.5mm, 26.5mm, 13.2mm, 9.5mm, 6.7mm and 4.75mm size 200 mm diameter : 2.36mm, 2.0mm, 1.18mm, 600 micron, 425 micron, 300 micron,150 micron, and 75 micron	2 set
10.	Sieve shaker capable of 200mm and 300mm dia sieves, manually operated with timing switch assembly.	1 Set
11.	Equipment for slump test – Slump Cone, Steel Plate, tamping rod, steel scale, scoop. Dial gauges 25mm travel – 0.01 mm / division Least count.	2 Nos.
12.	100 MT Compression Testing Machine, electrical-cum manually operated.	1 No.
13.	Graduated measuring cylinders 200 ml capacity	4 Nos.
14.	Enamel trays (for efflorescence test for bricks). (i). 300 mm x 250 mm x 40 mm - (ii). Circular plates of 250 mm dia -	2 Nos. 2 Nos.
15.	First Aid Box Apart from the above, the apparatus as per requirement of Site/Lab tests as mentioned in applicable specifications shall be arranged by the contractor as per the directions of Engineer-in-Charge.	1 Set
16.	Equipment for concrete testing	
(a)	Concrete cube moulds 15x15x15cm.	12 Nos.
(b)	Pruning Rods 2Kg weight length 40cm and ramming face 25mm	1 No.

(c)	Extra Bottom plates for 15cm cube mould	4 Nos.
(d)	Standard Vibration table for cubes	1 Nos.
(e)	Dial gauges 25 mm travel- 0.01 mm/division Least count-	1 Nos.
17	Any other Equipment	As per Actual requirement

Note:

a) The equipments which are not relevant/ not required for this work may be Exempted / removed from the site after approval from the Engineer-in-Charge on the written request of the agency. Decision of the Engineer-in-charge shall be final and binding on the contractor in this regard.

b) Any other equipment specified by Engineer-in-Charge shall be arranged / provided by Agency for which nothing extra shall be payable.

c) All necessary equipment for conducting all necessary tests shall be provided at the site in a well-furnished site laboratory by the contractor at his own cost with proper light and ventilation.

d) The contractor has to establish within **30 days** from the award of work a field laboratory at site including all necessary equipments and skilled manpower for the Field Tests as indicated in the tender document this own cost to have proper quality control. Rs. 5,000/- per day shall be recovered from the contractor for any delay beyond the specified period. If contractor fails to establish lab within additional period of 10 days, the Engineer in charge shall initiate action as deemed fit under relevant clauses of the agreement.

e) A site laboratory with temporary structure of minimum 15 sqm area may be fabricated at site by the contractor for accommodating above instruments and for conducting of various tests for which no extra payment shall be made to the contractor.

f) One sample keeping room/area of appropriate size should also be fabricated at site for keeping various materials brought by the contractor at site and approved by the Engineer-in-charge. No extra payment on account of this shall be made to the contractor.

g) All the above structures should be decent looking and shall be fabricated as per direction of Engineer-in-charge.

SALIENT / MANDATORY REQUIREMENTS FOR THE TENDERER

Name of Work: **Construction of Type "A" School Buildings Staff Quarters for Kendriya Vidyalaya at Reckongpeo, Distt. Kinnour (HP). SH:- Balance Development Works.**

1. The tenderer is advised to read and examine the tender documents for the work and the set of architectural drawings available with Engineer-in-charge for inspection on any working days between 10:00 AM to 4:00 PM. He should inspect and examine the site and its surroundings by himself before submitting his tender.

2. ~~Separate~~ Schedule of quantity is included in this tender for civil ~~and electrical~~ items of work. If the tenderer wants to offer any unconditional rebates on their rates, the same should also be offered in the ~~components of~~ civil ~~and electrical~~ schedule. The contractor shall quote the percentage rates in figures accurately, in decimal coinage. If the bidder quotes the rate in other format, then the bid shall become invalid and rejected.

3. Time allowed for the execution of work is **04 (Four) Months.**

4. The contractor(s) shall submit a detailed program of execution in accordance with the master programme/milestone within ten days from the date of issue of award letter.

5. Quality of the project is of utmost importance. This shall be adhered to in accordance with the provisions of CPWD specifications and guidelines given in the relevant paras.

6. The contractor (s) shall make his own arrangements for electricity and water required for the execution of work. If these are supplied by department as per request of agency, the suitable recovery shall be made from the RA bill / final bill.

7. Contractor has to deploy required Plant and machinery on the project. Minimum number of plant and machinery to be deployed by him is indicated in this NIT. However, if any additional type and number of plants and machines are required at site, the same shall be deployed by the agency without any extra cost which shall be in order to adhere to the time schedule, as specified in this NIT. The decision of Engineer-in-charge shall be final and binding on the contractor in this regard. In case, the contractor fails to deploy the plant and machinery whenever required and as per the direction of the Engineer-in-charge. The (Engineer-in-charge) shall be at a liberty to get the same deployed at the risk and cost of the contractor.

8. The contractor shall submit the running bills in the shape of the Electronic Measurement Book (EMB) in CPWD ERP portal only.

9. Contractor has to provide reinforcement cover blocks made of approved proprietary pre - packed free flowing mortars (Conbextra as manufactured by M/s Fosroc Chemical India Ltd. or approved equivalent) of high early strength.

10. 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.

11. GST, Labour-Cess and any other tax applicable for this contract shall be payable by the contractor and Government will not entertain any claim whatsoever in respect of the same. However, component of GST at time of supply of service provided by the contract shall be varied if is different from that applicable on the last date of receipt of tender including extension, if any.

12. 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 ADG/SE/Executive Engineer may in his discretion, without prejudice to any other right or remedy available in law, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.

Annexure- I

ON NON-JUDICIAL STAMP PAPER OF MINIMUM Rs. 100

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

FORM OF BANK GUARANTEE

(For Earnest Money Deposit/Performance Guarantee/Security Deposit/Mobilization Advance)

1. **Whereas the Executive Engineer……** (name of division) ……**CPWD on behalf of the President of India (hereinafter called "The Government") has invited bids under…… (NIT number) ……. dated ……. For …….. (name of work) .....** The Government has further agreed to accept **irrevocable Bank Guarantee for Rs …….. (Rupees ……only) valid up to …… (date)* ……. as Earnest Money Deposit from …… (**name and address of contractor) …… (hereinafter called "the contractor") for compliance of his obligations in accordance with the terms and conditions of the said NIT.

OR**

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

2. We, …… (indicate the name of the bank) …….. (herein after referred to as "the Bank") hereby undertake to pay to the Government an amount not exceeding Rs ……..……. (Rupees ……... only) on demand by the Government within 10 days of the demand.

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

4. We, …… (indicate the name of the bank) …….., further undertake to pay the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor in any suit or proceeding pending before any Court or Tribunal, our liability under this Bank Guarantee being absolute and unequivocal. The payment so made by us under this Bank Guarantee shall be a valid discharge of our liability for payment there under and the Contractor shall have no claim against us for making such payment.

5. We, …… … (indicate the name of the bank) …….., further agree that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligation here under to vary any of the terms and conditions of the said agreement or to postpone for any

time or from time to time any of the powers exercisable by the Government against the said contractor and to forbear or enforce any of the terms and condition related to the said agreement and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said contractor or for any forbearance, act of omission on the part of the Government or any indulgence by the Government to the said contractor or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. We, …… … (indicate the name of the bank) ……., further agree that the Government as its option shall be entitled to enforce this guarantee against the bank as a principal debtor at the first instance without proceeding against the contractor and notwithstanding any security or other guarantee the Government may have in relation in the contractor's liabilities.

7. This guarantee will not be discharged due to the change in the constitution of the Bank of the Contractor.

8. We, …… (indicate the name of the Bank) …….. Undertake not to revoke this guarantee expect with the consent of the Government in writing.

9. The Bank Guarantee shall be valid upto ……. unless extended on demand by the Government Notwithstanding anything mentioned above, our liabilities against the guarantee is restricted to Rs……. (Rupees……. Only) and unless a claim in writing is lodged with us within the date of expiry of extended date of expiry of this guarantee, all our liabilities under this guarantee shall stand discharged.

Date …….

Witnessess:

1. Signature …….
   Name and address

Authorized Signatory
Name
Designation
Staff Code No.
Bank Seal

2. Signature ……..
   Name and address

*Date to be worked out on the basis of validity period of **90 days** where only financial bids are invited ~~and **180 days** for two/three bid system~~ from the last date of submission of tender.
**In paragraph 1, strike out the portion not applicable. Bank Guarantee will be made either for earnest money or for performance guarantee/ security deposit/ mobilization advance, as the case may be.

Annexure-II

AFFIDAVIT

I /We have submitted a bank guarantee for the work _____
_____
(Name of work)
Agreement No. _____
Dated _____from _____
(Name of the Bank with full address)
to the Executive Engineer _____with a view
(Name of the Division)
to seek exemption from payment of performance guarantee in cash. This Bank guarantee expires on _____ ***I / We undertake to keep the validity of the bank guarantee intact by getting it extended from time to time at my / our own initiative up to a period of*** _____ ***months after the recorded date of completion of the work or as directed by the Engineer in charge.***

I / We also indemnify the Government against any losses arising out of non-encasement of the bank guarantee if any.

(Deponent)
Signature of Contractor

Note: The affidavit is to be given by the Executants before a first-class Magistrate.

FORM "F"

UNDERTAKING ON STRUCTURAL STABILITY AND SOUNDNESS OF ALREADY COMPLETED BUILDINGS AND INFRASTRUCTURE PROJECTS.

I/we undertake and confirm that any building / infrastructure constructed by our firm /partnership firm/company has not suffered any failure, making it unfit for intended use, either due to structural design and defects or due to use of sub-standard materials or execution of sub-standard work, poor workmanship or any other reason during the last 25 (twenty-five) years.

I/we, further, undertake that if such information comes to the notice of CPWD, then Engineer-in-Charge shall be free to terminate the bid/agreement and to forfeit the entire amount of earnest money deposit, performance guarantee and security deposits.

I/we, also undertake that in addition to above, the Engineer-in-Charge shall be free to debar us forever from tendering in CPWD.

The decision of Engineer-in-Charge or any higher authority shall be final and binding.

Signature of notary Signature of bidder or an authorized person with seal of the firm with stamp

Note: Affidavit to be furnished on a 'non-judicial' stamp paper of Rs. 200/- (scanned copy of the notarized affidavit to be uploaded at the time of submission of bid).

PART-B

CONDITIONS AND SPECIFICATIONS OF MAJOR COMPONENT (CIVIL WORK)

ADDITIONAL CONDITIONS (Civil)

1. Unless otherwise provided in the Schedule of Quantities/Specifications, the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the work and nothing extra shall be payable to him on account of the same. Extra payment for centering/shuttering, if required to be done for heights greater than 3.5 m shall however be admissible at the rates arrived at in accordance with clause 12 of the agreement and as per CPWD Specifications, if not already specified.

2. Other agencies doing works related with this project may also simultaneously execute their works and the contractor shall afford necessary facilities for the same. The contractor shall leave such necessary holes, openings etc. for laying/burying in the work, pipes cables, conduits, clamps, boxes and hooks for fan clamps etc. as may be required for the other agencies. Nothing extra over the Agreement rates shall be paid for doing these.

3. Some restrictions may be imposed by the security staff etc. on the working and for movement of labour, materials etc. The contractor shall be bound to follow all such restrictions/instructions and nothing extra shall be payable on account of the same.

4. The contractor shall fully comply with all legal orders and directions of the Public or local authorities or municipality and abide by their rules and regulations and pay all fees and charges for which he may be liable in this regard. Nothing extra shall be paid/reimbursed for the same.

5. The contractor shall give a performance test of the entire installation(s) as per standing specifications before the work is finally accepted by making his own arrangements for water supply, electricity etc. and nothing extra whatsoever shall be payable for the same.

6. The structural and architectural drawings shall at all times be properly co-related before executing any work. However, in case of any discrepancy in the item given in the schedule of quantities appended with the tender and Architectural drawings relating to the relevant item, the former shall prevail unless otherwise given in writing by the Engineer-in-charge.

7. The contractor shall bear all incidental charges for cartage, storage and safe custody of materials issued by department.

8. **Samples of materials required for testing shall be provided free of cost by the contractor. All expenditure to be incurred for testing of samples of all materials e.g. packaging, sealing, transportation, loading, unloading etc. including testing charges shall be borne by the contractor**. The samples of materials shall be tested from IITs, NITs, Govt laboratories approved by the Engineer-in-charge and list of laboratories for testing as approved by ADG, Region Chandigarh.

9. For the purpose of recording measurements and preparing running account bills, the abbreviated nomenclature indicated in the publications Abbreviated Nomenclature of Items of DSR 2023 shall be accepted. The abbreviated nomenclature shall be taken to cover all the materials and operations as per the complete nomenclature of the relevant items in the agreement and relevant specifications.

In case of items for which abbreviated nomenclature is not available in the aforesaid publication and also in case of extra and substituted items for which abbreviated nomenclature are not provided for in the agreement, full nomenclature of item shall be reproduced in the measurement books and bill forms for running account bills.
For the final bill, however, full nomenclature of all the items shall be adopted in preparing abstract in the measurement books and in the bill forms.

10. The contractor shall have to make approaches to the site, if so required and shall retain them till completion of the work and keep them in good condition for transportation of labour and materials as well as inspection of works by the Engineer in charge. Nothing extra shall be paid on this account.

11. No payment will be made to the contractor for damage caused by rains, or other natural calamities during the execution of the works and no such financial claim on this account will be entertained.

12. The contractor shall take instructions from the Engineer-in-charge for stacking of materials. No excavated earth or building materials etc. shall be stacked / collected in areas where other buildings, roads, services, compound walls etc. are to be constructed.

13. It shall be ensured by the contractor that no electric live wire is left exposed or unattended to avoid any accidents in this regard.

14. The contractor shall maintain, all portions executed in perfect condition allotted to him till completion of the entire work. Where however phased delivery of work is contemplated, these provisions shall apply separately to each phase.

15. Various factory-made materials shall be procured from reputed and approved manufacturers or their authorized dealers. Decision of Engineer in charge in this regard shall be final and binding on the contractor in this regard.

16. In cases where BIS certification system is available for a particular material/product but not even a single producer has so far approached BIS for certification, then the material can be used subject to the condition that it should confirm to CPWD specification and relevant BIS codes. In such case written approval of the technical sanctioning Authority may be obtained before use of such material in the work.

17. Contractor shall have to execute a Guarantee Bond in respect of Water Proofing works as applicable, as per Performa attached in this N.I.T.

18. The terms machine batched, machine mixed and machine vibrated concrete used elsewhere in agreement shall mean the concrete produced in concrete batching and mixing plant and if necessary transported by transit concrete mixers, placed in position by the concrete pumps, tower crane and vibrated by surface vibrator /needle vibrator / plate vibrator, as the case may be to achieve required strength and durability.

19. Wherever work is specified to be done or material procured through specialized agencies, their names shall be got approved well in advance from Engineer in charge. Failure to do so shall not justify delay in execution of work. It is suggested that immediately after award of work, contractor should negotiate with concerned specialist agencies and send their names for approval to Engineer in charge. Any material procured without prior approval of Engineer in charge in writing is liable to be rejected. Engineer in charge reserves right to get the materials tested in laboratories of his choice before final acceptance. Non standard materials shall not be accepted.

20. No chase cutting/dismantling of plaster/RCC/CC shall be allowed, so contractor has to execute the electrical work accordingly.

21. The contractor shall invariably prepare the samples of finishing items i.e. flooring of different types, external & internal finishing i/c colour scheme of paint, tiles in dado, flooring in platforms & staircase, water supply & sanitary fittings and any other item as per direction of Engineer-in-charge. The contractor shall proceed with further finishing items only after getting the samples of these items approved in writing from Engineer-in-charge. In case of construction of residential quarters, one sample quarter complete in all shape for each category, shall be prepared by the contractor and got approved from Engineer-in-charge in writing. The contractor shall be allowed to proceed with further quarters only after getting the sample quarters approved in writing from Engineer-in-charge No extra claim whatsoever beyond the payments due at agreement rates will be entertained from the contractor on this account.

22. The contractor or his authorized representative shall associate in collection, preparation, forwarding and testing of such samples. In case, he or his authorized representative is not present or does not associate him, the results or such tests and consequences thereon shall be binding on the contractor.

23. The contractor shall get the water tested with regard to its suitability of use in the works and get written approval from the Engineer in charge before he proceeds with the use of same of execution of works. The water shall be got tested at frequency specified in latest CPWD specifications/BIS code.

24. Cement bags shall be stored in separate godowns to be constructed by the contractor at his own cost as per sketch (which is only indicative and actual size will depend on the site requirements) given in CPWD specifications with weather proof roofs and walls. Each godown shall be provided with a single shutter door with two locks. The key of one lock shall remain with Engineer-in-charge or his authorized representative and that of the other lock with the authorized agent of the contractor at the site of work so that the cement is issued from the godown according to the daily requirements with the knowledge of both parties and proper account for the same is maintained in the standard proforma.

PROFORMA FOR THE CEMENT REGISTER

PARTICULARS OF RECEIPT

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

PARTICULARS OF ISSUE

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

Separate cement registers showing the receipt of the OPC and PPC shall be maintained at site. The contractor shall construct separate godowns for storage of OPC & PPC at site and nothing extra on this account shall be payable.

25. Cement issued shall be for consumption at site only. No cement for factory made items and those not manufactured at site shall be issued.

26. Additional Conditions for Barricading & Providing Safety Net

The contractor shall provide Safety Net and barricading upto 4.5 m height of Galvanized Iron Profile Sheets/CGI sheets with suitable MS framework as per structurally stable criteria to enclose the site and construction area as decided by the Engineer-in-Charge. The area of the site to be barricaded shall be decided by the Engineer-in-Charge and the decision shall be final and binding upon the contractor in this regard. The contractor shall submit the structural & architectural drawings for the barricading to be provided for approval of Engineer-in-Charge within 15 days of the issue of letter of intent to the agency.

The agency shall quote the rate taking into account above parameters, provisions, activities etc. and Nothing extra shall be paid on this account.

27. Additional Condition for Structural Design & Drawings

The Contractor/Agency shall get designed all components of the Retaining Wall, Staircases, Road Work, Steel Works, RCC framed Buildings and other ancillary structures from an expert Structural Designer and submit the drawings for approval of Engineer-in-Charge. Nothing extra shall be payable on this account.

Following steps shall be followed for Structural design & drawings of the Retaining Wall, Staircases, Road Work, Steel Works, RCC framed Buildings and other ancillary structures as per scope of work: -

27.1 The Expert Structural Designer/agencies for the above design/drawings shall be got approved from the Engineer-in-Charge on submission of all the credentials within seven days of award of the work for the capacity to handle the work. The decision of the Engineer-in-Charge in selection of the structural designer shall be final and binding on the contractor.

Eligibility Criteria for Engaging the Expert Structural Designer by the Agency:

Should have satisfactorily completed the Structural Design of the RCC framed Buildings or RCC Structures or Steel Structures as mentioned below during the last 7 (seven) years ending last day of the month previous to the one in which tenders are invited:

Three similar completed Comprehensive Structural Design of each project having **amount not less than Rs. 114.27 Lakh.**

Or

Two similar completed Comprehensive Structural Design of each project having **amount not less than Rs. 171.40 Lakh.**

Or

One similar completed Comprehensive Structural Design of project having **amount not less than Rs. 228.53 Lakh.**

Similar works shall mean "*Comprehensive Structural Design of RCC Structure/Steel Structure which shall be functional with Central /State Govt. Organization/Central Autonomous body/ Central Public Sector Undertaking/ Private Sector*".

27.2 The Contractor/ Agency shall submit hard and soft copies of above designs and drawings in prescribed format as approved by the Engineer-in-charge along with detailed design calculations and other required documents to Engineer-in-charge within 30 days of award of the work.

27.3 The detailed architectural drawings shall be provided by the Contractor as per scope of the work and as per direction of Engineer-In-Charge based on which the design shall be done. **The design shall be based on the Geotechnical Investigation Report provided by the Department. The contractor shall include cost of Architectural Drawings, Structural Design and Drawings in their quoted rate. Rates quoted by the contractor shall be all inclusive and nothing extra, except cost of vetting of design and drawings, shall be paid to the Contractor/ Agency/Laboratory on account of design and drawings.**

27.4 The Engineer-in-charge shall inform any modification needed in design & drawings. The agency shall comply with modifications and submit six set of all structural drawings in prescribed format as directed by Engineer-in-Charge within 07 days from date of request of such modifications, if any. If agency fails to submit the drawings along with detailed design calculation by this time, the delay on this account will be attributable to the contractor. Design shall commensurate with NBC (Latest), relevant IS codes i.e. IS 456, IS 1893 & IS 13920 and detailing as per SP: 34 with amendments upto last date of submission of tender.

27.5 The Engineer-in-charge shall forward the structural designs for vetting to reputed Govt. Institutions to any of IIT's, NIT's. **Charges of vetting shall be paid by the department.**

27.6 The Contractor/ Agency shall be responsible for correctness of the design. Approval of design by the department shall not absolve the Contractor/Agency of his responsibility in this regard.

27.7 The work shall be executed in accordance with the drawings duly approved by Engineer-in-charge, which shall be issued at regular intervals as per requirement.

27.8 In case of any dispute or interpretation of any provision, the decision of **Superintending Engineer, CPWD, Shimla** shall be final and binding on the Contractor/Agency and shall not be open to Arbitration.

The agency shall quote the rate taking into account above parameters, provisions, activities etc. and Nothing extra shall be paid on this account.

28. Additional Condition for Malba/C&D Disposal

Contractor shall have to make himself fully acquaint with the procedure of dumping malba/muck at authorized MC/TCP/Local Body authorized dumping ground well in advance. No hindrance shall be entertained on this account. The malba/ muck /C&D waste shall be disposed/ removed from the site within 72 hours from the time of intimation from the Engineer-in-Charge. For the purpose of removal of malba/ muck contractor shall have to make his own arrangement of adequate number of vehicles required at the MC/TCP/Local Body dumping ground authorized dumping ground including necessary registration of vehicles for this purpose. Nothing extra shall be paid on this account. The contractor shall intimate contact number/ mobile number of himself as well as of the supervisory staff who have to carry out this job of disposal of malba /C&D waste/muck.

Guidelines to be followed by the contractor: -

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

28.2 The contractor shall get prior approval from Engineer-in-Charge for the area where the construction material or debris can be stored beyond the metalled road. This area shall not cause any obstruction to the free flow of traffic/inconvenience to the pedestrians. It should be ensured by the contractor that no accidents occur on account of such permissible storage.

28.3 Keeping in view exigency, the work shall be carried out in more than one shift i/c Sunday & Holiday and nothing extra shall be paid on this account.

28.4 The contractor shall take appropriate protection measures like raising wind breakers of appropriate height on all sides of the plot/area using CGI sheets or plastic and /or other similar material to ensure that no construction material dust fly outside the plot area.

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

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

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

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

28.9 The contractor shall comply all the preventive and protective environmental steps asstated in the MoEF as per latest applicable guidelines.

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

28.11 The contractor shall use vehicles having pollution under control certificate. The emissions can be reduced by a large extent by reducing the speed of a vehicle to 20kmph.

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

The agency shall quote the rate taking into account above parameters, provisions, activities etc. and Nothing extra shall be paid on this account.

29. <u>Additional Conditions of obtaining all Statutory and Local Body Approvals required for the work:</u>

Agency shall take all statutory and local body approvals required for the work such as local body approval from Municipal Corporation, Town and Country Planning, Fire Safety Recommendation, Forest Clearance, Demolition & Disposal of malba /muck permission, PCB clearance, E.I.A. etc. **Quoted rate of the contractor shall be inclusive of these items and Nothing extra shall be payable to the agency on this account except Statutory Payment or fee paid to the statutory bodies.**

GENERAL CONDITIONS

1. The contractor (s) shall inspect the site of work before tendering and acquaint himself with the site conditions and no claim on this account shall be entertained by the department.

2. The contractor (s) shall get himself acquainted with nature and extent of the work and satisfy himself about the availability of materials from kiln or approved quarries for collection and conveyance of materials required for construction.

3. The contractor (s) shall study the soil investigation report for the site, available in the office of the Engineer-in-Charge and satisfy himself about complete characteristics of soil and other parameters of site. However, no claim on the alleged inadequacy or incorrectness of the soil data supplied by the department shall be entertained.

4. The contractor (s) shall give all necessary notices to the Municipality, Police and other authorities etc. that may be required by law and obtain all requisite Licenses for temporary obstructions, enclosures etc. and pay all fee, taxes and charges which may be leviable on account of these operations in executing the contract. He shall make good any damage to the adjoining property whether public or private and shall supply and maintain light and other illumination on for cautioning the public at night.

5. The contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards day and night speed limit boards red flags, red lights and providing barriers. He shall be responsible for all dangers and incidents caused to existing / new work due to negligence on his part. No hindrances shall be caused to traffic during the execution of the work.

6. Contractor shall provide permanent bench marks and other reference points for the proper execution of work and these shall be preserved till the end of work. All such reference points shall be in relation to the levels and locations, given in the Architectural and plumbing drawings.

7. On completion of work, the contractor shall submit at his own cost four prints of “as built” drawings to the Engineer-in-Charge within 30 days of completion of work. These drawings shall have the following information:

(a) Run of all piping and their diameters including soil waste pipes & vertical stacks.

(b) Ground and invert levels of all drainage pipes together with locations of all manholes and connections upto out fall.

(c) Run of all water supply lines with diameters, location of control valves, access panels etc.

8. The contractor shall submit for names of specialized agencies of repute for the approval of Engineer-in-Charge along with their technical capacity for executing specialized works, who must have executed satisfactorily works of value as specified in mandatory conditions.

9. The works shall be carried out in accordance with the Architectural drawings and duly approved and vetted structural drawings submitted by the agency to be issued from time to time by the Engineer-in-Charge.

10. Other agencies will also simultaneously execute and install the works of electrification, fire-alarm etc. for this work and the contractor shall provide necessary facilities for the same. The contractor shall leave such recesses, holes openings etc. as may be required for the electric, air-conditioning and other related works (for which inserts, sleeves, brackets, conduits base pinion, clamps etc. shall be supplied free of cost by the department unless otherwise specifically mentioned) and the contractor shall fix the same at time of casting of concrete, stone work & brick work, if required and nothing extra shall be payable on this account.

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

12. PROGRAMME CHART

(i) The contractor shall prepare an integrated programme chart 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 fulfilment of the programme within the stipulated period or earlier as indicated in the mile stones under clause 5 of the contract and submit the same for approval to the Engineer-in-Charge within ten days of the award of the contract.

(ii) The programme chart should include the following:-

(a) Descriptive note explaining sequence of various activities.
(b) Net work (PERT/CPM/BAR CHART)
(c) Programme for procurement of materials by the contractor
(d) Programme 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.

13. If appears to the Engineer-in-Charge that the actual progress of work does not conform to the approved programme referred above the contractor shall produce a revised programme showing the modifications to the approved programme to ensure completion of the work within the stipulated time for completion.

14. The submission for approval by the Engineer-in-Charge of such programme or the furnishing of such particulars shall not relieve the contractor of any of his 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.

15. For completing the work in time, the contractor might be required to work in two or more shifts (including night work) and no claim whatsoever shall be entertained on this account, notwithstanding the fact that the contractor will have to pay to the labourer sand other staff engaged directly or indirectly on the work according to the provisions of the labour regulations and the agreement entered upon and /or extra amounts for any other reason. If required, the contractor shall have to work during nights also. He shall make the necessary arrangements for lights etc. for night.

Nothing extra shall be paid on this account. The rates shall include the above elements. Keeping in view exigency, the work shall be carried out in more than one shift i/c Sunday & Holiday and nothing extra shall be paid on this account.

16. Existing drains, pipes, cables, over-head wires, sewer lines, water lines and similar services encountered in the course of the execution of work shall be protected against the damage by the contractor at his own expense. The contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services.

17. The contractor shall be responsible for the watch and ward/guard of the buildings and other structure as per scope of work, safety of all fittings and fixtures including sanitary and water supply fittings and fixtures provided by him against pilferage and breakage during the period of installations and thereafter till the building and other structural as per scope of work are physically handed over to the department or six months from the date of record of completion certificates as per schedule F, whichever is earlier. No extra payment shall be made on this account.

18. The day-to-day receipt and issue accounts of different grade/brand of cement shall be maintained separately in the standard proforma by the Jr. Engineer-in-Charge of work and which shall be duly signed by the contractor or his authorised representative.

19. The contractor shall render all help and assistance in documenting the total sequence of this project by way of photography, slides, audio-video recording etc. Nothing extra shall be payable to the contractor on this account. However, cost of photographs, slides, audio/videography etc. shall be borne by the department.

20. The contractor shall be fully responsible for the safe custody of materials brought by him issued to him even though the materials are under double lock key system.

21. No payment shall be made to the contractor for any damage caused by rain, snowfall, floods, earthquake or any other natural causes whatsoever during execution of work. The damages of the work will be made good by the contractor at his own cost and no claim on this account shall be entertained.

22. For construction works which are likely to generate malba/rubbish to the tune of more than a tempo/truck load, contractor shall dispose of malba, rubbish & other unserviceable materials and wastes at their own cost to the notified/specified dumping ground and under no circumstances these shall be stacked/dumped, even temporarily outside the construction premises.

23. Even ISI marked materials shall be subjected to quality test at the discretion of the Engineer-in-charge besides testing of other materials as per the specifications described for the item/material. Whenever ISI marked, materials are brought to the site of work, the contractor shall, if required by the Engineer-in-charge, furnish manufacturer's test certificate to establish that the material procured by the contractor for incorporation in the work satisfy the provisions of IS Codes relevant to the material and/or the work done.

24. A recovery @ 1% shall be made on account of labour welfare cess from the gross amount of the bill.

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

26. The Contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the public in general. The Contractor shall use such methodology and equipments for execution of the work, so as to cause minimum environmental pollution of any kind during construction. **Further, the Contractor shall take all precautions to abide by the environmental related restrictions imposed by the Ministry of Environment and Forest or other Govt. bodies/law authorities. No claim what so ever on account of site constraints mentioned above or any other site constraints, inadequate availability of skilled, semi-skilled or unskilled workers in the near vicinity, non-availability of T & P/ machinery spare parts and any other constraints not specifically stated here, shall be entertained from the Contractor. Therefore, the Tenderers are advised to visit site and get first-hand information of site constraints. Accordingly, they should quote their tenders. Nothing extra shall be payable on this account.**

27. The contractor shall have to make payment not less than minimum wages notified by the Govt. of India to the worker directly to him through bank or ECS or online transfer to his bank account latest by 7th day of each month. It shall be the duty of the contractor to ensure the disbursement of wages through bank account of labour. If there is holiday on 7th day, then payment shall be made one day earlier. If contractor fails to be made payment as specified, penalty @ Rs. 200/- per person per day shall be imposed on contractor from 8th day of the month till 14th day of the month.

28. The department shall not bear responsibility for lack of knowledge of the contractor of site condition and also the consequences thereof. The information and site data shown in the drawings and mentioned herein and also elsewhere in the tender documents are being furnished for general information and guidance only. The Engineer-in-charge in no case shall be held responsible for the accuracy thereof or any interpretation / or conclusions drawn there from by the contractor. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. It shall be deemed that the contractor has satisfied himself as to the nature and location of the work, general and local conditions and particularly those pertaining to probable location of batching plant/casting yard, contractor's offices site, transport, handling and storage of materials, availability of labour, weather conditions at site and general ground/subsoil conditions and the contractor has to estimate his cost accordingly.

29. The contractor shall make his own arrangement of water for completion of work and nothing will be paid on this account. The contractor shall get the water tested with regard to its suitability and conforming to the relevant IS Code. The contractor shall obtain written approval from the Engineer-in-Charge before he proceeds by using the same for execution of work. The contractor shall arrange Municipal water at his own cost or if he intends to use tubewell water, he will have to install a RO plant to treat the water, if required, as the tubewell may not be suitable for construction and nothing extra shall be paid to the contractor on this account. Water charges shall not be recovered in case arrangement of water is made at his own by the contractor. **In case water is supplied by the department, 1% water charges shall be deducted from the gross work done, of RA bill / final bill.**

30. The contractor shall obtain **all mandatory Statutory** Approvals and No Objection Certificate/ Consent for Establishment from **Statutory** Body authorities like local Fire department, local town planning authority, local ground water authority, local electricity supply authority, local pollution control board, Forest department, Environmental clearance, Lift inspectorate, Central Electricity Authority, Airport Authority of India (AAI) etc at his own cost. The contractor has to prepare all the documents as required and submit directly to the local Statutory bodies under intimation to the Engineer-in-charge and if required, resubmit the same as required by the local bodies/ authorities. The contractor shall include this component in their quoted rates and nothing extra shall be payable on this account except **The Statutory payments or fees made to local bodies shall be reimbursed by the department on production of proof of such payments and after approval of the respective proposal.** Three final copies of the documents prepared shall be submitted to Engineer-in-Charge for record. All the documents created out of the assignment will become the sole property of the Department. The contractor shall obtain occupancy certificate after completion of the project from Statutory local bodies before handing over the same to the Department.

31. Royalty at the prevailing rates wherever payable shall have to be paid by the contractor on the boulders, metal, shingle, sand and bajri etc. or any other material collected by him for the work direct to revenue authorities and **the department shall not pay anything for the same.**

32. Any damage done by the contractor to any existing work or work being executed byother agencies shall be made good by him at his own cost.

33. Any cement slurry added over base surface for continuation of concreting for betterbond is deemed to have been included in the items and nothing extra shall be payable on this account, also the cement consumed on this account shall not be considered in theoretical consumption.

34. The rate for all items, in which the use of cement is involved, is inclusive of chargesfor curing.

35. LICENSES

The contractor shall pay to the municipal, police or other authorities all the fees etc. if required for execution of work, obtain requisite licenses for temporary constructions, enclosures, and pay all fees, taxes and charges which shall be leviable on account of their observations in executions of the contract. No extra claim will be entertained on this account. However, department shall provide necessary assistance by way of forwarding the applications of the contractor.

36. AMENDMENT OF TENDER DOCUMENTS

At any time prior to the deadline for submission of Tender, CPWD may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective Tenderers modify the Tender Document by issuing Corrigendum. Corrigendum, if any, will be uploaded on e-tender website, and will form part of the Tender Documents. In order to afford Tenderers reasonable time to take Corrigendum into account in preparation of their Tenders, CPWD may at its discretion, extend the deadline for submission of Tenders.

37. LANGUAGE

The documents prepared by the Tenderer, and all correspondence and documents relating to the Tender exchanged by the Tenderer and the Engineer-in-charge shall be written in the English language only. Supporting documents and printed literature furnished by the Tenderer may be in another language provided they are accompanied by an appropriate translation in English. For the purpose of interpretation of the Tender, the English language shall prevail.

If there are varying or conflicting provisions made in any document forming part of the contract, the Engineer-in-Charge shall be the deciding authority with regard to the intention/interpretation of the tender and his decision shall be final and bindingon the contractor.

38. DEVIATION FROM THE DRAWINGS, SPECIFICATIONS, STIPULATION, CONDITIONS

The contractor is not to vary or deviate from the drawings, specifications, stipulation, conditions of tender document or instructions to execute any work of any kind whatsoever unless so authorized by the Engineer-in-Charge in writing. For any extra work involved in consequence of some breach of this contract on the part of the contractor(s), no extra payment will be admissible to the contractor.

39. PROTECTION OF WORK

All finished Works shall be protected from damage that could arise from other construction activities. Work shall be planned and executed in such a manner that work completed by other agencies is not damaged. The compliance of this provision is deemed to be included in the quoted amount and nothing extra shall be paid on this account.

The contractor shall maintain in good condition all work till the completion of entire work allotted to him. Engineer-in-Charge shall not be held responsible for any claims for injuries to persons/workmen or for structural damage to property happening from any neglect, default, want of proper care or misconduct on the part of the contractor or of any other of his authorized representatives in his employment during the execution of the work. The compensation, if any, shall be paid directly to the department/authority/persons concerned, by the contractor at his own cost.

40. WORKSHOP DRAWINGS

The Contractor shall be required to submit and get approved from the Engineer-in- Charge, the shop drawings for all steel work i/c staging /shuttering etc. and any other work required by Engineer-in-Charge under the supervision of an experienced professional Engineer at least one week in advance of their use so that necessary amendments, if required, can be done in time. All workshop drawings have to be sent to Engineer-in-charge and his consultant for approval.

The cost of preparation of workshop drawings, its modifications / revisions, submittals etc. are deemed to be included in the quoted amount and nothing extra shall be payable on this account.

41. *As built drawings and compiled video / photographs after completion of work (To be submitted within one month of date of completion of work.)* **"As Built Drawings"** shall have all details, incorporating, all changes/modifications that might have taken place during the execution, of drainage (including invert levels), street lighting, cabling, other services, levels (at desired interval w.r.t permanent bench marks) of road, footpath, drains, elevated road/flyovers/bridges, FOBs etc., details foundations/substructure, superstructure etc. as executed at site.

42. DRAWINGS TO BE KEPT AT SITE

Two complete sets of the drawings as approved by the department shall be kept by the contractor at the site within 14 days of date of start out of which one set shall be lined with cloth and same shall at all reasonable time be available for inspection and use by the Engineer-in-Charge and the representative of the Engineer-in-Charge and any other person authorized by the Engineer-in-Charge in writing.

43. EXISTING SERVICES

Existing drains, pipes, cables, overhead wires, sewer lines, water lines and similar services encountered in the course of the execution of the work shall be protected/ maintained against the damage by the contractor. The contractor shall identify all underground / overhead services and take necessary measures to protect the services before starting any excavation / activity. All temporary supports and other measures required to protect and maintain the services during construction period as per direction of Engineer-in-charge, shall be deemed to be included in the quoted rate / amount of the contractor and nothing extra shall be paid on this account. The contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services. For any permanent shifting, CPWD shall arrange to shift the services as and when required. However, in the interest of work, if CPWD decides to get it shifted by the contractor, then contractor shall be paid separately at the rates as decided by the Engineer-in-charge based on the actual quantum of the work involved in shifting such utilities/services. The decision of the Engineer-in-Charge in this regard shall be final and binding.

44. DIVERSION OF SERVICES

All works pertaining to services including rerouting/diversion of services, routine testing, installation etc., embracing in one or more than one process shall be subject to examination and approval to each stage thereof by the Engineer-in-Charge or concerned department as would be notified by the Engineer-in-Charge or his accredited representative when such stage is ready. In default of such notice, the Engineer-in-Charge shall be entitled to appraise the quantity and extent thereof and the decision of Engineer-in-Charge or his accredited representative in this regard shall be final and binding.

The contractor will not have any claim in case of any delay by the Engineer-in- Charge in removal of trees or shifting, raising, removing of telegraph, telephone or electric lines (over head or underground), water and sewer lines and other structures etc., if any, which may come in the way of the work. However, suitable extension of time will be granted to cover such delays.

45. PREVENTION OF NUISANCE AND POLLUTION

The contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants or occupiers of adjacent properties and to the public in general and to prevent any damage to such properties and any pollution. He shall make good at his own cost and to the satisfaction of the Engineer-in- Charge, any damage to roads, paths, drainage works or public or private property whatsoever caused by the execution of the work or by traffic brought thereon by the contractor. All waste or superfluous materials shall be cleaned away by the contractor without any reservations entirely to the satisfaction of the Engineer-in- Charge at no extra cost.

46. SITE MAINTENANCE

The Contractor shall maintain the Sites in good order during the whole construction period. It is strictly prohibited to bury any kind of waste materials, solid or liquid, in the ground. In the event of accidental discharge of polluting materials, the Contractor shall take immediate mitigating action and shall immediately inform theClient and the appropriate authorities.

47. The Contractor or his authorized representative should always be available at the site of work to take instructions from departmental officers, and ensure proper execution of work. No work should be done in the absence of such authorized representative.

48. The structural and other drawings for the work shall at all times, be properly correlated before executing any work and no claim whatsoever shall be entertainedin this respect.

49. The contractor shall maintain in good condition, all works executed till the completion of entire work allotted to the contractor.

50. All work and materials brought and left upon the ground by the contractor or by his order for the purpose of forming part of the works, are to be considered to be the property of the President of India and the same are not to be removed or taken away by the contractor or any other person without special license and consent in writing of the Engineer-in-Charge, but the President of India is not to be in any way responsible for any loss or damage which may happen to or in respect of any such work or materials either by the same being lost or damaged by weather orotherwise.

51. The contractor shall construct suitable godown at the contractor's compound for storing the materials safe against damage due to sun, rain dampness, fire, theft etc. He shall also employ necessary watch and ward establishment for the purpose andno extra claim whatsoever shall be entertained on this account.

52. Material shall be kept in joint custody of the contractor and the representative of the Engineer-in- charge. The empty containers shall not be removed from the site of work till the relevant item of work has been completed and permission obtained from the Engineer-in-Charge.

53. The area shall be kept dry when the work is in progress even below water table. Nothing extra shall be paid for removal of slush / sludge, bailing out water due to sub-soil condition, rains, spring etc.

54. The contractor shall have to make his own arrangement for housing facilities for staff and labour away from construction site and shall have to transport the labour to and from between construction site and labour camp at his own cost. No labour huts will be allowed to be constructed at the project site except a few temporary sheds for chowkidars and storekeepers. The decision about how many huts can be allowed for chowkidars and storekeepers at project site shall rest with the Engineer-in- Charge and the contractor shall have no claim on this account.

55. A complete testing lab shall be setup at the site by the contractor.

56. The contractor shall provide a total station Instrument for recording all initial and final levels of entire earth work, and marking levels for all other related items to ensure proper supervision at his own cost & as per direction of Engineer-in-Charge.

57. Barricading to be removed from the site after approval of Engineer-in-Charge. Barricading will be the property of contractor after work completed.

58. The contractor shall ensure that all his construction vehicles plying on public roads (like dump trucks, trailers, etc.) have proper license to ply on public roads from the state Transport Authority. Drivers holding proper valid license as per the requirements of Motor Vehicles Act shall drive these vehicles. The contractor shall not undertake loading and unloading at carriageways obstructing the free flow of vehicular traffic. Any encroachment of existing roads by the contractor applying theexcuse of work execution shall not be allowed.

59. DAMAGE AND INTERFERENCE

Work shall be Carried out in such a manner that there will be no damage to or interference with:

- Archeological monuments, bench marks, beacons etc.
- Water courses or drainage systems.
- Utility services and equipment.
- Structures, roads, street furniture, other public and private properties.
- Public or private vehicular or pedestrian access.
- Trees and other vegetation.

Other than to the extent that it is necessary to construct the Works and that too only with the approval of the appropriate authority and/or the CPWD.

Items, which are damaged during the work shall be reinstated to the satisfaction of the authorities and/or Client and to at least the same condition as that existed before the Works started. Nothing extra shall be paid on this account.

ADDITIONAL SPECIFICATIONS

1. The work in general shall be executed as per the description of the item, specifications and conditions attached and CPWD specifications 2019, Vol I & II with up-to-date correction slips and instructions of Engineer-in-Charge.

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

3. The foundation trenches shall be kept free from water while works below ground level are in progress.

~~4. The contractor shall execute following specialized work, through specialized agency.~~
~~(i) Water proofing.~~

~~5. The contractor shall associate with specilized agency to execute above specialized work under the agreement. The contractor shall submit name of specialized agency for approval of Engineer-in-charge along with their work experience for executing specialized work.~~

MATERIAL AND QUALITY ASSURANCE

1. The contractor shall ensure quality control measures on different aspects of construction including materials, workmanship and correct construction methodologies to be adopted. He shall have to submit quality assurance programme within two weeks of the award of work. The quality assurance programme should include method statement for various items of work to be executed along with check lists to enforce quality control.

2. The contractor shall get the source of all other materials, not specified elsewhere in the document, approved from the Engineer-in-Charge. The contractor shall stick to the approved source unless it is absolutely unavoidable. Any change shall be done with the prior approval of the Engineer-in-Charge for which tests etc. shall be done by the contractor at his own cost. Similarly, the contractor shall submit brand/ make of various materials not specified in the agreement, to be used for the approval of the Engineer-in-Charge along with samples and once approved, he shall stick to it.

3. The contractor shall submit shop drawings of staging and shuttering arrangement, aluminum work, and other works as desired by Engineer In Charge for his approval before execution. The contractor shall also submit bar bending schedule for approval of Engineer –in – charge before execution.

4. The contractor shall submit brand/make of various materials to be used for the approval of the Engineer-in-Charge/competent authority along with samples and once approved, he shall stick to it.

5. The contractor shall get the water tested with regard to its suitability for use in the works and get written approval from the Engineer- in-Charge before he proceeds with the use of same for execution of works. If the tube well water is not suitable, the contractor shall arrange Municipal water at his own cost and nothing extra shall be paid to the contractor on this account. Water charges shall not be recovered in case arrangement of water is made at his own by thecontractor.

6. Wherever any reference to any Indian Standard Specifications and other relevant codes occur in the documents relating to this contract same shall be inclusive of all amendments issued thereto or revision thereof, if any, upto date of receipt of the tender.

7. All the drawings shall at all times be properly correlated by the contractor before executing the work and no claim what so ever shall be entertained for failing to do so. In case of any discrepancy in the specifications, schedule of quantity and drawings. The decision of the Engineer-in-charge shall be final, conclusive and binding on the contractor.

8. Rates for the items are inclusive of all labour, materials, T&P, incidental charges, contractors' profit and overheads etc. unless, otherwise, specified. The contractors shall quote the rates accordingly).

9. All materials / items shall confirm to relevant IS codes / MoRTH Specifications, if not mentioned for the materials / items of the agreement.

10. COST OF TESTING

All costs involved in carrying out the tests and other incidental expense thereto shall be borne by the contractor regardless of the result of the tests. The contractor shall take down or cut out and reconstruct the defective work or shall make the remedial measures instructed at his own cost including consultancy charges for suggestion of remedial measures.

11 OTHER TESTS

In addition to the above tests, non-destructive test methods such as core test and ultrasonic pulse velocity test shall be carried out by the contractor at his own expense if so desired by the Engineer-in-Charge. Such tests shall be carried out by an agency approved by the Engineer-in-Charge and shall be done using only recommended testing equipment. The acceptance criteria for these tests shall be as specified by the testing agency or good engineering practice and as approved by the Engineer.

12. **Field Laboratory:**

All the materials to be used in the work and tested in the laboratory shall comply with the requirements of relevant specification or particular specifications as applicable or such recognized specifications as acceptable to Engineer-in-Charge in terms of this tender.

The testing machines shall be recalibrated periodically as per QAP/QAM and approved by Engineer-in- Charge. The calibration shall be got done from an authorized laboratory approved by Engineer-in-Charge. The site laboratory/shall be equipped with the minimum of the items mentioned in NIT at **Page 34-35.**

13. Test Laboratories:

A) Laboratory at site:

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

The representatives of the department shall be at liberty to inspect the testing facilities at site and conduct testing at random in consultation with Engineer in charge. The contractor shall provide all necessary facilities for the purpose. The laboratory shall be equipped, inter alia, with the equipments as mentioned in Table at **Page- 34-35.**

Not less than 90% tests for material be performed at site lab with above stated equipment's, however at least 10% testing of materials shall be got done from external laboratories. However, for the tests to be carried out by the external laboratories, the contractor shall supply free of charge all the materials required for testing, including transportation. For the tests conducted in the outside approved laboratories, the cost of such tests shall be borne by the contractor.

B) **OTHER APPROVED LABORATORIES**

The tests which cannot be carried out in the field laboratory shall be conducted in the approved external laboratories as detailed below or any other lab approved by Engineer-in-Charge.

1) IIT Roorkee.
2) Punjab Engineering College.
3) NIT Hamirpur.
4) NITTR Chandigarh.
5) NCCBM Ballabhgarh.
6) IIT Delhi.
7) CBRI, Roorkee.
8) Any other institute as approved by SE/Shimla.

The contractor or his authorized representative shall associate in collection, preparation, forwarding and testing of such samples. The cost of such samples shall be borne by the contractor.

The representatives of CPWD shall be at liberty to inspect the testing facilities at site and conduct testing at random in consultation with Engineer-in-Charge. The contractor shall provide all necessary facilities for the purpose.

It is also a term of the agreement that out of tests which can be carried out in field laboratory, minimum 10% of important tests e.g. concrete cube tests, test for cement etc., or the tests as directed by Engineer-in-Charge, shall be got done through agencies/labs as mentioned above. For the all tests, the contractor shall supply free of charge all the materials required for testing and the testing charges shall be borne by the contractor. No extra claims whatsoever on this account shall be admissible.

C) Sampling of Materials:

C1 Sample of building materials fittings and other articles required for execution of work shall be got approved from the Engineer-in-Charge. All materials and articles brought by the contractor to the site for use shall conform to the samples approved by the Engineer-in-Charge which shall be preserved till the completion of the work.

C2 The contractor shall ensure quality construction in a planned and time bound manner. Any sub-standard material/work beyond set out tolerance limit shall be summarily rejected by the Engineer-in-Charge.

C3 BIS marked materials except otherwise specified shall be subjected to quality test at the discretion of the Engineer-in-Charge besides testing of other materials as per the specifications described for the item/materials. Wherever BIS marked materials are brought to the site of work, the contractor shall furnish manufacturers test certificate if required, by the Engineer-in-Charge.

C4 In case there is any discrepancy in frequency of testing as given in the list of mandatory tests and that in the individual sub-head of work as per CPWD specification 2019 Vol. 1 & 2 the higher of the two frequencies of testing shall be adopted.

C5 Samples of materials required for testing shall be provided free of cost by the contractor. All expenditure to be incurred for testing of samples of all materials e.g. packaging, sealing, transportation, loading, unloading etc. including testing charges shall be borne by the contractor.

14. Maintenance of Registers:

(i) All the register of tests to be carried out at construction site or in outside laboratories **shall be maintained by the contractor** which shall be issued to the contractor by Engineer-in-Charge.

(ii) All the entries in the register will be made by the designated engineering staff of the contractor and same shall be regularly reviewed / checked by JE/AE/EE.

(iii) Contractor shall be responsible for safe custody of all the test registers.

15. The contractor shall ensure quality construction in planned and time bound manner. Any sub-standard material/work beyond setout tolerance limit shall be summarily rejected by the Engineer-in-charge & contractor shall be bound to replace/remove such sub-standard/defective work immediately. If any material, even though approved by Engineer-in-charge is found effective or not conforming to specifications shall be replaced/removed by the contractor at his own risk & cost.

16. **REMOVAL OF REJECTED/SUB-STANDARD MATERIALS**
The following procedure shall be followed for the removal of rejected/sub-standard materials from the site of work:

a Whenever any material brought by the contractor to the site of work is rejected, entry thereof should invariably be made in the Site Order Book under the signature of the Assistant Engineer, giving the approximate quantity of such materials.

b As soon as the materials removed, a certificate to that effect shall be recorded by the Assistant Engineer against the original entry, giving the date of removal and mode of removal, i.e., whether by truck, carts, or by manual labour. If the removal is by truck, the registration number of the truck should be recorded.

c When it is not possible fort The Assistant Engineer to be present at the site of work at the time of actual removal of the rejected/sub-standard materials from the site, the required certificate should be recorded by the Junior Engineer, and the Assistant Engineer should counter sign the certificate recorded by the Junior Engineer.

17. **CEMENT & STEEL REINFORCEMENT (IF NOT STIPULATED, TO BE SUPPLIED BY THECONTRACTOR).**

Contractor has to produce manufacturers test certificate and challan for each lot of Cement & Steel Reinforcement procured at site.

17.1 **CEMENT: -**

The PPC cement of approved make conforming to IS:1489-Part-I (latest version) as per list of preferred brands in 50kg bags bearing manufacturer's name and ISI marking, alongwith manufacturers test certificate for each lot shall be procured by the

contractor. However, if the contractor uses higher grade of cement or uses OPC only of 43 or 53 grades, nothing extra shall be paid.

Samples of cement arranged by the contractor shall be taken by the Engineer-in-Charge and got tested in accordance with provisions of relevant BIS Codes. In case test results indicate the cement arranged by the contractor does not conform to the relevant BIS Codes, the same shall stand rejected and shall be removed from the site by the contractor at his own cost within a week's time of written order from the Engineer-in-Charge to do so, the cost of tests shall be borne by the contractor.

Cement shall be brought at site in bulk supply of approximately 100 tonnes or as decided by the Engineer-in-Charge.

OPC & PPC bags shall be stored in separate godowns. Separate godowns fortested cement and fresh cement (under testing) to be constructed by the contractor at his own cost as per sketches given in C.P.W.D Specifications having weather-proof roofs and walls. The size of the cement godown is indicated in the sketches for guidance. **The material shall be stored as per site requirement keeping in view the site condition as per direction of Engineer-in-charge**. The actual size of godown shall be as per site requirements and nothing extra shall be paid for the same. Each godown shall be provided with door with two locks. The keys of one lock shall remain with Engineer-in- Charge or his authorized representative of the work and that of other lock with the authorized agent of the contractor at the site of works that the cement is issued from godown according to the daily requirement with the knowledge of both parties. The account of daily receipt and issue of cement shall be maintained in a register in the prescribed proforma and signed daily by the contractor or his authorized agent and Engineer-in-Charge or his authorized representative in taken of its correctness. The day-to-day receipt and issue accounts of different grade / brand of cement shall be maintained separately in the standard proforma by the contractor or his authorized representative which shall be duly signed by the authorized representative of the Engineer-in-Charge before issue to the work on day-to-day basis.

Four separate cement godowns each having capacity of 50MT or more as decided by the Engineer-in-Charge shall be constructed by the contractor at site of work for which no extra payment shall be made. The contractor shall be responsible for the watch and ward and safety of the cement godowns. The contractor shall facilitate the inspection of the cement godowns by the Engineer-in-Charge at any time.

The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in Clause-38 of the contract and shall be governed by the conditional aid therein.

If the quantity of cement actually used in the work is found to be more than the theoretical quantity of cement including authorized variation, nothing extra shall be payable to the contractor on this account. In the event of it being discovered after the completion of the work, the quantity of cement used is less than the quantity ascertained as herein before provided (allowing variation on the minus side as stipulated in Clause -38), the cost of quantity of cement not soused shall be recovered from the contractor as specified in schedule. Decision of the Engineer-in-Charge in regard to theoretical quantity of cement which should have been actually used as per the schedule and recovered at the rate specified, shall be final and binding on the contractor. For non-scheduled items, the decision of **the**

Superintending Engineer, Shimla, CPWD, Shimla regarding the theoretical quantity of the cement, which should have been actually used, shall be final and binding on the contractor.

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

In case the contractor brings surplus quantity of cement the same shall be removed from the site after completion of work by the contractor at his own cost after approval of the Engineer-in-Charge.

Cement, which is not used within 90 days from its date of manufacture, shall be re-tested at approved laboratory. Until the results of such tests are found satisfactory, it shall not be used on the work.

The cement shall be brought at site in bulk supply of approximately 50 tonnes or as decided by the Engineer- In- Charge. The cement godown of the capacity to store a minimum of 2000 bags of cement or as decided by NIT approving authority in case less than 100MTcement is required for the work, shall be constructed by the contractor at site of work for which no extra payment shall be made. For small maintenance works, NIT approving authority shall decide their requirement of the storage/ godown.

The contractor shall be responsible for the watch and ward and safety of the cement godown. The contractor shall facilitate the inspection of the cement godown by the Engineer-in-Charge at any time.

The cement shall be got tested by the Engineer-In-Charge and shall be used on the work only after satisfactory test results have been received. The contractor shall supply free of charge the cement required for testing including its transportation cost to testing laboratories, the cost of tests shall be borne by the contractor.

The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract.

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

The damaged cement shall be removed from the site immediately by the contractor on receipt of a notice in writing from the Engineer-In-Charge. If he does not do so within 3 days of receipt of such notice, the Engineer-In-Charge shall get it removed at the cost of the contractor.

Technical sanctioning authority may change the brand of Cement depending upon availability in local market but conforming to grade mentioned in the NIT and only with ISI mark, if warranted. Conditions for cement proposed to be procured in silos may be approved by the NIT approving authority alongwith mode of storage, measurement, testing and grade requirements.

17.2 **STEEL REINFORCEMENT: -**

The steel of approved make as per list of various grades shall be procured. In case of non availability, the steel produced by the steel manufacturers approved by ADG (Region Chandigarh) shall procure.

i). For reinforced cement concrete **CRS/Low alloy steel of grade Fe 500D or more** conforming to IS 1786: 2008 (Indian Standard Specification for high strength deformed steel bars and wires for concrete reinforcement) and Bar Set-I as per OM No. CSQ/SE(TAS)/steel/2024.262(H) dated 14.08.2025 shall be used.

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

iii). The Engineer-in-Charge shall get each consignment tested for both chemical composition and physical properties (including bend and re-bend test) as specified in IS: 1786 from NABL accredited laboratory of any Government laboratory.

iv). Samples shall also be taken and got tested by the Engineer-in-Charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to the specifications the same shall stand rejected, and it shall be removed from the site of work by the contractor at his cost within a week time on written orders from the Engineer-in-Charge to do so.

v). The steel reinforcement bars shall be brought to the site in bulk supply of 10 tonnes or more, or as decided by the Engineer-in-charge.

vi). The steel reinforcement bars shall be stored by the contractor at site of work in such a way as to prevent their distortion and corrosion, and nothing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.

vii). For checking nominal mass, tensile strength, bend test, re-bend test one sample for each, specimens of sufficient length shall be cut from each size of the bar at random, and at frequency not less than that specified below:

Size of bar	**For consignment upto or below 100 tonnes**	**For consignment above 100 tonnes**
Under 10 mm dia bars	One sample foreach 25 tonnes or part thereof	One sample for each 40 tonnes or part there of
10 mm to 16 mm dia bars	One sample for each 35 tonnes or part there of	One sample for each 45 tonnes or part there of
Over 16 mm dia bars	One sample for each 45 tonnes or part there of	One sample for each 50 tonnes or part there of

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

ix). The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in clause 38 of the contract and shall be governed by conditions laid therein. In case the consumption is less than theoretical consumption including permissible variations recovery at the rate so prescribed shall be made. In case of excess consumption, no adjustment needs to be made.

x). The steel brought to site and the steel remaining unused shall not be removed from site without the written permission of the Engineer-in-charge.

PARTICULAR SPECIFICATION FOR CIVIL WORK

1. DRAWINGS AND DIMENSIONS

Figured dimensions on drawings shall only be followed and drawings to a large scale shall take precedence over those to a smaller scale. All dimensions shall be checked on site prior to execution.

The levels, measurements and other information concerning the existing site as shown on the drawings are believed to be correct, but the contractor should verify them for himself and also examine the nature of the ground as no claim or allowance whatsoever will be entertained on account of any errors or omissions in the levels or the description of the ground levels or strata turning out different from what was expected or shown on the drawings.

2. DESIGN MIX CONCRETE:

The contractor shall be required to submit design mix of concrete.

(i) Coarse aggregate: As per CPWD Specifications and from approved source by the Engineer-in-charge.

(ii) Fine Aggregate: As per CPWD Specifications and from approved source by the Engineer-in-charge.

2.1 Water: It shall conform to requirements laid down in IS: 456: 2000 and CPWD specifications and from approved source by the Engineer-in-charge.

2.2 Cement: Cement arranged by the contractor will be PPC (in bags) conforming to IS: 1489-Part-I. If for any reasons, cement other than that specified in this para for example OPC of grade 43 or higher grade is brought to site by contractor, the issue, payments rate as well as the quantity to be used in the design mix concrete will remain unchanged.

2.3 Slump: Design slump should be clearly specified in the mix design.

2.4 Admixtures shall not be used without approval of Engineer-in-charge. Wherever required, admixtures of approved quality shall be mixed with concrete as specified. The admixtures shall conform to IS: 9103. The contractor shall not be paid anything extra for admixture required for achieving desired workability without any change in specified water cement ratio for RCC/CC work.

2.5 Grade of Concrete: The compressive strength of various grades of concrete shall to be given as below:

Sl. No.	Grade Designation	Compressive strength on 15cm cubes min 7 days (N/mm2)	Specified characteristic compressive strength at 28 days (N/mm2)	Minimum cement content (Kg per cum)	Maximum cement content (Kg per cum)	Maximum water cement ratio
(i)	M 25	As per Design	25	330	*As per CPWD specification / BIS Code*	0.50
(ii)	M 30	As per Design	30	350		0.45
(iii)	M 35	As per Design	35	370		0.45

2.5.1 The concrete mix design/laboratory tests shall be got done by contractor at his own cost and will be carried out by the contractor through one of the following laboratory/Test houses:

(i) IIT Roorkee.

(ii) Punjab Engineering College.

(iii) NIT Hamirpur.

(iv) Chandigarh College of Engineering.

(v) NITTR Chandigarh.

(vi) NCCBM Ballabhgarh.

(vii) IIT Delhi.

(viii) CBRI, Roorkee.

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

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

3. APPROVAL OF DESIGN MIX

The mix design for a specified grade of concrete shall be done for a target mean compressive strength Tck=Fck+1.65 s.

Where Fck = Characteristic compressive strength of 28 days

s = Standard deviation which depends on degree of quality control

The degree of quality control for this work is “good” for which the standard deviation (s) obtained for different grades of concrete shall be as below:

Grade of Concrete	For “Good” quality of control
M 25	4.00
M 30	5.00
M 35	5.00
M 40	5.00

Of the six specimens of each set three shall be tested at seven days and remaining three at 28 days. The preliminary tests at seven days are intended only to indicate the strength to be attained at 28 days

3.1 All cost of mix designing and testing connected therewith including charges payable to the laboratory shall be borne by the contractor.

3.2 The automatic concrete batching plant conforming to IS: 4925 should be of sufficient capacity and suitable to commensurate with the target mentioned in NIT with reference to quantity of concrete, mile stone and completion time of the work. It shall have the facilities of presetting the quantity to be weighed with automatic cutoff when the same is achieved. Concreting at places may have to be resorted to through concrete pump for which nothing extra shall be paid.

3.3 All other operations in concreting work like Mixing, Slump, Laying Placing of concrete, compaction curing etc. not mentioned in this particular specification for Design Mix of concrete shall be as per CPWD specification.

4. STONE WORK

Samples of each item of stone work either individually or in combination shall be prepared for approval of Engineer-in-charge before commencement of work.

5. WATER PROOFING TREATMENT

The contractor shall associate himself with the specialized firm, to be approved by the Engineer-in-charge in writing, for water proofing treatment for basement/lower ground floor, underground tank and on roofs. Guarantee in the prescribed proforma attached with tender document shall be given by the specialized firm, for a period of 5 years from the date after the maintenance period prescribed in the contract, which shall be counter signed by the contractor as token of overall responsibility. In addition, 10% (ten percent) of the cost of water proofing items shall be retained as guarantee to watch the performance of the work done If however any defect is noticed during the guarantee period, it shall be rectified by the contractor within seven days of intimation. In case it is not attended to, the same will be got done by another agency at the risk and cost of the contractor. This guarantee deposit can however be released in full if a bank guarantee of equivalent amount for 5 years is produced and deposited with the department by the contractor.

5.1 The contractor shall associate himself with the specialized firm, to be approved by the Engineer-in-charge in writing, for water proofing treatment for basement/lower ground floor, underground tank and on roofs.

5.2 GUARANTEE BOND

Five Years Guarantee bond in prescribed Performa attached at **Annexure-IV** herewith shall be submitted by the contractor which shall also be signed by both the specialized agency and the contractor to meet their liability / liabilities under the guarantee bond. However, the sole responsibility about efficiency of water proofing treatment shall rest with the building contractor.

10 (**Ten) percent of the cost of water proofing work shall be retained as security deposit** and the amount so withheld would be released after 5 years from the date of completion of the entire work under the agreement, if the performance of the work done is found satisfactory. If any defect is noticed during the guarantee period, it shall be rectified by the contractor within seven days of receipt of intimation of defects in the work. If the defects pointed out are not attended to within the specified period, the same will be got done from another agency at the risk and cost of contractor.

However, the security deposit deducted may be released in full against bank guarantee of equivalent amount in favour of Engineer in charge, if so, decided by the Engineer in charge.

The Security deposit against this item of work shall be in addition to the security deposit mentioned elsewhere in contract form.

6. SANITARY INSTALLATIONS, WATER SUPPLY AND DRAINAGE

The work of water supply and sanitary installations shall be got executed by the agency as approved by Engineer-in-Charge.

(i) The entire plumbing drawing and sanitary installation drawing/ details shall be submitted by the contractor and got approved by the Engineer-in-Charge before the execution.

(ii) The entire responsibility for the quality of work will however rest with the building contractor only.

6.1. The work of water supply, internal sanitary installations and drainage etc. shall be carried out as per the bylaws of the Municipal Corporation or any other local body and the contractor shall produce necessary completion certificates from such authority after completion of work.

6.2 All water tanks, taps, sanitary, water supply and drainage pipes fittings and accessories etc. shall conform to the bylaws and specifications of the local Body/Municipal Body/Corporation where CPWD specifications are not available.

6.3 The contractor shall engage licensed plumbers for the work and the materials (fixtures/fittings) tested by the local Municipal Body/Corporation wherever required at his own cost. Nothing extra shall be paid/reimbursed for the same.

6.4 The contractor shall give a performance test of the entire installation(s) as per standing specifications before the work is finally accepted by making his own arrangements for water supply, electricity etc. and nothing extra whatsoever shall be payable for the same.

6.5 The work in general shall be carried out as per CPWD specifications. Rate includes all materials, labour and all the operations mentioned in the respective items unless and otherwise specifically mentioned.

6.6 The contractor shall give a satisfactory performance test of the entire installation(s) before the work is finally accepted and nothing extra shall be payable to the contractor on this account.

6.7 The contractor shall be responsible for all the protection of sanitary, water supply fittings and fixtures against pilferage and breakage during the period of installation until the completion / handing over of the work.

6.8 The contractor shall submit completion plans for water supply internal sanitary installations and building drainage work within thirty days of the date of completion. These plans are to be submitted on drawings prepared preferably through computers (1 original copy + 3 photocopies) on suitable scales to show the general arrangement and desired details.

7. SPECIFICATIONS FOR WATER SUPPLY, SEWERAGE AND DRAINAGE

7.1. GENERAL

The scope of work comprises supply, laying, installation, commissioning and testing of water supply, sewerage and drainage works including sanitary fixtures and fittings. These works shall be executed as per the specifications of items attached and CPWD specifications 2019 Volume I & II with up-to-date correction slips up to the date of tender notice.

All the water supply and sanitary works shall be carried out by the **licensed plumbers** approved by the local authorities and skilled workman experienced in the trade. No work shall be covered without approval of the client.

All the works shall be completely concealed either within shafts or chases or in fills and dropped ceilings, unless specifically shown in drawings or required otherwise.

All the works shall be adequate protected against corrosion, so that the whole work is free from damage throughout.

The contractor shall be responsible for coordinating the work with works of other trades sufficiently ahead of time to avoid unnecessary hold-ups. Hangers, sleeves, recesses etc shall be left in time as the work proceeds whether or not these are shown in drawings.

The contractor shall submit as directed by the Engineer-in-charge, samples manufacture's drawings, equipment characteristics and capacity data etc. of all the equipment, accessories, devices etc. that he proposes to use in the installation to the Engineer-in-charge for approval.

Before the work is handed over, the contractor shall clean all fixtures removing all plaster, stickers, rust stains and other foreign matter, leaving every part in acceptable condition and ready for use to the satisfaction of the Engineer-in-charge.

All sanitary wares and fittings shall conform to IS standards. The contractor shall submit samples of all fittings and fixtures proposed to be used to the Engineer-in-charge for his approval. The approved samples shall remain with the Engineer-in-charge till the completion of the work.

All the workmanship shall confirm to Indian Standard Codes of practice. The fixing and finishing shall be neat true to level and in plumb. Manufacturer's instruction shall be followed closely regarding installation and commissioning.

All fixtures shall be protected throughout the progress of the work from damage. Special care shall be taken to prevent damage and scratching of the fittings. Tool marks on exposed fixtures shall be removed with hot water only at the final completion of work.

All fixtures and accessories shall be fixed in accordance with a set pattern matching the tiles or interior finish as per architectural requirements. Wherever necessary the fittings centered to dimensions and pattern desired.

7.2. The work of water supply and sanitary installations shall be designed by **approved** water supply and sanitary installation design **consultants** and got executed by the agency as approved by Engineer-in-Charge.

(i) The entire **plumbing drawing and sanitary installation drawing/** details shall be submitted by the **contractor** and got approved by the Engineer-in-Charge before the execution.

(ii) The entire responsibility for the quality of work will however rest with the building contractor only.

7.3. The work in general shall be carried out as per CPWD specifications. Rate includes all materials, labour and all the operations mentioned in the respective items unless and otherwise specifically mentioned.

(i) The contractor shall submit completion plans for water supply internal sanitary installations and building drainage work within thirty days of the date of completion. These plans are to be submitted on drawings prepared preferably through computers (1 original copy + 3 photocopies) on suitable scales to show the general arrangement and desired details in case the contractor fails to submit the completion plans as aforesaid security deposit shall not be released.

8 **INSPECTION AND TESTING**

Inspection and testing of water supply installations shall be carried out as per Section 1, Part IX of National Building Code of India 2005 with up-to-date amendments.

Inspection and testing of sewerage and drainage installations shall be carried out as per Section 2, Part IX of National Building Code of India 2005 with up-to-date amendments.

9 **ROAD WORK**

Road work shall conform to CPWD specification 2019, in case the same is not available in CPWD specification or if required as per item, the MORTH specifications for roads and bridges shall be followed.

10. MATERIAL SPECIFICATION

10.1 GENERAL:

This Chapter covers the specifications of only the main and important materials to be used in various items of the work. For the materials whose specifications are not covered in this chapter, the contractor shall follow the relevant specifications in the accepted order of preference given under General conditions of the contract. All materials shall be of best available quality and shall be in conformity with the specifications laid down in the contract document.

10.2 SOURCE OF MATERIALS

It shall be the responsibility of the contractor to procure all the materials required for construction and completion of the contract. The contractor shall indicate in writing the source of materials well in advance to the Engineer-in-Charge, after the award of the work and before commencing the work. If the material from any source is found to be unacceptable at any time, it shall be rejected by the Engineer-in-Charge and the contractor shall forthwith remove the material immediately from the site asdirected by the Engineer-in-Charge.

10.3 QUALITY

All materials used in the works shall be of the best quality of their respective kinds as specified herein, obtained from sources and suppliers approved by the Engineer- in-Charge and shall comply strictly with the tests prescribed hereafter, or where tests are not laid down in the specifications, with the requirements of the latest issues of the relevant Standards/Codes in the accepted order of preference given under special conditions of contract.

i) **Sampling and Testing:** All materials used in the works shall be subjected to inspection and test in addition to test certificates. Samples of all materials proposed to be used in the permanent works shall be submitted to the Engineer- in-Charge at least 30 days in advance for approval before actual materials are brought to the site for construction/execution.

Samples approved by the Engineer-in-Charge after necessary tests are to be kept and labeled in boxes suitable for storage. Materials or workmanship not corresponding in character and quality with approved samples will be rejected by the Engineer-in-Charge.

Samples required for approval and testing must be supplied sufficiently in advance to allow for testing and approval, due allowance being made for the fact that if the first samples are rejected further samples may be required. Delay to the works arising from the late submission of samples will not be acceptable as a reason for delay in completion of the works.

Materials shall be tested before leaving the manufacturer's premises, quarry or resource, wherever possible. Materials shall also be tested on the site and they may be rejected if not found suitable or in accordance with the specification, notwithstanding the results of the tests at the manufacturer's premises or elsewhere or test certificates or any approval given earlier.

The contractor shall supply material required for testing free of charge and make necessary arrangement for transportation of test samples to laboratory. The cost of tests that are not required to be tested in the field lab to be set up by the contractor shall be borne by the contractor.

The cost for all tests conducted in the field lab set up by the contractor or at Manufacturer's premises or test conducted at labs shall be borne by the contractor.

ii) **Dispatch of materials:** Materials shall not be dispatched from the manufacturer's works to the site without written authority from the Engineer-in-Charge.

iii) **Test certificates:** All manufacturer's certificates of test, proof sheets, etc showing that the materials have been tested in accordance with the requirement of this specification and of the appropriate Codes/ Standard are to be supplied free of cost to the Engineer-in-Charge.

iv) **Rejection:** Any materials that have not been found to conform to the specifications will be rejected forthwith and shall be removed from the site by the Contractor at his own cost within one week or as instructed by the Engineer-in-Charge. The Engineer-in-Charge shall have power to cause the Contractors to purchase and use such materials from any particular source, as may in his opinion be necessary for the proper execution of the work.

10.4 **STORAGE OF MATERIALS**

The storage of materials shall be in accordance with IS 4082-1996 “Recommendation on stacking and storage or construction materials on site” and asper IS 7969-1975 “Safety code for handling and storage of building materials”.

The contractor shall construct suitable godowns at the site of work for storing the materials safe against damage due to sun, rain, dampness, fire, theft etc. He shall also employ necessary watch and ward establishment for this purpose and no extraclaim whatsoever shall be entertained on this account.

The materials which are likely to get deteriorated shall be stored under covered sheds with waterproof roofs constructed on consolidated elevated platform with adequate seepage control measures as per direction and satisfaction of Engineer-in-charge. The quoted rates for various items shall be deemed to have included the cost of storage. The storage space shall be open for inspection as andwhen required by the Engineer-in-charge or his authorized representative.

The procedure for storing and stacking the important materials which the contractor must adhere to during the currency of contract work shall be as specified and/or asdirected by the Engineer-in-Charge.

11. CEMENT

11.1 Type of Cement: Cement to be used in the works shall be any of the following as mentioned in nomenclature of items and/ or as approved by Engineer-in-charge.

i) Portland Pozzolana Cement IS: 1489 (Part-I) (latest version).

11.2 Supply of Cement: Cement shall be procured from approved manufacturer of cement having a production capacity of one million tonne per annum or more and holding license to use ISI certification mark for their product. The list of approved manufacturers is mentioned elsewhere in the Tender Document. Supply of cement shall be taken in 50 kg bags bearing manufacturer’s name and ISI marking. Samples of cement arranged by the contractor shall be taken by the Engineer-in- Charge and got tested in accordance with provisions of relevant BIS codes. In case test results indicate that the cement arranged by the contractor or RMC supplier does not conform to the relevant BIS codes, the same shall stand rejected and shall be removed by the contractor or RMC supplier, as the case may be, at his own cost within a week’s time of written order from the Engineer-in-Charge to do so. To the extent possible, complete lot of cement of each type shall be obtained from one constant pre-approved source throughout the contract. Cement of different types shall not be mixed together. Different grade/brands of cement, or the same grade/brand of cement from different sources, shall not be used without express consent and prior approval of the Engineer-in-Charge.

11.3 Batch and MTC: Every batch of cement will be accompanied with a Manufacturer’s Test Certificate and subsequent tests will be conducted as per the QAP.

11.4 **Packing:** Packed cement shall be delivered to the site in original sealed bags which shall be labeled with the weight, name of manufacturer, brand, type, week of manufacture and ISI mark. Cement received in torn bags shall not be used. Contractor may obtain cement in bulk and store it in suitable silos of adequate capacity. Each type of cement shall be stored in a separate silo and it shall be ensured, that cements of different quality are not mixed up.

11.5 **Delivery:** All cement shall be fresh when delivered and at ambient atmospheric temperature. The cement shall be brought at site in bulk supply of approximately 50tonnes or more as decided by the Engineer-in-Charge.

11.6 **Storage:** Cement Godown of adequate capacity conforming to CPWD specifications shall be constructed by the contractor at site of work for which no extra payment shall be made. The contractor shall be responsible for the watch and ward and safety of the cement godown. The contractor shall facilitate the inspection of the cement godown by the Engineer-in-charge or his authorized representative at any time. Cement brought to site shall not be removed from site without written permission of Engineer-in-charge.

Separate godowns shall have to be provided for different grades / types of cement. Each godown shall display the grade / type of cement stored in it prominently. The testing of cement shall be carried out in advance. At least 15 days quantity shall be available at all times during the construction period in the godown.

11.7 **Uniformity:** In fair faced elements, the cement used in the concrete for any complete element shall be from a single consignment. All cement for exposed concrete shall be from the same approved source and uniform in colour.

11.8 **Consumption:** The actual receipt and consumption of cement of each type on the work shall be regulated and proper accounts maintained. The theoretical consumption of cement shall be worked out before the payment of each Running Bills. The cement registers as per direction of Engineer –in –Charge for issue and receipt of cement shall be maintained by the contractor under the control of authorized representative of Engineer-in-charge.

12. COARSE AGGREGATES

Coarse aggregate shall consist of naturally occurring crushed stones, crushed gravel, natural gravel or a suitable combination thereof. Coarse aggregate obtained from crushed or broken stone shall be angular, hard, strong, dense, durable, clean and free from adherent coating, injurious amounts of disintegrated pieces, alkali, vegetable matter, soft, friable, thin plate, elongated or flaky pieces and any deleterious material. The presence of flaky and elongated pieces shall be avoided. Coarse aggregate having positive alkali-silica reaction shall not be used. All coarse aggregates shall conform IS: 383 and tests for conformity shall be carried out as perIS: 2386, Part-I to Part- VIII.

The maximum value for flakiness index shall not exceed 35%. The maximum quantity of deleterious material shall not exceed the limit specified in Table I of IS: 383.

The nominal maximum size of aggregate to be used in R.C.C work and PSC shall be 20mm.

In order to obtain optimum workability, single sized aggregates of nominal size 20mm, 10mm, 4.75mm and 2.36mm will be blended in such a way that the grading curve for all aggregates will be a smooth curve from size 0.15mm to 25mm falling within the established envelop grading curve. Contractor shall establish envelop grading curve for each grade of concrete for given maximum size of aggregates and get it approved by Engineer-in-Charge before finalizing the mix design. However, the grading of aggregate shall be controlled by obtaining the coarse aggregate in different sizes and blending them in correct proportions as and when required.

The contractor shall satisfy himself that the material proposed to be used for construction complies with the requirements of IS: 383 and shall submit the entire information indicated in Appendix 'A' of IS: 383 for approval of the Engineer-in-charge. In case the aggregate tested do not comply with any requirement of the specifications, the source for the same shall be rejected. No further samples from the rejected source shall normally be considered for approval.

The aggregate shall be stored in such a way as to prevent mixing with foreign materials. Different sizes of coarse aggregate shall be stored in paved area in separate stock piles sufficiently distant from each other in order to prevent intermixing of the materials at the edges of the stock piles.

13. FINE AGGREGATE

Fine aggregate shall consist of clean, hard, strong and durable pieces of crushed stone, crushed gravel, or a suitable combination of natural sand, crushed stone or gravel. They shall not contain dust, lumps, soft or flaky, materials, mica or other deleterious materials in such quantities as to reduce the strength and durability of the concrete, or to attack the embedded steel. Motorized sand washing machines should be used to remove impurities from sand. Fine aggregate having positive alkali-silica reaction shall not be used.

All fine aggregates shall conform to IS: 383 and tests for conformity shall be carried out as per IS: 2386, (Parts 1 to VIII). The contractor shall submit the entire information indicated in Appendix A of IS:383 for approval of Engineer-in-charge. In case the aggregate tested do not comply with any requirement of the specifications, the source for the same shall be rejected. No further samples from the rejected source shall normally be considered for approval.

The fine aggregate shall conform to Zone II or Zone III of IS: 383 as per requirement of trial mix design (or any combination of the two as approved by Engineer-in-Charge; the decision of Engineer-in-Charge in this respect shall be final). The quality, tests and acceptance criteria for fine aggregates shall be same as per IS: 383. Regarding storage of fine aggregate, provisions as specified for coarse aggregate shall apply.

14. WATER

Water used for mixing and curing shall be clear and free from injurious impurities like oils, acids, alkalis, salts, sugar, organic material or other substances that may be deleterious to concrete or steel. The maximum permissible limits for physical and chemical impurities shall be as per Quality Control requirements of this tender document.

The PH value of water shall not be less than six. Potable water is generally considered satisfactory for mixing concrete. As a guide, the following concentrationsrepresent the maximum permissible values.

(a) To neutralize 100 ml sample of water, using phenolphthalein as an indicator, it should not require more than 5 ml of 0.02 normal NaOH. The details of test are given in 8.1 of IS: 3025 (Part 22).

(b) To neturalise 100 ml sample of water, using mixed indicator, it should not require more than 25 ml of 0.02 normal H_2S0_4. The details of test shall be as given in Clause 8 of IS: 3025 (Part 23).

(c) Permissible limit for solids shall be as under.

	Tested as per	**Permissible limit (max.)**
Organic	IS:3025(Pt.18)	200mg/lit.
Inorganic	IS:3025(Pt.18)	3000mg/lit.
Sulphates (as SO3)	IS:3025(Pt.24)	400mg/lit.
Chlorides (as Cl)	IS:3025(Pt.32)	• 2000mg/lit. for concrete work not containing embedded steel and • 500mg/lit. for pre stressed/reinforced concrete work.
Suspended matter	IS:3025(Pt.17)	2000mg/lit.

Water found satisfactory for mixing is also suitable for curing concrete; however, water used for curing shall not produce any objectionable stain or unsightly deposit on the concrete surface. The presence of toxic acid or iron compounds is objectionable.

15. ADMIXTURES

The admixtures, if used shall comply with the requirement of IS: 9103- 1999. Admixtures shall not impair durability of concrete nor combine with constituents to form harmful compounds nor risk the corrosion of reinforcement. The contractor shall provide the following details concerning each Admixture proposed to be used, after obtaining the same from the manufacturer, for the prior approval of the Engineer-in-charge along with a copy of the Manufacturer's Test Certificate of not earlier than 6 months.

(a) Normal dosage and detrimental effects, if any, of under dosage and overdosage.

(b) The chemical names of the main ingredients in the admixtures.

(c) The chloride content, if any, expressed as a percentage by the weight of the admixture.

(d) Values of dry material contents, ash content and relative density of the admixture which can be used for Uniformity Tests.

(e) Whether or not the admixture leads to the entrainment of air when used as per the manufacturer's recommended dosage, and if so to what extent.

(f) Where two or more admixtures are proposed to be used in any one mix, confirmation as to their compatibility.

(g) There would be no increase in risk of corrosion of the reinforcement or other embedment as a result of using the admixture.

The suitability of all admixtures shall be verified by trial mixes of concrete with 0.5% & 1% of admixtures to ascertain compatibility between a particular cement and a particular admixture at no additional cost and as per direction of Engineer-in-Charge.

The workability, compressive strength and slump loss of concrete with and without the use of admixture shall be established during the trial mixes before use of admixture. The minimum cement content specified shall not be reduced on account of the use of the Admixtures. Cost of all admixtures shall be borne by the contractorand deemed to have been included in his offer.

Admixture in addition to conformity to the requirement IS: 9103-1999 shall satisfy the following conditions.

(a) "Plasticisers" and "Super-Plasticisers" shall meet the requirements indicated for " Water reducing Admixture".

(b) Except where resistance to freezing and thawing and to disruptive action of deicing salt is necessary, the air content of freshly mixed concrete in accordance with the pressure method given in IS: 1199 shall not be more than 2 per cent higher than that of the corresponding control mix and in any case not more than 3 per cent of the test mix.

(c) The chloride content of the admixture shall not exceed 0.2 per cent when tested in accordance with IS: 6925. In addition, the maximum permissible limit of chloride content of all the constituents in concrete expressed as chloride- ion shall not exceed 0.10 percent for PSC and 0.20 percent for RCC by massof cement used.

(d) Uniformity tests on the admixtures are essential to compare qualitatively the composition of different samples taken from batch to batch or from the same batch at different times.

- **Dry Material Content**: to be within 3 per cent and 5 per cent of liquid and solid admixtures respectively of the value stated by the manufacturer.

- Ash content: to be within 1 per cent of the value stated by the manufacturer.

Relative Density (for liquid admixtures) to be within 2 per cent of the value stated by the manufacturer.

(e) All tests relating to the concrete admixtures shall be conducted periodically at an independent laboratory and compared with the data given by the manufacturer.

16. STEEL REINFORCEMENT:

Type of Steel Reinforcement: The Contractor shall procure only ISI Marked TMT CRS / Low Alloy steel reinforcement bars of various grades of approved brand as per preferred make list from the steel manufacturers or their authorized dealers. The applicability as well as properties of the steel for reinforcement shall commensurate to the provisions of latest IS 1786 and Bar Set I as per OM No. CSQ/SE(TAS)/Steel/2024.262(H) dtd 14.08.2025.

The steel reinforcement shall be brought to the site in bulk supply of 5 MT or more for each dia. as decided by the Engineer-in-Charge. The contractor shall produce original challan voucher for purchase of steel reinforcement from approved manufacturer as a proof of having purchased steel reinforcement from approved manufacturer.

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

Size of bar	***For consignment below 100 tonnes***	***For consignment above100 tonnes***
Under 10 mm dia bars	One sample for each 25 tonnes or part thereof	One sample for each 40 tonnes or part there of
10 mm to 16 mm dia bars	One sample for each 35 tonnes or part there of	One sample for each 45 tonnes or part there of
Over 16 mm dia bars	One sample for each 45 tonnes or part there of	One sample for each 50 tonnes or part there of

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

Storage: The steel reinforcement shall be stored by the contractor at site of work about 30 cm above the ground surface in such a way as to prevent distortion and corrosion and nothing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately and properly to facilitate easy counting and checking. The reinforcement bars shall be given a cement and inhibitor wash as soon as they reach the site and before stacking to prevent scale and rust at no extra cost to the department. The procedure for applying cement and inhibitor wash shall be as follows: -

a. Cleaning of steel reinforcement by wire brush for dust and sand blasting rust.

b. Apply one coat of cement slurry (1 kg cement and 600c.c. inhibitor solution Patent No. 109784/67) by dipping or brushing. Allow it to dry for 24 hours in shade. The

preparation and application of the solution shall be as per Manufacturer's instructions and got approved by the Engineer-in-charge.

c. The second coat of cement slurry (1 kg cement and 600 c.c. inhibitor solution shall be applied on reinforcement bar after cutting and bending but before placing in position.

Any reinforcement which is certified as corroded by the Engineer-in-charge shall be removed from the site.

Bending and Fixing: All reinforcement work shall be executed in conformity with the drawings supplied and instructions given by the Engineer-in-Charge and shall generally be carried out in accordance with the relevant Indian Standard Specifications IS: 2502- Bending and Fixing of Bars for Concrete Reinforcement. Every bar shall be inspected before assembling on the works and any defective, brittle, excessively rusted or burnt bars or bars with crack ends shall be removed. All bars will be carefully and accurately bent by approved means in accordance with IS: 2502, and relevant drawings. It shall be ensured that depth of crank is correct as per the bar cutting and bending schedule. Bent bars are not to be straightened for use in any manner that will injure the material.

Consumption: Reinforcement shall be measured in length of different diameters as actually (not more than as specified in the drawings or authorized by engineer-in-charge) used in the work nearest to a centimeter. The actual issue and consumption of steel on work shall be regulated and proper account shall be maintained as provided in GCC 2023 and CPWD Works Manual. The theoretical consumption of steel shall be worked out as per procedure prescribed in NIT and GCC 2023 of the contract and shall be governed by conditions laid therein. No payment for excess consumption of steel shall be allowed. However, for consumption lesser beyond the permissible theoretical variation recovery shall be made in accordance with conditions of contract without prejudice to action for acceptance of work/item at reduced rate or rejection as the case may be.

The theoretical consumption of steel shall be worked out for measurement of payment. Steel brought to site and steel remaining unused shall not be removed from site without the written permission of the Engineer-in-Charge.

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

(a) If the Derived Weight as in sub-para (i) above is lesser than the standard weight as in the table above then the derived actual weight shall be taken for payment.

(b) If the derived actual weight in sub-para (i) above is found more than the standard weight, then the standard weight as given in table above shall be taken for payment. In such case nothing extra shall be paid for the difference between the derived actual weight and the standard weight.

The steel brought to site and the steel remaining unused shall not be removed from site without the written permission of the Engineer-in-charge.

Bar Bending Schedule: Prior to starting bar bending work, the Contractor shall prepare bar bending schedule from the structural drawings supplied to him and get the same approved from the Engineer-in-Charge in conformity with IS: 2502. Any discrepancies and inaccuracies found by the Contractor in the drawings shall be immediately reported to the Engineer-in-Charge whose interpretation and decision there to, shall be accepted. No work shall be commenced without the Engineer-in-Charge's approval of the bar bending schedule.

Lapping: As far as possible, bars of the maximum length available shall be used. Laps shown on drawings or otherwise specified by the Engineer-in-Charge will be based on the use by the Contractor of bars of maximum length. Payment for reinforcement shall be made only for reinforcement shown in such drawings and approved bar bending schedule. The laps, chairs and spacers shall not be measured for payment separately. The contractor shall quote his rate considering the component of wastage, transportation, laps, chairs and spacers etc. Use of couplers/grips may be permitted without any extra cost to PWD.

Welding: Welding of reinforcement shall generally be not accepted. Welding of reinforcing bars (including tack welding for whatever reason), other than that specified elsewhere to make provision for earthing, shall only be carried out when approved by the Engineer in Charge. Wherever specified, all lap and butt welding of bars shall be carried in accordance with IS: 2571 using the appropriate welding materials and methods and carried out by qualified and experienced welders. The extreme non twisted end portion shall be cut off before welding. Electrodes with rutile coating should be used. Bars shall be free from rust at the joints to be welded. Slag produced in welding after alternative run should be chipped and removed by brush. Electrode should not be lighted by touching the hot bar. The welding procedure shall be approved by the Engineer-in-Charge and tests shall be made to prove the soundness of the welded connection. Some pier bars will be required to be welded with cross bars in diaphragm zone. Cost of the same is deemed to be included in the cost of reinforcement.

Placement and Positioning: All reinforcement shall be placed and maintained in the positions shown on the drawings. The Contractor shall provide approved types of supports for maintaining the bars in position and ensuring required spacing and correct cover of concrete to the reinforcement as specified on the drawings. Cover blocks of required shape and size, M.S. Chairs and spacer bars shall be used to ensure accurate positioning of reinforcement. Cover blocks shall be cast well in advance and shall consist of approved proprietary pre-packaged free flowing mortars (Conbextra HF of Fosroc or equivalent). They shall be circular in shape for side cover and square for bottom cover. Alternatively, plastic cover blocks conforming to approved international codes of practice shall be used. No extra payment shall be made for cover blocks and spacers.18 SWG mild steel annealed wire shall be used for binding reinforcement. The cost of cover block and 18 SWG mild steel annealed wire shall be deemed to have been included in the rates.

Projecting Reinforcement: Reinforcement left projecting from newly placed concrete shall be supported in such a way that there is no sag or risk of damage to the newly placed concrete. The projecting bars, which are likely to be exposed for a long time shall be protected by a coat of cement and inhibitor wash. These shall be thoroughly cleaned and wire brushed before depositing fresh concrete around it. No reinforcement bar shall remain exposed or projecting out of the finished concrete surface. These shall be removed or treated in a manner as directed by Engineer-in-Charge. The unwanted projected reinforcement bars shall be cut below the finished surface and the cut end painted with cement slurry. Thereafter the surface shall be repaired to match the colour, texture or pattern of adjoining concrete to the satisfaction of Engineer-in-Charge.

Mechanical couplers and anchors: Mechanical couplers or anchors will have to be used where called for in the design. Satisfactory test certificates for soundness of material, bearing capacity and elongation for both static load and fatigue stress shall be provided. For requirements regarding fatigue strength of couplers DS 411 applies. Full traceability of couplers and anchors for all stages of the production process is required. Mechanical couplers will be required for extension of some pier bars in superstructure. No separate payment shall be made for mechanical couplers/ anchors / grips as the same is deemed to be included in the quoted rate of reinforcement.

17. MISCELLANEOUS WORKS:

EPOXY

a) **Type of Epoxy Bonding Agent:** Epoxy bonding agents for match cast joints of segments shall be thermosetting 100 percent solid compositions that do not contain solvent or any non-reactive organic ingredient except for pigments required for coloring. Epoxy bonding agents shall be of two components, resin and hardener. The two components shall be distinctly pigmented, so that mixing produces a third color similar to the concrete in the segments to be joined.

Epoxy bonding agents shall be insensitive to damp conditions during application and after curing, shall exhibit high bonding strength to cured concrete, good water resistivity, low creep characteristics and tensile strength greater than the concrete. In addition, the epoxy bonding agents shall function as a lubricant during the joining of the match cast segments, as a filler to accurately match the surface of the segments being joined and as a durable water tight bond at the joint.

b) **Package of Material:** Epoxy bonding agent shall be packaged in proportioned, labelled, ready-to-use containers. The quantity of resins and hardeners in respective containers should be exactly required for application in one segment so that the balance material is not wasted. Epoxy bonding agents shall be formulated to provide application temperature ranges that will permit erection of match cast segments at substrate temperatures from 5^{o}C to 45^{o}C. If two surfaces to be bonded have different substrate temperatures, the adhesive applicable at the lower temperature shall be used.

18. BITUMEN

Bitumen of grade as specified conforming to relevant BIS code shall be used for the work. The Contractor shall procure bitumen of required grade from the manufacturers of repute as mentioned in tender document or any other manufacturer holding license to use ISI certification for their product as approved by the Engineer-in-Charge.

Sampling and Testing – The Contractor shall have to obtain and furnish test certificates issued by the manufacturer to the Engineer-in-Charge in respect of bitumen procured by him. The samples shall be collected by the Engineer-in- charge from every lot and got tested as per provisions of relevant IS codes/MORTH/CPWD Specifications from the laboratories approved by him.

In case, the test result indicates that the bitumen procured by the Contractor does not conform to the relevant BIS codes/ Specifications, the same lot shall stand rejected and shall be removed from the site of work by the Contractor at his own cost within a week's time of written order from Engineer-in-Charge to do so.
The bitumen content in bituminous mix shall be checked by conducting the bitumen extraction test conforming to IRC: SP 11- 1984 at regular interval during the progress of work and the actual consumption of bitumen shall be worked out based on such test results. The theoretical consumption shall be worked out based on the job mix formula and the actual consumption based on extraction test as well as MAS account. If actual consumption is found less than theoretical one, the work found shall be considered as sub-standard work and hence shall be liable for rejection. However, nothing extra shall be paid if actual consumption so worked out is higher than theoretical consumption. This is without prejudice to action under other relevant clause of the agreement.

Annexure- IV

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

The Agreement made this ..... day of ..... two thousand and..... between ..... son of ..... of ..... (hereinafter called the Guarantor of the one part) and the PRESIDENT OF INDIA (hereinafter called Government of the other part).

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

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

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

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

(a) Misuse of roof shall mean any operation which will damage proofing treatment, like chopping of firewood and things of the same nature which might cause damage to the roof;

(b) Alteration shall mean construction of an additional storey or a part of the roof or construction adjoining to existing roof whereby proofing treatment is removed in parts

(c) The decision of the Engineer-in-Charge with regard to cause of leakage shall be final.

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

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

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

Signed, sealed and delivered by OBLIGOR in the presence of-
1.

2.

Signed for and on behalf of THE PRESIDENT OF INDIA by ..... in the presence of.

LIST OF PREFERRED MAKES OF MATERIALS (CIVIL)

Name of Work: - Construction of Type "A" School Buildings Staff Quarters for Kendriya Vidyalaya at Reckongpeo, Distt. Kinnour (HP). SH:- Balance Development Works.

Acceptable makes of materials to be used in the work are enclosed. In case of non availability of the same makes, the Engineer-in charge may allow use of alternative makes. Only BIS marked materials shall be used in the work. Non-BIS marked materials may be permitted by the Engineer-in-charge only when BIS marked materials are not manufactured.

Sr. No.	Material	List of Preferred Makes
1	(i) Portland Pozzolana Cement / Ordinary Portland Cement	ACC, Ultratech, Ambuja Cement, J.K. Cement, Century Cement, Shree Cement, Jaypee Cement, Vikram Cement.
	(ii) White Cement	Birla White, J.K. White, Ultratech
2	Reinforcement Steel TMT bars Fe-500D	SAIL, Tata, RINL, JSW, JSPL
3	Water Proofing Compounds, Admixtures, Plasticizer, Super Plasticizer, Curing Compounds.	Fosroc, Pidilite Industries, CICO, Sika, BASF, Ardex Endura (Bal Endura), Saint Gobain-Weber, Berger Paint, KRYTON, Ferrous Crete, Asian Paints, Asian Paints Smartcare, Markchem, Bulwark Conchem, UltraTech
4	Integral Water Proofing compound with cement (For Plaster & Mortar)	Fosroc: Conplast 421, Dr. Fixit, Sika: Sikacin Asian Paints: Smart Care Vitalia& equivalent product of BASF, CICO, Ardex Endura, Saint Gobain-Weber, Berger Paint, KRYTON, Ferrous Crete, MYK Arment, UltraTech
5	Water Proofing for bathroom / toilet / balcony & other wet areas	Fosroc: Brush Bond, Dr. Fixit: Pidifine 2K, Sika: Nito Bond, Asian Paints: Damp Block 2 K & equivalent product of BASF, CICO, Ardex Endura, Saint Gobain-Weber, Berger Paint, KRYTON, Ferrous Crete F, UltraTech
6	Crystalline water proofing compound	Fosroc: Bushbond TGP, Fosroc Crystalline, Dr. Fixit: Dr. Fixit Crystalline Sika: Sika 101 h, Sika Crystalline, Asian Paints: Smart care & equivalent product of BASF, CICO, Ardex Endura, STP Ltd., Pentron, Saint Gobain- Weber, Berger Paint, KRYTON, MYK Arment, Bulwark Conchem
7	Grouts, Adhesive	MYK Latecrete (335), kerokoal, STP Ltd., BASF, Adrex Endura (White star), Ferrous Crete (Ferro-1122), Saint Gobain-Weber, Berger Paint, Asian Paints, Markchem, Reyno/Basex, UltraTech

8	Structural Steel	Tata, Jindal (Hisar), Prakash, Surya, RINL, JSW Steel Ltd., SAIL, APL-Apollo
9	Polycarbonate Sheet	GE Plastic, LEXAN& MG Polyplast, Ultralite
10	Hollow Steel Section	Jindal industries (Hisar), Tata Steel, SAIL, APL-Apollo, RINL, JSW Steel
11	Profile steel sheet (Precoated)	Ezydeck of TATA, Lloyd Superdeck, JSW, Jindal
12	Particle Board	Action TESA, Greenlam, Merino & Archid Ply
13	Laminated Particle Board / Laminates	Action TESA, Greenlam, Century Ply, Merino & ArchidPly, Sunmica, VIRGO
14	Flush Door shutters	Duro, Century, Green Ply, archid ply, JAYNA (Jain Wood Industries), Orion Doors (Modern Wudtech Industries), Jain Doors Pvt. Ltd., A-1 Teak Products Pvt. Ltd.
15	Fire Rated Doors	Shakti Hormann, Navair, ASES, Bhawani Fire, Jain Doors Pvt. Ltd., SUPREME METWOOD, Pacific, Indian Fire.
16	False Ceiling System	Armstrong, USG Boral, Saint Gobain, Diamond Ceiling, Anakon, Gyptech, RK Ceilings, Dexune, BOLLARD, MCRA Aerolite
17	Plywood / Veneer	Green ply, Century, Merino, Duro, Jayna
18	Melamine Polish	Asian Paints Melamine Gold, Wudfine of Pidilite, Timbertone of ICI Dulux.
19	Floor Spring & Door Closure	Godrej, Dorma, Dorset &Kich
20	Aluminium Section	Hindalco, Jindal, Indian Aluminium Co.
21	Anodised Aluminium Hardware (Heavy Duty)	Kinlong, Alualpha, Classic, Ebco
22	Clear/ Float/Frosted/Toughen Glass/Refractive/Coated Glass	Saint Gobain, Modiguard, Gold Plus, Guardian SunGuard
23	Aluminium Door & Window System	Eternia-Hindalco, Reynaers, Technal, Lumani
24	Stainless Steel Railing, Accessories etc.	JINDAL, Dorma, Ozone, Kich, GEZE, Godrej, Hardwyn.
25	S.S. fittings for Doors & Windows	Dorma, Kich, GEZE, Godrej, Ozone, Becker Fire Solutions, Hafele, Hettich
26	Silicon based water repellent / Weather sealant	G.E. Plastics, Dow Corning, Wacker, BASF, Pidilite (Dr. Fixit/Roff), Don Building Chemicals(I) Pvt. Ltd., Reyno
27	Poly-Sulphide Sealant	Fosroc, Pidilite (Dr.Fixit/Roff), Sika, BASF, Don Building Chemicals(I) Pvt. Ltd.,

28	Mosaic Tiles / Chequerred Tiles	NITCO, Dalal Tiles Pvt. Ltd., Swastik Tiles-Alwar, NTC tiles, Pooja Concrete Fabricator.
29	Glazed Ceramic Tiles	Somany, Kajaria, RAK, Nitco, Johnson, OrientBell, Oasis, Varmora, Sunhearrt Ceramik.
30	Vitrified Tiles (Antiskid/Matt/Glazed)	Somany, Kajaria, RAK, Orient Bell, Oasis, Varmora, Sunhearrt Ceramik.
31	Terracotta tiles	Savarock, Hunter Douglas NBK, Moeding
32	Paver Block &Kerb Stone	Dalal Tiles, KK, Pooja Concrete Fabricator, A-1 tiles, NTC, Swastik Tiles-Alwar, Bharat Tiles, Primecrete.
33	Dash / Anchoring Fasteners	HILTI, Fischer, Bosch, Wuerth.
34	Cement Based Wall putty	Birla wall care, JK White, Berger, Asian Paints, J.B., Basex.
35	Oil Bound Washable Distemper / Dry Distemper	Asian Paints, Nerolac, Berger, Dulux ICI
36	Ist Quality Acrylic Distemper (washable / Ready Mix / Low VOC)	Asian Paints, Berger or equivalent paints of Nerolac or ICI Dulux, British Paints.
37	Plastic Emulsion Paint	Asian Paints, Nerolac, Berger: ICI-Dulux: British Paints.
38	Acrylic Emulsion Paints	Asian Paints, Nerolac, Berger, ICI Dulux: British Paints.
39	Textured Exterior Paint	Asian paints, Nerolac, Berger Paints, Ultratech Paints & Luxture, UTTPL.
40	Acrylic Smooth Exterior Paints	Asian Paints, Nerolac, Berger, ICI-Dulux, British Paints
41	Premium Acrylic Smooth Exterior Paint with silicon additive	Asian Paints, Nerolac, Berger, ICI-Dulux, British Paints
42	Synthetic Enamel Paint	Asian, Berger, ICI-Dulux, British Paints.
43	Cement Primer	Nerolac, Berger, Asian, ICI Dulux, JK primax
44	Steel Primer (Red Oxide	Asian Paints, Nerolac, Berger, ICI-Dulux
45	Wood Primer	Asian Paints (Wood Primer – White / Pink), Berger, ICI, Nerolac.
46	Epoxy Paint	Asian, Nerolac, Berger, ICI-Dulux, Kansai Akzo Nobel, Saint Gobain-Weber, Asian Paints Smartcare
47	Fire Paint	Asian Paints, Akzo Nobel Coatings India Ltd., PROMAT, Jotun, Berger Paint
48	G.I. / M.S. Pipe	Tata, Jindal (Hisar), Prakash, Surya
49	G.I. Fittings	Unik, AVR, Zoloto
50	HDPE Pipes	Reliance, Jain Pipes, ORIPLAST, Supreme

51	DI Pipes	Electrosteel, Jindal, Tata Ductura, Kapilansh, Kesoram.
52	DI Fittings	Electrosteel, Jindal, Tata Ductura, Kapilangle, Kesoram.
53	UPVC pipe and Fittings	Astral, Supreme, Skipper, Prayag Polymers Pvt. Ltd., AKG, SENTINI, HB
54	SWR pipe and Fittings	SKIPPER, AKG, SENTINI, HB
55	Centrifugally Cast (Spun) Iron Pipes & Fittings	NECO, Bengal Iron Corporation (BIC), RPMF, SKF
56	Hubless Centrifugally Cast (spun) Iron Pipes & Fittings	RPMF, NECO, Bengal Iron Corporation (BIC), SKF
57	AC PIPES (Mazza)	A Infrastructure Ltd., Apurva Vinimay Pvt. Ltd., Kanoria Sugar Gen. Mfg. Co. Ltd.
58	C.I. Manhole covers, frames & GI Gratings	NECO, BIC, KK, NTC, RPMF, Venus
59	SFRC Manhole covers & gratings	KK, Jain, Pargati
60	CP Brass Fittings (Superior Range)	Jaquar, Grohe, ESS ESS, Kohler, Duravit, Roca
61	P.T.M.T. Bath Fittings	Prayag, Shakti, Jainco, Prima
62	Wood Polymer Composite (WPC) Door & Window Frames	BVW, Rajshri, Alstone WPC, SV Woods
63	Sanitary ware, Fittings & accessories	Jaquar Solo, Grohe Eurocosmo, Kohler Veil, Somany
64	Mirror Glass	Atul, Modi Guard, Golden Fish, Gold Plus, Shakti
65	CPVC Pipe & fitting	Astral, Supreme, SKIPPER, PRAYAG POLYMERS PVT. LTD, Jain Irrigation System Ltd/AKG/SENTINI/ HB
66	Stainless Steel Pipes & Fittings	Jindal Stainless Steel, Viega, Rampart India Pvt. Ltd., J-Press
67	Stainless Steel Sink	Nirali, Jyna, Prayag Polymers Pvt. Ltd, Plato, Prima, Silver Shine, Cera, Jainko, Shakti, Kingston, Plato
68	RCC Pipes	Lakshmi, Sood & Sood, Jain Pipe Co. (Newai), Mahaveer Enterprises (Newai)
69	Extruded Polystrene Insulation Board	Dowcorning, Supreme, Texas, Analco
70	Heat Resistant Tiles	Swastik Tiles-Alwar, Thermatek, Dalal Tiles, NTC
71	Light Weight Gypsum Plaster	Ferrous Crete (Ferro-500), Gyproc Saint Gobain (Elite 100), Kerakoll, USG Boral, Ultratech
72	Polymer Modified Self Curing Plaster	MYK Laticrete, Ferrous Crete, Ardex Endura

73	Floor hardener	Ironite, Ferrok, Hardonate, Saint Gobain-Weber,
74	Modular Expansion Joint	Herculus, Sanfield India Ltd. Vexcolt
75	Glass Wool	Dow Corning, U.P. Twiga, Isover
76	UPVC Doors, Windows & Ventilators (PROFILE makers & their authorized Fabricators only)	Fenesta, Veka, Encraft, Advika Fenster, Prominance, Saint –Gobain, Aluplast
77	Hardware for uPVC Windows	Rotto, Dorset, Kinlong, Fenesta, Becker Fire Solutions, Winda, McCoy 8M
78	AAC Blocks	Ultratech, BILTECH, Eco Green, EMMKAY GREEN, R.S Green
79	AAC Block Adhesive	UltraTech, Ardex Endura, Ferrous Crete, Saint Gobain-Weber,
80	PVC Rain water pipe & fittings As per IS :13592	Finolex, Supreme, Plasto, Jain Pipe
81	PVC Shutter	Rajshri, Sintex, M/s Jain Wood Industries
82	PVC Water Storage Tank	Sintex, Frontline Super, SPL, Orient
83	Fire door / Non-Fire door Hardware	Yale, Assa Abloy, Ozone, Dorma, Becker Fire Solution, Shakti Hormann, SUPREME METWOOD, Pacific, Indian Fire.
84	Aluminium Formwork (Shuttering)	MFS Formwork System, Unimex International, Winntus Alminium Form work
85	Wall panels,Soundabsorbing ceiling & tiles, Acoustic Systems & Puff Panels	Armstrong, Himalyan Acoustics, Synergy, Anakon, Gyptech, BOLLARD, MCRA Pacific
86	Block Board	Merino, Century, Green ply
87	FRP Doors/ Panelled & Wiremesh doors	Jayna, Jain Doors Pvt. Ltd., Ashish Industries
88	Modular Furniture/Steel Furniture/ Furniture/Partition System	Godrej, Durian, Delite, Featherlite
89	Aluminium Composite Panel/ Aluminium High Pressure Composite Panel	Virgo, Eurobound, Alucobond, Aludecor, Reynoarch of Alstone, Alutuff, Viva
90	Aluminium Honeycomb Panels	Reynoarch Honeycomb, Alucobond, Aludecor, Alutuff, Viva
91	Zinc Composite Panels	Reynoarch Zinc Panel, Alucobond, Aludecor, Viva
92	Solid Aluminium Sheets	Virgo, Eurobound, Alucobond, Aludecor, Reynoarch of Alstone, Alutuff, Viva
93	PU Water proofing	Saint Gobain Weber, KRYTON, MYK Arment
94	PU & Epoxy Flooring	Saint Gobain Weber, KRYTON, Asian Paints Smartcare, MYK ArmentFE
95	High Pressure Laminate	Virgo, Merino, Fundermax, Versito,

		Greenlam
96	PVC-U pipes & Fittings	Supreme, Astral, Skipper
97	M.S. tubular windows Press steel door frames	Jangid Engineering, AGFUV, SEN HARVIC, NAVAIR Delhi, SUKRITI Delhi, Chandni industries
98	Metal Glazed Fire Doors & Hardware	Shakti Hormann, Navair, Bhawani Fire, JC Fire, SUPREME METWOOD, Pacific, Indian
99	Lead Line Doors & Hardware	Shakti Hormann, Navair, Metaflex
100	Hollow Metal Doors & Hardware	Shakti Hormann, Navair, Bhawani Fire
101	Pressed Steel Door/window/ventilator Frames Manufacturers	Krishna Steel Fabricator Sirsa, Laxmi Steel Works Bahadurgarh, Ashish Industries Ghaziabad, Ashwani & Sons, Shri Ganpati Doors, PSI, Supreme Metwood
102	Precoated/Pre-painted Galvanized RollFormed Steel Doors, Windows and Ventilators Frames	NCL Buildtech Limited, Madhu Industries Sanharbic, Elixir Met Form
103	Polymer modified ready mix plaster	Saint Gobain, Ultratech, Ferrous Crete, USG Boral, GYPROC, ACC, MARKCHEM, UltraTech
104	External Thermal Insulation & composite system	Berger Paints, MBCC Group, Wacker chemie, Asian Paints
105	Rebar Coupler	RM Engineer, Dextra, Moment, Sanfield
106	Factory Made Modular Kitchen and Wardrobes	Godrej/ Brown Crust/ Sleek (Asian Paints)
107	SMC Panel Tank	Sovisy/Sintex/Amitex
108	Plaster of paris	J.B./Shakrni/JK Plus
109	Precast Boundary Wall	Pooja Concrete Fabricator/Paras Steel Industries/Trilok Precast Pvt. Ltd.
110	CURING COMPOUND	FOSROC, BASF, STP, SIKA
111	MICRO CONCRETE	FOSROC, BOND, BUILTECH, STP
112	Cobble Stone	Unistone, NTC, Primecrete
113	Self Drilling Anchors (SDA)	Srons, Techanchor, Argentium or equivalent
114	Geocomposite Geomat	Terrashield, Maccaferri, Techfab, HMBS Textiles or equivalent

Note: - SE, CPWD, Shimla reserves the right to add or delete any materials and Brands in the list of preferred materials/brands on the recommendations of Engineer-in-charge.

PART- C

(SCHEDULE OF QUANTITY)

SCHEDULE OF QUANTITES (Civil)

Name of work:- Construction of Type "A" School Buildings Staff Quarters for Kendriya Vidyalaya at Reckongpeo, Distt. Kinnour (HP). SH:- Balance Development Works.

Sr. No.	Description of item	Qty.	Unit	Rate	Estimated Cost after using Correction factor on DSR 2023 on account of GST @ 0.973	Rate i/c Cost index @ 42.99% on DSR items except M/R items	Amount	Type of Item (DSR-2023/ Market Rate (MR))
1	**EARTH WORK**							
1.1	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth for all lead and all lifts involved, as directed by Engineer-in-charge. **Note:- If any hard rock is encountered and excavated, the same shall be deposited to the Engineer-in-Charge and stacked at designated location approved by the Engineer-in-charge. Nothing extra shall be paid on this account.**							
1.1.1	All kinds of soil including ordinary and hard rock	4740.00	cum	177.50	172.71	246.96	11,70,590.00	2.6.1
1.2	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, for all lead and all lifts involved.	950.00	cum	196.00	190.71	272.70	2,59,065.00	2.25
1.3	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, for all lift, including getting out the excavated soil and disposal of surplus excavated soil as directed, for all leads	48.00	cum	260.30	253.27	362.15	17,383.00	2.8.1
			Sub Head Total			**1447038.00**		
2	**CONCRETE WORK**							
2.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :							
2.1.1	1:2:4 (1 Cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 40 mm nominal size derived from natural sources)	45.00	cum	7780.30	7570.23	10824.67	4,87,110.00	4.1.4
2.1.2	1:5:10 (1 cement : 5 coarse sand(zone-III) : 10 graded stone aggregate 40 mm nominal size)	174.00	cum	6518.60	6342.60	9069.28	15,78,055.00	4.1.10
2.2	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets, sunken floor etc., up to floor five level, excluding the cost of centering, shuttering and finishing :							
2.2.1	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	6.00	cum	9895.20	9628.03	13767.12	82,603.00	4.2.3
			Sub Head Total			**2147768.00**		
3	**REINFORCED CEMENT CONCRETE**							
3.1	Centering and shuttering including strutting, propping etc. and removal of form for:							
3.1.1	Foundations, footings, bases of columns, etc. for mass concrete	298.00	sqm	392.15	381.56	545.59	1,62,586.00	5.9.1
3.1.2	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	428.00	sqm	842.50	819.75	1172.16	5,01,684.00	5.9.2
3.1.3	Suspended floors, roofs, landings, balconies and access platform	187.00	sqm	927.25	902.21	1290.07	2,41,243.00	5.9.3
3.1.4	Lintels, beams, plinth beams, girders, bressumers and cantilevers	116.00	sqm	736.40	716.52	1024.55	1,18,848.00	5.9.5
3.1.5	Columns, Pillars, Piers, Abutments, Posts and Struts	133.00	sqm	961.30	935.34	1337.44	1,77,880.00	5.9.6
3.1.6	Edges of slabs and breaks in floors and walls							
3.1.6.1	Under 20 cm wide	52.00	metre	208.55	202.92	290.16	15,088.00	5.9.16.1
3.2	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.							
3.2.1	Thermo-Mechanically Treated bars of grade Fe-500D or more as per latest IS 1786)	4550.00	kg	107.85	104.94	150.05	6,82,728.00	5.22.6

Correction-Nil
Deletion-Nil
Insertion-Nil
Overwriting-Nil

AE(P) (C)

3.3	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.							
3.3.1	Thermo-Mechanically Treated bars of grade Fe-500D or more as per latest IS 1786)	12160.00	kg	107.85	104.94	150.05	18,24,608.00	5.22A.6
3.4	Providing and laying in position specified grade of reinforced cement concrete, including all leads & all lifts, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :							
3.4.1	1:1.5:3 (1 cement : 1.5 coarse sand (zone-lll) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	35.00	cum	9045.75	8801.51	12585.28	4,40,485.00	5.1.2
3.4.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, beams, slabs, steps, staircases, pillars, piers, abutments, posts and struts etc. above plinth level up to floor five level, including all leads & all lifts, excluding cost of centering, shuttering, finishing and reinforcement :							
3.4.2.1	1:1.5:3 (1 cement : 1.5 coarse sand(zone-lll) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	76.00	cum	10852.95	10559.92	15099.63	11,47,572.00	5.2.2
				Sub Head Total		**5312722.00**		
4	**BRICK WORK**							
4.1	Providing and fixing upto floor V level precast cement concrete solid block, including hoisting and setting in position block masonary with cement mortar 1:3 (1 cement : coarse sand), cost of required centering, shuttering complete:							
4.1.1	1:3:6 (1 Cement: 3 coarse sand (zone-lll) : 6 graded stone aggregate 20 mm nominal size).	24.00	cum	10360.35	------	10360.35	2,48,648.00	MR
4.2	Providing and laying in position Plum Cement Concrete in Retaining Walls having 60% Random Rubble Stone and 40% Cement Concrete of grade 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size), including Steel centering and shuttering for uniformly smooth and even finish at all levels and all heights including placing PVC pipe weep holes of dia. 110mm @ 2.00 Mtr. C/C horizontally and vertically @ 1.00 Mtr. C/C placed staggered all complete as per direction of Engineer-in-charge (Cost of PVC pipe shall be paid separately).	1530.00	cum	7266.60	-------	7266.60	1,11,17,898.00	MR
4.3	Providing and fixing unplasticized rigid PVC pipe conforming to IS:13592 Type A, 110mm dia in brick masonry/plain/reinforced concrete/wing/ return/ retaining wall for weep holes, extending through full width of the structure with slope of 1V:20H, sloping away from retaining side, etc. complete, as per directions of Engineer-in-charge.	250.00	mtr	217.70	-----	217.70	54,425.00	MR
4.4	Providing and filling hard and durable stone boulder of 15 cm and above size at the back of the Retaining Walls as filter media for drainage for all heights and levels of Retaining wall all completed as per the direction of the Engineer-in-charge. (Quantity of stone shall be paid after deduction of @20% voids). **(The stone used shall be hard and durable).**	173.00	cum	1751.75	-----	1751.75	3,03,053.00	MR
4.5	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:							
4.5.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	54.00	cum	7370.65	7171.64	10254.73	5,53,755.00	6.1.1
				Sub Head Total		**12277779.00**		
5	**Wood and P.V.C. work**							
5.1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid separately)							
5.1.1	second class deodar wood	0.27	cum	123095.00	--------	123095.00	33,236.00	MR
5.2	Providing and fixing glazed shutters for doors, windows and clerestory windows using min. 6 mm thick toughened glass panes fixing with ISI marked 316 grade S.S. butt hinges bright finished of required size with necessary screws.							
5.2.1	Second class deodar wood							
5.2.1.1	30 mm thick	9.00	sqm	3119.10	--------	3119.10	28,072.00	MR

5.3	Providing and fixing wire gauge shutters using stainless steel wire gauge (316 grade) aperture 1.40mm & 0.50mm dia wire for doors, windows and clerestory windows with 316 grade S.S. hinges and necessary stainless steel screws :							
5.3.1	30 mm thick shutters-with ISI marked stainless steel (316 grade) butt hinges of required size.							
5.3.1.1	Second class deodar wood	9.00	sqm	4072.20	--------	4072.20	36,650.00	MR
5.4	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.							
5.4.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	4.00	sqm	3473.85	3380.06	4833.15	19,333.00	9.20.1
5.5	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.							
5.5.1	Fixed to steel windows by welding	9.00	kg	219.10	213.18	304.83	2,743.00	9.48.1
5.6	Providing and fixing Stainless Steel (316 grade) Sliding Door Bolts of ISI marked with SS nuts and SS screws etc of Godrej, Kich, Hafele, Hettich, Dorma or equivalent make all complete :							
5.6.1	300x16 mm	2.00	each	441.40	--------	441.40	883.00	M/R
5.7	Providing and fixing Stainless Steel (316 grade) Tower Bolt of ISI marked with SS nuts and SS screws etc of Godrej, Kich, Hafele, Hettich, Dorma or equivalent make all complete							
5.7.1	200x10 mm	4.00	each	133.26	--------	133.26	533.00	M/R
5.7.2	150x10 mm	32.00	each	119.42	--------	119.42	3,822.00	M/R
5.8	Providing and fixing stainless steel (316 grade) 'D' handle with necessary stainless steel nuts and screws etc. of Godrej, Kich, Hafele, Hettich, Dorma or equivalent make all complete as per direction of Engineer- in- charge.							
5.8.1	125 mm	4.00	each	125.80	--------	125.80	503.00	M/R
5.8.2	100 mm	16.00	each	118.76	--------	118.76	1,900.00	M/R
5.9	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISi, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete	2.00	each	983.15	956.60	1367.84	2,736.00	9.84
5.10	Providing and fixing aluminium hanging floor door stopper, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade, with necessary screws etc. complete.							
5.10.1	Twin rubber stopper	2.00	each	72.35	70.40	100.66	201.00	9.101.2
				Sub Head Total		**130612.00**		
6	**STEEL WORK**							
6.1	Structural steel work in single section, fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	913.00	kg	117.35	114.18	163.27	1,49,066.00	10.1
6.2	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete							
6.2.1	Hot finished welded type tubes	2414.00	kg	194.40	189.15	270.47	6,52,915.00	10.16.1
6.3	Welding by gas or electric plant including transportation of plant at site etc. complete.	265.00	cm	3.70	3.60	5.15	1,365.00	10.22
6.4	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.							
6.4.1	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	7312.00	kg	172.60	167.94	240.14	17,55,904.00	10.25.2

6.5	Providing and fixing carbon steel galvanised (minimum coating 5 micron) dash fastener of 10 mm dia double threaded 6.8 grade (yield strength 480 N/mm2), counter sunk head, comprising of 10 m dia polyamide PA 6 grade sleeve, including drilling of hole in frame , concrete/ masonry, etc. as per direction of Engineer-in-charge							
6.5.1	10 x 120 mm	320.00	each	170.95	166.33	237.84	76,109.00	10.27.3
			Sub Head Total			**2635359.00**		
7	**Flooring**							
7.1	Chequerred precast cement concrete tiles 22 mm thick in footpath & courtyard, jointed with neat cement slurry mixed with pigment to match the shade of tiles, including rubbing and cleaning, etc. complete, on 20mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand). MS nosing shall be installed at the edge of all treads which shall be paid separately.							
7.1.1	Dark shade pigment using ordinary cement	319.00	sqm	1119.50	1089.27	1557.55	4,96,858.00	11.20.3
7.2	Providing and laying Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :							
7.2.1	25 mm thick	57.00	sqm	1948.25	1895.65	2710.59	1,54,504.00	11.26.1
7.3	Kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement: 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete	5.00	sqm	2354.70	2291.12	3276.07	16,380.00	11.27
7.4	Providing and laying Pre-Polished Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing , curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge.							
7.4.1	Polished Granite stone slab of shade and colour Jet Black, KotKasta, Lakha Red, Ruby Red, Cherry Red or equivalent.	61.00	sqm	4481.30	4360.30	6234.79	3,80,322.00	11.56.1
7.5	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-Charge) of total coated thickness 0.50 mm (base metal of minimum 0.45 mm thickness with total coating thickness of 0.05mm) with zinc coating 120 grams per sgm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	18.00	sqm	738.65	718.71	1027.68	18,498.00	12.50
			Sub Head Total			**1066562.00**		
8	**FINISHING**							
8.1	12 mm cement plaster of mix :							
8.1.1	1:6 (1 cement: 6 coarse sand)	158.00	sqm	343.65	334.37	478.12	75,543.00	13.4.2
8.2	15 mm cement plaster on rough side of single or half brick wall of mix:							
8.2.1	1:6 (1 cement: 6 coarse sand)	171.00	sqm	395.35	384.68	550.05	94,059.00	13.5.2
8.3	6 mm cement plaster of mix :							
8.3.1	1:3 (1 cement : 3 fine sand)	264.00	sqm	300.45	292.34	418.02	1,10,357.00	13.16.1
8.4	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade:							
8.4.1	New work (Two or more coats applied @ 1.43 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	435.00	sqm	171.10	166.48	238.05	1,03,552.00	13.47.1

8.5	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :							
8.5.1	Two or more coats on new work	344.00	sqm	155.90	151.69	216.90	74,614.00	13.61.1
8.6	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete. (Note: For external surface, putty shall be of external grade quality)	593.00	sqm	156.05	151.84	217.12	1,28,752.00	13.80
				Sub Head Total		**586877.00**		
9	**ROAD WORK**							
9.1	Supplying and stacking at site.							
9.1.1	Good Earth	35.00	cum	775.50	754.56	1078.95	37,763.00	16.3.9
9.2	Supplying at site Angle iron post & strut of required size including bottom to be split and bent at right angle in opposite direction for 10 cm length and drilling holes upto 10 mm dia. etc. complete.	950.00	kg	125.75	122.35	174.95	1,66,203.00	16.19
9.3	Welded steel wire fabric fencing with posts of specified material and of standard design placed and embedded in cement concrete blocks 45x45x 60 cm of mix 1:5:10 (1 cement:5 fine sand : 10 graded stone aggregate 40 mm nominal size), every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and struts embedded in cement concrete blocks 70x45x50 cm of the same mix, provided with welded steel wire fabric fixed between the posts fitted and fixed with G.I. staples on wooden plugs or tied to 6 mm bar nibs with G.I. binding wire (cost of posts, welded steel wire fabric, painting, earth work in excavation and concrete to be paid for separately).	144.00	sqm	66.15	64.36	92.03	13,252.00	16.20
9.4	Providing and fixing concertina coil fencing with punched tape concertina coil 600 mm dia 10 metre openable length (total length 90 m), having 50 nos rounds per 6 metre length, upto 3 m height of wall with existing angle iron 'Y' shaped placed 2.4 m or 3.00 m apart and with 9 horizontal R.B.T. reinforced barbed wire, stud tied with G.I. staples and G.I. clips to retain horizontal, including necessary bolts or G.I. barbed wire tied to angle iron, all complete as per direction of Engineer-in-charge, with reinforced barbed tape(R.B.T.) / Spring core (2.5mm thick) wire of high tensile strength of 165 kg/ sq.mm with tape (0.52 mm thick) and weight 43.478 gm/ metre (cost of M.S. angle, C.C. blocks shall be paid separately)	265.00	metre	375.80	365.65	522.84	1,38,553.00	16.53
9.5	Providing and fixing G.I. chain link fabric fencing of required width in mesh size 50x50 mm including strengthening with 2 mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in- charge.							
9.5.1	Made of G.I. wire of dia 4 mm	144.00	sqm	1017.80	990.32	1416.06	2,03,913.00	16.70.1
9.6	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge)	21.00	cum	10117.60	9844.42	14076.54	2,95,607.00	16.69
9.7	Providing and laying C.C. pavement of mix M-25 with ready mixed concrete from batching plant. The ready mixed concrete shall be laid and finished with screed board vibrator , vacuum dewatering process and finally finished by floating, brooming with wire brush etc. complete as per specifications and directions of Engineer-in-charge. (The panel shuttering work shall be paid for separately).							
	(Note:- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/ recoverable separately).	110.00	cum	9823.80	9558.56	13667.78	15,03,456.00	16.75

9.8	Providing and fixing GRC Cobble Stone (pre-polished) tiles of required colours/ shade of minimum size 100x100x55 mm and Min. M-35 grade having groove of 8 to 10 mm fixed with spacer in floor, footpath & courtyard, parking jointed with polymer modifed cementitious Grout of Laticrete or equivalent mixed with pigment to match the shade of tiles, including cleaning and grouting of joints with grout mix etc., on 20 mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand) all complete as per direction of Engineer-in-charge.	144.00	sqm	1982.60	--------	1982.60	2,85,494.00	M/R
9.9	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power rollerto achieve the desired density, complete as per specifications and directions of Engineer-in- Charge.							
9.9.1	With material conforming to Grade-| (size range 75 mm to 0.075 mm) having CBR Value-30	82.00	cum	2784.00	2708.83	3873.36	3,17,616.00	16.78.1
				Sub Head Total		**2961857.00**		
						Total	**2,85,66,574.00**	

Note:-

	Rate quoted by the contractor shall be inclusive of rate for following activities / items:-
(i)	**All mandatory statuatory approvals and No Objection Certificate/ Consent for Establishment from statuatory body , local body & other concerned authorities.**
(ii)	**The Contractor/Agency shall get designed all components of the Buildings, Road Work, Staircases, Steel Works, Retaining Wall, Structural work and other ancillary structures from an expert Structural Designer as stipulated in the NIT and submit the Structural Drawings to the Engineer-in-charge.**
(iii)	**Watch and ward / guard of the buildings and other structure as per scope of the work till the building and other structure are physically handed over to client department or Three months from record of Completion Certificate by the competent authority as per schedule F, whichever is earlier.**
(iv)	**Preparation of Architectural Drawings as per scope of the work and as per direction of the Engineer-In-Charge.**
(v)	**Any other scope mentioned in NIT which is not stated specifically in SOQ .**
	Nothing extra other than the quoted rate of the contractor shall be paid for the above activities / items mentioned from Sr. No. (i) to (v).

Assistant Engineer (P) (C)
CPWD, Shimla Circle

Correction-Nil
Deletion-Nil
Insertion-Nil
Overwriting-Nil

AE(P) (C)

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भारत सरकार
GOVERNMENT OF INDIA
केन्द्रीय लोक निर्माण विभाग
CENTRAL PUBLIC WORKS DEPARTMENT

CPWD

कार्यालय अधीक्षण अभियन्ता
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O/o Superintending Engineer
CPWD, Shimla
Kennedy Cottage, Shimla-171004
E-mail: sescc.sml@cpwd.gov.in

Name of Work:- Construction of Type "A" School Buildings Staff Quarters for Kendriya Vidyalaya at Reckongpeo, Distt. Kinnour (HP). SH:- Balance Development Works.

Sr. No.	Name of Component	Estimated Cost (Rs.)	Percentage above/below on the Total Estimated Cost in decimal coinage	Total Cost in (Rs.)
1.	Total Estimated Cost (Civil)	2,85,66,574/-	XXXX	XXXX

XXX (to be filled by Contractor).

Assistant Engineer (P) (C)
CPWD Shimla Circle

Correction—Nil Deletion—Nil Insertion—Nil Overwriting--Nil Page No. 100

AE(P)(C)