



(A Govt. of India Enterprises)  
(Civil Wing)



OFFICE OF THE  
EXECUTIVE ENGINEER (C), BSNL, CIVIL DIVISION, TELEPHONE EXCHANGE  
BUILDING, THE MALL, SOLAN (HP).  
(TELEPHONE No-01792- 224300).

## **e-TENDER DOCUMENT**

FOR THE WORK OF

**Construction of New Academic Block in Campus of Government  
Polytechnic for Women Kandaghat, Distt. Solan [HP]. (SH. Civil Work  
& Electrical works)**

**NIT No : 18/EE/BSNL/CD/SOL/2022-2023, Dated-17.03.2023**

Certified that this document contains **1 To 91** printed pages including the cover page.

**To be submitted only online on the website: [www.tenderwizard.com/BSNL](http://www.tenderwizard.com/BSNL)  
by 18.00 hrs on 03.04.2023**

O/o Executive Engineer (Civil)  
BSNL Civil Division  
Solan (HP)

(A Govt. of India Enterprises)  
(CIVIL WING)  
O/o Executive Engineer (Civil), BSNL, Civil Division, Solan (HP)

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Executive Engineer [C]  
BSNL Civil Division  
Solan (HP)

**INFORMATION AND INSTRUCTIONS FOR CONTRACTORS/ BIDDERS FOR E-TENDERING FORMING PART OF BID DOCUMENT**

The Executive Engineer, BSNL Civil Division Solan (HP), on behalf of the HP State Govt., invites online item rate bids from approved and eligible contractors of BSNL and non – BSNL registered contractors registered with other public works organizations like CPWD, State PWD (B&R), D.O.P., M.E.S. & Railways (in the appropriate class for tendering limit of equal to or more than the estimated cost) for following work:

S. No	NIT No.	Name of Work & Location	Estimated Cost put to bid	Cost of e-tender	Earnest money	Period of Completion	Last Date & Time of online submission of bid	Period during which EMD& Bid cost shall be submitted	Time & Date of Opening of bid
1	2	3	4	5	6	7	8	9	10
1	18/EE/ BSNL/ CD/ SOL/ 2022-2023	Construction of New Academic Block in Campus of Government Polytechnic for Women Kandaghat, Distt. Solan [HP]. (SH. Civil Work & Electrical works)	Rs. 110541453 (108448918 for Civil + 2092535 for Electrical)	Rs. 1770/-	Rs. 2105415/-	17 (Seventeen) months	18:00 Hrs on 03.04.2023	Before or within 5 days of bid submission on end date.	Technical Bid to open on 05.04.2023 at 15:30 and Financial bid at 11:00 Hrs on 06.04.2023

- The intending bidder must read terms and conditions of BSNL W6 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
- Information and instructions for bidders posted on website “www.eprocure.gov.in” shall form part of bid document.
- The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website [www.tenderwizard.com/BSNL](http://www.tenderwizard.com/BSNL) or [www.hp.bsnl.co.in/hpc](http://www.hp.bsnl.co.in/hpc).
- But the bid can only be submitted after depositing processing fee in favour of ITI limited and uploading the mandatory scanned document such as Demand draft or Pay order or Banker’s cheque or Deposit at call Receipt or Fixed deposit Receipt and Bank guarantee of any scheduled Bank towards cost of bid document and EMD in favour of **Accounts Officer [EF], O/o CGMT, BSNL HP Telecom Circle, Shimla [HP]** and other documents as specified.
- Those contractors not registered on the website mentioned above are required to get registered beforehand. If needed they can be imparted training on online bidding process as per details available on the website.
- The intending bidder must have valid **class III digital signature** to submit the bid.
- On opening date the contractor can login and see the bid opening process. After opening of bids he will receive the competitor bid sheets.
- Contractor can upload documents in the form of JPG format / PDF format.
- Contractor must ensure to quote rate of each item. If any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as “0” Zero.
- If a tenderer quotes nil rates against each item in item rate tender or does not quote any percentage above/below on the total amount of the tender or any section/sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer
- For e-Tendering, BSNL has engaged e-portal maintained by M/s ITI Ltd. The agency intending to participate in tendering process shall have to register with <https://www.tenderwizard.com/BSNL> by making online payment of required amount with

registration particulars. For further details kindly visit website <http://www.tenderwizard.com/BSNL> or contact on ITI helpline nos. 01723953753, 08261033300 /09625033300 /08261922200.

12. The tenderer should read carefully & understand the tender document, procedure for e- tendering etc. completely before participating in the e-tender procedure. Participation in the e-tendering, presumes that the bidder (s) has/have gone through all the terms & conditions of the bid document and are fully agreeable to it.

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

- i) **Enlistment Order** of the contractor \*.
- ii) **Near relative certificate** as stipulated under clause 14 of Notice Inviting Tender (Annexure I)
- iii) Copy of EPF& ESIC registration OR an undertaking as per Annexure II.
- iv) **Demand Draft / Pay order or Banker's Cheque /Deposit at Call Receipt/FDR of any Scheduled Bank against EMD**

**OR**

**Bank transaction detail with UTR No for successful payment of EMD and Cost of Bid Document.**

- v) Demand Draft / Pay order or Banker's Cheque of any Scheduled Bank towards Cost of Bid Document
- vi) Certificates of Work Experience (for non BSNL registered contractors)
- vii) **Copy of GST Registration issued by concerned Department of Govt. of HP / Govt. of India (can be submitted after acceptance of tender along with PG).**
- viii) Undertaking regarding physical submission of bid documents & Undertaking regarding physical examination/ inspection of site as per Annexure-III.

\* If the bidder is a firm in partnership/Limited company or Corporation, then the hard copies of **Form "A" and partnership deed / memorandum of articles of association and power of attorney / certificate of incorporation / authorization to the person who signs the tender in case of companies etc shall also be uploaded/submitted along with other documents.**

14. **Tender fee and EMD can also be paid through e payment mode to the account " BSNL HQ ND collection Account New Delhi, Account No. - 1120002102326181, IFSC Code- PUNB0112000 , PNB New Delhi. In that case Bank transaction detail along with UTR No for successful payment of EMD and Cost of Bid Document shall be uploaded as per Para 13.**

15. Original financial payment instrument against EMD & TC (when payment is not made through online/e payment mode) shall be submitted offline in O/o EE (civil) **before or within 5 days the period of bid submission end date**, failing which the tender bid (if already opened on the basis of scanned documents uploaded in 1st electronic envelope/technical bid) shall be rejected

16. During tender process BSNL's tender inviting authority may require bidder to produce original copy of any scanned/uploaded document submitted in technical part, the bidder shall have to comply with.

17. **If the contractor do no submit the offline documents e.g. EMD & Tender cost, consecutively three times after submission of online bids, action shall be taken to withdraw his / their enlistment & debar him / them from tendering in BSNL for the period of 6( Six) months.** An undertaking in this regard is to be submitted along with the tender by the tenderers as per Annexure III.

18. **If L1 bidder, after opening of financial bid, fails to submit offline documents i.e. EMD and Tender Cost within prescribed period, tenders shall be rejected and recalled. L1 contractor will be debarred from tendering in BSNL for 1 (One) year.**

**ANNEXURE-I**

(To be submitted by the contractor regarding near relatives working in BSNL Civil Zone as per clause 14 of BSNL W-6)

**CERTIFICATE FOR NEAR RELATIVES**

"I..... S/o .....Resident of  
..... hereby certify that

none of my relative(s) as defined in clause 14 of BSNL W-6 is / are employed in *BSNL HP Civil Zone, Shimla*

In case, at any stage, it is found that the information given by me is false/ incorrect, BSNL shall have the absolute right to take any action as deemed fit without any prior intimation to me".

**SIGNATURE OF CONTRACTOR**

*(Note: The certificate in case of Proprietorship Firm shall be given by the proprietor and for Partnership firm's certificate shall be given by all Partners and in case of Limited Company by all Directors of the company. However, Government of India / Financial Institutions nominees and independent non-official part-time Directors appointed by Govt. of India or the Governor of the State are excluded from the purview of submission of this certificate while submitting tenders by Limited Companies.)*

Annexure-II

**DECLARATION REGARDING EPF, ESIC & Labour license**

"I / We \_\_\_\_\_ do hereby solemnly declare that I shall abide by all the rules / condition / provisions of 'The Employees Provident Funds Act / Scheme 1961' and ESIC Act . I/We shall obtain and submit applicable EPF, Labour license & ESIC within one month of award of work. First payment shall be made to me/us only after submission of applicable EPF, ESIC & labour license by me/us. In case of any default, the sole responsibility shall be mine / us. I/We shall also be liable for any pecuniary liability arising on account of any violation by me/us of the provisions of the said Acts".

This declaration shall become part of the Agreement.

**SIGNATURE OF CONTRACTOR**

Annexure-III

**1. UNDERTAKING REGARDING SUBMISSION OF PHYSICAL BID DOCUMENTS**

“If I / We \_\_\_\_\_ do not submit the physical bid /offline documents e.g EMD and Tender cost after submission of online bids **consecutively three times** within the prescribed time, it shall be treated as breach of conditions and action shall be taken to withdraw my / our enlistment / debar me / us from tendering in BSNL for 6 ( Six) months”.

**2. UNDERTAKING REGARDING PHYSICAL EXAMINATION / INSPECTION OF SITE**

“ I / We have physically visited the site **as per provision at Sr. No. 10 of BSNLW-6** and have acquainted myself/ourselves regarding Site conditions, approach to site of work, arrangement of water & Electricity for execution of work etc. for timely execution of the work. Tender has been quoted accordingly considering all above factors.”

**SIGNATURE OF CONTRACTOR**

## **PART-A (CIVIL WORK)**

BSNL– W-6

### **BHARAT SANCHAR NIGAM LIMITED (A GOVERNMENT OF INDIA ENTERPRISE)**

O/o Executive Engineer (Civil), BSNL Civil Division, Solan

#### **NOTICE INVITING e-TENDER**

NIT No. 18/EE/BSNL/CD/ SOL/ 2022-2023

dated – 17.03.2023

1. **Item rate e-tenders** are invited by the Executive Engineer (C), BSNL Civil Division, Solan (HP), on behalf of the “**HP State Govt.**”, from approved and eligible contractors of BSNL and non – BSNL registered contractors registered with other public works organizations like CPWD, State PWD (B&R), D.O.P., M.E.S. & Railways (**in the appropriate class for tendering limit of equal to or more than the estimated cost**) for the work of:

**“Construction of New Academic Block in Campus of Government Polytechnic for Women Kandaghat, Distt. Solan [HP]. (SH. Civil Work & Electrical 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.

- 1.1 The work is estimated to cost **Rs. 110541453.00 (Rupees Eleven Crore Five Lakh Forty One Thousand Four Hundred Fifty Three Only).**
- 1.2 The intending Tenderers have to upload the self attested scanned copy of their valid enlistment document with the appropriate authority and copies of certificates, testimonials and satisfactory completion certificates of works, from the department concerned, obtained from an officer not below the rank of Executive Engineer, in charge of work. **He / they shall submit attested copies of GST registration Certificate issued by concerned Department of Govt of HP / Govt. of India , on acceptance of tender along with Performance Guarantee.** In the event of failure on the part of contractor (whose tender is accepted) to furnish the documents pertaining to GST registration Certificate along with Performance Guarantee within stipulated period, the earnest money will be forfeited and tender cancelled. The original financial payment instrument against EMD & TC (when payment is not made through online/e payment mode) shall be submitted offline in O/o EE (Civil) **before or within 5 days the period of bid submission end date**, failing which the tender bid (if already opened on the basis of scanned documents uploaded in 1st electronic envelope/technical bid) shall be rejected .
- 1.2.1 **Eligibility criteria regarding Work Experience:**
- 1.2.1.1 For BSNL enlisted contractors for BUILDING WORKS in Appropriate class: - **NIL.**
- They shall upload letter for experience certificate that these documents are not required to be submitted by them. Uploading of this letter is mandatory otherwise system will not clear mandatory field.
- 1.2.2.2 Non – BSNL registered contractor in appropriate class (CPWD, State PWD (B&R), D.O.P., M.E.S. & Railways) -----
- The applicant should have completed works as per details below during the last seven years ending last day of the month previous to the one in which the tenders are invited.
- a) Three similar completed works each costing not less than **Rs. 44217000.00**
- b) Two similar completed works each costing not less than **Rs. 55271000.00**
- c) One similar completed works each costing not less than **Rs. 88434000.00**

Similar work means “**Building work in RCC frame with minimum one building of five storey's Or Completing balance Construction work of one building (i/c structural work) minimum up to five storey**”. For this purpose, each basement, still constructed in the building shall be considered as a storey.” The value of executed works shall be brought to current costing level by enhancing the actual value of executed work at simple rate of 7% per annum; calculated from the date of completion to last date of receipt of applications for tenders and shall be rounded off to the nearest hundred rupees. . Above works should have been carried out in Central / State Government/ Central or State Public sector Undertakings.

The experience certificate given by an officer not below the rank of Executive Engineer shall indicate clearly the nature of the work, agreement no. and satisfactory completion of the work along with actual value of work done and actual date of completion and shall be issued by authorized signatory/ authority and shall be in original / attested. **The work experience certificate shall be considered as invalid, if extension of time (EOT) is granted with levy of compensation or not decided on the last date of submission of bids.**



- 1.2.3 The contractor shall have to fully abide by the relevant provisions of the Employee's Provident Fund Act 1952, ESIC (wherever applicable) and Rules of The Employees provident Funds Act / Scheme 1961 (as applicable) framed therein from time to time and they have to obtain and produce EPF registration within one month of award of work.
- 1.3 The agency should fulfill the criteria of **clause 14** of BSNL form W-6 & should furnish a **Certificate regarding near relatives as per Annexure I**.
- 1.4 The agency/agencies, which are Blacklisted/Debarred/Ceased for Financial Transactions by BSNL and/or any Central/state Govt. Department/PSU are not eligible for tendering.
2. Agreement shall be drawn with the successful bidders on prescribed Form No. BSNL W 8 and General Conditions of Contract with up to date correction slips 1 to 6 which are available as a BSNL Publication and also on BSNL website [www.civil.bsnl.co.in](http://www.civil.bsnl.co.in). & [www.hp.bsnl.co.in/hpc](http://www.hp.bsnl.co.in/hpc). Bidders shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
3. The time allowed for carrying out the work, will be **17(Seventeen) months** from the 15th day after the date of issue of letter of award of work or from the first day of handing over of the site whichever is later, in accordance with phasing, if any, indicated in the Tender Document.
4. The site for the work shall be made available at the time of execution.
5. The bid document consisting of plans, Specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents including General Conditions of Contract Form including correction slips can be seen from website <http://www.tenderwizard.com/BSNL> & [www.hp.bsnl.co.in/hpc](http://www.hp.bsnl.co.in/hpc).
- (i) The last date of submission of bids online, will be **03.04.2023 by 18:00 Hrs.**
- (ii) The date of submission of offline documents i.e. EMD & tender fee, (After submission of online bid) will be **before or within 5 days the period of bid submission end date..**
- (iii) The date of opening of e-tenders will be **06.04.2023 at 11:00 Hrs.**
6. After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of bid as notified.
- While submitting the revised bid, contractor can revise the rate of one or more items any numbers of times (he need not re-enter rate of all the items) but before last date and time of submission of bid as notified.
7. Interested contractors who wish to participate in the tender had to make following payments and submission as under:
- 7.1 (i) **Cost of Bid Document – Non refundable** in form of Demand Draft / pay orders amounting to **Rs. 1770.00** drawn in favour of **Accounts Officer [EF], O/o CGMT, BSNL HP Telecom Circle, Shimla [HP]** payable at Shimla.
- (ii) **Earnest Money of Rs 2105415.00** as Banker's cheque /deposit at Call receipt of a scheduled bank/fixed deposit receipt of a scheduled bank /Demand draft of a scheduled bank issued in favour of **Accounts Officer [EF], O/o CGMT, BSNL HP Telecom Circle, Shimla [HP]** payable at Shimla. When amount of earnest money is more than Rs. 5 lakhs, part of the earnest money is acceptable in the form of bank guarantee also. In such case, minimum 50% of earnest money (but not less than 5 lakhs) or Rs. 25 lakhs, whichever is less, will have to be deposited in the shape prescribed above. For balance amount of earnest money, bank guarantee will also be acceptable.
- (iii) Tender fee and EMD can also be paid through e payment mode to the account “ **BSNL HQ ND collection Account New Delhi, Account No. - 1120002102326181, IFSC Code- PUNB0112000, PNB New Delhi**. In that case Bank transaction detail along with UTR No for successful payment of EMD and Cost of Bid Document shall be uploaded.
- (iv) **e-tender Processing Fee-** An amount (**As Displayed online while submitting the e-tender** ) (**Non refundable**) as processing fee to “IT I Limited” shall be paid through e-payment mode only through the website [www.tenderwizard.com/BSNL](http://www.tenderwizard.com/BSNL).
- Note:** Money due to contractor in any other work or earnest money of the previous call of the same work shall not be adjusted towards earnest money. The Cost of tender, EMD, Processing fee should be submitted through separate instruments.
- The scanned copy of above documents (demand Draft/Pay order or Banker's cheque/FDR/deposit at call receipt or bank guarantee) is to be uploaded to the e-Tendering web site within the period of online bid submission and within the period mentioned in this NIT.
- The intending bidder has to fill all the details such as Banker's name, Demand draft/Fixed Deposit Receipt / Pay order/ Banker's cheque/ Bank Guarantee number, amount and the date in the e-tendering website.**
- 7.2 **MODE OF SUBMISSION:-**

a) The copy of Earnest money, cost of Tender & E-tendering processing fee receipt, Copy of Enlistment Order, copy of GST registration, Near relative certificate (annexure I), copy of EPF, ESIC OR an undertaking as per Annexure II, copy of undertaking regarding submission of physical bid documents as per Annexure III, copy of work experience & Power of Attorney, if applicable shall be scanned & uploaded to the e-tendering website within the period of tender submission.

b) Original financial payment instrument against EMD & TC (when payment is not made through online/e payment mode) shall be submitted offline in O/o EE(civil) **before or within 5 days the period of bid submission end date.** Failing which the tender bid ( if already opened on the basis of scanned documents uploaded in 1st electronic envelope/technical bid ) shall be rejected. The envelope shall be superscripted with name of work, name of tenderer, date and time of opening of bids.

The financial bid submitted shall be opened at **11:00 Hrs on 06.04.2023.**

The bid submitted shall become invalid and cost of bid & e-Tender processing fee shall not be refunded if:

- i) The bidder is found ineligible.
  - ii) The bidder does not upload all the documents as stipulated in the bid document.
  - iii) If any discrepancy is noticed between the details/ documents as uploaded at the time of submission of bid and hard copies as submitted physically in the office of tender opening authority.
  - iv) The bidder does not submit documents in physical form as specified in the bid document before specified date and time.
- Note:** In case the eligibility credentials are not found genuine at any stage i.e. before award of work or during execution of the work or after completion of the work, the contractor will be debarred from tendering in BSNL for three years including any other action under the contract or existing law.

8. The description of the work is as follows: -  
**"Construction of New Academic Block in Campus of Government Polytechnic for Women Kandaghat, Distt. Solan [HP]. (SH. Civil Work & Electrical works)"**
9. Copies of other drawings and documents pertaining to the work will be open for inspection by the tenderers at the office of the **Executive Engineer (Civil) BSNL Civil Division, Solan (HP).**
10. Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general, shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. 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. The tenderer 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 tender by a tenderer 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 BSNL and local conditions and other factors having a bearing on the execution of the work.
11. The competent authority on behalf of the BSNL 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 assigning any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected.
12. Canvassing whether directly or indirectly, in connection with bids is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable to rejection.
13. The competent authority on behalf of BSNL 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.
14. The company or firm or any other person shall not be permitted to tender for works in BSNL Civil Zone, in which his near relative(s) (directly recruited or on deputation in BSNL is/are posted in any capacity either non-executive or executive employee. Near relative (s) for this purpose is/are defined as:
  - i) Member of Hindu Undivided family (HUF).
  - ii) They are Husband and Wife.
  - iii) The one is related to other in the manner as father, mother, son(s) & Son's wife (daughter-in-law), Daughter(s), Daughter's husband (son-in-law), brother(s), brother's wife, sister(s), sister's husband (brother-in-law).

The contractor 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 relative to any executive employee/gazetted officer in the BSNL or Department of Telecom or in the Ministry of Communications.

All the intending tenderers will have to give a certificate/ Declaration that none of his/her such near relative (s) as defined above is/are working in the concerned BSNL Civil Zone where he is going to apply for tender/work. The format of the certificate is as under:

“I \_\_\_\_\_ S/o Shri \_\_\_\_\_  
Resident of \_\_\_\_\_ hereby certify that none of my relative(s) as defined above is/are employed in concerned BSNL Civil Zone. In case at any stage, it is found that the information given by me is false/incorrect, BSNL shall have the absolute right to take any action as deemed fit without any prior intimation to me.”

The certificate in case of Proprietorship Firm shall be given by the proprietor, for Partnership Firm certificate shall be given by all partners and in case of Limited Company, by all Directors of the company. However, Government of India/ Financial Institutions nominees and independent non-official part-time Directors appointed by Govt. of India or the Governor of the State are excluded from the purview of submission of this certificate while submitting tenders by Limited Companies.

Any breach of these conditions by the Company or Firm or any other person, the tender/ work will be cancelled and Earnest Money/ Security Deposit will be forfeited at any stage, whenever it is so noticed. BSNL will not pay any damages to the company or Firm or the concerned person but damages arising on account of such cancellation to be borne by the contractor. The Company or Firm or the person will also be debarred for further participation in the tender in the concerned BSNL Civil Zone. Further, any breach of this condition by the tenderer would also render him liable to be removed from the approved list of contractors of BSNL. If however the contractor is registered in any other Department he shall also be debarred from tendering in BSNL for any breach of this condition.

15. No Engineer of Gazetted rank or other Gazetted officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India including State Government or PSU's (including BSNL) is allowed to work as a contractor for a period of two years after his retirement from Government service, without previous permission of the Government of India or BSNL 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 /State Government or PSU's as aforesaid before submission of the tender or engagement in the contractor's service.
16. The bid for the works shall remain open for acceptance for a period of **90 (Ninety) days** from the date of opening of Bids. If any bidder withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then BSNL shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. **Further the bidder shall not be allowed to participate in the re-bidding process of the work.**
17. In case of works having estimated cost below Rs.15,00,000/-, the successful tenderer shall be required to execute an agreement with the Engineer-in-charge in the Proforma annexed to the tender document, within 15 days of the issue of letter of award by the BSNL. In the event of failure on the part of the successful tenderer to sign the agreement, the earnest money will be forfeited and tender cancelled. In case of works of estimated to cost Rs.15, 00,000/- and above, the successful tenderer shall, upon issue of letter of acceptance of Tender, shall be required to furnish performance guarantee at rate of 5% of the tendered value in the form of irrevocable Bank Guarantee of requisite amount to the Engineer-in-charge in the Proforma annexed to the tender document, within 15 days of the issue of letter of acceptance of Tender by the BSNL. In the event of failure on the part of the successful tenderer to furnish the Bank Guarantee within 15 days, the earnest money will be forfeited and tender cancelled.
18. This Notice Inviting Tender (BSNL W-6) shall form a part of the contract document. In accordance with clause 1 of the contract, the letter of acceptance shall be issued first in favor of the successful tenderer/ contractor. After submission of the performance guarantee, the letter of award shall be issued. The contract shall be deemed to have come into effect on issue of letter of acceptance of the tender. On issue of letter of award, the successful Tenderer/Contractor shall, within 30 days from such date, formally sign the agreement consisting of :-
  - a) The notice inviting tender, all the documents including additional conditions, specifications and drawings, if any, forming part of the tender, and, as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto
  - b) Standard BSNL W8 as on Website [www.hp.bsnl.co.in/hpc](http://www.hp.bsnl.co.in/hpc) and [www.civil.bsnl.co.in](http://www.civil.bsnl.co.in).
  - c) Agreement signed on non-judicial stamp paper as per proforma annexed to the tender document.
19. Payment to the contractors shall be made through e-payment system like ECS/EFT/RTGS as detailed below:-
  - (a) In cities/areas where ECS/EFT/RTGS facility is provided by Banks, the tenderer must have Account in such ECS/EFT/RTGS facility providing Banks and that Bank A/c Number shall be quoted in the tender by the tenderer.
  - (b) The cost of ECS/EFT/RTGS will be borne by BSNL in all cases where the payment to contractor is made in a local Branch i.e. tenderer is having bank account in the same place from where the payment is made by BSNL unit.
  - (c) In case payment is made to outside branch i.e. tenderer is having bank account not in the same place from where the payment is made by BSNL unit, the crediting cost will have to be borne by the tenderer only.
  - (d) The payments to contractors will compulsorily be made through ECS/EFT/RTGS in respect of all contracts where the value of the contract is more than Rs. 10 lakhs.
20. First running account bill shall be paid only after
  - (a) Signing of the Agreement/Contract by both the parties, and
  - (b) Progress chart has been prepared as required under Clause 5 and approved by the competent authority.

21. If a contractor after purchasing the tender does not quote consecutively on three occasions, the contractor may be debarred for further purchase of tenders for a period of Six months.
22. General conditions of works in BHARAT SANCHAR NIGAM LTD and all correction slips are available on website [www.hp.bsnl.co.in/hpc](http://www.hp.bsnl.co.in/hpc) as well as in the Divisional/ Sub divisional Office.
23. The Contractor will submit computerized measurement books and bill in duplicate for all running and final bills and nothing extra shall be paid on this account.
24. **Condition for EPF/ESI/GST**  
(a) The bidder must comply with the Provisions of EPF & Misc. Provisions Act, 1952 and Employees Provident Fund Scheme 1952, in respect of labourers/employees engaged by the bidder for carrying out works and they have to obtain and produce EPF registration within one month of award of work. **First payment shall be made to the contractor only when he submits his valid/applicable EPF registration.**  
  
(b) The claim bill of contractor must accompany the list showing the details of labourers/ employees engaged ,duration of their engagement, amount of wages paid to such labours/ employees , & authenticated documents showing amount of EPF contributions (both employer's & employees contribution), paid to the EPF Authorities. Non compliance of above provision will be treated as breach of contract and necessary action against the bidder will be taken.  
  
(c) The contractor shall be required to comply the provision of ESIC (wherever applicable), payment of wages act, contractor labour regulation act, payment of bonus act, payment of gratuity act and GST regulations. Non compliance of above provisions will be treated as breach of contract and necessary action against the bidder will be taken.  
  
(d) **The rates shall be quoted inclusive of all taxes including GST to the extent mentioned in schedule F under clause 37(i) and all other taxes of Central / HP State Government with loading, unloading and transportation etc. The rates shall be firm and final. Nothing extra shall be paid on any account & BSNL shall not entertain any claim in this respect.** The invoices raised by the contractor shall indicate GST as a separate component of the gross bill raised. The payment of GST by BSNL to the contractor shall be governed by the rule of the government made in this regard and applicable to BSNL and further as per the rules framed by BSNL in this regard. BSNL shall claim ITC credit for the GST as per rules of BSNL in vogue.  
**The contractor shall be solely responsible for timely payment of GST to the concerned department. Any penalty / interest for late submission etc. arising thereupon and as demanded by the concerned department shall be sole responsibility of the contractor and BSNL shall have absolutely no liability what so ever on this account.**
25. **Tenderers are advised to acquaint themselves regarding Office Infrastructure to be provided under section 5 of "Special Conditions" and quote their rates accordingly. The rates quoted by agency should include charges for Office Infrastructure mentioned therein and nothing extra shall be paid on this account.**
26. For e-Tendering, BSNL has engaged e-portal maintained by M/s ITI, New Delhi. The agency intending to participate in tendering process shall have to register with M/s ITI, New Delhi. The ITI helpline nos. are 01723953753, 08261033300 /09625033300 /08261922200.
27. If any terms and conditions under General Rules and Directions is in contravention to terms and conditions as above, the terms and conditions as above shall prevail.
28. If there happens to be holiday on any dates mentioned above, then the transactions will be made on next working day.
29. **For Composite Bids (As applicable in the present bid)**  
The Executive Engineer in charge of the major component will call bids for the composite work. The cost of Bid document and earnest money will be fixed with respect to the combined estimated cost put to tender for the composite bid. The bid document will includes following three components:  
**Part A:** Information and instruction for bidders for e-Tendering, BSNLW-6, BSNLW -8 (Abridged version) & Standard General Conditions of contract for BSNLW8 with upto date correction slips.  
**Part B:** Proforma of schedule (including schedule A to F for Civil work), General instructions, Proforma for agreement, Form of Performance security, Annexure "P" corrections to BSNLW, GCC – 2006 (Corrected upto CS – 1 to 4 & 6, List of preferred make to be used for this work, specific conditions.  
**Part C:** MOU, Proforma of schedule (including schedule A to F for electrical work, SE/EE in charge of major component shall also be competent authority under clause 2 and clause 5 as mentioned in schedule A to F for major components) Special

conditions for electrical work for composite tender, Additional conditions for electrical work, Additional specifications for the work of (EI & FANS), List of preferred make – BSNL Electrical Wing

- 29.1.1 The bidders must associate with himself, agencies of the appropriate class eligible to bid for each of the minor component individually.
- 29.1.2 The eligible bidders shall quote rates for all items of major component as well as for all items of minor components of work.
- 29.1.3 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 Bharat Sanchar Nigam limited. 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 in charge of minor component. One such signed set of agreement shall be handed over to EE in charge of minor component. EE of major component will operate Part A of the agreement. EE in charge of minor component (s) shall operate Part B along with Part A of the agreement.
- 29.1.4 Entire work under the scope of composite bid including major and all minor components shall be executed under one agreement.
- 29.1.5 Security Deposit will be worked out separately for each component corresponding to the tendered cost of the respective component of works.
- 29.1.6 The main contractor has to associate agency(s) for minor component(s) conforming to eligibility criteria as defined in the bid document and has to submit detail of such agency(s) to Engineer-in-charge of minor component(s) within prescribed time. Name of the agency(s) to be associated shall be approved by Engineer-in-charge of minor component(s).
- 29.1.7 In case the main contractor intends to change any of the above agency/agencies during the operation of the contract, he shall obtain prior approval of Engineer-in-charge of minor component. The new agency/agencies shall also have to satisfy the laid down eligibility criteria. In case 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.
- 29.1.8 The main contractor has to enter into agreement with the contractor(s) associated by him for execution of minor components(s). Copy of such agreement shall be submitted to EE in charge of each minor component as well as to EE in charge of major component. In case of change of associate contractor, the main contractor has to enter into agreement with the new contractor associated by him.
- 29.1.9 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.
- 29.1.10 The composite work shall be treated as complete when all the components of the works are complete. The completion certificate of the composite work shall be recorded by Engineer in charge of major component after record of completion certificate of all other components
- 28.1.11 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:** \_\_\_\_\_  
**Name:** \_\_\_\_\_  
**Executive Engineer (Civil)**  
**BSNL Civil Division**  
**Solan**  
**For & on behalf of HP State Govt.**

## **IMPORTANT INSTRUCTIONS TO ALL TENDERERS**

### **All tenderers should read the following important instructions carefully before actually quoting rates:-**

1. The tenderer should read carefully & understand Tender form BSNL W-8, Bharat Sanchar Nigam Limited “General Conditions of Contract for Civil Works (2006) with up to date correction slips no. 1 to 6 (available on website [www.hp.bsnl.co.in/hpc](http://www.hp.bsnl.co.in/hpc)), schedule of quantity etc. before quoting for the work.
2. The schedule of items, estimated cost etc in this contract are based on **CPWD DSR 2021** and CPWD specifications 2019, Volume I & II with up to date correction slips.
3. All the eligibility credentials submitted by the intending tenderers must be duly self attested.
4. Payment of RA bill to the contractor will be made within **45 working** days of submission of bill/invoice by the contractor. However this period may further be extended by another 15 days due to administrative reasons. No delay will be considered for grant of extension of time on account of delay in payment. The intending tenderer shall have sufficient working capital to continue the progress of work and complete it in the scheduled time as per milestone.
5. The contractor shall file the GST claim of bill/invoice in time so that the input credit is available to BSNL while processing their bill in Central accounting unit. In case the same is not available/reflected in GST portal then the appropriate amount in the bill will be retained and shall be released only after input credit is allowed to BSNL.
6. The contractor shall quote their rate/bid including all taxes and GST @ 18% as modified time to time but applicable for Govt works as on last date of submission of tender.
7. The Contractor shall visit the site and acquaint himself/themselves about the site and working conditions before quoting the bid. Necessary Certificate as per Annexure –III shall be submitted alongwith bid.

**BHARAT SANCHAR NIGAM LIMITED**  
(A Government of India Enterprise)

STATE: Himachal Pradesh  
ZONE: H.P Civil Zone

CIRCLE: BSNL Civil Circle, Shimla  
DIVISION: BSNL Civil Division, Solan  
SUBDIVISION: BSNL Civil Sub Division, Solan

Item rate Bid for the work of: "Construction of New Academic Block in Campus of Government Polytechnic for Women Kandaghat, Distt. Solan [HP]. (SH. Civil Work & Electrical works)"

- (i) To be submitted online on the website "www.tenderwizard.com/BSNL" by 18:00 hours on 03.04.2023. Documents which are to be submitted by the bidders to the Executive Engineer (Civil) BSNL Civil Division, Solan (HP) before or within 5 days the period of bid submission end date will be opened in the presence of bidder.
- (ii) The financial bid shall be opened online at 11:00 hours on 06.04.2023 in the office of Executive Engineer (C), BSNL Civil Division, Solan (HP).

**TENDER**

I/We have read and examined Notice Inviting Tender, Schedules A, B, C, D, E & F, Specifications applicable, Drawings & Design, General Rules and Directions, Conditions of Contract, Special conditions, Schedule of Rate & other document & 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 work specified for the Bharat Sanchar Nigam Limited 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 (Civil and Electrical) and in Clause 11 of the Conditions of the contract and with such materials as are provided for, by and in respect in accordance with, such conditions so far as applicable.

I/We agree to keep the tender open for 90 (Ninety) days from the due date of submission thereof and not to make any modifications in its terms and conditions. If I/we withdraw my/our tender before the said period or issue of letter of acceptance/intent, whichever is earlier, or, makes any modifications in the terms and conditions of the tender which are not acceptable to the BSNL, then the BSNL shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid.

A sum of Rs 2105415.00 (Rupees Twenty One Lakh Five Thousand Four Hundred Fifteen Only ) has been deposited in prescribed manner as earnest money. If I/We fail to commence the work specified I/We agree that the said Bharat Sanchar Nigam Limited shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely otherwise the said earnest money shall be retained by competent authority on behalf of the Bharat Sanchar Nigam Limited 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 carry out such deviations as may be ordered, upto 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.

I/We agree that, in case of works of estimated cost exceeding Rs.15,00,000/-, to deposit an amount equal to 5% of Tendered value of the work as performance guarantee in the form of bond of any Scheduled Bank of India in accordance with the proforma prescribed or in the form of Fixed Deposit Receipt etc., within 15 days of the issue of letter of acceptance of Tender by the BSNL. I/We am/are aware that in the event of failure on my/our part to furnish the Bank Guarantee within 15 days, the earnest money will be forfeited and tender cancelled. 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 rebidding 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 bidding in BSNL 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 intimate that for receiving payments I/we have an account in \_\_\_\_\_ Bank with account No. \_\_\_\_\_ where the ECS/EFT/RTGS facility of e-payment is available.

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.

I / We agree that should I / we fail to commence the work specified in the above memorandum, an amount equal to the amount of the earnest money mentioned in the form of invitation of tender shall be absolutely forfeited to the Bharat Sanchar Nigam Limited and the same may at the option of the competent authority on behalf of the Bharat Sanchar Nigam Limited be recovered without prejudice to any right or remedy available in law out of the deposit in so far as the same may extend in terms of the said bond and in the event of deficiency out of any other money due to me / us under this contract or otherwise.

The information in respect of works in hand is as per proforma enclosed.

I/We agree that this contract is subject to jurisdiction of court at **Solan (HP)** only.

Name of Work	Name and Particulars of Division where work is being executed	Value of Work	Position of Work in progress	Remarks
1	2	3	4	5

Dated.....

Witness:

.....

Address:

Contractor

Occupation:

Postal Address:

Signature of

**ACCEPTANCE**

The above tender [as modified by you (Contractor) and as provided in the letters mentioned hereunder] is accepted by me for

and on behalf of the HP State Govt., for a sum of

Rs.....(Rupees.....)

.....)

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

(a)

.....

...

(b)

.....

...

**For & on behalf of the HP State Govt.,**

Signature:

Dated .....

.....X.....

**Name and Designation:**

.....X.....



<b>SCHEDULE - "F"</b>		<b>PROFORMA OF SCHEDULES</b> (Operative Schedules to be supplied separately to each of the intending tenderer) Reference to General Condition		
<b>SCHEDULE - "A"</b>				
Schedule of Quantities (Civil Work):		<b>As per Extra Excel Work Sheet</b>		
<b>Estimated cost of Work</b>		<b>Rs. 110541453 (108448918 for Civil + 2092535 for Electrical)</b>		
<b>SCHEDULE - "B"</b>				
Schedule of Materials to be issued to the contractor				
S. No.	Description of Item	Quantity	Rates in figures & words at which the materials will be charged from the contractor	Place of issue
1	2	3	4	5
..... NIL .....				
<b>SCHEDULE - "C"</b>				
Tools and Plants to be hired to the contractor				
S. No.	Description of Item	Hire charges per day	Place of issue	
1	2	3	4	
.....DELETED .....				
<b>SCHEDULE - "D"</b>				
Extra schedule for specific requirements/documents for the work. (a) Performa of Agreement (b) Form of Performance Guarantee (c) Specifications and conditions including conditions for procurement of steel reinforcement and cement (d) Additional conditions and additional specifications (e) Performa of Guarantee Bond (f) Special conditions (g) Important instructions to all tenderers (h) Correction slips and Amendments (i) List of Preferred makes.				
<b>SCHEDULE - "E"</b>				
Schedule of component of Materials, Labour etc. for escalation.				
<b>CLAUSE 10:</b>				
Component of Materials expressed as percent of Total Value of Work		<b>"X"</b>	<b>75%</b>	
Component of Labour expressed as percent of Total Value of Work		<b>"Y"</b>	<b>25%</b>	
Component of POL expressed as percent of Total value of Work		<b>"Z"</b>	<b>0%</b>	

Earnest Money	Rs <b>2105415.00 (Rupees Twenty One Lakh Five Thousand Four Hundred Fifteen Only)</b>
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<b>Performance Guarantee</b> (5% of the tendered value in the form of Bank Guarantee from Scheduled Bank in respect of works with estimated cost put to tender exceeding Rs. 15.00 Lakhs)		Rs. ....x..... ( Rupees ..... )
<b>Security Deposit</b> (5% of the tendered value for works with estimated cost put to tender exceeding Rs. 15.00 Lakhs)		Rs. ....x..... ( Rupees ..... )
<b>GENERAL RULES AND DIRECTIONS</b>		
Officer Inviting tender		Executive Engineer (C), BSNL Civil Division, Solan (HP)
Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clause 12.2 & 12.3		50% (Fifty Percent)
<b>Definitions:</b>		
2 (v)	Engineer-in-charge	Executive Engineer (C), BSNL Civil Division, Solan (HP)
2 (viii)	Accepting Authority	Chief Engineer (C), BSNL HP Civil Zone, Shimla.
2 (x)	Percentage on cost of materials and labour to cover all overheads and profit	<b>10 %</b>
2 (xi)	Standard Schedule of Rates	<b>CPWD DSR-2021</b> with up to date corrections as on the date of opening of tenders with modification of 110/115.
9 (ii)	Standard BSNL Contract Form	Form BSNLW – 8 with up to date correction slips (1 to 6) as on the date of opening of tenders
<b>Clause 2</b>		
	Authority for fixing compensation under Clause -2	Chief Engineer (C), BSNL HP Civil Zone, Shimla.
<b>Clause 2A</b>		
	Whether Clause 2A shall be applicable	No
<b>Clause 3A</b>		
	Whether Clause 3A shall be applicable	No
<b>Clause 5</b>		
i)	Time allowed for execution of work	<b>17(Seventeen) months</b>
ii)	Authority to give fair and reasonable extension of time for completion of work.	Chief Engineer (C), BSNL HP Civil Zone, Shimla.
<b>Clause 6A</b>		
	Whether Clause 6A shall be applicable	Yes
<b>Clause 7</b>		
	Gross value of work to be done together with net payment / adjustment of advances for materials collected, if any, since the last such payment for being eligible to interim payment.	<b>Rs. 5000000.00</b>

<b>Clause 10</b>							
	Reinforcement steel to be used in the work shall have to be procured as below:				TMT bars to be procured from Producers only (SAIL/TATA/RINL/JSW/JINDAL STEEL & POWER)		
<b>Clause 11</b>							
	Specification to be followed for execution of work.				CPWD Specifications 2019 Volume: I & II, with up to date correction slips.		
<b>Clause 12</b>							
12.2 & 12.3	Limit for value of any item of any individual trade beyond which sub clauses (i) to (ii) shall not apply and clauses 12.2 and 12.3 shall apply				50%		
<b>Clause 16</b>							
	Competent authority for deciding reduced rates				Superintending Engineer (C), BSNL Civil Circle, Shimla (HP)		
<b>Clause 36(i)</b>							
<b>General guideline for fixing requirements of technical staff and rate of recovery in case of non compliance for a work, shall be as per the following.</b>							
S No	Minimum Qualification of Technical representative	Discipline	Designation	Minimum Experience	Number	Rate at which recovery shall be made from contractor in event of non deployment	
						Figures	words
1	Graduate Engineer	Civil	Project Manager	10 (and having experience	1	Rs. 30,000/- per month	Rs. Thirty thousand only per month
2	Graduate Engineer Or Diploma Engineer	Civil	Project/ Site Engineer	5 or 10 respectively	1	Rs 25000/- per month	Rs Twenty five thousand per month
3	Graduate Engineer Or Diploma Engineer	Civil/Electrical	Planning /quality/ billing Engineer	2 or 5 respectively	1+1	Rs. 15,000/- per month	Rs. Fifteen thousand only per month
4	Graduate Engineer Or Diploma Engineer	Civil/Electrical	Project Planning /quality/ Billing Engineer	2 Years Or 5 Years	1+1	Rs. 15,000/- per month	Rs. Fifteen thousand only per month
<b>Clause-37 (i)</b>							
<b>Extent of GST (Goods and services Tax) payable by contractor for building and construction works.</b>				<b>100% [Rates shall be inclusive of 100% GST. However, after issue of detailed guidelines / rules, if a portion of GST is to be paid by department (BSNL), the same shall be recovered from the bill of the contractor]</b>			
<b>Clause 42</b>							
i) (a)	Schedule / statement for determining theoretical quantities of cement.				DSR 2021 printed by CPWD with up to date correction slips as on the date of opening of tenders		
ii)	<b>Variation permissible on theoretical quantities</b>						
a)	Cement for works with estimated cost put to tender:						
	i) Not more than Rs. 5.00 Lakhs				3 % minus		
	ii) More than Rs. 5.00 Lakhs				2 % minus		

b)	Steel reinforcement and structural steel sections for each diameter, section and category.	2 % minus
<b>Star prices to be considered for Escalation and Recoveries:</b>		
S. No.	Material	Star Price (Rate in Figures and Words)
1	For Cement (OPC 43 grade only)	<b>Rs. 7,500/= (Rs. Seven Thousand Five Hundred Only) per Metric Tonne.</b>
2 (a)	For Mild steel	Not Applicable
2 (b)	For Reinforcement Steel conforming to BIS 1786 ( Fe 415 Grade)	Not Applicable
2 (c)	For Reinforcement Steel TMT bars	<b>Rs. 68,100/= (Rs. Sixty Eight Thousand One Hundred Only) per Metric Tonne.</b>
2(d)	For Galvanized steel	Not Applicable

\*\*\* The base rates of the material to be taken for MRJ is to be stipulated as star prices above under Clause-10CA.

Executive Engineer (Civil)  
BSNL Civil Division  
Solán

**Amendments to Clause 37 & 38 of GCC 2006**

Sr. No.	Existing Provision	Modified Provision
1	<p><b>Page 12 of GCC (item 15 of General Rules &amp; Directions)</b></p> <p>15. Sales tax, purchase tax, turnover tax or any other tax on material in respect of the contract shall be payable by the contractor and government will not entertain any claim whatsoever in respect of the same.</p>	<p><b>Page 12 of GCC (item 15 of General Rules &amp; Directions)</b></p> <p><b>15. GST [up to the extent mentioned in Schedule-F under Clause-37(i)],</b> Sales Tax/VAT, purchase tax, turnover tax or any other tax on material in respect of the contract shall be payable by the contractor and BSNL will not entertain any claim whatsoever in respect of the same.</p>
2	<p><b>Clause 37</b></p> <p><b>Levy / Taxes payable by contractor</b>                      (i) Sales Tax/VAT [including Service Tax up to the extent mentioned in Schedule-F under Clause-37(i)], Building and other construction workers Welfare Cess or any other tax or cess in respect of this contract shall be payable by the contractor and BSNL shall not entertain any claim whatsoever in this respect.</p>	<p><b>Clause 37</b></p> <p><b>Levy / Taxes payable by contractor</b>                      (i) Sales Tax/VAT [including GST up to the extent mentioned in Schedule-F under Clause-37(i)], Building and other construction workers Welfare Cess or any other tax or cess in respect of this contract shall be payable by the contractor and BSNL shall not entertain any claim whatsoever in this respect.</p>
3	<p><b>Clause 38</b></p> <p><b>Conditions for reimbursement of levy/taxes if levied after receipt of tenders</b>                      (i) All tendered rates shall be inclusive of all taxes and levies [including Service tax up to the extent mentioned in schedule-F under Clause-37(i)] payable under respective statutes. However, if any further tax or levy or cess is imposed by statute, after the last stipulated date for the receipt of tender including extensions, if any, and the contractor thereupon necessarily and properly pays such taxes/levies, the contractor shall be reimbursed the amount so paid, provided such payments, if any, is not in the opinion of the Superintending Engineer (whose decision shall be final and binding on the contractor) attributable to delay in execution of work within the control of the contractor.</p>	<p><b>Clause 38</b></p> <p><b>Conditions for reimbursement of levy/taxes of levied after receipt of tenders</b>                      (i) All tendered rates shall be inclusive of all taxes and levies [including GST up to the extent mentioned in schedule-F under Clause-37(i)] payable under respective statutes. However, if any further tax or levy or cess is imposed by statute, after the last stipulated date for the receipt of tender including extensions, if any, and the contractor thereupon necessarily and properly pays such taxes/levies, the contractor shall be reimbursed the amount so paid, provided such payments, if any, is not in the opinion of the Superintending Engineer (whose decision shall be final and binding on the contractor) attributable to delay in execution of work within the control of the contractor.</p>

**PART-B**  
**SH: CIVIL WORK**

**SPECIAL CONDITIONS**

**1.0 General:**

- 1.1. The eligible tenderers of civil component will quote rates for various items of electrical components of work also. The lowest tender shall be decided after adding quotes for Civil work component (Part B) and Electrical component (Part C). The quoted rates for various items in the tender shall be inclusive of all terms and conditions such as additional conditions, special conditions, particular specifications etc. and for adherence to all terms, conditions and specifications mentioned in the tender document. No extra payment shall be made to the contractor on account of this. Any infringement and/or breach of these specification and condition(s) etc. shall render the contractor liable for action(s) under various clauses of the contract and such action stipulated in conditions therein.
- 1.2. **GST [up to the extent mentioned in Schedule F under clause 37(i)], Sales tax / VAT, purchase tax, turnover tax or any other tax on materials in respect of this contract shall be payable by the Contractor and BSNL will not entertain any claim whatsoever in respect of the same.**
- 1.3. The Contractor shall make his own arrangements for electricity required for the execution of the work. Necessary payment shall be made by the Contractor directly to the department concerned. In case the statutory authority fails to sanction the electric connection or delays the sanction of electric connection, the Contractor shall make his own arrangements by providing diesel generators of adequate capacity at his own cost. No delay on this account shall be accepted. Nothing extra shall be paid on this account.
- 1.4. The Contractor shall make his own arrangement for backup power at his own cost. No interruption of work shall be accepted due to power failure. Nothing extra shall be paid on this account.
- 1.5. No walls or terraces shall be cut for making any opening after water proofing has been done without written approval of Engineer-in-Charge. When permitted cutting of water proofing work shall be done very carefully so that other portion of water proofing is not damaged. On completion of work at such place the water proofing work shall be made good and ensured that the opening / cutting is made fully water proof as per contract specifications/ directions of Engineer-in-Charge. Nothing extra shall be payable on this account.
- 1.6. No structural member shall be chased or cut without the written permission of the Engineer-in-Charge.
- 1.7. The order or preference in case of any discrepancy as indicated in condition No.8.1 under "Conditions of Contract" given in the General Conditions of Contract for BSNL 2006 form may be read as the following:
- (i) Nomenclature of items as per schedule of quantities.
  - (ii) Particular specifications, special and additional conditions etc., as stipulated in tender document.
  - (iii) Contract clauses of Standard BSNL Contract form 2006 as corrected and modified up to last date of receipt of tenders.
  - (iv) CPWD Specifications.
  - (v) Architectural Drawings.
  - (vi) Indian Standard Specifications.
  - (vii) Sound Engineering Practice.
  - (viii) Manufacture Specifications.
  - (ix) Decision of Engineer-in-Charge shall be final and binding.
- A references made to any Indian Standard Specifications in these documents, shall imply to the latest version of that standard, including such revisions / amendments as issued by the Bureau of Indian Standards up to last date of receipt of tenders. The contractor shall keep at his own cost all such publications of relevant Indian Standard applicable to the work at site.
- 1.8. The Contractor shall be bound to follow the instructions and restrictions imposed by the Local Administration / Police authorities on the working and /or movement of labour, materials etc. and or due to less/ restricted working hours or any detours in movement of vehicles. Nothing extra shall be payable on this account.
- 1.9. The Contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards such as day and night boards, speed limit boards and flags, red lights and providing barriers, etc. He shall be responsible for all damages and accidents caused due to negligence on his part. No hindrance shall be caused to traffic during the execution of work. Nothing extra shall be payable on this account.
- 1.10. All material shall only be brought at site as per programme finalized with the respective Engineer- Charge. Any pre-delivery of the material, not required for immediate consumption shall not be accepted and thus not paid for.
- 1.11. Large scale details and manufacture's dimensions for material to be incorporated shall take precedence over small scale drawings.
- 1.12. No foreign exchange shall be made available by the BSNL for the purchase of equipments, plants, machinery, material of any kind or other items required to be carried out in execution of work.

- 1.13. Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water. Nothing extra shall be payable on this account.
- 1.14. In accordance with requirements of the pollution control board, the DG sets installed during construction activity must be provided with necessary acoustic measures and exhaust pipe above the height of nearest tall building. The vehicles must possess necessary Pollution certificate. Nothing extra shall be payable on this account.
- 1.15. In accordance with requirements of the pollution control board, the diesel generator sets to be used during construction phase shall be low sulphur diesel type and shall conform to E(P) Rules prescribed for air and noise emission standards. Nothing extra shall be payable on this account.
- 1.16. In accordance with requirements of the pollution control board, the safety equipments like boots, helmets, safety belts, gloves etc. must be provided for the workers and best and safe engineering practices must be adopted. Nothing extra shall be payable on this account.
- 1.17. In accordance with requirements of the pollution control board, the stipulations under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006 shall be ensured. Nothing extra shall be payable on this account.
- 1.18. If, any levy / fine is imposed by the regulatory authorities / inspecting authorities on account of violation of the above specified norms, the same shall be recovered from the contractor.
- 1.19. Except for the items, for which Particular Specifications are given or where it is specifically mentioned otherwise in the description of the items in the schedule of quantities, the work shall generally be carried out in accordance with the "CPWD Specifications" (Refer Schedule F) and as per instructions of Engineer-in-Charge. Wherever CPWD Specifications are silent, the latest IS Codes / Specifications shall be followed and the rates should be all inclusive.
- 1.20. Any reference made to any Indian Standard Specifications, shall imply to the latest version of that standard, including such revisions / amendments as issued by the Bureau of Indian Standards up to last date of receipt of tenders. **The Contractor shall keep at his own cost all such publications including relevant Indian Standard applicable to the work at site.**
- 1.21. The work shall be executed and measured as per metric dimensions given in the Schedule of Quantities, drawings etc. (FPS units wherever indicated are for guidelines only).
- 1.22. The work should be planned in a systematic manner so that chase cuttings in the walls, ceilings and floors is minimized. Wherever absolutely essential, the chase shall be cut using chase cutting machines. Chases will not be allowed to be cut using hammer / chisel. The electrical boxes should be fixed in walls simultaneously while raising the brick work. The contractor shall ensure proper co-ordination of various disciplines viz. sanitary & water supply, horticulture & electrical etc.
- 1.23. All the hidden items such as water supply lines, drainage pipes, conduits, sewers etc. are to be properly tested before covering.
- 1.24. Samples including brand / quality of materials and fittings to be used in the work shall be got approved from the Engineer-in-Charge, well in advance of actual execution and shall be preserved till the completion of the work.
- 1.25. Equipment like concrete pump excavators/Transit mixer etc. shall be allowed to be moved away from the site when, in written opinion of Engineer-in-Charge, the same are no longer required at site of work.
- 1.26. The contractor, his agents / representative, workman etc. shall strictly observe orders pertaining to fire precautions prevailing in the area.
- 1.27. 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 at site. However, no claim on the alleged inadequacy or incorrectness of the soil data supplied by the department shall be entertained.
- 1.28. The tenderer shall see the approaches to the site. In case any approach from main road is required at site or existing approach is to be improved and maintained for cartage of materials by the contractor, the same shall be provided, improved and maintained by the contractor at his own cost.
- 1.29. Contractor shall take all precautionary measures to avoid any damage to adjoining property. All necessary arrangement shall be made at his own cost.

- 1.30 The contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards day and night, speed limit boards, red flags, red lights and providing barriers. He shall be responsible for all damages and accidents caused to work due to negligence on his part. No hindrances shall be caused to traffic, during the execution of the work.
- 1.31 The contractor shall take instructions from the Engineer-in-Charge regarding collection and stacking of materials at any place. No excavated earth or building rubbish shall be stacked on areas where other buildings, roads, compound wall, services etc are to be constructed.
- 1.32 The contractor shall provide at his own cost suitable weighing, surveying and levelling and measuring arrangements as may be necessary at site for checking. All such equipments shall be got calibrated in advance from laboratory, approved by the Engineer-in-Charge. Nothing extra shall be payable on this account.
- 1.33 Contractor shall provide permanent bench marks, flag tops 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.
- 1.34 Water tanks, taps, sanitary, water supply and drainage pipes, fittings and accessories should conform to byelaws and municipal body / corporation where CPWD Specifications are not applicable. The contractor should get the materials (fixtures/fittings) tested by the Municipal Body / Corporation authorities wherever required at his own cost.
- 1.35 The work shall be carried out in accordance with the Architectural drawings and Structural drawings, to be issued from time to time, by the Engineer-in-Charge. Before commencement of any item of work, the contractor shall correlate all the relevant architectural and structural drawings issued for the work, nomenclature of items, specifications etc. and satisfy himself that the information available there from is complete and unambiguous. The figures & the written dimensions of the drawing shall supersede the measurement by scale. The discrepancy, if any, shall be brought to the notice of the Engineer-in-Charge for immediate decision before execution of the work. The contractor alone shall be responsible for any loss or damage occurring by the commencement of work on the basis of any erroneous and/ or incomplete information and no claim, whatsoever shall be entertained on this account.
- 1.36 The Architectural drawings other than those indicated in nomenclature of items are only indicative of the nature of the work and materials/fittings involved unless and otherwise specifically mentioned.
- 1.37 The contractor should submit the shop drawing of staging and shuttering for approval of Engineer-in-Charge before actually commencing the execution of work under the item. Nothing extra shall be payable on this account.
- 1.38 Other agencies may also simultaneously execute and install the works and the contractor shall afford necessary facilities for the same. The contractor shall leave such recesses, holes, openings, trenches etc. as may be required for such related works (for which inserts, sleeves, brackets, conduits, base plates, clamps etc. shall be available as specified elsewhere in the contract) and the contractor shall fix the same at the time of casting of concrete, stone work and brick work, if required, and nothing extra shall be payable on this account.
- 1.39 The contractor shall conduct his work, so as not to interfere with or hinder the progress or completion of the work being performed by other contractor(s) or by the Engineer-in-Charge and shall as far as possible arrange his work and shall place and dispose off the materials being used or removed so as not to interfere with the operations of other contractor or he shall arrange his work with that of the others in an acceptable and coordinated manner and shall perform it in proper sequence to the complete satisfaction of others.
- 1.40 All material shall only be brought at site as per program finalized with the Engineer-in-Charge. Any pre-delivery of the material not required for immediate consumption shall not be accepted and thus not paid for.
- 1.41 The contractor shall procure the required materials in advance so that there is sufficient time for testing of the materials and approval of the same before use in the work.
- 1.42 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. In case temporary supporting/shifting of such services is required to facilitate the work, the same shall be done by the contractor at no extra cost.  
In case the existing services are to be shifted permanently, then before dismantling the existing services, alternate/diversion of service lines has to be laid by the contractor so that there is no interruption in use of existing services. The contractor has to plan the alternate suitable route for diversion/shifting of service lines and get the same approved from the Engineer-in-Charge before starting shifting of services. Nothing extra shall be paid except the payment of dismantling and laying of new service lines as per conditions of contract.
- 1.43 The contractor shall be responsible for the watch and ward / guard of the buildings, safety of all fittings and fixtures including sanitary and water supply fittings and fixtures provided by him against pilferage and breakage during the period of installations and thereafter till the building is physically handed over to the department. No extra payment shall be made on this account.



- 1.44 The contractor shall be fully responsible for the safe custody of materials brought by him/ issued to him even though the materials may be under double lock key system.
- 1.45 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 his own cost to the notified /specified dumping ground and under no circumstances these shall be stacked / dumped even temporarily, outside the construction premises.
- 1.46 Surplus excavated earth which is beyond the requirement of the B.S.N.L./ **Client Department** shall have to be disposed of the contractor at his own cost beyond the municipal limits or at places identified by the local bodies or as directed by the Engineer-in-Charge after obtaining written permission of the Engineer-in-Charge and no payment will be made by the Department for such disposal of this surplus excavated earth.
- 1.47 With each Running Bill, the details of test carried out shall be submitted by the contractor as per perform given in the document.
- 1.48 On completion of work, the contractor shall submit at his own cost four prints of "as built" drawings to the Engineer-in-Charge. These drawings shall have the following information.
- a) Run off of all piping and their diameters including soil, waste pipes and vertical stacks.  
b) Ground and invert level of all drainage pipes together with locations of all manholes and connections, up to out fall.
- c) Run off of all water supply lines with diameters, location of control valves, access panels etc.  
In case the contractor fails to supply "as built drawing" aforesaid within 30 days of the date of completion, then the recovery @ Rs.10, 000/- each for such set of drawings shall be made from the contractor's final bill.
- 1.49 In the item of providing and fixing precast reinforced cement concrete in shelves the cost of cutting chases and making good the same shall be inclusive in the item and nothing extra shall be paid on this account.
- 1.50 In the item of finishing walls with exterior paint, only the plain/flat area shall be measured for payment and nothing extra shall be paid on account of pointed wall surface.

## 2.0 Rates:

Unless otherwise specified in the schedule of quantities, the rates for respective items shall be all inclusive and apply to the following: -

- (i) All lifts & all heights, floors including terrace, leads and depths.
- (ii) All labour, material, tools and plants and other inputs involved in the execution of the item.
- (iii) Any of the conditions and specifications mentioned in the tender documents.
- (iv) Pumping / bailing out surface water / rain water / sub soil water, if necessary for any reason.
- (v) Providing sunk flooring in bath-rooms, kitchen, etc.
- (vi) Any legal or financial implications resulting out of disposal of earth, unserviceable building materials, debris, malba, if any.
- (vii) Payment of Royalty at the prevailing rates, if any, on the boulders, metal, shingle, sand and bajri etc. or any other material collected by him for the work direct to revenue authorities.
- (viii) Performance test of the entire installation(s) before the work is finally accepted.
- (ix) Any cement slurry added over base surface (or) for continuation of concreting for better bond is deemed to have been built in the items.
- (x) All incidental charges for cartage, storage and safe custody of materials brought to site.

## 3.0 **SECRECY**

3.1 The contractor shall take all steps necessary that all persons employed on any work in connection with the contract have notice that the Indian Official Secrets Act 1923 applies to them & will continue so to apply even after the execution of such works under the contract.

- 3.2 The contract in confidential and must be strictly confirmed to the contractor's own use (except so far as confidential disclosure to sub-contractors or suppliers as necessary) and to the purpose of the contract.
- 3.3 All documents, copies thereof & extracts there from furnished to the contractor shall be returned to the Engineer-in-Charge on the completion of the work / works or the earlier determination of the contract.

#### 4.0 LABOUR AND SECURITY

- 4.1 The contractor shall employ only Indian Nationals after verifying their antecedents and loyalty. The contractor shall, on demand submit list of his agents, employees and work people concerned & shall satisfy as to the bonafides of such people.
- 4.2 The contractor & his work people shall observe all relevant rules regarding security promulgated in which work is to be carried out by the Controlling Administrative Authority of the **Client Department** (hereinafter referred to as "Administrator").
- 4.3 The contractor, his representative, workman shall be allowed to enter through specified gates & timing as laid down by the controlling authority. They shall be issued an identity card or an individual pass in accordance with the standing rules & regulations & they should possess the same while working. The contractor shall be responsible for the conduct & actions of his workman, agents / representatives.
- 4.4 Normally contractor shall be allowed to carry out work between 7 AM to 6 PM. However, he may also be allowed to carry out the work beyond 6 PM & up to 7 AM if the site conditions / circumstances so demand with prior written permission from the "Administrator". However, if the work is carried out in more than one shift or at night, no claim on this account shall be entertained.

#### 5.0 OFFICE INFRASTRUCTURE:

- 5.1 The agency shall setup quality assurance lab for testing of material at site office including engagement of necessary personnel and infrastructure for the same. For quality assurance lab necessary equipment for testing of cubes, bricks, arrangement of silt test, bulkiness of sand, moisture content test, slump test on concrete. Instruments like electronic weighing machine, vernier calliper, sieves sets, cement concrete moulds 15x15x15cm (Two set of 6 Nos.) slump test apparatus, depth gauge 20cm, rubber hammer, steel foot plate etc shall be available at lab.
- 5.2 The agency, at his own cost, shall construct a site office for the field staff, inspecting officers and site lab having 2 rooms of size 3.0mx4.0m with toilet facility, furniture, cup boards, light, fan etc. at the place approved by the Engineer-In-Charge in the campus. The site office shall be temporary type structure in brick work with AC sheet roof, false ceiling, door and windows etc. complete. The same shall be got dismantled after completion of work with permission of Engineer-In-Charge. The site shall be made clean and free from debris, broken/ waste materials etc. Nothing extra shall be paid on this account.
- 5.3 **For quality control measures, measurements and monitoring the quality, the contractor shall provide one no. of supporting staffs for field work the entire completion period of 15 months under the control of SDE(Civil). Nothing extra shall be paid on this account. If the agency fails to provide the same, amount of Rs 20,000.00 p.m shall be recovered from the agency.**
- 5.4 The rates quoted by the agency should include charges for above office infrastructure required and nothing extra shall be paid for this.

#### 6.0 PROGRAM CHART: -

- 6.1 The Contractor shall prepare an integrated program 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 program within the stipulated period or earlier and submit the same for approval of the Engineer-in-Charge within **15 days** of the issue of letter of acceptance for the contract.
- 6.2 The work has to be completed in stages as indicated in the Milestones under clause 5 and the program should be prepared in such a manner to achieve these Milestones as indicated therein or even earlier.
- 6.3 The program chart should include the following: -
- a) Descriptive note explaining sequence of various activities.
  - b) Network (PERT / CPM / BAR CHART) which will indicate resources in financial terms, manpower and specialized equipment for every important stage.
  - c) Program for procurement of materials by the contractor.
  - d) Program of procurement of machinery / equipments having adequate capacity, commensurate with the quantum of work to be done within the stipulated period, by the contractor.
- 6.4 If at any time, it appears to the Engineer-in-Charge that the actual progress of work does not conform to the approved program referred above, the contractor shall produce a revised program showing the modifications to the approved program by additional inputs to ensure completion of the work within the stipulated time.

- 6.5 The submission of revised program or approval by the Engineer-in-Charge of such program 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. Notwithstanding the fact that the contractor will have to pay to the labour and 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.

#### 7.0 **PROGRESS AND MONITORING OF WORK:**

Contractor shall give the Engineer-in-Charge on the 10<sup>th</sup> day of each month, progress report of the work done during the previous month. Such progress report will include the project progress summary, work progress (planned v/s. actual), PERT chart, milestone status, financial progress status, manpower deployment status, important materials consumed, materials at site at the beginning of the month, materials consumed during the month and the balance quantities at the end of month and progress of the work stating the reasons for shortfall, if any including the steps and measures to be taken for making good the shortfall in the succeeding period. Non submission of aforesaid progress report shall make contractor liable for action under breach of contract conditions.

#### 8.0 **SAMPLE OF MATERIALS:-**

- 8.1 All materials and fittings brought by the contractor to the site for use shall conform to the samples approved by the Engineer-in-Charge which shall be preserved till the completion of the work. If a particular brand of material is specified in the item of work in Schedule of Quantity, the same shall be used after getting the same approved from Engineer-in-Charge. Wherever brand / quality of material is not specified in the item of work, the contractor shall submit the samples as per **List of Preferred Makes stated in the document** for approval of Engineer-in-Charge. For all items, ISI Marked materials and fittings shall be used with the approval of Engineer-in-Charge. Wherever ISI Marked material / fittings are not available, the contractor shall submit samples of materials / fittings manufactured by firms of repute conforming to relevant Specifications or IS codes for the approval of Engineer-in-Charge. **Equivalent means equal/equivalent in quality as well as cost/rate.**
- 8.2 To avoid delay, contractor should submit samples as stated above well in advance so as to give timely orders for procurement. If any material, even though approved by Engineer-in-Charge is found defective or not conforming to specifications shall be replaced / removed by the contractor at his own risk & cost.
- 8.3 BIS marked materials, except otherwise specified, shall also be subjected to quality test besides testing of other materials as per the specifications described for the item/material. Wherever BIS marked materials are brought to the site of work, the contractor shall, furnish manufacturer's test certificate or test certificate from approved testing laboratory to establish that the material procured by the contractor for incorporation in the work satisfies the provisions of specifications relevant to the material and / or the work done.  
BIS marked items (except cement & steel for which separate provisions have been made in para 10.0) required on the work shall be got tested, for only important tests, which govern the quality of the product, as decided by the Engineer-in-Charge. For mandatory test, frequency shall be as specified in CPWD Specifications.
- 8.4 For certain items, if frequency of tests is neither mentioned in the CPWD Specifications & BIS, then tests shall be carried out as per decision of Engineer-in-Charge.

#### 9.0 **CEMENT & STEEL REINFORCEMENT**

- 9.1 Contractor has to produce manufacturers test certificate for each lot of Cement & Steel Reinforcement procured at site.
- 9.2 **CEMENT:-**
- 9.2.1 The contractor shall procure 43 Grade Ordinary Portland Cement required in the work from reputed manufacturers of cement as per the approved make in 50 kg. bags bearing manufacturer's name and ISI marking, along with manufacturers test certificate for each lot.
- 9.2.2 OPC bags shall be stored in godown 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 actual size of godown shall be as per site requirements and nothing extra shall be paid for the same.
- 9.2.3 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 that 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 - 42), the cost of quantity of cement not so used 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 regarding theoretical quantity of the cement, which should have been actually used, shall be final and binding on the contractor.
- 9.2.4 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.

#### 9.3 **STEEL REINFORCEMENT: -**

- 9.3.1 The contractor shall procure Thermo Mechanical Treated (TMT) Steel Reinforcement bars (of Fe 415 grade as per IS 1786 from approved Primary producers by ministry of steel. The contractor shall obtain Original Vouchers and Test Certificates and furnish the same to the Engineer-in-Charge in respect of all the lots of steel brought by him from approved supplier to the site of work. The original vouchers and test certificates shall be kept on record in the site office by the Site staff.
- 9.3.2 The steel reinforcement shall be brought in bulk supply of 20 tonnes or more or as decided by the Engineer-in-Charge along with manufacturer test certificate for each lot.
- 9.3.3 The steel reinforcement shall be stored by the contractor at site of work about 30cm. to 45 cm. above ground. A coat of cement wash shall be given to steel bars when stored at site for long duration so as to prevent corrosion. Nothing extra shall be paid on these accounts. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.
- 9.3.4 In case the contractor bring surplus quantity of steel, the same after completion of the work will be removed from the site by the contractor at his own cost after approval of the Engineer-in- Charge. Nothing shall be paid on this account.
- 9.3.5 Reinforcement including authorised spacer bars and lappages shall be measured in length of different diameters as actually (not more than as specified in the drawings) used in the work nearest to a centimetre. **Wastage and unauthorized overlaps shall not be measured.**

#### 10.0 **ENGAGING SPECIALISED AGENCIES FOR WORKS: -**

- 10.1 The Contractor shall engage specialized agency unless otherwise approved by any Government Department having adequate technical capability and experience of having executed at least one work of similar items of 80% or more magnitude or two works of similar items of minimum 60% magnitude or three works of similar items of minimum 40% magnitude individually for executing the following items of the work and/or any other items of work where specialized firm is required to be engaged as per contract conditions. For determining the required magnitude, the value of the work executed may be suitably enhanced with the prevailing approved cost index.
- i) Water proofing treatment work of all types.
  - ii) Fabrication and erection of Skylights with necessary fittings
  - iii) Pile work
  - iv) Stainless steel railing
  - v) False ceiling and wall panelling
  - vi) Glass partitions
- 10.2 The Specialized agency for the work shall be got approved from the Engineer-in-Charge well before actual commencement of the item of work. The contractor shall submit the list of Specialized agencies, proposed to be engaged by him along with necessary performance certificates, within 15 days from the date of issue of acceptance letter to substantiate technical capability and experience of the agency for prior approval of the Engineer-in-Charge.
- 10.3 The conditions of approval of specialized agency shall be final and binding on the contractor and he shall comply with such conditions of approval.

#### 11.0 **QUALITY ASSURANCE & QUALITY CONTROL**

- 11.1. The work shall be subjected to a strict quality assurance and quality control as prescribed in the tender documents and as may be further required by the Engineer-in-charge.
- 11.2. The Contractor shall be required to carry out all mandatory tests as per the CPWD specifications and other tests prescribed in this tender document. In addition, the Engineer-in-charge may at his discretion, order carrying out additional tests, as may be felt necessary by him.
- 11.3. Tests shall be carried out from one of the following laboratories/test houses as shall be decided by the Engineer in- charge.
- i. National Test House, Delhi
  - ii. Shri Ram Institute for Industrial Research, New Delhi
  - iii. CBRI, Roorkee
  - iv. PEC, Chandigarh.
  - v. Indian Institute of Technology, Mandi/Ropar
  - vi. NABL accredited labs.
  - vii. Any other labs approved by O/o CE (C), BSNL Shimla.
- 11.4 The agency shall essentially deploy equipment & machinery (owned or hired) as per the list given the document, in addition to any other T & P required to achieve the Milestone(s) at his own cost.

**List of Preferred Makes for Civil & Public Health Works for the work**

SN	Name of Materials	Preferred Makes
1	Ordinary Portland cement/ Pozzolona Cement (Grey) - 43 Grade	ACC, Ultratech, Gujarat Ambuja, Vikram, Birla, JKCement, JP Rewa & Shree.
2	RMC	Ultratech, Lafarge, ACC
3	White Cement	Birla White / J. K. White
4	Reinforcement Steel	SAIL, TISCO, RINL,JSW LTD, JINDAL STEEL & POWER(Panther)
5	Mica/Laminates	Greenply, Century, Merino ,GreenPanel
7	UPVC windows/door hardware/ fittings	PULSE,HOPPE,GU,ROTTTO , Signia, KInlong
8	UPVC sections material door/window	Veka, Fenesta, Aluplast
9	Pressed Steel Frames	KRISHNA STEEL FABRICATOR SIRSA, LAXMI STEEL WORKS BAHADURGARH, ASHISH INDUSTRIES GHAZIABAD, ASHWANI & SONS.
10	Water Proofing Compound	Fosroc, Cico, Pidilite. Impermo by M/s Snowcem & Sika.
11	PVC Pipe & Fittings	Supreme, Finolex & Prince.
12	Acrylic Distemper / Plastic Paint / OBD	NEROLAC ACRYLIC DISTEMPER, TRACTOR ACRYLIC DISTEMPER (ASIAN PAINTS) , MAXILITE ACRYLIC DISTEMPER (ICI), BISON ACRYLIC DISTEMPER (BERGER).
13	Synthetic Enamel Paint	DULUX HI-GLOSS (ICI), APCOLITE PREMIUM GLOSS (ASIAN), NEROLAC HIGH GLOSS (NEROLAC), LUXOL HI-GLOSS (BERGER
14	Steel /wood Primer	ICI, Nerolac , Berger & Asian Paints
15	STRUCTURAL, SUSPENDED GLAZING, CURTAIN WALL GLAZING, GLAZED SKYLIGHT FABRICATORS	ALUPRO, SP FABRICATORS, GLAZE TECH, GREEN FAÇADE
16	Mosaic Glass Tiles	Coral, Mridul, Italia & Bisaza
17	Dash / Anchoring Fasteners	HILTI / Fischer
18	Nuts / Bolts & Screws	GKW & Atul
19	Stainless Steel Sink (Out of Salem Steel only)	DIAMOND, NIRALI, Neelkant & Jayna
20	Float Valve	Viking & Prayag.
21	Admixtures	Fosroc & Sika
22	Vitreous China Sanitary Ware	Parryware, Hindware,Jaquar ,RAK & Cera
23	Plastic Seat Cover of W.C. (ISI Mark only)	Commander, Hindware, Admiral, Parryware & Cera
24	CP Fittings / Mixer Pillar taps Washers	ESS ESS, Jaquar continental series or equivalent,RAK
25	CP Accessories	ESS ESS, Jaquar continental series or equivalent,RAK
26	Centrifugally Cast (Spun) Iron Pipes	NECO, HIF, HEPCO, SKF
27	Centrifugally Cast (Spun) Iron Pipes (Class LA)	Electro Steel, Kesoram & Jindal.
28	G.I. Pipes	Jindal (Hissar) & TATA
29	G.I. Fittings	Unik & UU
30	Gun metal Valves	Leader, Zoloto & Sant
31	Stone Ware Pipes & Gully Traps	Prefect, Hind, Crystal or ISI marked S.W.Pipes.
32	Mirror Glass	Atul, Modi Guard & Saint Gobain
33	Grouting Compound	Bal endura & Latticrete
34	Aluminium Sections	Hindalco, Jindal, Indalco

35	Aluminium Fittings	Ebco, Dorma, Ozone, Classic & Everite
36	Hydraulic Door Closer	Dorset, Dorma, Ozone, Everite, Godrej
37	Floor Springs	Ebco, Dorma, Ozone, Godrej
38	Exterior Paint	APEX ULTIMA (ASIAN), DULUX WEATHERSHEILD MAX (ICI), EXCEL (NEROLAC), WEATHERCOAT ALL GUARD (BERGER).
39	Friction Hinges	Zipco, AKS, Dorma & Earl Bihari
40	Reflective Sun Control Film	Garware
41	Ply board / laminated board	Greenply, Century, Merino, Green Panel, Archid
42	Telescopic Drawer Channel	Earl Bihari & Hettich
43	Ceramic Tiles (Rectified only)	Nitco, Johnson, Orient bell, RAK & Kajaria
44	Vitrified Tiles (Full body)	Restile, NITCO, Qutone
45	AUTOCLAVED AERATED BLOCKS	BILTECH, ECO GREEN, FINECRETE, J.K. LAKSHMI CEMENT LTD.
46	Glass including high performance thermal glass	Saint Gobain, Modi Guard & AIS
47	Brass Locks	Dorset, Crust, Kich & Godrej
48	Particle Board/block/ply board/laminated board	Greenply, Century, Merino, GreenPanel,
49	POLYETHYLENE WATER STORAGE TANK	SINTEX, VECTUS, FRONTIER, KAVARI,
50	Patch fitting for frameless glass	Dorma, Ozone, Dorset
51	CEILING TILES	Armstrong / Hunter Doglus
52	Silicon Sealant	Dow Corning, GE & 3M
53	Paver Blocks & Kerb stones	Unitile, NITCO, NTC
54	Stainless Steel Hand Rail System	Kich, Dorset, Crust, Dorma, ICICH Industries, Essal
55	FRP doors/Frame	Fibre ways technology, Shiv Shakti Fibre udhyog, Jaindoor Pvt. Ltd., Jayna.
56	Wall Putty	Birla Care & JK White
57	Ceramic Wall/ Dado	Nitco, Johnson, Orient bell, RAK & Kajaria
58	W.C., EWC, Wash Basin, Urinal & Urinal Division Plates	Hindware, Parryware, Cera, RAK & Jaguar
59	Health Shower, Taps, Jet Spray	Jaguar, ESS-ESS Moen & Marc
60	Steel pre painted sheet	TATA, JINDAL, CRIL, LLOYDS, BHUSAN
61	Flush Door Shutters	Century, Greenlam, Archid, Merino and GreenPanel
62	MILD STEEL DOOR, WINDOWS & VENTILATORS MANUFACTURERS	FRIENDS MANUFACTURING COMPANY, KOTKAPURA, PD INDUSTRIES, SHAKTI INDUSTRIES, STEELMAN INDUSTRIES, SKS STEEL INDUSTRIES, SHIVAM
63	M.S. TUBES/HOLLOW STEEL SECTION	TATA STEEL LTD, JINDAL INDUSTRIES HISSAR, BHUSHAN POWER STEEL, JSW STEEL LTD, APL(Apollo)
64	Aluminium composite panel sheet	Alucobond, Alstone, Aludecor, Alomax

It is certified that I have gone through the above list of preferred make of materials and the rates has been quoted accordingly.

(Signature of Contractor)

**PROFORMA FOR ASSOCIATION OF ELECTRICAL AGENCY**

We would like to engage the following Electrical Contractor for this work:-

Name of Contractor	Address	Class of Registration	Max. Ceiling Limit to execute Elect. work	BSNL/CPWD/HPP WD/RAILWAYS/ME S etc. Registration No.	Validity of Registration	Whether debarred from tendering

Signature of Contractor)

**PROFORMA FOR CONSENT LETTER FOR ASSOCIATION WITH ELECTRICAL CONTRACTOR**

**NAME OF WORK:- Construction of New Academic Block in Campus of Government Polytechnic for Women Kandaghat, Distt. Solan [HP]. (SH. Civil Work & Electrical works)**

I/We hereby give my/our consent to work as electrical contractor for execution of the electrical component of the work till the completion of work/project. I/We shall also be responsible for all necessary action to hand over the installation and for rectification of defects and repair during the maintenance period. I/We shall execute the work as per CPWD specifications and other provisions mentioned in additional, special, particular etc. terms and conditions of the contract.

I/We shall engage suitable qualified Engineer for the work as per condition of contract.

I/We hereby certify that I/We am/are registered contractors of BSNL/CPWD/HPPWD/RAILWAYS/MES etc., eligible to tender for the estimated cost of electrical component of the work.

I/We hereby certify that none of my relative (s) as defined in the document, is are employed in concerned BSNL Civil and Electrical Zone. In case at any stage, it is found that the information given by me is false/incorrect, BSNL shall have the absolute right to take any action as deemed fit without any prior intimation to me.

I further certify that the above particulars pertaining to me are correct.

**(Signature of Electrical Contractor)**



## PARTICULAR SPECIFICATIONS OF WORK

### **1.0 R.C.C. WORK:-**

#### **1.1 Construction Joint:**

- 1.1.1 Concreting shall be carried out continuously up to the construction joints, the position and details of which shall be as shown in structural drawing or as indicated in Fig. 26 of CPWD Specification or as directed by Engineer-in-charge. Number of such joints shall be kept to minimum. These shall be straight and shall be at right angles to the direction of main reinforcement. Construction joints should comply with IS : 11817.
- 1.1.2 In case of columns the joints shall be horizontal and 10 to 15 cm below the bottom of the beam running into the column head. The portion of the column between the stepping off level and the top of the slab shall be concreted with the beam.
- 1.1.3 When stopping the concrete on a vertical plane in slabs and beams, an approved stop-board (see Fig. 26 C of CPWD Specification) shall be placed with necessary slots for reinforcement bars or any other obstruction to pass the bars freely without bending. The construction joints shall be keyed by providing a triangular or trapezoidal fillet nailed on the stop-board. Inclined or feather joints shall not be permitted. Any concrete flowing through the joints of stop-board shall be removed soon after the initial set. When concrete is stopped on a horizontal plane, the surface shall be roughened and cleaned after the initial set.
- 1.1.4 When the concrete is to be resumed, the joint shall be thoroughly cleaned with wire brush and loose particles removed. A coat of neat cement slurry at the rate of 2.75 kg of cement per square meter shall then be applied on the roughened surface before fresh concrete is laid.

#### **1.2 Compaction:**

- 1.1.1 Concrete shall be thoroughly compacted and fully worked around embedded fixtures and into corners of the form work. Compaction shall be done by mechanical vibrator of appropriate type till a dense concrete is obtained. The Mechanical vibrators shall conform to IS 2505, IS:2506, IS:2514, and IS:4656. To prevent segregation, over vibration shall be avoided.
- 1.1.2 Compaction shall be completed before the initial setting starts. For the items where mechanical vibrators are not possible to be used, the contractor shall take permission of the Engineer-in-charge in writing before the start of the work. After compaction, the top surface shall be finished even and smooth with wooden trowel before the concrete begins to set.
- 1.2.3 Concrete shall be compacted into dense mass immediately after placing by means of mechanical vibrators designed for continuous operations. The Engineer-in-Charge may however relax this conditions at his discretion for certain items, depending on the thickness of the members and feasibility of vibrating the same and permit hand compaction instead. Hand compaction shall be done with the help of tamping rods so that concrete is thoroughly compacted and completely worked around the reinforcement, embedded fixtures, and into corners of the form. The layers of concrete shall be so placed that the bottom layer does not finally set before the top layer is placed. The vibrators shall maintain the whole of concrete under treatment in an adequate state of agitation, such that de-aeration and effective compaction is attained at a rate commensurate with the supply of concrete. The vibration shall continue during the whole period occupied by placing of concrete, the vibrators being adjusted so that the centre of vibrations approximates to the centre of the mass being compacted at the time of placing.
- 1.2.4 Concrete shall be judged to be properly compacted, when the mortar fills the spaces between the coarse aggregate and begins to cream up to form an even surface. When this condition has been attained, the vibrator shall be stopped in case of vibrating tables and external vibrators. Needle vibrators / internal vibrators shall be withdrawn slowly so as to prevent formation of loose pockets. In case both internal and external vibrators are being used, the internal vibrator shall be first withdrawn slowly after which the external vibrators shall be stopped so that no loose pocket is left in the body of the concrete. The specific Contractor instructions of the makers of the particular type of vibrator used shall be strictly complied with. Shaking of reinforcement for the purpose of compaction should be avoided. Compaction shall be completed before the initial setting starts or extended initial setting time in case where retarder is used.

#### **1.2 Curing:**

- 1.3.1 As soon as concrete is compacted and levelled, the exposed surface shall be covered with polythene sheet for initial two to three hours after laying of the concrete so that moisture loss from the concrete can be prevented.
- 1.3.2 When the concrete begins to harden i.e. two to three hours after compaction, the exposed surfaces shall be kept damp with moist gunny bags, sand or any other material approved by the Engineer-in-charge. 24 hours after compaction, the exposed surface shall be kept continuously in damp or wet conditions by ponding or by covering with a layer of sacking, canvass, Hessian or similar absorbent materials and kept constantly wet for at least 10 days from the date of placing of concrete.
- 1.3.4 Approved curing compounds may be used in lieu of moist curing with the written permission of the Engineer-in-Charge. Such compounds shall be applied to all exposed surfaces of the concrete as soon as possible after the concrete has set.
- 1.3.4 Freshly laid concrete shall be protected from rain by suitable covering.

1.3.5 Over the foundation concrete, the masonry work may be started after 48 hours of its compaction but the curing of exposed surfaces of cement concrete shall be continued along with the masonry work for at least 10 days. And where cement concrete is used as base concrete for flooring, the flooring may be commenced before the curing period of base concrete is over but the curing of base concrete shall be continued along with top layer of flooring for a minimum, period of 10 days.

#### **1.4 Finishing:**

1.4.1 In case of roof slabs the top surface shall be finished even and smooth with wooden trowel, before the concrete begins to set.

1.4.2 Immediately on removal of forms, the RCC work shall be examined by the Engineer-in-Charge, before any honey combs / defects are made good.

1.4.3 Surface defects of a minor nature may be accepted. On acceptance of such a work by the Engineer-in-Charge, the same shall be rectified as follows :

a) Surface defects which require repair when forms are removed, usually consist of bulges due to movement of forms, ridges at form joints, honey combed areas, damage resulting from the stripping of forms and bolt holes, bulges and ridges are removed by careful chipping or tooling and the surface is then rubbed with a grinding stone. Honey-combed and other defective areas shall be chipped out, the edges being cut as straight as possible and perpendicular to the surface, or preferably slightly undercut to provide a key at the edge of the patch. patch.LAR SPECIFICATION BSNL

b) Shallow patches shall first treated with a coat of thin grout composed of one part of cement and one part of fine sand and then filled with mortar similar to that used in the concrete. The mortar is placed in layers not more than 10 mm thick and each layer is given a scratch finish to secure bond with the succeeding layer. The last layer is finished to match the surrounding concrete by floating, rubbing or tooling on formed surfaces by pressing the form material against the patch while the mortar is still plastic.

c) Large and deep patches require filling up with concrete held in place by forms. Such patches are reinforced and carefully dowelled to the hardened concrete.

d) Holes left by bolts are filled with mortar carefully packed into places in small amounts. The mortar is mixed as dry as possible, with just enough water so that it will be tightly compacted when forced into place.

e) Tiered holes extending right through the concrete may be filled with mortar with a pressure gun similar to the gun used for greasing motor cars.

f) Normally, patches appear darker than the surrounding concrete, possibly owing to the presence on their surface of less cement laitance. Where uniform surface colour is important, this defect shall be remedied by adding 10 to 20 percent of white Portland cement to the patching mortar. The exact quantity being determined by trial.

g) The same amount of care to cure the material in the patches should be taken as with the whole structure, Curing must be started as soon as possible, after the patch is finished to prevent early drying. Damp Hessian may be used but in some locations it may be difficult to hold it in place. A membrane curing compound in these cases will be most convenient.

1.4.4 The surface which is to receive plaster or where it is to be joined with brick masonry wall, shall be properly roughened immediately after the shuttering is removed, taking care to remove the laitance completely without disturbing the concrete. The roughening shall be done by hacking. Before the surface is plastered, it shall be cleaned and wetted so as to give bond between concrete and plaster. RCC work shall be done carefully so that the thickness of plaster required for finishing the surface is not more than 6 mm.

1.4.5 The surface of RCC slab on which the flooring with cement base is to be laid shall be roughened with brushes while the concrete is green. This shall be done without disturbing the concrete.

#### **1.5 FORM WORK:**

1.5.1 The work shall be done in general as per CPWD Specifications.

1.5.2 Only M.S. centring / shuttering and scaffolding material unless & otherwise specified shall be used for all R.C.C. work to give an even finish of concrete surface.

1.5.3 In order to keep the floor finish as per architectural drawings and to provide required thickness of the flooring as per specifications, the level of top surface of R.C.C. shall be accordingly adjusted at the time of its centring, shuttering and casting for which nothing extra shall be paid to the Contractor.

As per general engineering practice, level of floors in toilet / bath, balconies, shall be kept 12 to 20mm or as required, lower than general floors shuttering should be adjusted accordingly. Nothing extra is payable on this account.

1.5.4 Steel shuttering as approved by the Engineer-in-Charge shall be used by the contractor. Minimum size of shuttering plates shall be 600mm x 900mm except for the case when closing pieces are required to complete the shuttering panels. Dented, broken, cracked, twisted or rusted shuttering plates shall not be allowed to be used on the work. The shuttering plates shall be cleaned properly with electrically driven sanders to remove any cement slurry or cement mortar or rust. Proper shuttering oil or de-bonding compound shall be applied on the surface of the shuttering plates in the requisite quantity before assembly of steel reinforcement.

#### **1.6 REINFORCEMENT:**

The reinforcement shall be done as per CPWD Specifications.

- 1.6.1 The rate of item of reinforcement of RCC work includes all operations including straightening, cutting, bending, welding, binding with annealed steel or welding and placing in position at all the floors with all leads and lift complete as per CPWD Specifications.
- 1.6.2 The contractor shall provide approved type of support for maintaining the bars in position and ensuring required spacing and correct cover of concrete to reinforcement as called for in the drawings, spacer blocks of required shape and size. Chairs and spacer bars shall be used in order to ensure accurate positioning of reinforcement. **Spacer blocks shall be cast well in advance with approved proprietary pre-packed free flowing mortars (Conbextra as manufactured by M/S Fosroc Chemicals India Ltd. or approved equivalent)** of high early strength and same colour as surrounding concrete, Pre-cast cement mortar/concrete blocks/blocks of polymer shall not be used as spacer blocks unless specially approved by the Engineer-in-charge, rate of RCC items is inclusive of cost of such cover blocks.

## **2.0 PRE-CAST RCC WORK**

- 2.1 The work shall be done in accordance with CPWD Specifications.
- 2.2 Pre-cast reinforced concrete units shall be of grade or mix as specified. Provision shall be made in the mould to accommodate fixing devices such as hooks etc. and forming of notches and holes. Each unit shall be cast in one operation. A sample of the unit shall be got approved from Engineer-in-charge before taking up the work.
- 2.3 Pre-cast units shall be clearly marked to indicate the top of member and its location.
- 2.4 Pre-cast units shall be stored, transported and placed in position in such a manner that these are not damaged.
- 2.5 The compaction of the concrete shall be done by vibrating, table or external vibrator, as approved by Engineer-in-charge. The rate quoted for the item shall include the element for framework and mechanical vibration.
- 2.6 Rate for item includes cost of all materials, labour, and all operations involved. Cost of M.S. frames, lugs including their welding, lifting hooks is also included.

## **3.0 BRICK WORK:-**

- 3.1 The brickwork shall be carried out with good quality well burnt FPS bricks of class designation 75 as per CPWD Specifications or as specified in the item.
- 3.2 The rate shall also include for leaving chases / notches for dowels / cramps for all kinds of cladding to come over brick work.
- 3.3 Brick work provided around shaft or lift walls or around slab cut outs shall be measured in the brick for corresponding floor level. Nothing extra shall be paid on this account.

## **4.0 WOOD WORK:-**

- 4.1 The wood work in general shall be carried out as per CPWD Specifications.
- 4.2 The sample of timber to be used shall be deposited by the contractor with Engineer-in-charge before commencement of work.
- 4.3 The shape and size of beading shall be as per drawings. The joints of beading shall be mitred.
- 4.4 Timber shall be of specified species, good quality, kiln seasoned and preservative treated. It shall have uniform colour, reasonably straight grains and shall be free from knots, cracks, shakes and sapwood. It shall be close grained. The contractor shall deposit the samples of species of timber to be used with the Engineer-in-Charge for testing before commencement of the work.
- 4.5 Wood work shall not be painted, oiled or otherwise treated before it has been approved by the Engineer-in-charge. All portion of timber including architrave abutting against masonry, concrete, stone or embedded in ground shall be painted with approved wood preservative or with boiling coaltar.
- 4.6 The contractor(s) shall produce cash voucher and certificates from approved Kiln Seasoning Plants about the timber used on the work having been kiln seasoned and chemically treated by them, falling which it would not be so accepted as kiln seasoned and/or chemically treated.
- 4.7 The shutters should be fabricated in factories & fabrication should conform to CPWD Specifications 2009.
- 4.8 The contractor shall propose well in advance to Engineer-in-Charge, the names and address of the factory where from the contractor intends to get the shutters manufactured along with the credential of the firm. The contractor shall place the order for manufacturing of shutters only after obtaining approval of the Engineer in Charge whose decision in this case shall be final & binding. In case the firm is not found suitable he shall propose another factory. The factory may also be inspected by a group of officers before granting approval; shutters shall however be accepted only if these meet the specified test.

4.9 Contractor will arrange stage wise inspection of the shutters at factory by the Engineer-in-Charge or his authorized representative. The contractor will have no claim if the shutters brought at site in part or full lot are rejected by the Engineer-in-Charge due to bad workmanship / quality. Such defective shutters will not be measured and paid. The contractor shall remove the same from the site of work with in 7 days after the written instruction in this regard are issued by the Engineer-in-Charge.

#### **5.0 STEEL WORK:-**

5.1 The work shall be carried out as per CPWD Specifications.

5.2 **Pressed Steel Frame / T Iron Frames:** - The work shall be done as per CPWD Specifications 2009 and IS 4351. The frames shall be fabricated in approved workshops as mentioned in the List of preferred makes.

#### **6.0 FLOORING:**

6.1 All work in general , shall be carried out as per CPWD Specifications. Only machine cut stone slabs of Marble, Granite, Kota, etc. shall be used for flooring work.

6.2 Whenever flooring is to be done in patterns of tiles and stones, the contractor shall get samples of each pattern laid and approved by the Engineer-in-charge before final laying of such flooring. Nothing extra shall be payable on this account.

6.3 Different stones / tiles used in pattern flooring shall be measured separately as defined in the nomenclature of the item and nothing extra for laying pattern flooring shall be paid over and above the quoted rate. No additional wastage, if any, shall be accounted for any extra payment.

6.4 Samples of flooring stones (Kota/ Marble/ Granite etc.) shall be deposited well in advance with the Engineer-in-Charge for approval. Approved samples should be kept at site with the Engineer-in-Charge and the same shall not be removed except with the written permission of Engineer-in-Charge. No payment whatsoever shall be made for these samples.

6.5 The Marble/ Kota/ Granite or any other stone shall be fully supported by the details establishing the quarry and its location.

6.6 Whenever the Kota stone/marble stone flooring are to be provided in treads of staircase, it should be provided in one piece with pre finished nosing and pre polished exposed surfaces and edges. Kota stone flooring or granite stone flooring to be provided on top of cooking platform shall be pre polished with pre finished nosing.

#### **7.0 FINISHING:**

7.1 The work shall be done in accordance with CPWD Specifications.

7.2 All painting material of approved brand and manufacturer shall be brought to the site of work in the original sealed containers. The material brought to the site of work shall be sufficient for at least 30 days of work. The material shall be kept under the joint custody of contractor and representative of the Engineer-in-charge. The empty containers shall not be removed from the site till the completion of the work without permission of the Engineer-in-charge.

#### **8.0 SANITARY INSTALLATIONS /WATER SUPPLY / DRAINAGE:-**

8.1 The work in general shall be carried out as per CPWD Specifications.

8.2 The tendered rates shall include the cost of cutting holes in walls, floors, RCC slabs etc. wherever required and making good the same for which nothing extra shall be paid.

8.3 The Centrifugally spun cast iron pipe IS: 3989-1984 ,wherever necessary, shall be fixed to RCC columns, beams etc. with rawl plugs of approved quality and nothing extra shall be paid for on this account. In case the pipe is to be imbedded in the brick wall/RCC/CC, the same shall be got done as per direction of Engineer-in-charge and nothing extra shall be paid on account of this.

#### **9.0 Aluminium doors, windows, ventilators etc. glazing specifications**

9.1 The work shall be carried out through an approved specialized Agency, who shall furnish all material, labour, accessories, equipment, tool and plants and incidentals required for providing and installing Polyester powder coated aluminium doors, windows, claddings, louvers and other items as called for on the drawings. The drawings and specifications cover the major requirements only. The supplying of additional fastenings, accessories, fixtures and other items not mentioned specifically herein, but which are necessary to make a complete installation shall be a part of this contract.

9.2 **General:** - Aluminium doors, windows etc. shall be of sizes, section details as shown on the Architectural drawings. The details shown on the drawings indicate generally the sizes of the component parts and general standards. These may be

varied slightly to suit the standard adopted by the manufacturers. Before proceeding with any manufacturing, the contractor shall prepare and submit complete manufacturing and installation drawings for approval of the Engineer-in-Charge and no work shall be performed until the approval of these drawings is obtained.

- 9.3 **Shop Drawings:** -The contractor shall submit the shop drawings of doors, windows, louvers, cladding and other aluminium work, based on the architectural drawings to the Engineer-in-Charge for his approval. The shop drawing shall show full size sections of doors, windows etc. thickness of metal (i.e. wall thickness) details of construction, sub frame/rough ground profile, anchoring details hardware as well as connection of windows, doors and other metal work to adjacent work. Samples of all joints and methods of fastening and joining shall be submitted to the Engineer-in-Charge for approval well in advance of commencing the work.
- 9.4 **Samples:** -Samples of doors, windows louvers etc. shall be fabricated, assembled and submitted to Engineer-in-Charge for his approval. They shall be of sizes, types etc. as decided by Engineer-in-Charge. All samples shall be provided at the cost of the contractor and nothing shall be paid on account of these.
- 9.5 **Sections:** -Aluminium doors and windows shall be fabricated from approved sections of profiles as detailed on drawings. The sections shall be approved by the Engineer-in-Charge. The aluminium sections shall conform to BIS designation IIE/IIV 9 WP alloy, with chemical composition technical properties, as per IS: 733 and IS: 1285. The permissible tolerance of the sections shall be such as not to impair the proper and smooth function/ operations and appearance of doors and windows.
- 9.6 **Fabrication:** - Doors, windows etc. shall be fabricated to sizes at factory and shall be of section, sizes, combinations and details as shown on the drawings. All doors, windows etc. shall have mechanical joints. The joints shall be designed to withstand a wind load of 150 Kg. per sqm. The design shall also incur that the maximum deflection of any member shall not exceed 1/175 of the span of the member. All members shall be accurately machined and fitted to form hairline joints prior to assembly. The joints accessories such as cleats, brackets etc. shall be of such material as not to cause any bimetallic action. The design of the joints and accessories shall be such that the accessories are fully concealed. The fabrication of doors, windows, etc. shall be done in suitable sections to facilitate easy transportation, handling and installation. Adequate provision shall be made in the door and window members for anchoring to support and fixing of hardware and other fixture as approved by the Architect.
- 9.7 Polythene tape protection shall be applied on the aluminium section before they are brought to site. All care shall be taken to ensure surface protection during transportation, storage at site and installation. The tape protection shall be removed on installation. The sample will be tested in the approved laboratory and cost of samples; cost of testing etc. shall be borne by the contractor.
- 9.8 **Protection of finish:** - All aluminium members shall be wrapped with approved self-adhesive non-staining. PVC tapes and nothing extra shall be paid on this account.
- 9.9 **Handing and Stacking:** -
- 9.9.1 Fabricated materials shall be carried in an approved manner to protect the material against any damage during transportation. The loading and unloading shall be carried out with utmost care. On receipt of material at site, it shall be carefully examined to detect any damaged pieces. Arrangements shall be made for expeditious replacement of damaged pieces/ parts. Materials found to be acceptable on inspections shall be repacked in crates and stored safely.
- 9.9.2 In the case of composite windows and doors, the different units are to be assembled first. The assembled composite units should be checked for line, level and plumb before final fixing is done. Units may be serial numbered and identified as out how to be assembled in their final locations if situation so warrants.
- 9.9.3 The contractor shall be responsible for assembling composite, bedding and filling the groove with polysulphide sealant inside and outside, at transoms and mullions placing the doors, windows etc. in their respective openings. After the doors/ windows have been fixed in their correct assigned position, the open hollow sections abutting masonry concrete shall be fitted with approved polysulphide sealant densely packed and finished neat.
- 9.9.4 The contractor shall be responsible for doors, windows, etc. being set straight, plumb, level and for their satisfactory operation after fixing is complete.
- 10.0 **Installation:**
- 10.1 Just prior to installation the doors, windows, etc. shall be uncreated and stacked on edge on level bearers and supported evenly. The frame shall be fixed into position true to line and level using adequate number of expansion machine bolts, anchor fasteners, of approved size and manufacture and in an approved manner. The holes in concrete/masonry members for housing anchor bolts shall be drilled with an electric drill.
- 10.2 The door/ windows assembled as shown on drawings shall be placed in correct final position on the opening and marks made on concrete members at jambs, sills and heads against the holes provided in frames for anchoring. The frame shall then be removed from the opening and laid aside. Neat holes with parallel sides of appropriate size shall then be drilled in the concrete members with an electric drill at the marking to house the expansion bolts. The expansion bolts shall then be

inserted in the holes, struck with a light hammer till the nut is forced into the anchor shell. The frame shall then be placed in final position in the opening and anchored to the support through cadmium plated machine screws of required size and anchored to the support through cadmium plated machine screws of required size threaded to expansion bolts. The frame shall be set in the opening by using wooden wedges at supports and be plumbed in position. The wedges shall invariably be placed at the meeting at points of glazing bars and frame.

10.3 Neoprene gaskets: - The contractor shall provide and install Neoprene gaskets of approved size and profile at all locations as shown and as called for to render the doors, windows etc. absolutely air tight and weather tight. The contractor shall produce samples of the gaskets for approval and shall procure the same only after approval of the product.

10.4 The gaps between aluminium frames and adjacent RCC/Brick work/ Stone work etc. and also any gaps in the door and windows sections shall be raked out as directed and filled with approved sealant as per direction of Engineer-in-charge.

10.5 **Details of Test:** -

10.5.1 The various tests on aluminium sections shall be conducted in accordance with the relevant CPWD specifications/IS codes. The samples of major member of each unit of doors/ windows shall be selected at random by Engineer-in-Charge as such that all the aluminium section shall be got tested.

10.5.2 **Acceptance Criteria:** - The aluminium work shall carry one year of guarantee after completion of work against unsound material, workmanship and defective coating as per guarantee bond. Guarantee in prescribed Performa given in the document , must be given by the specified firm, which shall be counter signed by the contractor, in token of his overall responsibility. If any defect is noticed during the guarantee period, the contractor should rectify it within seven days and if not attended to the same will be got done from another agency at the risk and cost of contractor and shall be recovered from Security deposit.

10.5.3 **Rates:** -

The rates of the item shall include the cost of materials, labour etc. including all incidental charges in all the above operations as specified in CPWD specifications. The rate also includes the cost of hinges/pivots.

Correction Slip No.6

(To GCC for civil works-2006)

Clause No.	Present Provision	Proposed Provision
Clause 7	<p>No payment shall be made for work, ----- rates as decided by Engineer-in-Charge.</p> <p>The amount admissible will as far as possible be paid by 10th working day after the day of presentation of the bill by the contractor to the Engineer-in-Charge or his Asstt. Engineer together with the account of the material issued by the BSNL or dismantled materials, if any. In the case of works outside the headquarter of the Engineer-in-Charge, the period of ten working days will be extended to fifteen working days.</p> <p>All such interim payment .... detailed measurement thereof.</p>	<p><b>No change.</b></p> <p>The amount admissible will as far as possible be paid by 30th working day after the day of presentation of the bill by the contractor to the Engineer-in-Charge or his Asstt. Engineer together with the account of the material issued by the BSNL or dismantled materials, if any. In the case of works outside the headquarter of the Engineer-in-Charge, the period of thirty working days will be extended to forty five working days.</p> <p><b>No change.</b></p>

**PROFORMA FOR AGREEMENT  
(ON NONJUDICIAL STAMP PAPER OF APPROPRIATE VALUE)**

**CONTRACT AGREEMENT FOR THE WORK OF \_\_\_\_\_ DATED \_\_\_\_\_ Between M/s \_\_\_\_\_ (refer note) in the town of \_\_\_\_\_ hereinafter called the contractor (which term shall unless excluded by or repugnant to be subject or context include its successors and permitted assigns) of the one part and the Bharat Sanchar Nigam Limited hereinafter called the BSNL (which term shall unless excluded by or repugnant to the subject or context include its successes and assigns) of the other part.**

WHEREAS

- a. The BSNL is desirous that the construction of \_\_\_\_\_ at \_\_\_\_\_ should be executed as mentioned, enumerated or referred to in the tender including Press Notice Inviting Tender, General Conditions of the Contract, Special Conditions of the Contract, Specifications, Drawings, Plans, Time Schedule of completion of jobs, Schedule of Quantities and Rates, Agreed Variations, other documents, has called for Tender.
- b. The contractor has inspected the site and surroundings of the work specified in the tender documents and has satisfied himself by carefully examination before submitting his tender as to the nature of the surface, strata, soil, subsoil and grounds, the form and nature of the site and local conditions the quantities, nature and magnitude of the work the availability of labour and materials necessary for the execution of work, the means of access to site, the supply of power and water thereto and the accommodation he may require and has made local and independent enquiries and obtained complete information as to the matters and things referred to or implied in the tender documents or having any connection therewith, and has considered the nature and extent of all the probable and possible situations, delays, hindrances or interferences to or with the execution and completion of the work to be carried out under the contract, and has examined and considered all other matters, conditions and things and probable and possible contingencies, and generally all matters incidental thereto and ancillary thereof affecting the execution and completion of the work and which might have influenced him in making his tender.
- c. The tender documents including the BSNL's Press Notice Inviting Tender, General conditions of contract, Special Conditions of Contract, Schedule of Quantities and rates, General obligations, Specifications, Drawings, plan, time schedule for completion of work. Letter of Acceptance of tender and any statement of agreed variations with its enclosures copies of which are hereto annexed form part of this contract though separately set out herein and are included in the expression Contract wherever herein used.

AND WHEREAS

The BSNL accepted the tender of M/s \_\_\_\_\_ (refer note \_\_\_\_\_) (Contractor) for the construction of \_\_\_\_\_ at \_\_\_\_\_ and conveyed vide letter No. \_\_\_\_\_ dated \_\_\_\_\_ at the rates stated in the Schedule of quantities for the work and accepted by the BSNL (hereinafter called the Schedule of Rates) upon the terms and subject to the conditions of the contract.

**NOW THIS AGREEMENT WITNESSTH & IT IS HEREBY AGREED AND DECLARED AS FOLLOWS.**

1. In consideration of the payment to be made to the contract for the work to be executed by him, the contractor hereby convenient with the BSNL that the contractor shall and will duly provide, execute, complete and maintain the said work and shall do and perform all other acts and things in the contract mentioned or described or which are to be implied and therefrom or may be reasonably necessary for the completion of the said works and at the said times and in the manner and subject to the terms and conditions or stipulations mentioned in the contract, AND
2. In consideration of the due provisions execution, completion and maintenance of the said work, the BSNL does hereby agree with the contractor that the BSNL will pay to contractor the respective amounts for the work actually done by him and approved by the BSNL at the Schedule or Rates and such other sum payable to the contractor under provision of the contract, such payment to be made at such time in such manner as prescribed for in the contract.  
It is specifically and distinctly understood and agreed between the BSNL and the contractor that the contractor shall have no right, title or interest in the site made available by the BSNL for execution of the works or in the building, structures or works executed on the said site by the contractor or in the goods, articles, materials, etc. brought on the said site (unless the same specifically belongs to the contractor) and the contractor shall not have or deemed to have any lien whatsoever charge for unpaid bills will not be entitled to assume or retain possession or control of the site or structures and the BSNL shall have an absolute and unfettered right to take full possession of site and to remove the contractor, their servants, agents and materials belonging to the contractor and lying on the site.
3. "The contract is subject to the jurisdiction of Court at **Solan (HP)** only." (Where the e-NIT/Tender has been issued).



In Witness whereof the parties hereto have hereinto set their respective hands and seals in the day and the year first above written.

Signed and delivered for and on behalf of BSNL

Signature and delivered for and on behalf of the contractor

(BHARAT SANCHAR NIGAM LIMITED)  
OFFICIAL ADDRESS

(Contractor)

Date  
Place

Date  
Place

IN PRESENCE OF TWO WITNESSES

SIGNATURE  
NAME  
SIGNATURE  
NAME

SIGNATURE  
NAME  
SIGNATURE  
NAME

**For Proprietary Concern**

Shri.....s/o.....r/o.....carrying on business under the name and style of.....at..... (here in after called the said Contractor which expression shall unless the context requires otherwise include his heirs, executors, administrators and legal representatives).

**For Partnership Concern**

M/s ..... a partnership firm having its registered office at ..... (hereinafter called the said Contractor which expression shall unless the context requires otherwise include his heirs, executors, administrators and legal representatives). The partners of the firms are:

- i) Shri .....s/o....., And
- ii) Shri .....s/o.....etc..

**For Companies**

M/s .....a company duly incorporated under the Indian Companies Act, 1956 and having its registered office at .....in the state of .....(hereinafter called the said Contractor which expression shall unless the context requires otherwise include its successors and assign).

**FORM OF PERFORMANCE SECURITY  
BANK GUARANTEE BOND  
(To be used by approved Scheduled Banks)**

1. In consideration of the BHARAT SANCHAR NIGAM LIMITED (hereinafter called "the BSNL") having agreed under the terms and conditions of agreement No. \_\_\_\_\_ Dated \_\_\_\_\_ made between \_\_\_\_\_ and \_\_\_\_\_ (hereinafter called "the said contractor(s)") for the \_\_\_\_\_ work (hereinafter called "the said agreement") for compliance of his obligation in accordance with the terms and conditions in the said agreement.

We \_\_\_\_\_ (indicate the name of the Bank) (hereinafter referred to as "as Bank) hereby undertake to pay to the BSNL and amount not exceeding Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) on demand by the BSNL.

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

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

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

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

5. We \_\_\_\_\_ (indicate the name of Bank) further agree with the BSNL that the BSNL shall have the fullest liberty without our consent and without affecting any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time to time any of the powers exercisable by the BSNL against the said contractor(s) and to forebear or enforce any of the terms and conditions relating to the said agreement shall not be relieved from our liability by reasons of any such variation or extension being granted to the said contractor(s) or for any forbearance act of omission on that part of the BSNL or any indulgence by the BSNL to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effected or so relieving us.

6. The guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).

7. We \_\_\_\_\_ (indicate the name of Bank) lastly undertake not to revoke this guarantee except with the previous consent of the BSNL in writing.

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

Date the \_\_\_\_\_ date of \_\_\_\_\_

for

\_\_\_\_\_  
(Indicate the name of Bank)

**AFFIDAVIT**

I/We have submitted a bank guarantee for the work \_\_\_\_\_ (Name of Work), Agreement No. \_\_\_\_\_  
Dated: \_\_\_\_\_ from \_\_\_\_\_ (Name of the Division) with a view 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 upto 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 Bharat Sanchar Nigam Limited against any losses arising out of non-encashment 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.

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**APPENDIX-XV**

**Notice for appointment of Arbitrator  
(Refer clause 25)**

To

The Chief Engineer,  
BSNL H.P. Civil Zone  
Shimla.

Dear Sir,

In item of clause 25 of the agreement, particulars of which are given below, I/we hereby give notice to you to appoint an Arbitrator for settlement of disputes mentioned below.

1. Name of applicant.
2. Whether applicant is individual/Prop. Firm/Partnership Firm/Ltd Co.
3. Full address of the applicant.
4. Name of the work and contract number in which arbitration sought.
5. Name of the division which entered into contract.
6. Contract amount in the work.
7. Date of contract.
8. Date of contract date of initiation of work.
9. Stipulated date of completion of work.
10. Actual date of completion of work (if completed).
11. Total number of claims made.
12. Total amount claimed.
13. Date of intimation of final bill(if work is completed)
14. Date of payment of final bill(if work is completed).
15. Amount of final bill (if work is completed).
16. Date of request made to SE for decision .
17. Date of receipt of SE's decision.
18. Date of approval to you.
19. Date of receipt of your decision.

Specimen signatures of the applicant  
(only the person/authority who signed the contract should sign)

I/We certify that the information given above is true to the best of my/our knowledge. I/We enclose following documents.  
1.Statement of claims with amount of claims.

**Yours faithfully.**

**(Signatures)**

**Copy in duplicate to:**

1. **The Executive Engineer,  
BSNL Civil Division  
Solan (HP)**

**PART-C**  
**SH:- ELECTRICAL WORK**

**SCHEDULES**

**SCHEDULE 'A'**

Schedule of quantities

As per Extra Excel Work Sheet

**SCHEDULE 'B'**

Schedule of materials to be issued to the contractor.

S.No.	Description of Item	Quantity	Rates in figures and words at which material will be charged to the contractor	Place of issue
1	2	3	4	5
NIL				

**SCHEDULE 'C'**

Tools and plants to be hired to the contractor

Sr No	Description	Hire charges per day	Place of issue
NIL			

**SCHEDULE 'D'**

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

1.	Amendments/ Changes in Clauses of the General Conditions of Contract ( C.S2 and 3)	
2.	Special Conditions	-
3.	Additional Conditions	-
4.	List of Approved make	-

**SCHEDULE 'E'**

Schedule of component of other materials, Labour, POL etc. for price escalation:-

<b>CLAUSE 10 C: NOT APPLICABLE</b>	
Component of civil (Except materials covered under clause 1 OCA)	'Xm' Nil %
Electrical construction materials expressed as percent of total value of work.	Nil %
Component of labour expressed as percent of total value of work.	'Y' Nil %
Component of P.O.L. expressed as percent of total value of work.	'Z' Nil %

**SCHEDULE 'F'**

**Reference to General Conditions of Contract.**

1.1 Name of Work: - **Construction of New Academic Block in Campus of Government Polytechnic for Women Kandaghat, Distt. Solan [HP]. (SH. Civil Work & Electrical works)**

1.2 Estimated Cost of work: - **Rs. 2092535/= (Electrical component only)**

- 1.3 Earnest Money: - Refer at Page No. 18 of this NIT.
- 1.4 Performance Guarantee Refer at Page No. 18 of this NIT.
- 1.5 Security Deposit Refer at Page No. 18 of this NIT.

**General Rules & Directions:-**

Officer Inviting Tender: - Executive Engineer (C) BSNL Civil Division **Solan**

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 & 12.5 Refer Clause-12

**Definitions:-**

- 2(v) Engineer-In-Charge **Executive Engineer (E), BSNL ED, Shimla.**
- 2(viii) Accepting Authority **Chief Engineer (C) BSNL HP Zone, Shimla**
- 2(x) Percentage on cost of materials and labour to cover all overheads and profits 10%
- 2(xi) Standard Schedule of Rates Schedule of rates 2012
- 2(xii) Department BSNL
- 9(ii) Standard Contract Form BSNL -8 as modified and corrected up to date

- Clause-2:-** I. Authority for fixing compensation under clause-2. Chief Engineer (Civil) BSNL, **HP Zone**, Shimla
- II. Whether clause-2A shall be not applicable.

- Clause-5:-** Time allowed for Completion of work. **17(Seventeen) months**
- Authority to give fair and reasonable extension of time for completion of work. Chief Engineer (C) BSNL **HP Zone** Shimla

<b>Clause-7:-</b>	Gross work to be done together with net payment / adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment	Rs. 2.00 Lacs.
<b>Clause 10</b>	Materials covered under this clause	Nil.
<b>Clause-11:-</b>	Specifications to be followed for execution of work	C.P.W.D. amended up to date.

<b>Clause 12</b>		
12.1 .2(ii)	Schedule of rates for determining the rates for additional, altered or substituted items that cannot be determined under 12.1.2(i) and (ii).	DSR-2012
12.1.2 (iii)	Plus/ minus the % over the rate entered in the schedule of rates.	
12.2 & 12.3	Limit for value of any item of any individual trade beyond which sub clauses (i) to (v) shall not apply and clauses 12.2.& 12.3 shall apply	<b>25% and can be extended up to 50% in urgent cases</b>

**Clause-16:** Competent Authority for deciding Superintending Engineer (E)

**Clause-36**

S. No.	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical/ Technical Representative)	Minimum Experience	Number	Rate at which recovery Shall be made from contractor in the event of non deployment.	
						Figures	Words
1.	Graduate Engineer or Diploma Engineer	Electrical	Principal Technical Representative	NIL or 3 YEAR	1 No.	Rs. 4000/- per month	Rs. Four thousand Only per month.

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

Clause-37 (i)		
<u>Extent of GST (Goods and services Tax) payable by contractor for building and construction works.</u>		<b>100% [Rates shall be inclusive of 100% GST. However, after issue of detailed guidelines / rules, if a portion of GST is to be paid by department (BSNL), the same shall be recovered from the bill of the contractor]</b>
<b>Clause 42</b>	Schedule / statement for determining theoretical quantities of cement.	N-A
<b>i) (a)</b>		
<b>ii) a)</b>		
<b>b)</b>	Variation permissible on theoretical quantities Cement for works with estimated costs put to tender more than Rs. 5 lakhs	
	Steel reinforcement and structural steel sections for each diameter, section and category.	

**Star prices to be considered for escalation & recoveries –**

N-A

Sl. No	Material	For Cement 43 grade ( confirming to IS: 8112)
2(a)		For Mild steel
2(b)		For Reinforcement Steel /TMT conforming to BIS 1786 ( Fe 4 15/500 Grade)
2(c)		For Reinforcement Steel TMT bars conforming to relevant BIS Codes from main producer as approved by Ministry of Steel.
2(d)		For Galvanized steel

**MEMORANDUM OF UNDERSTANDING [M.O.U] BETWEEN**

- 1] M/S [Name of the firm with full address]  
Enlistment Status  
Valid Upto:  
[Henceforth called the main contractor]
- And
- 2] M/S [Name of the firm with full address]  
Enlistment Status  
Valid Upto:  
[Henceforth, called Associated Electrical Contractor or Electrical Contractor]

For the execution of Electrical Work: **Construction of New Academic Block in Campus of Government Polytechnic for Women Kandaghat, Distt. Solan [HP]. (SH. Civil Work & Electrical works)**

We state that M.O.U between us will be treated as an agreement and has legality as per Indian Contract Act [amended upto date] and the department [BSNL] can enforce all the terms and conditions of the agreement for execution of the above work. Both of us shall be responsible for the execution of work as per the agreement to the extent this MOU allows. Both the parties shall be paid consequent to the execution as per agreement to the extent this MOU permits. In case of any dispute, either of us will go for mediation/arbitration by the Superintending Engineer [E]. Any of us may appeal against the mediation/arbitration to the **Chief Engineer [Civil], BSNL HP Zone, Shimla**. His decision shall be final and binding on both of us.

We have agreed as under:

- 1] The electrical contractor will execute all electrical works in the wholesome manner as per terms and conditions of the agreement. Payment to the associated electrical contractor shall be governed as per relevant clause of NIT.
- 2] The electrical contractor shall be liable for disciplinary action if he failed to discharge the action[s] and other legal action as per agreement besides forfeiture of the security deposit.
- 3] All the machinery and equipments, tools and tackles required for execution of the electrical works, as per agreement, shall be the responsibility of the electrical contractor.
- 4] The site staff required for the electrical work shall be arranged by the electrical contractor as per terms and conditions of the agreement.
- 5] Site order book maintained for the said work shall be signed by the main contractor as well as by the Engineer of the Associated Contractor and by Associated Contractor himself.
- 6] All the correspondence regarding execution of the electrical work shall be done by the BSNL with the Associated Contractor with a copy to the main contractor. In case of non-compliance of the provisions of agreement, the main contractor, as well as the associated contractor shall be responsible. The action under clauses 2 and 3 shall be initiated and taken against the main contractor.

SIGNATURE OF MAIN CONTRACTOR

SIGNATURE OF ASSOCIATED  
ELECTRICAL CONTRACTOR.

Date:  
Place

Date  
Place:

COUNTERSIGNED

EXECUTIVE ENGINEER (ELECT.)  
BSNL ELECT. DIVISION,  
**Dharamshala .**



## WILLINGNESS CERTIFICATE

**Name of work: Construction of New Academic Block in Campus of Government Polytechnic for Women Kandaghat,  
Distt. Solan [HP]. (SH. Civil Work & Electrical works)**

I hereby give my willingness to work as electrical contractor for the above mentioned work.

I will execute the work as per specifications and conditions for the agreement and as per direction of the Engineer-in-Charge. Also I will employ full time technically qualified supervisor for the works. I will attend inspection of officers of the department as and when required.

Dated:

**Signature of the Electrical Contractor**

## SPECIAL CONDITIONS

- 1.0 All the works shall be carried out as per CPWD General specification for Electrical Works, Part-I (Internal)2007; Part-II latest (External); Part-IV (Sub-Station)-2007, amended up to date and should also comply with relevant provisions of the Indian Electricity Rules and Acts as applicable, amended up to date.
- 2.0 The contractor is advised to visit the site of work to have an idea of the execution of the work; failure to do so shall not absolve their responsibility to do the work as specified in agreement.
- 3.0 **For Electrical Sub-head of the work, as contained under PART- C of the document, the Electrical Agency to be associated by the civil (main) contractor, shall be :**
- BSNL enlisted contractor in Electrical category of respective class as per their tendering limits.  
OR
  - The Contractors satisfying the following conditions :  
The contractor enlisted in CPWD, M.E.S. and Railways in respective class as per their tendering limits.  
AND  
Average annual turnover during the last 3 years, ending 31st March of the previous financial year, should be at least 30% of the estimated cost of electrical subhead  
  
AND  
Experience of having successfully completed similar works in Central Government/State Government /Central Autonomous Body/Central Public Sector Undertaking during last 7 years ending last day of month previous to the one in which NIT applications are invited ,should be either of the following :-
    - Three similar successfully completed works costing not less than the amount equal to 40% of the estimated cost for electrical subhead.  
OR
    - Two similar successfully completed works costing not less than the amount equal to 60% of the estimated cost for electrical subhead.  
OR
    - One similar successfully completed work costing not less than the amount equal to 80% of the estimated cost for electrical subhead.
- The Contractor shall have to possess ELECTRICAL LICENCE of appropriate Voltage Issued by any State Govt. Under Clause 45 of compilation of Indian Electricity Rules 1956 or as amended from time to time provided notification in official Gazette, exempt, on such condition**
- 4.0 The civil contractor has to associate agency for electrical component confirming to eligibility criteria, as defined above and has to submit details of such agency to Engineer-in-Charge of electrical component within 3 days of issuance of letter of acceptance. Name of the agency to be associated shall be approved by Engineer-in-Charge of electrical component. The lowest tenderer has to submit the MOU/agreement for association of electrical contractor at least 7 days prior to submission performance guarantee.
- 5.0 Executive Engineer (Electrical) shall be the Engineer-in-charge as far as electrical works are concerned. Separate schedule F, schedule of quantities, additional conditions and Special Conditions for Electrical Work are appended with this tender. It will be obligatory on the part of the contractor/tenderer to sign the tender documents for all the component parts.
- 6.0 The main contractor shall be responsible and liable for proper and complete execution of the Electrical work and ensure coordination and completion of both civil and electrical work.
- 7.0 If the main contractor fails to associate agency/agencies for execution of minor components of work within prescribed time or furnishes incomplete details or furnishes details of ineligible agencies even after the tenderer is given due opportunity, the entire scope of such Component of works shall be withdrawn from the tender and the same shall be got executed by the Engineer-in-Charge at the risk and cost of the main contractor.
- 8.0 The associate or sub contractor shall attend the inspection of the work by the Engineer-in-Charge of E&M works as and when required
- 9.0 Running payment for the civil component shall be made by EE (Civil) to the main contractor. Running payment for electrical components shall be made by the EE (Electrical) in charge of the electrical component directly to the main contractor. In case main contractor fails to make the payment to the contractor associated by him within 15 days of receipt of each running account payment then on the written complaint of contractor associated for such electrical component, EE (Electrical) in charge of electrical component shall serve the show cause to main contractor and after considering the reply of the same he may make the payment directly to the contractor associated for electrical component as per the terms & conditions of the

agreement drawn between main contractor and associate contractor fixed by him, if reply of main contractor either not received or found unsatisfactory. Such payment made to the associate contractor shall be recovered by EE of Civil or Electrical component from the next RA/final bill due to main contractor as the case may be.

Final bill of whole work shall be finalized and paid by the EE of civil component. Other EE will prepare and pass the final bill for their component of work and pass on the same to the EE of civil component for including in the final bill for composite work. Same milestones shall be applicable for all components of work. The agencies of minor components will ensure that their components of the work are executed in time without giving any chance for slippage of milestones of the project. The amount to be withheld under Clause 5 of the contract will be decided by the EE of the main discipline only and not by other EEs. In the event of not achieving the necessary milestones as assessed from milestone bar chart, specified percentage of the tendered value of work will be withheld for failure of each milestone. However, the program of electrical works is to be co-ordinate in accordance with the building work so that electrical work is completed within **One Month** of the completion of civil work.

**10.0 Rates:**

10.1. The work shall be treated as on works contract basis and the rates tendered shall be for complete items of work (except the materials, if any, stipulated for supply by the BSNL) inclusive of all taxes (including works contract tax, if any), duties, and levies etc. and all charges for items contingent to the work, such as packing, forwarding, insurance, freight and delivery at site for the materials to be supplied by the contractor, watch and ward of all materials (including those supplied by the BSNL, if any) for the work at site etc.

**11.0 Taxes and Duties:**

11.1. The rates shall be quoted **inclusive of all taxes including GST to the extent mentioned in schedule F under clause 37(i) and all other taxes of Central / HP State Government with loading, unloading and transportation etc. The rates shall be firm and final. Nothing extra shall be paid on any account & BSNL shall not entertain any claim in this respect.** The invoices raised by the contractor shall indicate GST as a separate component of the gross bill raised. The payment of GST by BSNL to the contractor shall be governed by the rule of the government made in this regard and applicable to BSNL and further as per the rules framed by BSNL in this regard. BSNL shall claim ITC credit for the GST as per rules of BSNL in vogue.

*The contractor shall be solely responsible for timely payment of GST to the concerned department. Any penalty / interest for late submission etc. arising thereupon and as demanded by the concerned department shall be sole responsibility of the contractor and BSNL shall have absolutely no liability what so ever on this account.*

11.2. The deduction at source of such taxes as per rule shall be made while releasing payment of the running/final bills at the rate as applicable. The department shall issue a certificate of the rate and amount of deductions but such taxes shall not be paid/reimbursed to the contractor by the BSNL separately. No concessional form shall be issued by the BSNL. The road permit etc. shall be arranged by the tenderer on his own without any extra cost.

**12.0 Mobilization Advance:**

No mobilization advance shall be paid for the work, unless otherwise stipulated in tender papers for any individual works/composite work.

**13.0 Completeness of Tender:**

All sundry fittings, assemblies, accessories, hardware items, foundation bolts, termination lugs for electrical connections as required, and all other sundry items which are useful and necessary for proper assembly and efficient working of the various components of the work shall be deemed to have been included in the tender, whether such items are specifically mentioned in the tender documents or not.

**14.0 Works to be arranged by the BSNL:**

Unless and otherwise specified in the tender documents, the following works shall be arranged by the BSNL:

- (i) Supply of materials to the contractor as stipulated in the tender documents.

**15.0 Works to be done by the contractor:**

Unless and otherwise mentioned in the tender documents, the following works shall be done by the contractor, and therefore their cost shall be deemed to be included in their tendered cost:-

- (i) Foundations for equipments and components where required, including foundations bolts.
- (ii) Cutting and making good all damages caused during installation and restoring the same to their original finish.
- (iii) Sealing of all floor openings provided by him for pipes and cables, from fire safety point of view, after laying of the same.

- (iv) Painting at site of all exposed metal surfaces of the installation other than pre-painted items like fittings, fans, switchgear/distribution gear items, cubicle switchboard etc. Damages to finished surfaces of these items while handling and erection, shall however be rectified to the satisfaction of the Engineer-in-Charge.
- (v) Testing and commissioning of completed installation.
- (vi) Storage space for all equipments, components and materials for the work

**16.0 Storage and Custody of Materials:**

The contractor has to make his own arrangement for the storage of the material at site & necessary watch and ward of the electrical installation during the execution of work till the same is handed over to **Client Department**. No extra payment will be made on this account. The storage space shall however be arranged at site, if available. The main contractor shall arrange for proper storage of the electrical fans and fittings at site and that double lock system shall be arranged for the fans and fittings after receipt at site until the time they are taken for installation. The contractor shall however be responsible for proper storage and safe custody of the same till their installation and handing over to **Client Department**.

**17.0 Electric Power Supply and Water Supply:**

Power and water supply will be arranged by the contractor at the site for installation purpose. However, for testing purpose after complete installation of the electrical items, electricity supply will be made available free of cost to the contractor. Contractor will take due care to ensure safety of electrical installation during execution of work.

**18.0 Tools for handling and Erecting:**

All tools and tackles required for handling of equipments and materials at site of work as well as for their assembly and erection and also necessary test instruments shall be the responsibility of the contractor.

**19.0 Payment Terms:**

Payment shall be made as per the relevant clauses of schedule 'F' forming part of the tender documents.

**20.0 Co-ordination with other agencies:**

The contractor shall co-ordinate with all other agencies involved in the building work so that the building work is not hampered due to delay in his work. Recessed conduit and other works, which directly affect the progress of building work, should be given priority.

**20.1 Care of buildings:**

Care shall be taken by the contractor to avoid damage to the building during execution of his part of the work. He shall be responsible for repairing all damages and restoring the same to their original finish at his cost. He shall also remove, at his costs, all unwanted and waste materials arising out of his work, from the site. Any expenditure incurred by the BSNL in this condition shall be recovered from the contractor and decision of the Engineer-in-Charge about recovery shall be final.

**21.0 Structural Alterations to Buildings:**

- (i) No structural member in the building shall be damaged/altered, without prior approval from the competent authority through the Engineer-in-charge.
- (ii) Structural provisions like openings, cutouts, if any, provided by the department for the work, shall be used. Where these required modifications, or fresh provisions are required to be made, such contingent works shall be carried out by the contractor at his cost.
- (iii) All such openings in floors provided by the department shall be closed by the contractor after installing the cables/conduits/rising mains etc. as the case may be, by any suitable means as approved by the Engineer-in-charge without any extra payment.
- (iv) All chases required in connection with the electrical works shall be provided and filled by the contractor at his own cost to the original architectural finish of the buildings.

**22.0 Addition to an installation:**

Any addition, temporary or permanent, to the existing electrical installation shall not be made without a properly worked out scheme/design by a qualified Electrical Engineer to ensure that such addition does not lead to overloading, safety violation of the existing system.

**23.0 Work in occupied buildings:**

- (i) When work is executed in occupied buildings, there would be minimum of inconvenience to the occupants. The work shall be programmed in consultation with the Engineer-in-charge and the occupying department. If so required, the work may have to be done even before and after the office hours.
- (ii) The contractor shall be responsible to abide by the regulations or restrictions set in regard to entry into, and movement within the premises.

- (iii) The contractor shall not tamper with any of the existing installations including their switching operations or connections there to without specific approval from the Engineer-in-charge.

**24.0 Drawings:**

- (i) The work shall be carried out in accordance with the drawings and the tender documents and also in accordance with modification thereto from time to time as approved by the Engineer-in-charge.
- (ii) All wiring diagrams shall be deemed to be 'Drawings' within the meaning of the term as used in Clause 11 of the conditions of contract (BSNL W 7/8). They shall indicate the main switch board, the distribution boards (with circuit numbers controlled by them), the runs of various mains and sub mains and the position of all points with their controls.
- (iii) All circuits shall be indicated and numbered in the wiring diagram and the points shall be given the same number as the circuit to which they are electrically connected.
- (iv) After award of the work, the firm will be required to submit the drawings for the proposed work including layout plan, conduit routes etc. Work will be carried out as per the approved drawings.

**25.0 Conformity to IE act, IE Rules, and standards:**

- 25.1. All electrical works shall be carried out in accordance with the provisions of Indian Electricity Act, 1910 and Indian Electricity Rules, 1956 amended up to date (Date of call of tender unless specified otherwise). List of rules of particular importance to electrical installations under these General Specifications is given in Appendix C of CPWD general specifications for electrical works part-1 internal 2007, for reference.

**26.0 General requirements of components:**

- 26.1. **Quality of material:** All materials and equipments supplied by the contractor shall be new. They shall be of such design, size and materials as to satisfactorily function under the rated conditions of operation and to withstand the environmental conditions at site.

**27.0 Inspection of materials and equipments:**

- 27.1. Materials and equipments to be used in the work shall be inspected by the departmental officers. Such inspection will be of following categories:

- (i) Inspection of materials / equipments to be witnessed at the Manufacturer's premises in accordance with relevant BIS /Agreement Inspection Procedure.
- (ii) To receive materials at site with Manufacturer's Test Certificate(s)
- (iii) To inspect materials at the authorized dealer's go downs to ensure delivery of genuine materials at site.
- (iv) To receive materials after physical inspection at site.

- 27.2. Adequate care to ensure that only tested and genuine materials of proper quality are used in work shall be ensured by firm. The firm shall ensure that:

- (i) Material will be ordered & delivered at site only with the prior approval of the department to ensure timely delivery.
- (ii) As and when the order is placed for the fittings/ fixtures, cables, switchgears, poles, rising main, other main items etc, its copy shall be endorsed to the Engineer-in-charge.
- (iii) The firm will be required to procure material like electrical fittings & fans, exhaust fans, MCB's & DB's, switches & sockets, wires & cables, conduits and switchgears, rising mains, poles, outdoor fittings etc. directly from the manufacturer/ authorized dealers to ensure genuineness & quality and as per the approved makes only. Proof in this regard shall be submitted by the contractor if required by the department.
- (iv) Inspection at factory or at godown, as required, shall be arranged by the firm for a mutually agreed date.
- (v) Delivery of material shall be taken up only with the consent of department, after clearance of the material.
- (vi) Department shall reserve the right to waive inspection in lieu of suitable test certificate, at its discretion

- 27.3. Similarly, for fabricated equipments, the contractor will first submit dimensional detailed drawings for approval before fabrication is taken up in the factory. Suitable stage inspection at factory also will be made to ensure proper use of materials, workmanship and quality control.

**28.0 Ratings of components:**

- 28.1. All components in a wiring installation shall be of appropriate ratings of voltage, current and frequency, as required at the respective sections of the electrical installations in which they are used.
- 28.2. All conductors, switches and accessories shall be of such size as to be capable of carrying the maximum current, which will normally flow through them, without their respective ratings being exceeded.
- 29.0 **Conformity to standards:**
- 29.1. All components shall conform to relevant Indian Standard Specifications wherever existing. Materials with ISI certification mark shall be preferred.
- 29.2. Relevant Indian Standards including amendments or revisions thereof up to the date of tender acceptance shall be applicable in the respective contracts for respective items, firm to ensure its compliance.
- 30.0 **Interchangeability:**
- Similar parts of all switches, lamp holders, distribution fuse boards, Switch gears, ceiling roses, brackets, pendants, fans and all other fittings of the same type shall be interchangeable in each installation.
- Workmanship:**
- Good workmanship is an essential requirement to be complied with. The entire work of manufacture/fabrication, assembly and installation shall conform to sound engineering practice.
- 31.2. Proper supervision/skilled workmen: The contractor shall be a licensed electrical contractor of appropriate class suitable for execution of the electrical work. He shall engage suitably skilled/licensed workmen of various categories for execution of work supervised by supervisors / Engineer of appropriate qualification and experience to ensure proper execution of work. They will carry out instruction of Engineer-in-charge and other senior officers of the Department during the progress of work.
- 31.3. Use of quality materials: Only quality materials of reputed make as specified in the tender will be used in work.
- 31.4. Fabrication in reputed workshop: Switch boards and LT panels shall be fabricated in a factory/workshop having modern facilities like quality fabrication, seven tank process, and powder/epoxy paint plant, proper testing facilities, manned by qualified technical personnel. These shall be as per make / item approved.
- 32.0 **Testing:**
- All tests prescribed in this General Specification, to be done before, during and after installation, shall be carried out, and the test results shall be submitted to the Engineer-in charge in prescribed Performa, forming part of the Completion Certificate.
- 33.0 **Commissioning on completion:**
- After the work is completed, it shall be ensured that the installation is tested and commissioned.
- 34.0 **Completion plan and completion certificate:**
- 34.1. For all works completion certificate after completion of work as given in Appendix –E of CPWD Specification shall be submitted to the Engineer-in-charge.
- 34.2. Completion plan drawn to a suitable scale in tracing cloth with ink indicating the following, along with three blue print copies of the same shall also be submitted.
- (i) General layout of the building.
  - (ii) Locations of main switchboard and distribution boards, indicating the circuit numbers controlled by them.
  - (iii) Position of all points and their controls.
  - (iv) Types of fittings, viz. fluorescent, pendants, brackets, bulk head, fans, exhaust fans etc.
  - (v) Name of work, job number, tender reference, actual date of completion, names of Division/ Sub-division and name of the firm who executed the work with their signature.
  - (vi) In case, the contractor fails to submit the completion plan for electrical works, he shall be liable to pay a sum equivalent to 2.5% of the value of the work subject to ceiling of Rs. 15000/-.
- 35.0 **Guarantee**
- The installation will be handed over to the **Client Department** after necessary testing and commissioning. The installation will be guaranteed against any defective design/workmanship. Similarly, the materials supplied by the contractor will be guaranteed against any manufacturing defect, inferior quality. The guarantee period will be for a period of 12 months from the date of handing over to **Client Department**. Installation/ equipments or components thereof shall be rectified/ repaired to the satisfaction of the Engineer-in-charge.

**Indicative Inventory of Electrical Installation in New Academic Block in Campus of Government Polytechnic for Women, Kandaghat, Distt-Solan. {Provision of Electrical Installation}**

S N o.	Locations	Light Point	Ceiling Fan Point	Exhaust Fan Point	Call Bell Point Point	Total Light Points Gr.-C	Twin Control Light Point	5/6 A Light Plug Point for UPS	5/6 A SS ON SB	15/16 A Power Point	RJ 45 CUM TERM	TELEPHONE SOCKET	8WAY SPNDB	4 Way TPN DD MCB DB	8W(4+24) TPN DD MCB DB
	<b>BASEMENT-LVL-2</b>														
1	PARKING-1	2	0	0	0	2	0	0	1	1	0	0	0	0	0
2	PARKING-2	4	0	0	0	4	0	0	1	1	0	0	0	0	0
3	PARKING-3	4	0	0	0	4	0	0	1	1	0	0	0	0	0
4	STAIRS	2	0	0	0	2	1	0	0	0	0	0	0	0	0
5	ENTRANCE VER	2	1	0	0	3	0	0	1	1	0	0	1	0	0
	<b>Total</b>	<b>14</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>
	<b>BASEMENT-LVL-1</b>														
1	ELECTRIC WORKSHOP	20	10	2	0	32	0	1	4	4	1	0	0	1	0
2	CORRIDOR	5	0	0	0	5	0	0	1	1	0	0	0	0	0
3	STAIRS	1	0	0	0	1	1	0	0	0	0	0	0	0	0
4	GENERAL WORKSHOP	24	12	2	0	38	0	1	4	4	1	0	0	1	0
5	SEMINAR HALL	20	8	0	0	28	0	1	4	4	1	0	0	0	0
6	TOILETS	4	0	2	0	6	0	0	2	2	0	0	0	0	0
	<b>TOTAL</b>	<b>74</b>	<b>30</b>	<b>6</b>	<b>0</b>	<b>110</b>	<b>1</b>	<b>3</b>	<b>15</b>	<b>15</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>
	<b>GROUND FLOOR</b>														
1	BALCONY	1	0	0	0	1	0	0	1	0	0	0	0	0	0
2	STORE	3	1	0	0	4	0	0	1	1	0	0	0	0	0
3	ROOM	2	1	0	1	4	0	0	1	1	0	0	0	0	0
4	CORRIDOR 2.4M WIDE	3	0	0	0	3	0	0	1	0	0	0	0	0	0
5	TOILETS	4	0	2	0	6	0	0	2	2	0	0	0	0	0
6	CLASS ROOM-4	12	4	0	0	16	0	1	2	2	1	0	0	0	0
7	LAB-3	11	4	0	0	15	0	1	2	4	1	0	0	1	0
8	ENT VER	3	2	0	0	5	0	0	1	1	0	0	0	0	0
9	ENT LOBBY	6	3	0	0	9	0	0	1	1	0	0	0	0	0
10	CAFETARIA	16	8	0	0	24	0	0	3	2	0	0	0	1	0
11	PANTRY	2	0	1	1	4	0	0	2	2	0	0	0	0	0
12	KITCHEN	2	0	1	1	4	0	0	2	2	0	0	0	0	0
13	STAIRS	0	0	0	0	0	1	0	0	0	0	0	0	0	0
14	DRAWING HALL	16	8	2	0	26	0	1	2	2	1	0	0	0	0
	<b>Total</b>	<b>81</b>	<b>31</b>	<b>6</b>	<b>3</b>	<b>121</b>	<b>1</b>	<b>3</b>	<b>21</b>	<b>20</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>

	<b>FIRST FLOOR</b>														
1	BALCONY	1	0	0	0	1	0	0	1	0	0	0	0	0	0
2	HOD ROOM	6	3	0	1	10	0	1	2	2	1	0	0	0	0
3	STAFF TOILET	2	1	0	0	3	0	0	1	1	0	0	0	0	0
4	TOILETS	4	2	0	0	6	0	0	2	2	0	0	0	0	0
5	CLASS ROOM-4	13	4	0	0	17	0	1	1	2	1	0	0	0	0
6	CLASS ROOM-3	13	4	0	0	17	0	1	1	2	1	0	0	1	0
7	FACULTY	6	3	0	0	9	0	1	1	1	1	0	0	0	0
8	CLASS ROOM-2	13	4	0	0	17	0	1	2	2	1	0	0	0	0
9	CLASS ROOM-1	13	4	0	0	17	0	1	2	2	1	0	0	0	0
10	PASSAGE 2.40M WIDE	6	0	0	0	6	0	0	1	0	0	0	0	0	0
11	STAIR CASE	0	0	0	0	0	1	0	0	0	0	0	0	0	0
12	COMMON ROOM	12	6	0	1	19	0	1	2	2	1	0	0	1	0
<b>Total</b>		<b>89</b>	<b>31</b>	<b>0</b>	<b>2</b>	<b>122</b>	<b>1</b>	<b>7</b>	<b>16</b>	<b>16</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>
	<b>SECOND FLOOR</b>														
1	MULTYPURPOSE HALL	69	11	4	1	85	0	2	8	8	2	0	0	1	0
2	LOBBY	6	3	0	0	9	0	0	1	1	0	0	0	0	0
3	STAIRS	1	0	0	0	1	1	0	0	0	0	0	0	0	0
3	L.TOILET	2	0	1	0	3	0	0	1	1	0	0	0	0	0
4	G. TOILET	2	0	1	0	3	0	0	1	1	0	0	0	0	0
5	LAB	11	4	0	0	15	0	1	2	2	1	0	0	1	0
6	LAB	11	4	0	0	15	0	1	2	2	1	0	0	0	0
7	BALCONY	2	0	0	0	2	0	0	1	0	0	0	0	0	0
<b>Total</b>		<b>104</b>	<b>22</b>	<b>6</b>	<b>1</b>	<b>133</b>	<b>1</b>	<b>4</b>	<b>16</b>	<b>15</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>
1	BASEMENT LVL-2	14	1	0	0	15	1	0	4	4	0	0	1	0	0
2	BASEMENT LVL-1	74	30	6	0	110	1	3	15	15	3	0	0	2	0
3	GROUND FLOOR	81	31	6	3	121	1	3	21	20	3	0	0	2	0
4	FIRST FLOOR	89	31	0	2	122	1	7	16	16	7	0	0	2	0
5	SECOND FLOOR	104	22	6	1	133	1	4	16	15	4	0	0	2	0
<b>Total All Floors</b>		<b>362</b>	<b>115</b>	<b>18</b>	<b>6</b>	<b>501</b>	<b>5</b>	<b>17</b>	<b>72</b>	<b>70</b>	<b>17</b>	<b>0</b>	<b>1</b>	<b>8</b>	<b>0</b>



**INTERNAL AND EXTERNAL ELECTRICAL WORKS  
ADDITIONAL SPECIFICATIONS**

1. All repairs & patch work shall be neatly carried out to match with the original finish & all damages caused to the building installation during the execution of work shall have to be made good by the contractor immediately at his own cost to the entire satisfaction of Engineer-in-charge. In case contractor fails to comply with the instructions of the Engineer-in-charge, Engineer-in-charge shall be at liberty to get the work done by any other agency and recover such amount as paid to the other agency from the bill(s) of the contractor. Contractor shall have no claim, whatsoever, on the extent of such amount.
2. Wherever ceiling roses are not required to be provided in the light/fan/exhaust fan points, due to site conditions, the contractor shall use suitable three pin connectors for which nothing extra shall be paid. Wiring shall be carried out with FR wires. Copper wire upto 4 sq.mm may be single stranded whereas wires above 4 sq.mm shall be multi-stranded conductor. Termination of multi-stranded conductors shall be done using crimping type thimbles at both the ends. Nothing extra shall be paid for the same.
3. Contractor shall provide polythene/PVC plastic cover for all MDB 's/SDB 's/DB 's to protect them from rust/damages, during execution of work till the work is actually completed and handed over to the department.
4. The loose wire boxes/cable end boxes (adaptor boxes) shall be provided on the various electrical boards to facilitate the termination of the wiring in the various mountings. The boxes shall be of the same make as the DB's as far as possible. Wherever the company made cable end boxes are not available they shall be neatly fabricated with 16 SWG CRCA sheet steel, duly powder coated, dust & vermin proof and the front cover of MS sheet shall be with rubber gasket suitably screwed or with 3mm thick phenolic laminated sheet of Hylam/Formica instead of MS sheet, as desired by the Engineer-in-charge. The length of such boxes shall be same/or more as the width of the electrical switchboard. Such loose wire boxes are deemed included in the scope of the work and no extra payment shall be made for them.
5. All debris/malba resulting due to electrical work shall be removed on daily basis and completion of the work shall only be accepted after the site has been cleaned of all Melba. In case, contractor fails to comply, the same shall be got removed by the other agency and the payment so made shall be recovered from the bill(s) of the contractor.
6. The contractor shall have to make arrangements, at his own risk and cost, for transportation of materials from the point of issue of stores to site of work, if any.
7. Makes of all items that are not covered in the schedule of work/additional specifications shall be got approved from the Engineer-in-charge and shall conform to relevant Indian Standard as applicable.
8. The contractor shall ensure that the staff employed by him for execution of the electrical work, possess the valid electrical license issued by competent authority. Consequences arising due to the default of the contractor in not complying with the above condition shall be the responsibility of the contractor.
9. Copper lugs shall be provided for terminating copper/aluminum/GI earth wire to all switchboards for which nothing extra shall be paid. All multi-stranded/ stranded wires shall be terminated through copper lugs. All hardware items such as screws, thimbles, G.I. Wires, etc. which are essentially required for completing an item as per specifications will be deemed to be included in the item even when the same have not been specifically mentioned.
10. All concealed work and earthing shall be done in the presence of the Engineer-in-charge or his authorized representative.
11. The schematic diagram/dimensional drawings of the various electrical cubical panels shall be got approved from the Engineer-in-charge before fabrication and shall comply with CPWD specifications and Indian Electricity Rules. The panels shall conform to IS: 8623/1993. All panels shall be powder coated inside out, in shade approved by the Engineer-in-charge.
12. All floor-mounted panels shall be mounted on 75mmX75mmX6mm thick M.S. channel on all the sides. It shall have a continuous earth bus of the same size and material as the main phase running continuously along the length of the panel extending on either side for earth connection.
13. The doors of all cubicle panels shall be hinged type including those of bus bar chambers and cable alleys. The locking shall be with chrome plated metal key locks. All doors shall be earthed with copper conductor wire as approved by the Engineer-in-charge.
14. The work shall be carried out according to drawing approved by the Engineer-in-charge. The layout once approved can only be changed by the Engineer-in-charge as per requirement at site. It shall be the responsibility of the contractor to plan the layout and get the approval from the Engineer-in-charge before laying the conduits etc.
15. The MCB should be of the same make as that of MCB DB's and having a minimum breaking capacity of 10 KA. Contractor shall obtain approval of the Engineer-in-charge before procurement of MCB DB's.
16. All model of modular accessories required for the work shall be got approved from the Engineer-in charge from among the approved makes. The base plate shall be preferably in sheet steel or otherwise in unbreakable polycarbonate. The cover plates shall be screw less type in shade approved by the Engineer-in-charge.
17. Contractor shall have to check the Site Order Book for any instructions of the Engineer-in-charge or his authorized representative and sign the site order book. He shall be bound to ensure compliance with the instructions recorded therein.

18. The MCCB's shall be compatible for reliable protection and accurate measurement. The rated Service breaking capacity (kAmps) shall be 100% of Ultimate breaking capacity (kAmps). All MCCB's shall be current limiting type with features as per relevant IS codes and CPWD specification.
19. MCCB's shall be used with terminal spreaders and all terminals shall be shrouded to avoid direct contact.
20. Mechanical Castle key interlock shall be provided among the incomer MCCB's, wherever, as applicable, two different incomer sources are provided in the panel as per the directions of the Engineer in charge. The same is deemed included in the scope of work.
21. All measuring and indicating instruments shall be protected through fuses/ MCB's and isolating switches.
22. General arrangement drawing of the switchboard shall be got approved from the Engineer-in-Charge before commencement of manufacturing. While deciding the size of switch boxes for light point/fan points/exhaust fan point items, wherever fan regulators are to be provided, extra two modules will be provided for fan regulators (fan regulator is to be provided in separate item).
23. For the items like LT panels, feeder pillars and accessories, etc, the firm shall arrange for inspection in the factory and provide for all facilities for testing. The cost of the visit of Engineer-in-Charge or his representative shall be borne by department. However, firm will be responsible for arranging the inspections as required.
24. Conduit layout as per switching arrangement shall be prepared by contractor and got approved from the Engineer-in-Charge before slab casting. However the Engineer-in-Charge has the right to change the layout as per the site requirements and the contractor shall not have any claim due to change in layout.
25. To facilitate drawing of wires (including telephone/ fire alarm wires) 16/18 SWG G.I fish wire shall be provided along with lying of recessed conduit for which no extra payment shall be made to contractor. Color coding shall be done for conduit laid for different services as per direction of Engineer-in –charge.
26. Conduit and termination to SDB and main board adapter box i/c connection wires to MCB,s inter connection between SDB and main board etc shall be included in the tendered rates and nothing extra shall be paid for the same.
27. The contractor shall provide junction boxes / looping boxes of required sizes and such boxes shall be measured as part of conduit / batten wiring without any extra payment.
28. Only brass screws along with brass washers will be used for fixing Phenolic laminated sheet covers and at other places aluminum alloy/ brass / cadmium plated screws, nuts, washers will be used.
29. M.S. dash fastener shall be used for installation of fittings and fixtures in ceiling and for providing suspenders for the angle support, conducting, cable tray etc. for which nothing extra shall be paid
30. All CI/metal boxes & junction boxes should be cleaned properly and painted from inside before wiring & fixing the accessories.
31. In wiring items like point wiring / wiring for light and power plug /circuit wiring / sub main wiring, the item includes the cost of conduit also.
32. For items of power plugs, 15 Amp socket shall be of universal 6 pin type.
33. (a) The telephone conduits shall be laid with GI fish wires kept, pulled in for pulling of wires, at least 1000mm extra at outlets.  
(b) Main junction box of telephone conduit system shall be mounted at a height so that the top of box does not exceed 1.65 meters from the floor level and in a suitable location for working by the staff, with approval of Engineer-in-charge.

**ADDITIONAL SPECIFICATIONS FOR THE WORK (E.I. & FANS)**

1. The work shall be done as per CPWD specifications for electrical works as amended from time to time and Indian Electricity Rules as amended up to date
2. The work shall be supervised by a qualified over-sear.
3. The layout of the work will be given by the Engineer-in charge or the duly authorized representative, at the site work.
4. The following wiring shall be done in separate circuits.
  - A) Power plug wiring.
  - B) Light and fan point wiring.
  - C) Emergency light and fan point wiring.
  - D) Telephone wiring.
  - E) Circuit wiring.
  - F) Sub main wiring.
5. The number of power plug points shall be one per ckt. As in H.P. heater are used on each ckt.
6. The earthing sets shall be provided in the presence of the Engineer-in-charge or his authorized representative.
7. The contractor will have to submit the completion plan to scale in triplicate in ammonia printed i.e. Blue prints before finally paid, failing which 2.5% of the value of work subject to a ceiling of Rs. 2500/- will be recovered from his final bill.
8. The contractor will have to give the following tests at his cost and intimate test results before final bills are paid. Nothing extra will be paid to him on this accounts.
  - A) Earth Test.
  - B) Polarity Test.
  - C) Insulation Test.
  - D) Earth continuity test of the recessed conduit pipes.
9. Any damage done to the building by the contractor during the execution of work shall have to made good at his cost and risk. If he does not do it himself within a reasonable time determined by the Executive Engineer (Elect) then the same will be get done at his cost departmentally after giving notice to him.
10. The outlet box is for switches and pipes or conduits etc. For different categories of conduits runs catering for different type of electric wiring as mentioned in clause(4) above shall be painted inside with different colors each signifying the different categories mentioning so as to avoid mixing of various circuits and their wiring and nothing extra will be paid for this account.
11. At the time of laying conduit pipe in the slab and in recess the contractor will keep fish wire of 14 S.W.G. (G.I.) wire through conduit/pipe and will have to take special care so that the conduits do not pass through air conditioning nuts grills, columns, beams etc. If any such necessity is foreseen special written permission of E.E. (Elect) will be obtained before such work is carried out, in case of failure the contractor will not be paid this account. Successful tenderer should recess the conduit in the walls before they are plastered and in collaboration with the cost of the contractor. The conduit/pipes should be mechanically and electrically continues.
12. The Bakelite covers of the tumbler switches, plug & sockets etc. shall not be removed or broken for taking connections. It shall be done at their backs by providing suitable wooden rider in the I.C. boxes, where found necessary. All I.C. boxes for switches, plugs and regulators etc. shall be provided with thick bakelite sheet covers.

13. The runs of various circuits wiring at various places shall be kept minimum by taking the runs on walls, where crossing column is not necessary. This has to be decided before the casting of slab, so that unnecessary length of conduits is not laid therein.
14. All the I.C. distribution boards, sub main boards and their complete fittings shall be sign written, clearly indicating the number of distribution boards, the socket load it is serving and the number of circuits contained in the distribution box.
15. Underground cables both of 220v and 1.1kv grade should be subjected to pressure/insulation tests before and after laying the same in the ducts. In case of unsatisfactory tests, the cost of all repairs and replacements and all extra work of removal and relaying will have to be done by the contractor at his own risk and cost.
16. The contractors will have to use metal clad switches/MCB's/Isolators/MCB distribution boxes and metal clad distribution as given in the schedule of work.
17. A termination of all connections of main boards/sub-main boards/sub-distribution boards will be done by crimping and nothing extra will be payable on this account.
18. Inter-connection between bus-bars and switches i/c and above 100Amps. sub main boards connections, will be done with solid copper conductor with PVC sheathing.
19. For the conduit already laid, recovery shall be made on the basis of DSR-2012 rates plus abatement of this tender on linear basis.
20. The Department shall not supply any tools and plants .
21. The work is to carry out according to the drawings issued, kept in the office of Engineer-in-charge who reserves the right to change the layout as and when required according to changed site conditions at any stage .The wiring and conduit routes are to be marked at site first and got approved by the Engineer- in-charge for commencement of actual work. No extra payment shall be made on this account.
22. The electrical works shall be carried out in close with the civil work in such a way that at no stage the electrical works lags behind the civil works.
23. No compensation shall be payable to the contractor for any damage caused by rain, fire, wind, storm. flood, or otherwise and no claim on this account shall be entertained.
24. The contractor shall maintain in good condition all work executed till the completion of work allotted to him.
25. No sharp edges of conduit shall be left unrounded.
26. The 5A/15A sockets should be multiple pin type
27. All the material to be used on the work shall be (S) marked and if ISI marked is not manufactured the confirmation to ISS shall be used. The same shall be approved by Engineer-in-Charge before use .All rejected material is to be removed from the site of work immediately at contractor's on cost.

**BHARAT SANCHAR NIGAM LIMITED**

LIST OF APPROVED MAKES- BSNL ELECTRICAL WING

Sr. No.	Item	Make
1	Engine	Ashok Leyland /Cummins/ Cater pillar /KOEL / Volvo Penta / Mahindra & Mahindra (up to 200 KVA) /Escorts (up to 30 KVA)/ Eicher (up to 35 KVA)
2	Alternator(Brushless)	Crompton Greaves (AL. series) / KEC / Leroy Somer / Stamford/Jyoti Ltd
3	Battery (Lead Acid / Mntc. Free)	Amara Raja / AMCO / Farukawa / Hitachi / Exide/ Prestolite / Standard
4	HV Switchgear (Vacuum CircuitBreaker/SF6 )	Biecco Lawrie / Crompton / Kirloskar /MEI / Jyoti Ltd
5	Transformer (Oil filled / Dry type)	ABB / Schneider Electric /Andrew Yule / Bharat Bijlee / Crompton / EMCO/ Kirloskar/ Siemens
	a) Above 400 KVA	
	b) Up to 400 KVA	In addition to above makes, Uttam/ Patson/ Rajasthan Transformer and Switchgear
6	Air Circuit Breaker	L&T/ Schneider Electric / Siemens
7	MCCB(Ics=Icu)	L&T/ Schneider Electric / Siemens
8	SDF units	L&T/ Schneider Electric / Siemens/ HPL/ Havells
9	Power Contactors	L&T/ Schneider Electric / Siemens/ Lakshmi(LECS)
10	Change Over Switch	HPL / Havells / H-H Elcon
11	Intelligent APFC Relay	L&T/EPCOS(Siemens)/ Schneider Electric / Neptune Ducati/Syntron/ABB
12	Bus Bar Trunking/ Sandwiched Bus Duct	Moeller/L&T/Schneider Electric/ABB /Legrand/Zeta
13	Power Capacitors (MPP/APP)	L&T/EPCOS(Siemens)/ABB/Crompton/ Schneider Electric/Neptune Ducati
14	Digital/ KWHr meter	Schneider Electric/ AE/ Digitron / IMP/ Meco / Rishabh /Universal/HPL/L&T/ABB/Yokins
15	Cold shrink HT/LT Cable Joint	Denson / 3M(M-Seal )/ Raychem
16	Rubber Matting	ISI mark
17	MCB/ Isolator /ELCB/RCCB/ Distribution Board	Crompton / Havells / Indokopp / MDS Legrand / L&T / Schneider Electric/ Siemens / Standard/ C&S/ABB/HPL
18	MS/ PVC Conduit	ISI mark
19	Cable Tray	MEM/Bharti/Ratan/Slotco/Profab
20	HT/LT Cables	ISI mark
21	PVC insulated copper conductor wire	ISI mark
22	Centrifugal Pump	Amrut / BE / Beacon / Batliboi /Crompton / Jyoti / Kirloskar / KSB /Mather & platt / WASP/Grundfos
23	Submersible Pump	Crompton/Amrut / BE / Calama /Kirloskar / KSB
24	Motors	ABB/ Bharat Bijlee / Crompton Greaves / Schneider Electric / HBB / KEC / Siemens/ Jyoti Ltd
25	Fresh Air Fans	GE / Khaitan/Almonard/Crompton
26	Starter	ABB / BCH / Schneider Electric / L&T / Siemens /

Sr. No.	Item	Make
27	Single Phase Preventer	L&T / Minilec / Siemens / Zerotrip
28	GI/MS Pipe	ATC / ATL / BST / GSI / ITC / ITS / IIA / JST / Jindal / TTA / Tata/Zenith
29	Foot Valve	ISI mark
30	Gate Valve	Advance/Audco/Johnson Controls/Zoloto /Annapurna / Fountain /Kirloskar / Leader / Sant / Trishul
31	Compressors	Carrier/Emerson Copeland/York/Danfoss (for chillers only)
32	Resin Bonded Glass wool	Fibre Glass / Pilkington / UP Twiga
33	Expanded Polystyrene	BASF(India) Ltd.
34	Gauge	Feibig / H.Guru / Pricol
35	Controls	FLICA / Honeywell / Indfoss / Penn-Danfoss / Ranco / Ranutrol / Sporland
36	Fine Filters	Anfiltra Effluent / ARW / Athlete/Airtake/ Dyna / Kirsloskar/ Puromatic/ Purafill/ Purolator / Tenacity
37	GI Sheet	HSU Jindal / National / Nippon Denro / Sail / Tata
38	Heat Detector	Appollo / Chemtron/ Edward / Fenwal/ Hochiki / Nitton /System Sensor/ Wormald /Honeywell Essar/Notifier
39	Ionization Detector	Appollo / Cerebrus / Edward / Fenwal / Hochiki / Nitton / System Sensor /Wormald
40	Photo Electric Smoke Detector	Appollo / Cerebrus / Edward / Fenwal/ Hochiki / Nitton / Wormald/System Sensor
41	Fire Panel (Microprocessor based)	Agni Instruments / Agni Devices/ Aruna Agencies/ Carmel Sensor / Ravel Elect. /Honeywell Essar/Notifier/Navin Systems
42	Sprinkler/ Hose Reel & Hose Pipe	ISI mark
43	Fire Extinguisher	ISI mark
44	Lift	OTIS/ Kone/ Mitsubishi/ Schindler/Johnson/ThyssenKrupp Elevators(India)
45	High Precision Air Conditioners (HPAC units)	Units Manufactured by 1. M/s Emerson Network Power India(P) Ltd, Thane 2. M/s Sidwal Refrigeration Ind.(P) Ltd, New Delhi 3. M/s Stulz CHSPL India(P) Ltd, Mumbai 4. M/s Schneider Electric IT Business(I) Pvt Ltd, Gurgaon(formerly M/s Uniflair India(P) Ltd.
NOTE- In addition to above, the items having valid approval of BSNL Elect Zone HP Shimla shall also be used.		

**NOTE:**

1. The makes of Modular Switches/Sockets, GI Boxes, Modular Bases and Cover Plates should be North West/Havells/Crabtree/Legrand/Siemens/Philips/ Anchor or Equivalent (Technically and Financially) Similar Superior Make.
2. Items which are approved from O/o PGM (E) BSNL New Delhi till last date of sale of tender, shall also be accepted.
3. The accessories such as CT/PT/measuring instrument/relays provided by approved make in respect of Transformer/HT Panel/DG /AC Package Units as supplied by approved manufacturer along with the equipment's are also acceptable in addition.

**SCHEDULE OF QUANTITIES (CIVIL WORK)**

**[For View Purpose Only]**

<b><u>Name of Bidder:</u></b>	-
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**Name of Work: Construction of New Academic Block in Campus of Government Polytechnic for Women Kandaghat, Distt. Solan [HP] [SH: Civil & Electrical Works].**

I. No.	Description of Item	Quantity		Rate (Rs)	Unit	Amount (Rs)
	<b>Sub-Head : Earth Work</b>					
<b>1</b>	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth, 1.5m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth, lead up to 50m and lift up to 1.5m, as directed by Engineer-in-Charge.					
<b>a)</b>	All kinds of soil	3211.00	Cum		One Cubic Metre	0.00
<b>2</b>	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth, lead up to 50 m and lift up to 1.5m, as directed by Engineer-in-Charge.					
<b>a)</b>	Ordinary rock	1070.00	Cum		One Cubic Metre	0.00
<b>3</b>	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, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.					
<b>a)</b>	All kinds of soil.	715.00	Cum		One Cubic Metre	0.00
<b>4</b>	Excavation work by mechanical means (Hydraulic excavator)/ manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50m.					

a)	Ordinary rock	385.00	Cum		One Cubic Metre	0.00
5	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m :					
a)	All kinds of soil					
(i)	Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	150.00	m		One Metre	0.00
6	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, lead up to 50 m and lift up to 1.5 m.	664.00	Cum		One Cubic Metre	0.00
7	Extra for every additional lift of 1.5 m or part thereof in excavation /banking excavated or stacked materials.					
a)	All kinds of soil.	1391.00	Cum		One Cubic Metre	0.00
b)	Ordinary or hard rock.	749.00	Cum		One Cubic Metre	0.00
7	Supplying and filling in plinth with Local fine sand under floors, including watering, ramming, consolidating and dressing complete.	184.00	Cum		One Cubic Metre	0.00
	<b>Sub-Head : Concrete Work</b>					
1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :					
a)	1:2:4 (1 cement : 2 coarse sand(zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	10.00	Cum		One Cubic Metre	0.00
b)	1:5:10 (1 cement : 5 coarse sand(zone-III) derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)	266.00	Cum		One Cubic Metre	0.00
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 :					0.00
a)	1:2:4 (1 Cement : 2 coarse sand derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	10.00	Cum		One Cubic Metre	0.00



b)	1:5:10 (1 cement : 5 coarse sand (zone-III) derived from natural sources : 10 graded Brick aggregate 40 mm nominal size derived from natural sources).	33.00	Cum		One Cubic Metre	0.00
3	Centering and shuttering including strutting, propping etc. and removal of form work for :					
a)	Retaining walls, return walls, walls (any thickness) including attached pilasters, buttresses, plinth and string courses fillets, kerbs and steps etc.	179.00	Sqm		One Square Metre	0.00
4	Providing and laying in position cement concrete 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size) with 15% plums/stone boulders of specified grade and size and curing complete excluding the cost of centering and shuttering in retaining walls & breast walls. The size of plums shall usually be 150mm to 300mm as per the directions of the Engineer in charge.	178.00	Cum		One Cubic Metre	0.00
	<b>Sub-Head : Reinforced Cement Concrete</b>					
1	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :					
a)	1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	416.00	Cum		One Cubic Metre	0.00
2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. above plinth level up to floor five level, excluding cost of centering, shuttering, finishing and reinforcement :					
a)	1:1.5:3 (1 cement : 1.5 coarse sand(zone-III)derived from natural sources : 3 graded stone aggregate 20 mm nominal sizederived from natural sources)	192.00	Cum		One Cubic Metre	0.00
3	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases above plinth level up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III)derived from natural sources : 3 graded stone aggregate 20 mm nominal sizederived from natural sources).	765.00	Cum		One Cubic Metre	0.00
4	Centering and shuttering including strutting, propping etc. and removal of form for :					
a)	Foundations, footings, bases of columns, etc. for mass concrete	124.00	Sqm		One Square Metre	0.00
b)	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	179.00	Sqm		One Square Metre	0.00

c)	Suspended floors, roofs, landings, balconies and access platform	3168.00	Sqm		One Square Metre	0.00
d)	Shelves (Cast in situ)	50.00	Sqm		One Square Metre	0.00
e)	Lintels, beams, plinth beams, girders, bressumers and cantilevers	1976.00	Sqm		One Square Metre	0.00
f)	Columns, Pillars, Piers, Abutments, Posts and Struts	1642.00	Sqm		One Square Metre	0.00
g)	Stairs, (excluding landings) except spiral-staircases	120.00	Sqm		One Square Metre	0.00
h)	Weather shade, Chajjas, corbels etc., including edges	486.88	Sqm		One Square Metre	0.00
5	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto all level.					
a)	Thermo-Mechanically Treated bars of grade Fe-500D or more.	252900.00	Kg		One Kilogram	0.00
6	Smooth finishing of the exposed surface of R.C.C. work with 6 mm thick cement mortar 1:3 (1 Cement : 3 fine sand).	6930.00	Sqm		One Square Metre	0.00
	<b>Sub-Head : Masonry Work</b>					
1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:					
a)	Cement mortar 1:6 (1 cement : 6 coarse sand)	30.00	Cum		One Cubic Metre	0.00
2	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :					
a)	Cement mortar 1:6 (1 cement : 6 coarse sand)	64.00	Cum		One Cubic Metre	0.00
3	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level.					
a)	Cement mortar 1:4 (1 cement : 4 coarse sand)	904.00	Sqm		One Square Metre	0.00
4	Extra for providing and placing in position 2 Nos 6mm dia. M.S. bars at every third course of half brick masonry.ird course of half brick masonry.	904.00	Sqm		One Square Metre	0.00

5	Providing and laying autoclaved aerated cement blocks masonry with 150mm/230mm/300 mm thick AAC blocks in super structure above plinth level up to floor V level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineer-in-Charge. (The payment of RCC band and reinforcement shall be made for separately).	257.00	Cum		One Cubic Metre	0.00
	<b>Sub-Head : Stone work</b>					
1	Random rubble masonry with hard stone in foundation and plinth including leveling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20mm nominal size) up to plinth level with : <b>(Note: Stone will be supplied free of cost by department )</b>					
a)	Cement mortar 1:6 (1 cement : 6 coarse sand).	120.00	Cum		One Cubic Metre	0.00
2	Supplying & back filling with well graded stone boulders of size 150 mm to 300 mm behind retaining wall complete as per the directions of the Engineer-in-charge. (Note :- 30% deductions in measurements shall be made for voids).	60.00	Cum		One Cubic Metre	0.00
3	Providing and fixing 110 mm dia P.V.C pipe (working pressure 4Kg/Sqcm) conforming to IS:13592 Type-A in retaining walls for use as weep holes, laid to required slope complete as per the directions of the Engineer in charge.	100.00	Mtrs		One Metre	0.00
	<b>Sub-Head : Cladding Work</b>					
1	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels.					
a)	Granite stone slab colour black, Cherry/Ruby red					
(ii)	Area of slab over 0.50 sqm	77.00	Sqm		One Square Metre	0.00
2	Extra for providing opening of required size & shape for wash basin/kitchen sink in kitchen platform, vanity counter and similar location in marble/ Granite/ stone work, including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc. complete	18.00	Nos.		Each	0.00

3	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	365.00	Sqm		One Square Metre	0.00
<b>Sub-Head : Wood and P.V.C. Work</b>						
1	Providing and fixing factory made single extruded WPC (Wood Polymer Composite) solid door/window/Accessory windows & other Frames/Chowkhat comprising of virgin PVC polymer of K value 58-60 (Suspension Grade), calcium carbonate and natural fibers (wood powder/ rice husk/wheat husk) and non toxic additives (maximum toxicity index of 12 for 100 gms) fabricated with miter joints after applying PVC solvent cement and screwed with full body threaded star headed SS screws having minimum frame density of 750 kg/cum, screw withdrawal strength of 2200 N (Face) & 1100 N (Edge), minimum compressive strength of 58 N/mm <sup>2</sup> , modulus of elasticity 900 N/mm <sup>2</sup> and resistance to spread of flame of Class A category with property of being termite/borer proof, water/moisture proof and fire retardant and fixed in position with M.S hold fast/lugs/SS dash fasteners of required dia and length complete as per direction of Engineer-In- Charge. (M.S hold fast/lugs or SS dash fasteners shall be paid for separately).					
	Note: For WPC solid door/window frames, minus 5mm tolerance in dimensions i.e depth and width of profile shall be acceptable. Variation in profile dimensions on plus side shall be acceptable but no extra payment on this account shall be made.					
a)	Frame size 65 x 100 mm	50.00	Mtr		One Metre	0.00
b)	Frame size 65 x 125 mm	319.00	Mtr		One Metre	0.00
2	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters:					
a)	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	135.00	Sqm		One Square Metre	0.00
3	Providing and fixing chromium plated brass curtain rods having wall thickness of 1.25 mm with two chromium plated brass brackets fixed with C.P. brass screws and PVC sleeves etc., wherever necessary complete :					

a)	25 mm dia.	215.00	Mtr		One Metre	0.00
4	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.					
a)	Fixed to openings /wooden frames with rawl plugs screws etc.	6555.00	Kg		One Kilogram	0.00
5	Providing M.S. Piano hinges ISI marked IS : 3818 finished with nickel plating and fixing with necessary screws etc., complete.					
a)	Overall width 35 mm.	150.00	Mtr		One Metre	0.00
6	Providing and fixing bright finished brass hasp and staple (safety type) with necessary screws etc. complete :					
a)	150 mm	120.00	Nos.		Each	0.00
7	Providing and fixing special quality chromium plated brass cupboard locks with six levers of approved quality including necessary screws etc. complete.					
a)	Size 50 mm	25.00	Nos.		Each	0.00
8	Providing and fixing aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 35 kg and door width upto 700 mm), with necessary accessories and screws etc. complete.	46.00	Nos.		Each	0.00
9	Providing and fixing chromium plated brass 50 mm cupboard or wardrobe knobs with nuts complete.	50.00	Nos.		Each	0.00
10	Providing and fixing bright /matt finished Stainless Steel sliding door bolts of approved quality & make with necessary screws etc all complete as per direction of Engineer-in-Charge.					
a)	300x16 mm	10.00	Nos.		Each	0.00
b)	250x16 mm	36.00	Nos.		Each	0.00
11	Providing and fixing bright /matt finished Stainless Steel tower bolt of approved quality & make with necessary screws etc all complete as per direction of Engineer-in-Charge.					
a)	250x10 mm	92.00	Nos.		Each	0.00
b)	150x10 mm	46.00	Nos.		Each	0.00
12	Providing and fixing bright /matt finished Stainless Steel handles of approved quality & make with necessary screws etc all complete as per direction of Engineer-in-Charge.					
a)	125 mm	92.00	Nos.		Each	0.00

b)	100 mm	20.00	Nos.		Each	0.00
13	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.					
a)	Twin rubber stopper	46.00	Nos.		Each	0.00
14	Providing and fixing 2nd class teak wood lipping/ moulded beading or taj beading of size 18X5 mm fixed with wooden adhesive of approved quality and screws/ nails on the edges of the Pre-laminated particle board as per direction of Engineer-in-charge.	75.00	Mtr		One Metre	0.00
15	Providing and fixing magnetic catcher of approved quality in cupboard / ward robe shutters, including fixing with necessary screws etc. complete.					
a)	Double strip (horizontal type)	92.00	Nos.		Each	0.00
16	Providing and fixing powder coated telescopic drawer channels 300 mm long with necessary screws etc. complete as per directions of Engineer-in-charge.	20.00	Sets		Each Set	0.00
17	Providing and fixing Fiber Glass Reinforced plastic (FRP) Door Frames of cross-section 90 mm x 45 mm having single rebate of 32 mm x 15 mm to receive shutter of 30 mm thickness. The laminate shall be moulded with fire resistant grade unsaturated polyester resin and chopped mat. Door frame laminate shall be 2 mm thick and shall be filled with suitable wooden block in all the three legs. The frame shall be covered with fiber glass from all sides. M.S. stay shall be provided at the bottom to steady] the frame.	110.00	Mtr		One Metre	0.00
18	Providing and fixing to existing door frames.					
a)	30 mm thick Glass Fibre Reinforced Plastic (FRP) panelled door shutter of required colour and approved brand and manufacture, made with fire - retardant grade unsaturated polyester resin, moulded to 3 mm thick FRP laminate for forming hollow rails and styles, with wooden frame and suitable blocks of seasoned wood inside at required places for fixing of fittings, cast monolithically with 5 mm thick FRP laminate for panels conforming to IS: 14856, including fixing to frames.	50.00	Sqm		One Square Metre	0.00
19	Providing & Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt / suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS : 2046 Type S, including cost of adhesive of approved quality.					
a)	1.0 mm thick.	46.00	Sqm		One Square Metre	0.00

<b>20</b>	Providing & Fixing laminated sheet of white/ivory shade inside of cupboard etc with adhesive bonding quality conforming to IS : 2046 Type S, including cost of adhesive of approved quality.					
	0.8 mm thick.	75.00	Sqm		One Square Metre	0.00
<b>21</b>	Providing and fixing factory made uPVC white colour sliding glazed window upto 1.50 m in height dimension comprising of uPVC multi-chambered frame with in-built roller track and sash extruded profiles duly reinforced with 1.60 ± 0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to uPVC profile), appropriate dimension of uPVC extruded glazing beads and uPVC extruded interlocks, EPDM gasket, wool pile, zinc alloy (white powder coated) touch locks with hook, zinc alloy body with single nylon rollers (weight bearing capacity to be 40 kg), G.I fasteners 100 x 8 mm size for fixing frame to finished wall and necessary stainless steel screws etc.					
	Profile of frame & sash shall be mitred cut and fusion welded at all corners, including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealent over backer rod of required size and of approved quality, all complete as per approved drawing & direction of Engineer-in-Charge. (Single / double glass panes, wire mesh and silicon sealent shall be paid separately).Variation in profile dimension in higher side shall be accepted but no extra payment on this account shall be made.					
	Note: For uPVC frame and sash extruded profiles minus 5% tolerance in dimension i.e. in depth & width of profile shall be acceptable.					
<b>a)</b>	Two track two panels sliding window made of (small series) frame 52 x 44 mm & sash 32 x 60 mm both having wall thickness of 1.9 ± 0.2 mm and single glazing bead of appropriate dimension. (Area of window upto 1.75 sqm)	437.00	Sqm		One Square Metre	0.00
<b>22</b>	Providing and fixing glazing in uPVC windows, all complete with uPVC beading as per manufacturer's specification and direction of of Engineer-in-charge. ( Note :- uPVC beading to be paid in basic frame item). (Area of opening for panel inserts excluding portion inside grooves or rebates to be measured).					
<b>a)</b>	Toughened glass panes					
<b>(i)</b>	6 mm thick.	437.00	Sqm		One Square Metre	0.00
<b>23</b>	Providing and fixing BWP grade Block board conforming to IS: 1659 of approved brand and manufacture, bonded with phenolformaldehyde synthetic resin in cupboards, shelves, shutters with necessary screws, nails and adhesive etc. all complete as per the direction of Engineer-in-charge					

a)	19mm thick BWP grade block board with commercial vennering on both faces.	75.00	Sqm.		One Square Metre	0.00
24	Providing and fixing 6mm thick ISI marked commercial plywood of Century or equivalent make to frames, backings, studding and similiar places with screws, nails etc. all complete as per the directions of the Engineer in Charge.(Note:- Frames, backing or studding to be paid separately).	46.00	Sqm.		One Square Metre	0.00
	<b>Sub-Head : Steel Work</b>					
1	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	59763.00	Kg		One Kilogram	0.00
2	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.					
a)	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	2000.00	Kg		One Kilogram	0.00
3	Providing and fixing stainless steel ( Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-incharge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	1366.00	Kg		One Kilogram	0.00
	<b>Sub-Head : Flooring</b>					
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).					
a)	Ordinary cement without any pigment.	270.00	Sqm		One Square Metre	0.00
2	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) :					
a)	25 mm thick.	440.00	Sqm		One Square Metre	0.00



<b>3</b>	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.	40.00	Sqm		One Square Metre	0.00
<b>4</b>	Providing and laying rectified Glazed Ceramic floor tiles of size 450x600 mm or more (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in all colours, shades, except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick Cement Mortar 1:4 (1 Cement : 4 Coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including pointing the joints with white cement and matching pigments etc., complete.	150.00	Sqm		One Square Metre	0.00
<b>5</b>	Providing and laying uncoated full body homogeneous vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS : 15622 , of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) jointing with grey cement slurry @ 3.3kg/sqm including grouting the joints with white cement and matching pigments etc., complete.					
<b>a)</b>	Size of Tile 600x600 mm	1900.00	Sqm		One Square Metre	0.00
<b>6</b>	Providing and laying uncoated full body homogeneous Vitrified tiles in different sizes (thickness to be specified by manufacturer) with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make in all colours & shade in skirting, riser of steps, over 12 mm thick bed of cement mortar 1:3 (1cement: 3 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joint with white cement & matching pigments etc. complete.					0.00
<b>a)</b>	Size of Tile 600x600 mm	190.00	Sqm		One Square Metre	0.00
<b>7</b>	Grouting the joints of flooring tiles having joints of 3 mm width, using epoxy grout mix of 0.70 kg of organic coated filler of desired shade(0.10 kg of hardener and 0.20 kg of resin per kg), including filling/grouting and finishing complete as per direction of Engineer-in-charge.					
<b>a)</b>	Size of Tile 600x600 mm	2090.00	Sqm		One Square Metre	0.00
<b>8</b>	Deduct for not grouting the joints with white cement and matching pigment in the items of fixing of vitrified tiles	2090.00	Sqm		One Square Metre	0.00

9	Providing and laying GVT vitrified floor tiles of approved in smooth finish Vitrified tiles in different sizes (thickness to be specified by manufacturer) with water absorption less than 0.08 % and conforming to I.S. 15622, in dark colours & shade in wall lining over 12 mm thick bed of cement mortar 1:3 (1cement: 3 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including using PVC spacer 2 to 3 mm thick and after removing the spacers, the joints shall be filled using epoxy grout mix of 0.7 kg of organic coated filler of desired shade , 0.1 Kg of hardner and 0.2 kg of resin per kg of grout and finishing all complete as per direction of E-In-Charge.					
a)	Size of Tile 600x600 mm	75.00	Sqm		One Square Metre	0.00
10	Providing and laying 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.					
a)	Polished Granite stone slab of all colour and texture except Black, Cherry/Ruby Red.	395.00	Sqm		One Square Metre	0.00
11	Providing and laying Double Charged vitrified floor tiles of approved in smooth finish Vitrified tiles in different sizes (thickness to be specified by manufacturer) with water absorption less than 0.08 % and conforming to I.S. 15622, in dark colours & shade <b>in wall lining</b> over 12 mm thick bed of cement mortar 1:3 (1cement: 3 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including using PVC spacer 2 to 3 mm thick and after removing the spacers, the joints shall be filled using epoxy grout mix of 0.7 kg of organic coated filler of desired shade , 0.1 Kg of hardner and 0.2 kg of resin per kg of grout and finishing all complete as per direction of E-In-Charge.					
a)	Size of Tile 1200x600 mm	250.00	Sqm		One Square Metre	0.00
	<b>Sub-Head : Roofing</b>					
1	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion,					
	(i)Single socketed pipes.					
a)	110 mm diameter	240.00	m		One Running Metre	0.00

<b>2</b>	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS :5382 leaving 10 mm gap for thermal expansion.					
<b>a)</b>	Bend 87.5°					
<b>(ii)</b>	110 mm bend	12.00	Nos		Each	0.00
<b>b)</b>	Shoe (Plain)					
<b>(ii)</b>	110 mm Shoe	12.00	Nos		Each	0.00
<b>3</b>	Providing and fixing unplasticised -PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50x50x50 mm hardwood plugs, screwed with M.S. screws of required length including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete.					
<b>a)</b>	110 mm	36.00	Nos		Each	0.00
<b>4</b>	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams.	12.00	Nos		Each	0.00
<b>5</b>	Providing and fixing Factory coated galvalumn iron profile sheets of Jindal (Colouron)/ Tata steel (Durashine)/Bhushan make (size, shape and pitch of corrugation as approved by Engineer-in-charge)0.50 mm + 0.05 %, total coated thickness with zinc coating 120 gsm 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 while transportation and should be supplied in single length upto 12metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55mm) 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.	1237.00	Sqm		One Square Metre	0.00
<b>6</b>	Providing and fixing precoatedplain Galvalume profile sheets of TATA Durashine /JINDAL Coloron /CRILL as approved by Engineer-in-charge 0.470 mm (min. total coated thickness ) tensile strength 550 mpa steel grade, composition -55% Aluminium, 43.4% Zinc & 1.6% Silicon , strength as per IS 1397 - 1993, base metal high tensile steel sheet 600 mm wide plain precoated sheet for ridges / valleys / flashings / gutters or 200 mm to 600 mm wide E-Board / E Board bottom with nominal 40 mum zinc coated or nominal 25 mum zinc-tin alloy coated, hexhead, self-drilling screws as per AS 3566-2002 class 3 fasteners woth EPDM / Cyclonic washer all complete as per the direction of the Engineer -in-charge.	256.00	Sqm		One Square Metre	0.00

7	<p>Acoustic Ceiling High density Moisture resistance Wooden tiles :</p> <p>Providing &amp; fixing of Acoustic Ceiling 16 mm thickness in sizes 600 x 600 mm &amp; 600 x 1200 mm, 4mm beveled edge in concealed system , easily demountable tiles , option of weekly wet cleaning, daily dusting, vacuum cleaning, manufactured from High density Moiser resistant , back of the tile covered with glass tissue .Tiles should be classified under sound absorption class A with "alpha w " value of 0.9 at minimum 65mm o.d.s. The system should have Sound Absorption NRC value of 0.9 (according to EN ISO 11654). Tiles should withstand a permanent ambient RH upto 75% at 30 * C without sagging, warping or delaminating (ISO 4611). Articulation class 180 as per ASTM E1111, ASTM E1110. Thermal resistance Framing system:- Providing and fixing Ecotone pre coated (Exposed portion only) GI T Grid system in 1200/600x600mm module which includes providing and fixing wall angle along the perimeter of the room with help of nylon sleeves and wooden screws at 300mm centers.</p>					
	<p>Then suspending the main tee of size from the soffit with help of soffit cleat, rawl plugs and wire rod with Leveling spring clip at 1200mm c/c. 1200mm Cross Tee is then interlocked into the pre-cut slots in the main Tees at 600mm centres in direction perpendicular to the main Tee to make a grid of 600x1200mm. 600mm Cross tees are then interlocked into the pre cut slots in the 1200mm tees at 1200mm centres and in direction parallel to the main tee. Cross Tees having length more than 600mm are to be supported independently. Finally the space bar (2 meter long) get interlock in the main T at every 600 mm and screws to be put inside the main T and space Bar to lock and give strength to the system .</p>					
	<p>Dimensions:- Main Runner 'T' section of size 24x38mm hot dipped galvanized steel body and capped with pre-coated of dipped galvanized steel and 3.6mtr. Long. Cross Runner 'T' section of size 24x25mm hot dipped galvanized steel body and capped with pre-coated of dipped galvanized steel and 1.2/0.6mtr. Long. Perimeter wall angle of hot dipped galvanized steel angle body of size 19x19mm and 3 meter long, GI Space Bar 2000 mm. Make: Ecotone/Armstrong/ Hunter Douglas</p>	400.00	Sqm		One Square Metre	0.00

9	<p>Providing and fixing wall acoustical paneling using ecotone Slato Acoustic Panel make Slats L-16 of size 128mmx2430mmx16mm thick with the specification :-Slats L-16- 2mm @16mm, 32 x 128 x 2430 mm high grade Pine wood base Medium Density Fiber acoustic boards with Tongue &amp; Groove Edge,2mm slot perforation @ 16mm centre, slats perforations, The acoustic should be furnished with a Black absorbent felt backing with an airflow resistance of 330-460 Ns/m<sup>3</sup> (DIN 53887),wood practical core,NRC : should be Up to 0.75,should meet the safety requirements of EN 14190. with using Synco PF Polyester Wool with 1000 GSM and 50 MM thick Fixing :- Sound Strut CC18 screw fixed horizontal/vertical to wall at every 600mm c/c. Metal cleat can be fixed on top edges of Sound Strut CS55 fixed directly by stamping to the CS55 and IC91 which is screw fixed directly to the wall where ever required with a backing black color fabric as approved by Architect and as specified including all accessories, material &amp; labor complete as directed by Architect / Engineer – in – charge. Make: Ecotone/Armstrong/ Hunter Douglas</p>	300.00	Sqm		One Square Metre	0.00
10	<p>Providing and fixing tiled false ceiling of approved materials of size 595x595 mm in true horizontal level suspended on inter locking metal grid of hot dipped galvanized steel sections ( galvanized @ 120 gsm/sqm, both side inclusive) consisting of main "T" runner with suitably spaced joints to get required length and of size 24x38 mm made from 0.30mm thick (minimum) sheet, spaced at 1200 mm center to center and cross "T" of size 24x25mm made of 0.30mm thick (minimum) sheet, 1200 mm long spaced between main "T" at 600 mm center to center to form a grid of 1200x600 mm and secondary cross T of length 600 mm and size 24x25 mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600 mm panel to form grids of 600x600 mm and wall angle of size 24x24x0.3 mm and laying false ceiling tiles of approved texture in the grid including, required cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc.</p>					
	<p>Main "T" runners to be suspended from ceiling using GI slotted cleats of size 27 x 37 x 25 x1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4 mm GI adjustable rods with galvanised butterfly level clips of size 85 x 30 x 0.8 mm spaced at 1200 mm center to center along main T, bottom exposed width of 24 mm of all T-sections shall be pre-painted with polyester paint, all complete for all heights as per specifications, drawings and as directed by Engineer-in-charge.</p>					
a)	<p>GI Metal Ceiling Lay in perforated Tegular edge global white color tiles of size 595x595 mm and 0.5 mm thick with 8mm drop; made of GI sheet having galvanizing of 100 gms/sqm (both sides inclusive) and 20% perforation area with 1.8mm dia holes and having NRC (Noise Reduction Coefficient ) of 0.5, electro statically polyester powder coated of thickness60 microns (minimum), including factory painted after bending and perforation, and backed with a black Glass fiber acoustical fleece.</p>	135.00	Sqm		One Square Metre	0.00

<b>Sub-Head : Finishing</b>						
<b>1</b>	12 mm cement plaster of mix :					
<b>a)</b>	1:6 (1 cement: 6 coarse sand)	8862.00	Sqm		One Square Metre	0.00
<b>2</b>	15 mm cement plaster on rough side of single or half brick wall of mix :					
<b>a)</b>	1:6 (1 cement: 6 coarse sand)	2988.00	Sqm		One Square Metre	0.00
<b>3</b>	Cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement.					
<b>a)</b>	12 mm cement plaster	108.00	Sqm		One Square Metre	0.00
<b>4</b>	Finishing walls with Acrylic Smooth exterior paint of required shade :					
<b>a)</b>	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm).	2988.00	Sqm		One Square Metre	0.00
<b>5</b>	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :					
<b>a)</b>	Two or more coats on new work.	437.00	Sqm		One Square Metre	0.00
<b>6</b>	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:					
<b>a)</b>	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture.	250.00	Sqm		One Square Metre	0.00
<b>7</b>	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.	14100.00	Sqm		One Square Metre	0.00
<b>8</b>	Providing and fixing 22 gauge chicken wire mesh in required size and shape 150 mm wide and fixed with Bombay nails on vertical and horizontal junctions of RCC and AAC block masonry i/c scaffolding, all leads and lifts etc. Before plastering of surface all complete as per direction of Engineer -In-Charge.	150.00	Sqm		One Square Metre	0.00
<b>9</b>	Distempering with 1st quality acrylic distemper, having VOC (Volatile Organic Compound ) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.					

a)	Two coats.	14100.00	Sqm		One Square Metre	0.00
<b>Sub-Head : Dismantling and Demolishing</b>						
1	Demolishing stone rubble masonry manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge :					
a)	In lime mortar	150.00	Cum		One Cubic Metre	0.00
2	Removing mortar from and cleaning stones and concrete articles (net quantity of stacks of cleaned materials will be measured):					
a)	In lime mortar	120.00	Cum		One Cubic Metre	0.00
3	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.	2530.00	Cum		One Cubic Metre	0.00
<b>Sub-Head : Road Work</b>						
1	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earthwith lead upto 50 metres.	750.00	Sqm		One Square Metre	0.00
2	Providing and laying factory made chamfered edge Cement Concrete paver blocks In foot path, park & lawns driveway or light & traffic parking etc. of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50mm thick compacted bed of course sand, compacting and proper embedding/ laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand, all complete as per manufacturer's specifications & direction of Engineer in-Charge.					
a)	80mm thick Cement concrete paver block of M-30 grade with approved colour, design & pattern.	750.00	Sqm		One Square Metre	0.00
<b>Sub-Head : Sanitary Installations</b>						

<b>1</b>	Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous china flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40 mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :					
<b>a)</b>	W.C. pan with ISI marked white solid plastic seat and lid	22.00	No.		Each	0.00
<b>2</b>	Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350 mm with white PVC automatic flushing cistern, with fittings, standard size C.P. brass flush pipe, spreaders with unions and clamps (all in C.P. brass) with waste fitting as per IS : 2556, C.I. trap with outlet grating and other couplings in C.P. brass, including painting of fittings and cutting and making good the walls and floors wherever required :					
<b>a)</b>	Single half stall urinal with 5 litre P.V.C. automatic flushing cistern	5.00	No.		Each	0.00
<b>3</b>	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require:					
<b>a)</b>	White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps	25.00	No.		Each	0.00
<b>4</b>	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS:13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required :					
<b>a)</b>	Kitchen sink with drain board					
<b>(i)</b>	510x1040 mm bowl depth 250 mm.	3.00	No.		Each	0.00
<b>5</b>	Providing and fixing 8 mm dia C.P. / S.S. Jet with flexible tube upto 1 metre long with S.S. triangular plate to European type W.C. of quality and make as approved by Engineer - in - charge.	25.00	No.		Each	0.00
<b>6</b>	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.					
<b>a)</b>	Semi rigid pipe					
<b>(i)</b>	32 mm dia	25.00	No.		Each	0.00
<b>(ii)</b>	40 mm dia	15.00	No.		Each	0.00



<b>7</b>	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	25.00	No.		Each	0.00
<b>8</b>	Providing and fixing soil, waste and vent pipes :					
<b>a)</b>	100 mm dia.					
<b>(i)</b>	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989.	409.00	Mtr		One Running Metre	0.00
<b>9</b>	Providing and fixing M.S. holder-bat clamps of approved design to Sand Cast iron/cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including cost of cutting holes and making good the walls etc. :					
<b>a)</b>	For 100 mm dia. Pipe	70.00	Nos.		Each	0.00
<b>10</b>	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.					
<b>a)</b>	100 mm dia					
<b>(i)</b>	Sand cast iron S&S as per IS - 3989	25.00	Nos.		Each	0.00
<b>11</b>	Providing and fixing plain bend of required degree.					
<b>a)</b>	100 mm dia					
<b>(i)</b>	Sand cast iron S&S as per IS : 3989	36.00	Nos.		Each	0.00
<b>12</b>	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.					
<b>a)</b>	100x100x100 mm					
<b>(i)</b>	Sand cast iron S&S as per IS - 3989	48.00	Nos.		Each	0.00
<b>13</b>	Providing and fixing single equal plain junction of required degree :					
<b>a)</b>	100x100x100 mm					
<b>(i)</b>	Sand cast iron S&S as per IS - 3989	40.00	Nos.		Each	0.00
<b>14</b>	Providing and fixing terminal guard:					
<b>a)</b>	100 mm					
<b>(i)</b>	Sand cast iron S&S as per IS - 3989	20.00	Nos.		Each	0.00
<b>15</b>	Providing and fixing collar:					

a)	100 mm					
(i)	Sand cast iron S&S as per IS - 3989	75.00	Nos.		Each	0.00
16	Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter:					
a)	100 mm	250.00	Nos.		Each	0.00
17	Providing and fixing trap of self cleaning design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors :					
a)	100 mm inlet and 100 mm outlet					
(i)	Sand cast iron S&S as per IS: 3989.	60.00	Nos.		Each	0.00
18	Painting sand cast iron/ centrifugally cast (spun) iron soil, waste vent pipes and fittings with two coats of synthetic enamel paint of any colour such as chocolate grey, or buff etc. over a coat of primer (of approved quality) for new work :					
a)	100 mm diameter pipe	250.00	Mtr		One Metre	0.00
19	Providing and fixing PTMT liquid soap container 109 mm wide, 125 mm high and 112 mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour, weighing not less than 105 gms.	25.00	Nos.		Each	0.00
20	Providing and fixing PTMT towel ring trapezoidal shape 215 mm long, 200 mm wide with a minimum distances of 37 mm from wall face with concealed fittings arrangement of approved quality and colour, weighing not less than 88 gms.	25.00	Nos.		Each	0.00
21	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fittings arrangement of approved quality and colour.					
a)	600 mm long towel rail with total length of 645 mm, width 78 mm and effective height of 88 mm, weighing not less than 190 gms.	25.00	Nos.		Each	0.00
22	Extra for providing and fixing 100 mm Dia stainless steel grating with frame (with or without hole) instead of screwed down or hinged SCI grating.	50.00	Nos.		Each	0.00
	<b>Sub-Head : Water Supply</b>					
1	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, i/c cutting and making good the walls etc. : Internal work – Exposed on wall.					
a)	25 mm dia. nominal bore	250.00	Mtr		One Running Metre	0.00

<b>b)</b>	32 mm dia. nominal bore	80.00	Mtr		One Running Metre	0.00
<b>c)</b>	40 mm dia. nominal bore	75.00	Mtr		One Running Metre	0.00
<b>2</b>	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. :Concealed work, including cutting chases and making good the walls etc.					
<b>a)</b>	15 mm nominal outer dia .Pipes.	400.00	metre		One Running Metre	0.00
<b>b)</b>	20 mm nominal outer dia .Pipes.	250.00	metre		One Running Metre	0.00
<b>3</b>	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. : External work					
<b>a)</b>	25 mm dia. nominal bore	150.00	Mtr		One Running Metre	0.00
<b>b)</b>	50 mm dia. nominal bore	75.00	Mtr		One Running Metre	0.00
<b>4</b>	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete :					
<b>a)</b>	25 to 40 mm nominal bore	1.00	No.		Each	0.00
<b>5</b>	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :					
<b>a)</b>	25 mm nominal bore	16.00	Nos.		Each	0.00
<b>6</b>	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :					
<b>a)</b>	20 mm nominal bore	8.00	Nos.		Each	0.00
<b>7</b>	Painting G.I. pipes and fittings with synthetic enamel white paint with two coats over a ready mixed priming coat, both of approved quality for new work :					

a)	25 mm diameter pipe.	150.00	Mtr		One Running Metre	0.00
b)	32 mm diameter pipe.	120.00	Mtr		One Running Metre	0.00
c)	40 mm diameter pipe.	50.00	Mtr		One Running Metre	0.00
8	Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :					
a)	25 mm diameter pipe	130.00	Mtr		One Running Metre	0.00
b)	50 mm diameter pipe	50.00	Mtr		One Running Metre	0.00
9	Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work)					
a)	15 mm nominal bore	40.00	Nos.		Each	0.00
b)	20 mm nominal bore	30.00	Nos.		Each	0.00
c)	25 mm nominal bore	30.00	Nos.		Each	0.00
d)	32 mm nominal	30.00	Nos.		Each	0.00
e)	40 mm nominal bore	30.00	Nos.		Each	0.00
f)	50mm nominal bore	20.00	Nos.		Each	0.00
10	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, IS : 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	8000.00	Ltr		One Litre	0.00
11	Providing and fixing CON-047KN of Continental Jaguar, CERA F1099151 or equivalent make C.P. brass bib cock with flange all complete as per the direction of Engineer-in-charge:					
a)	15 mm nominal bore.	96.00	Nos.		Each	0.00
13	Providing and fixing CON-059KN of Continental Jaguar, CERA-F1099201 or equivalent make C.P. brass Angle cock with flange all complete as per the direction of Engineer-in-charge.: C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931					

a)	15mm nominal bore	96.00	Nos.		Each	0.00
14	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.					
a)	15 mm nominal bore	15.00	Nos.		Each	0.00
	<b>Sub-Head : Drainage</b>					
1	Providing, laying and jointing glazed stoneware pipes class SP-1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :					
a)	150 mm diameter	125.00	Mtr		One Running Metre	0.00
2	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design :					
a)	150 mm diameter S.W. pipe	120.00	Mtr		One Running Metre	0.00
3	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design:					
a)	100x100 mm size P type					
(i)	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	10.00	Nos.		Each	0.00
4	Constructing brick masonry manhole in cement mortar 1:4 ( 1 cement : 4 coarse sand ) with R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design :					
a)	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :					

(i)	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	12.00	Nos.		Each	0.00
5	Extra for depth for manholes					
a)	Size 90x80 cm					
(i)	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	2.00	Mtr		One Running Metre	0.00
	<b>Sub-Head : Aluminium Work</b>					
1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass/ stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :					
a)	For fixed portion					
(i)	Powder coated aluminium (minimum thickness of powder coating 50 micron)	200.00	Kg		One Kilogram	0.00
b)	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately).					
(i)	Powder coated aluminium (minimum thickness of powder coating 50 micron)	100.00	Kg		One Kilogram	0.00
2	Providing and fixing 12mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS:12823 Grade I Type II, in panelling fixed in aluminum doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of engineer-in-charge.					
a)	Pre-laminated particle board with decorative lamination on both sides.	20.00	Sqm		One Square Metre	0.00

3	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item):					
a)	With float glass panes of 5 mm thickness (weight not less than 12.50 kg/sqm)	25.00	Sqm		One Square Metre	0.00
4	Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg., for doors, including cost of cutting floors ,embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge.					
a)	With stainless steel cover plate minimum 1.25 mm thickness.	4.00	Nos.		Each	0.00
5	Providing and fixing aluminium tubular handle bar 32 mm outer dia, 3.0 mm thick & 2100 mm long with SS screws etc .complete as per direction of Engineer-in-Charge.					
a)	Powder coated minimum thickness 50 micron aluminium tubular handle bar.	8.00	Nos.		Each	0.00
5	Providing and fixing Brass 100mm mortice latch and lock with 6 levers without pair of handles (best make of approved quality) for aluminium doors including necessary cutting and making good etc. complete.	2.00	Nos.		Each	0.00
	<b>Sub Head: Water Proofing</b>					
1	Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of :i) Ist course of applying cement slurry @ 4.4 Kg/sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface. ii) IInd course of 20mm cement plaster 1:3 (1 cement : 3 coarse sand)mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface.iii) IIIrd course of applying blown or residual bitumen applied hot at 1.7Kg. per sqm of area. iv) IVth course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 Kg/sqm.)	115.00	Sqm		One Square Metre	0.00
2	Providing and fixing GI Spouts in depressed portions, 40mm dia and 60Cm long in Cement Mortar 1:4 (1Cement: 4Fine Sand) i/c making arrangement for smooth & efficient functioning of the spout as per the direction of the Engineer-in-charge.	16.00	Nos.		Each	0.00
	<b>Total Civil work (A)</b>					0.00

**SCHEDULE OF QUANTITIES (ELECTRICAL WORK)**

Sr. No.	Description of item.	Quantity		Rate	Unit	Amount
	<b>SUB HEAD-I (Wiring)</b>					
1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required					
(a)	Group C	501.00	Points		Point	0.00
2	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required	5.00	Points		Point	0.00
3	Wiring for light/ power plug with 2X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit alongwith 1 No. 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required	500.00	Meters		Meter	0.00
4	Wiring for light/ power plug with 4X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit alongwith 2 No. 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required	250.00	Meters		Meter	0.00
5	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required					
(a)	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	200.00	Meters		Meter	0.00
b)	4 X 1.5 sq. mm + 2 X 1.5 sq. mm earth wire	200.00	Meters		Meter	0.00
c)	6 X 1.5 sq. mm + 3 X 1.5 sq. mm earth wire	150.00	Meters		Meter	0.00
d)	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	50.00	Meters		Meter	0.00
(e)	4 X 16 sq. mm + 2 X 6 sq. mm earth wire	250.00	Meters		Meter	0.00



6	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.					
(a)	20 mm	150.00	Meters		Meter	0.00
(b)	25 mm	200.00	Meters		Meter	0.00
(c)	40 mm	100.00	Meters		Meter	0.00
7	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/recessed steel/PVC conduit as required.					
(a)	1x1.5 sq. mm	50.00	Meters		Meter	0.00
(b)	2x1.5 sq. mm	100.00	Meters		Meter	0.00
©	3x1.5 sq. mm	50.00	Meters		Meter	0.00
(d)	4x1.5 sq. mm	50.00	Meters		Meter	0.00
(e)	5x1.5 sq. mm	50.00	Meters		Meter	0.00
(f)	6x1.5 sq. mm	50.00	Meters		Meter	0.00
8	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 amps modular socket outlet and 5/6 amps modular switch, connection etc. as required.	20.00	Nos.		Each	0.00
9	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required.	75.00	Nos.		Each	0.00
10	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.					
(a)	5/6 amps switch	79.00	Nos.		Each	0.00
(b)	15/16 amps switch	15.00	Nos.		Each	0.00
©	3 pin 5/6 amp socket outlet	79.00	Nos.		Each	0.00
(d)	6 pin 15/16 amp socket outlet	15.00	Nos.		Each	0.00
(e)	Telephone socket outlet	4.00	Nos.		Each	0.00

(g)	RJ-45 Jack with Cat 6	20.00	Nos.		Each	0.00
11	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc as required.					
(a)	1 or 2 Module (75mmX75mm)	20.00	Nos.		Each	0.00
(b)	4 Module (125mmX75mm)	20.00	Nos.		Each	0.00
©	8 Module (125mmX125mm)	10.00	Nos.		Each	0.00
(d)	12 Module (200mmX150mm)	10.00	Nos.		Each	0.00
12	S/Fixing hexagonal fan box of size 150 mm dia made outof 16 SWG MS sheet including 12mm dia MS rod in the U shape with its vertical legs bent horizontally at the top at least 19 cm on either side and bound to the top reinforcement of the roof at the time of casting i/c S/F 3 mm thick phenolic laminated sheet at the bottom complete as reqd.	115.00	Nos.		Each	0.00
13	Supplying and fixing two module stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	115.00	Nos.		Each	0.00
14	Supplying and drawing following pair 0.5 mm dia FRLS PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as required.					
(a)	2 Pair	100.00	Meters		Meter	0.00
(b)	4 Pair	100.00	Meters		Meter	0.00
15	Supplying and drawing of UTP 4 pair CAT 6 LAN Cable in the existing surface/ recessed Steel/ PVC conduit as required.					
(a)	1 run of cable	200.00	Meters		Meter	0.00
(b)	2 run of cable	200.00	Meters		Meter	0.00
	<b>SUB HEAD-II (Distribution System)</b>					
1	Supplying and fixing following way, horizontal type SPN / TPN, sheet steel, MCB distribution board, 240/ 415 volts, on surface/ recess, complete with metal door, tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/ RCCB/ Isolator)					
(a)	8 Way SPN Double Door	1.00	Nos.		Each	0.00
(b)	4 Way TPN (8+12) Double Door	8.00	Nos.		Each	0.00
(c)	8 Way TPN (4+24) Double Door	2.00	Nos.		Each	0.00

2	Supplying and fixing following rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.					
(a)	5 amps to 32 amps, 240 volts Single pole.	150.00	Nos.		Each	0.00
(b)	Double Pole	1.00	Nos.		Each	0.00
(c)	63 amps, 415 volts Four pole.	10.00	Nos.		Each	0.00
3	S/F Following rating MCB power protected unit suitable for operation on 230V single phase AC supply complete with all accessories i/c making interconnection etc as required.					
a)	16A	4.00	Nos.		Each	0.00
4	Supplying and fixing 63 Amps., four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current up to 30 milli amperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.	10.00	Nos.		Each	0.00
5	Supplying and fixing Adaptor Box(s) fabricated out of 16 SWG M.S. sheet complete with cutting, welding, painting, sign writing etc. all as required.	6.00	Sqm		Sq. Meter	0.00
	<b>TOTAL ELECTRICAL WORK (B)</b>					0.00
	<b>TOTAL (A+B)</b>					0.00

Executive Engineer [C]  
BSNL Civil Division  
Shimla [HP]