



**GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT**

Notice Inviting Tender

**Name of Work:
Construction toilets & other works at ISPW Station, Leh, UT
of Ladakh.**

NIT No. : 03/EESM/LPD-I/2026-27

Certified that this Bid document contains 01 to 103 serially numbered.

This NIT is approved for Rs. 17,82,091/- (Rupees Seventeen Lakh Eight-Two Thousand and Ninety-One Only).

Assistant Engineer (P)
LPD-I, CPWD

Assistant Engineer (E)(P)
LPED, CPWD

EE & SM (LPD-I)
LPD-I, CPWD

EE & SM (LPED)
LPED, CPWD

**INFORMATION AND INSTRUCTIONS FOR CONTRACTORS FOR
e-TENDERING FORMING PART OF NIT AND TO BE POSTED ON WEBSITE**

The Executive Engineer and Senior Manager (C), Leh Project Division-1, CPWD, Leh, UT of Ladakh (Ph: 7979821173, e-mail id: eesm1-leh@cpwd.gov.in) on behalf of the President of India invites online bids on Percentage Rate Basis from CPWD enlisted contractors of appropriate class in Building & Roads category for the following work:

S. No.	NIT No.	Name of work & location	Estimated cost put to tender	Earnest Money	Period of Completion	Last date & time of submission of bid, copy of receipt of deposition of original EMD, and other documents as specified in the bid document	Time & date of opening of bid
1	2	3	4	5	6	8	9
1	03/EESM/LPD-1/2026-27	Construction of toilets and other works at ISPW Station Leh, UT of Ladakh.	17,82,091/-	35,642/-	45 days	07.09.2026 Up to 11:00 AM	07.09.2026 at 11:30 AM

The CPWD enlisted Contractors of appropriate class who fulfill the following requirement shall only be eligible to apply:

1. The intending bidder must read the terms and conditions of CPWD-6 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
2. This information and instructions for bidders posted on website shall form part of bid document.
3. The bid document consisting of details of proposed fencing, Specifications, 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 <https://etender.cpwd.gov.in> or www.cpwd.gov.in free of cost.

4. But the bid can only be submitted after deposition of original EMD either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission and uploading the mandatory scanned documents such as Insurance Surety Bonds, Account Payee Demand draft or Banker's Cheque or Fixed Deposit Receipts or/ and Bank Guarantee including e- Bank Guarantee (for balance amount as prescribed) from any of the Commercial Bank towards EMD in favour of Executive Engineer as mentioned in NIT, receipt for deposition of original EMD to division office of any Executive Engineer (including NIT issuing EE/ AE), CPWD and other documents as specified.
5. Those contractors who are not registered or have not updated their profile on the website mentioned above, are required to get registered/update their profile beforehand. The necessary training materials including the videos with step-to-step process are available on download section of <https://etender.cpwd.gov.in>
6. The intending bidder must have a valid digital signature certificate with encryption key (combo type) to perform any operations/transactions on the e-tendering portal / website and the bidder should download and install the eMsigner on their system as per instruction available on download section of <https://etender.cpwd.gov.in>
7. On opening date, the contractor can login and see the bid opening process. After opening of bids, he will receive the competitor bid sheets.
8. Contractor can upload documents in the form of JPG format and PDF format.
9. Contractor must ensure to quote rate of each item. The column meant for quoting rate in figures appears in yellow colour and the moment rate is entered; it turns sky blue. In addition to this, while selecting any of the cells a warning appears that if any cell is left blank the same shall be treated as "0". Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as "0" (ZERO).

However, if a tenderer quotes nil rates against each item in item rate tender or does not quote any percentage above/below on the total amount of the tender or any section / sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.
10. The department reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criterion.
11. **Site information**
 - (i) The work is required to be carried out at Police Solar Colony, Leh which is having extreme cold condition. No damage shall be allowed / reimbursed to the contractor on this account.
12. The List of Documents to be scanned and uploaded within the period of Bid submission.

- a) Insurance Surety Bond, Demand Draft/ Account Payee Banker's Cheque / FDR/ Bank Guarantee of any commercial Bank (for balance amount as prescribed) against EMD in favour of **Executive Engineer and SM C 1 CPWD, Leh UT of Ladakh.**
- b) Copy of Receipt of deposition of original EMD issued from division office of any Executive Engineer (including NIT issuing EE/AE), CPWD. (Form – “A”)
- c) Enlistment order of the contractor
- d) GST registration certificate of the state, if already obtained by the bidder.
If the bidder has not obtained GST registration as applicable, then in such a case the bidder shall upload the following undertaking with the bid document.
“If work is awarded to me/us, I/We shall obtain GST registration certificate as applicable within one month from date of receipt of award letter or before payment of 1st R.A. bill whichever is earlier, failing which, I/We shall be responsible for any delay in payments which will be due towards me on account of the work executed and/ or for any action taken by CPWD or GST department in this regard”. (Form “B”)
- e) Undertaking on structural stability and soundness as per prescribed format (Form “C”)

Executive Engineer & Senior Manager (C)
Leh Project Division-I,
CPWD, Leh, UT of Ladakh

CPWD-6

CPWD

**GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT
CPWD-6 for e-TENDERING**

1. The Executive Engineer and Senior Manager (C), Leh Project Division-1, CPWD, Leh, UT of Ladakh (Ph: 7979821173, e-mail id: eesm1-leh@cpwd.gov.in) on behalf of the President of India invites online bids on Percentage Rate Basis from CPWD enlisted contractors of appropriate class in Building & Roads category for the following work:

Name of work: Construction of toilets and other works at ISPW Station Leh, UT of Ladakh.

The work is estimated to cost Rs. 17,82,091/-. This estimate, however, is given merely as a rough guide.

1. Agreement shall be drawn with the successful bidders on prescribed CPWD General Condition of Contract construction work 2023 which is available as a Govt. of India Publication and also available on website www.cpwd.gov.in. Bidders shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
2. The time allowed for carrying out the work will be 45 days from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the bid documents.
3. The site for the work is available. As the site is situated on international border, sometimes border guarding agencies may impose some restrictions for movement or for working. No compensation whatsoever shall be entertained on these grounds.
The availability of architectural and structural drawings has been mentioned in Schedule-F.
4. The bid document consisting of details of proposed roads, specifications, the schedule of quantities of various ~~types~~ of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen on website <https://etender.cpwd.gov.in> or www.cpwd.gov.in free of cost.
5. After submission of the bid the contractor can re-submit revised bid any number of times or withdraw it before last time and date of submission of bid as notified. No post-tender modification is allowed by the tenderers except through negotiations, if required. In case, any tenderer does so, the tender will be rejected and the tenderer will be debarred for future tendering in CPWD for two years by the concerned enlisting authority (in case of CPWD enlisted contractor) and by the concerned CE/SE (in case of non-enlisted contractor).

6. While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of bid as notified.
7. When bids are invited in three stage system and if it is desired to submit revised financial bid then it shall be mandatory to submit revised financial bid. If not submitted then the bid submitted earlier shall become invalid.
8. Earnest Money in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee including e- Bank Guarantee (for balance amount as prescribed) from any of the Commercial Banks (**drawn in favour of Executive Engineer and SM C 1 CPWD, Leh UT of Ladakh**) shall be scanned and uploaded on the e-Tendering website within the period of bid submission. The original EMD should be deposited either in the office of the Executive Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission. The EMD receiving Executive Engineer (including NIT issuing EE/AE) shall issue a receipt of deposition of earnest money deposit to the bidder in a prescribed format (enclosed) uploaded by tender inviting EE in the NIT.

A part of earnest money is acceptable in the form of bank guarantee also. In such case, minimum 50% of earnest money or Rs. 20 lac, whichever is less, shall have to be deposited in shape prescribed above, and balance may be deposited in shape of Bank Guarantee including e- Bank Guarantee of any Commercial bank having validity for a period of 90 days for single bid works and 180 days for two bid system or more from the last date of receipt of bids which is to be scanned and uploaded by the intending bidders.

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

Copy of Enlistment Order and certificate of work experience and other documents as specified in the notice inviting e- tender shall be scanned and uploaded on the e-Tendering website within the period of bid submission. However, certified copy of all the scanned and uploaded documents as specified in e- tender notice shall have to be submitted by the lowest bidder within a week physically in the office of tender opening authority. Online bid documents submitted by intending bidders shall be opened only of those bidders, who's original EMD deposited with any division of CPWD and other documents scanned and uploaded are found in order.

The bid submitted shall be opened at 11:30 AM on 07.09.2026-

9. The bid submitted shall become invalid and e-Tender processing fee (if applicable) shall

not be refunded if:

- (i) The bidder is found ineligible.
 - (ii) The bidder does not upload scanned copies of all the documents stipulated in the bid document.
 - (iii) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest bidder in the office of bid opening authority.
 - (iv) If a tenderer quotes nil rates against each item in item rate tender or does not quote any percentage above/below on the total amount of the tender or any section / sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.
10. The contractor whose bid is accepted will be required to furnish performance guarantee at specified percentage of the tendered amount as mentioned in schedule E and within the period specified in Schedule F. This guarantee shall be in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt or Bank Guarantee from any of the Commercial Banks in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F', including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. The earnest money deposited along with bid shall be returned after receiving the aforesaid performance guarantee. The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses/ registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare Board including Provident Fund Code No., if applicable, and also ensure the compliance of aforesaid provisions by the sub-contractors, if any engaged by the contractor for the said work within the period specified in Schedule F.

11. The description of the work is as follows:

“Construction of toilets and other works at ISPW Station Leh, UT of Ladakh.

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

and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

12. The competent authority on behalf of the President of India does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.
13. Canvassing, whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.
14. The competent authority on behalf of President of India reserves to himself the right of accepting the whole or any part of the bid and the bidders shall be bound to perform the same at the rate quoted.
15. The contractor shall not be permitted to bid for works in the CPWD Circle (Division in case of contractors of Horticulture/Nursery category) responsible for award and execution of contracts, in which his near relative is posted a Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any gazetted officer in the Central Public Works Department or in the Ministry of Housing and Urban Affairs. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.
16. No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid for engagement in the contractor's service.
17. The bids for the work shall remain open for acceptance for a period of 30 (Thirty) days from the date of opening of bids.

Further,

- (i) If any tenderer withdraws his tender within 7 days after last date and time (24 hours basis) of submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to forfeit 50% of the earnest money absolutely

irrespective of letter of acceptance for the work is issued or not.

- (ii) If any tenderer withdraws his tender after expiry of 7 days after last date and time (24 hours basis) of submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to forfeit 100% of the earnest money absolutely irrespective of letter of acceptance for the work is issued or not.
 - (iii) Withdrawal of the tender, by the tenderer, shall only be made through e-tender portal. Any other method i.e. through letter / e-mail etc. Shall not be considered.
 - (iv) In case of forfeiture of earnest money as prescribed in para (i) and (ii) above, the bidders shall not be allowed to participate in the rebidding process of the same work.
18. This notice inviting Bid shall form a part of the contract document. The successful bidder/ contractor, on acceptance of his bid by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:
- (a) The Notice Inviting Bid, all the documents including Special and additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.
 - (b) Standard C.P.W.D. Form 7 and CPWD Standard General Conditions of Contract-construction work 2023 as amended/ modified up to last date of submission of bid.
19. The intending bidders are required to update their profile in CPWD e- tender portal and to upload their bids well in advance of last date of submission of tender. Any issue related to updating profile/uploading tender can be resolved through the concerned Executive Engineer/ Assistant Engineer or ERP helpline no. 18001803286 or e-mail id cpwd.support@techmahindra.com. The e- tendering bidders are also advised not to wait to raise any issues till the last date of submission of bid in their own interest.

Executive Engineer & Senior Manager (C)
Leh Project Division-I,
CPWD, Leh, UT of Ladakh

Section-I

Brief scope of the work

1. Salient details of the work for which bids are invited are as under: -

S.No.	Name of work	Estimated Cost	Period of completion
1.	Construction of toilets and other works at ISPW Station Leh, UT of Ladakh.	17,82,091/-	45 days

Design & Scope: - The following provisions have been made in the NIT as below: -

1. 1st quality ceramic glazed wall tiles 30 mm thick flush door shutters including fixture & fittings.
2. Brass fancy handle.
3. Rectified Glazed Ceramic floor tiles of size 300x300 mm or more.
4. Finishing walls with textured exterior paint.
5. Applying white cement-based putty.
6. White vitreous china pedestal type water closet.
7. White vitreous china pedestal for wash basin.
8. CP Brass Single lever telephonic wall mixer.
9. Four layered heavy duty polyethylene water storage tanks.
10. Water proofing treatment on roofs of slabs.
11. Insulation to water storage tank.
12. Self-regulating heating cable, on existing water pipeline.
13. SITC of LED Glow sign board size " 4x6".
14. SITC of Oil Bukhari with exhaust pipe.
15. SITC of oil radiant heater with 15 fins.
16. SITC of 25 litre electric geyser.
17. SITC of RO system with hot and cold-water provision.
18. SITC of 5 KVA UPS including all accessories.
19. SITC of electric humidifier including all accessories.

Note:

1. The scope of works & specification is given in general but they are not exhaustive i.e. does not mention all the incidental works required to be carried out for complete execution of the item of work. The work shall be carried out, all in accordance with true intent and meaning of the specifications and the drawings taken together, regardless of whether the same may or may not be particularly shown on the drawings and/ or described in the specifications, provided that the same can be reasonably inferred there from. There may be several incidental works, which are not mentioned in the contract document/specifications but will be necessary to complete the item in all respect. All these incidental works/ costs which are not mentioned, but are necessary to complete the work shall be deemed to have been

included in the overall amount quoted by the contractor for various components of work.

2. The responsibility for making arrangement for “water and power supply” required for the work rests with the agency within his quoted rates.
3. **The scope of work includes cost of all materials, manpower, equipment, T&P, fixtures, accessories, royalties, taxes, watch & ward and all other essential elements for completion of works as aforesaid whatsoever.**

FORMS FOR FURNISHING **INFORMATION**

FORM 'A'

Receipt of deposition of original EMD (Receipt No...../date.....)		
(i)	Name of work	<i>Construction of toilets and other works at ISPW Station Leh, UT of Ladakh.</i>
(ii)	NIT No.	03/EESM/LPD-I/2026-27
(iii)	Estimated Cost	Rs. 17,82,091/-
(iv)	Amount of Earnest Money Deposit	Rs. 35,642/-
(v)	Last date of submission of bid (To be filled by Tender inviting authority/NIT approving authority at the time of issue of NIT and uploaded along with NIT)	07.09.2026 upto 11:00 AM
(vi)	Name of the Contractor	#
(vii)	Form of EMD	#
(viii)	Amount of EMD	#
(ix)	Date of submission of EMD	#
Signature, Name and Designation of EMD receiving officer (EE/ AE(P)/ AE/ AAO) along with office stamp		
(# to be filled by EMD receiving EE or NIT issuing EE/AE as the case may be)		

LETTER OF TRANSMITTAL

To

Executive Engineer & Senior Manager (C)
Leh Project Division-I,
CPWD, Leh, UT of Ladakh

Sub: Construction of toilets and other works at ISPW Station Leh, UT of Ladakh.
NIT NO.:03/EESM/LPD-I/2026-27

Sir,

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

1. I/We hereby certify that all the statements made and information supplied in the enclosed forms and accompanying statements are true and correct.
2. I/We have furnished all information and details necessary for eligibility and have no further pertinent information to supply.
3. I/We hereby submit undertaking on structural stability and soundness as per prescribed format Form – “C”.

Certificate:

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

Enclosures: Seal of bidder

Date of submission

Signature(s) of bidder(s)

Telephone No./Mobile No./Fax No/ email

FORM 'B'
UNDERTAKING REGARDING GST REGISTRATION
(on letterhead of bidder with stamp)

To.
Executive Engineer & Senior Manager (C)
Leh Project Division-I,
CPWD, Leh, UT of Ladakh

*Sub:- Submission of Tender for the work of 'Construction of toilets and other works at
ISPW Station Leh, UT of Ladakh.'*

NIT No.:03/EESM/LPD-I/2026-27

Sir,

Having examined the details given in press notice and bid document for the above works,

I/ We hereby submit the following. "If work is awarded to me / us, I / We shall obtain GST registration certificate as applicable within one month from the date of receipt of the award letter or before release of any payment by CPWD, whichever is earlier, failing which I/We shall be responsible for any delay in payments which will be due towards me/us on a/c of the work executed and/or for any action taken by CPWD of GST department in this regard.

Seal of bidder.

Date of submission

Signature (s) of Bidder(s)

FORM 'C'

UNDER TAKING ON STRUCTURAL STABILITY AND SOUNDNESS OF ALREADY COMPLETED BUILDINGS AND INFRASTRUCTURE PROJECTS

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

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

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

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

**Signature of
Notary with seal**

**Signature of bidder or an
authorized person of the firm
with stamp**

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

On non judicial stamp paper of minimum Rs. 100

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

**Form of Bank Guarantee for Earnest Money Deposit /performance
Guarantee/Security Deposit/Mobilization Advance/ refund of milestone withheld
amount.**

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

OR**

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

2. We, (indicate the name of the bank) (herein after referred to as "the Bank"), hereby undertake to pay to the Government an amount not exceeding Rs.,...,..... (Rupees "..... only) on demand by the Government within 10 days of the demand.
3. We, (indicate the name of the Bank)do here by undertake to pay the amount due and payable under this guarantee without any demur, merely on a demand from the Government stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. (Rupeesonly).
4. We, (indicate the name of the Bank), further undertake to pay the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor in any suit or proceeding pending On non-judicial stamp paper of minimum Rs.100 before any court or Tribunal, our liability under this Bank Guarantee being absolute and unequivocal. The payment so made by us under this Bank Guarantee shall be a valid discharge of our liability for payment thereunder and the contractor shall have no claim against us for making such payment.

5. We, (indicate the name of the Bank)further agree that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligation hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said contractor and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said contractor or for any forbearance, act of omission on the part of the Government or any indulgence by the Government to the said contractor or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.
6. We, (Indicate the name of the Bank) further agree that the Government at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor at the first instance without proceeding against the contractor and notwithstanding any security or other guarantee the Government may have in relation to the Contractor's liabilities.
7. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor.
8. We, (Indicate the name of the Bank), undertake not to revoke this guarantee except with the consent of the Government in writing.
9. This Bank Guarantee shall be valid up to unless extended on demand by the Government. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs (Rupees..... only) and unless a claim in writing is lodged with us within the date of expiry or extended date of expiry of this guarantee, all our liabilities under this guarantee shall stand discharged.

Date.....

Witnesses:

- | | |
|--------------------|----------------------|
| 1. Signature | Authorized signatory |
| Name and address | Name |
| | Designation |
| | Staff code no. |
| 2. Signature | Bank seal |
| Name and address | |

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

CPWD-7

GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT
Percentage rate tender and contract for works

(A) Tender for the work of: **“Construction of toilets and other works at ISPW Station Leh, UT of Ladakh.”**

- (i) To be uploaded by 11:00 AM on 07.09.2026 at <https://etender.cpwd.gov.in>.
- (ii) To be opened in presence of tenderers who may be present at 11:30 AM on 07.09.2026 in the office of The Executive Engineer and Senior Manager (C), Leh Project Division-1, CPWD, Leh, UT of Ladakh (Ph: 7979821173, e-mail id: eesm1-leh@cpwd.gov.in)

TENDER

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

I/We hereby tender for the planning, designing and execution of the work as per scope mentioned in this tender document specified for the President of India within the time specified in Schedule ‘F’ viz., schedule of quantities and in accordance in all respect with the applicable municipal byelaws, regulations, Acts, NGT guidelines, specifications, designs, drawing and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in accordance with, such conditions so far as applicable.

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

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

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

Further, if I/We fail to commence work as specified, I/ We agree that President of India or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12 of the tender form. Further, I/We agree that in case of forfeiture of Earnest Money or Performance Guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

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

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

Dated
Witness:

Signature of Contractor / bidder
Postal Address

Address:
Occupation:

ACCEPTANCE

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

Signatures

Designation

Dated:

SCHEDULES FOR GCC “A to F” (civil work)

SCHEDULE ‘A’

Schedule of work:

Enclosed

SCHEDULE ‘D’

Extra schedule for specific requirements/ Document for the work, if any:

As per the Tender document

SCHEDULE ‘E’

Reference to General condition of Contract:

CPWD’s General Condition of contract – construction work 2023 (with amendments upto last date of submission of bids)

Name of Work: “Construction of toilets and other works at ISPW Station Leh, UT of Ladakh.”

Estimated cost of Work:

Rs. 17,82,091/-

(i) Earnest Money:

Rs. 35,642/-

(ii) Performance Guarantee:

Performance Guarantee: - (a) 5% of tendered value or Estimated Cost Put to Tender (ECPT) (Whichever is higher)
(b) Where the tendered amount is less than eighty percent (80%) of the Estimated Cost Put to Tender (ECPT), the Performance Guarantee, in addition to the requirement under (a) above, shall be increased by an amount equal to the difference between eighty percent (80%) of the ECPT and the tendered amount.

(iii) Security Deposit:

2.5% of the tendered value

SCHEDULE ‘F’

GENERAL RULES & DIRECTION

Officer inviting bid:

Executive Engineer & Senior Manager (C)
Leh Project Division-I, CPWD, Leh, UT of Ladakh

Definitions:

2(vi) Engineer-in-charge:

Executive Engineer & Senior Manager (C)
Leh Project Division-I, CPWD, Leh, UT of Ladakh.

2(viii) Accepting Authority:

Executive Engineer & Senior Manager (C)
Leh Project Division-I, CPWD, Leh, UT of Ladakh.

- 2(x) Percentage on cost of materials and labour to cover all overheads and profits: **15%**
- 2(xi) Standard Schedule of Rates: DSR 2023 & Market Rates
- 2(xii) Department Central Public Works Department
- 9(ii) Standard CPWD Contract Form CPWD's General Condition of Contract-Construction works 2023 (with amendments upto last date of submission of bids)

Clause 1

- (i) Time allowed for submission of Performance Guarantee, programme chart (Time and progress) and applicable labour licenses, registration with EPFO, ESIC and BOCW welfare board or proof of applying thereof from the date of issue of letter of acceptance **7 days**
- (ii) Maximum allowable extension with late fee @0.1% per day of Performance Guarantee amount beyond the period provided in (i) above: **10 days**

Clause 2

Authority for fixing compensation under **CE cum ED, CPWD, Leh** clause 2.

Clause 5

(i)	Authority to convey the decision of shifting of milestone and extension of time. (Engineer-in-charge or Engineer-in-charge of Major component in case of composite contracts, as the case may be)	Executive Engineer & Senior Manager (C) Leh Project Division-I, CPWD, Leh, UT of Ladakh
(ii)	Authority to decide rescheduling of milestone	CE cum ED, CPWD, Leh,

	and extension of time.	UT of Ladakh
(iii)	Shifting of date of start in case of delay in handling over of site.	CE cum ED, CPWD, Leh, UT of Ladakh

Time allowed for execution of work **45 days**

Number of days from the date of issue of letter of acceptance for reckoning date of start. **10 Days**

Milestone(s) as per Table given below:

S. No.	Description of Milestone (Physical /Financial)	Time Allowed in days (from stipulated date of start)	Amount to be withheld in case of non-achievement of milestone.
1	Work upto 1/3 rd of the tendered value	15 Days	1.5% of contract value
2	Work upto 2/3 rd of the tendered value	30 Days	1.5% of contract value
4	Complete work	45 Days	1.5% of contract value

PERFORMA OF SCHEDULES

Clause 5: Schedule of handing over of site:

Part	Portion of site	Time Period for handing over reckoned from date of issue of letter of intent.
Part A	Portion without any hindrance	Full site is available
Part B	Portions with encumbrances	NIL
Part C	Portions dependent on work of other agencies	NIL

Schedule of issue of Design and drawings

Part	Time period for issue
All the design and drawings	Conceptual drawings are attached with NIT.

Clause 6

Computerized Measure Book (CMB)
/ Electronic Measurement Book

(EMB)

(i) Mode of measurement: CMB

Clause7

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 Lacs or part thereof as agreed with the Engineer-in-charge.

Clause7A

Whether clause 7A shall be applicable:

Yes, applicable. (No running account bill shall be Paid for the work till the applicable Labour, licenses registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the contractor to the Engineer-in-Charge).

Clause 8

Competent authority to inspect and issue part / final completion certificate

Executive Engineer & Senior Manager (C)
Leh Project Division-1

Clause 8A

Authority to decide compensation on account if contractor fails to submit completion plan:

CE cum ED, CPWD, Leh

Clause 10A

List of testing equipment to be provided by the contractor at site lab

As per NIT

Clause 10B(ii)

Whether Clause 10 B (ii) shall be applicable

Yes

Clause 10C & 10CA

Not applicable

Clause 10CC

Not Applicable

A. For Construction period

S.No.	Relevant component of Material /	Percentage of total
-------	----------------------------------	---------------------

	Labour for price escalation	value of work
1.	Component of cement	10%
2.	Component of Labour	25%
3.	Civil component of other construction materials	45%
4.	Component of POL (Diesel)	0%
5.	Component of Bitumen	0%
6.	Reinforcement steel bars / TMT bars / structural steels (including strands and cables).	20%

Clause 11

Specification to be followed for 1. C.P.W.D. Specifications (Vol I & II)
execution of work: 2019 with upto date Amendments and
correction slips, for Items which are
not covered in former.

Clause 12.2 (C)

Deviation Limit beyond which 100%
Clauses 12.2 (C) shall apply for
items mentioned in Schedule of
Quantity

Clause 16

Competent Authority for deciding CE cum ED, CPWD, Leh
reduced rates:

Clause 18

Mandatory machinery, tools and plants to
be deployed by the contractor at site as
per requirement.

Clause 19C

EE, LPD-1, LPZ.... Authority to decide
penalty for each default

Clause 19D

EE, LPD-1, LPZ.... Authority to decide
penalty for each default

Clause 19G

EE, LPD-1, LPZ.... Authority to decide
penalty for each default

Clause 19K

EE, LPD-1, LPZ.... Authority to decide
penalty for each default

Clause-25

- (i) Conciliator: Additional Director General (Jammu)
(ii) Arbitrator Appointing Authority: CE cum ED, CPWD, Leh
(iii) Place of Arbitration: Leh

Clause 32 : “Requirement of Technical Representative (s) and Recovery Rates”

Requirement of Technical Staff		Minimum experience (Years)	Designation of Technical staff	Rate at which recovery shall be made from the contractor in the event of not fulfilling
Qualification	Number(of Major + Minor component)			
Graduate Engineer or Diploma Engineer	1 of major component	02 or 05 years respectively	Project manager cum Planning/ Quality/Billing Engineer	Rs. 15,000/- per Month per person

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

Note:- The contractor may withdraw the strength of idle technical staff not required at site due to non-availability of site with the approval of Engineer-in-Charge.

List of testing equipment's to be provided by the contractor at site lab, which may be needed for execution as per actual requirement.

All necessary equipment for conducting all necessary tests shall be provided at the site laboratory by the contractor at his own cost. The following minimum laboratory equipment's shall be set up at site office laboratory, which shall be set up at one place. It may be possible that some of the equipment may not be needed or some may be needed for some fixed period (As per requirement of work to be decided by Engineer-in-charge).

A. For Building Work

1. Balances

- (i) 7 kg. to 10 kg. capacity, semi-self-indicating type - accuracy 10 gm.
- (ii) 500 gm. capacity, semi-self-indicating type - accuracy 1 gm.
- (iii) Pan balance- 5 kg. capacity - accuracy 10 gms.

2. Sieves: as per IS 460-1962.

- (i) I.S. sieves- 200mm internal dia (brass frame) consisting of 2.36mm, 1.18mm, 600 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns, with lid and pan.

3. Sieve shaker capable of 200 mm and 300 mm dia sieves, manually operated with timing switch assembly.

This equipment is suggestive in nature and Engineer-in-charge decision shall be final and binding for any additional equipment required for construction purpose.

GENERAL CONDITIONS

1. The work shall be carried out according to specifications of CPWD specification 2019 Volume I to Volume II, including correction slips upto date of submission of bid and relevant MoRTH and IRC Codes mentioned in the tender and particular specifications, additional conditions of the contract.
2. The contractors shall quote their rates inclusive of all sorts of taxes, stamp duty, cartage, royalties etc., complete.
3. Unless otherwise specified, the agreement rates for all items of work of the schedule of quantities are for all heights, depths, leads and lifts involved in the execution of work.
4. The contractor shall make his own arrangement of generators for carrying out electrical activities.
5. Other agencies working at site will also simultaneously execute the work entrusted to them and the contractor shall offer necessary co-operation wherever required to other agencies.
6. On account of security consideration, there could be some restrictions on the working hours, movement of vehicles for transportation of materials. The contractor shall be bound to follow all such restrictions and adjust the programme for execution accordingly.
7. The work shall be carried out in a manner complying in all respects with the requirements of relevant bye laws of the local bodies, labour laws, minimum wages act, workmen compensation act and other statutory laws enacted by Central Government as well as State Government.
8. No claims of the labour shall be entertained by the Department including that of providing employment, regularization of services etc.
9. The staff employed by the contractor should be well behaved, Polite & courteous. Any complaint against staff on behavior should be taken very seriously and such should be removed by the contractor immediately from the site.
10. The contractor shall make all safety arrangement required for the labour engaged by him at his own cost. All consequences due to negligence or due to lapse of security/safety or otherwise shall remain with the contractor. The department shall not be responsible for any mishap, injury, accident or death of the contractor's staff. No claim in this regard shall be entertained /accepted by the department.
11. Contractor shall be fully responsible for any damages caused to govt. Property by his labour/staff in carrying out the work and shall be rectified by the contractor at his own cost

12. GST/Income Tax/other taxes as applicable shall be recovered from the contractor's bill.

13. All the screws used for joinery / fixing fixtures etc shall be stainless steel of 304 Grade. No MS screws shall be used.

14. Unforeseeable difficulties/situations:

15.1 Except as otherwise specifically stated elsewhere in the contract:

15.1.1 The agency shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances which may influence or affect the works.

15.1.2 By signing the contract, the agency accepts total responsibility for having foreseen all difficulties and costs of successfully completing the works.

15.1.3 The contract amount shall not be adjusted to take account of any unforeseen difficulties or costs.

16. **ALL HEIGHTS, LIFTS, LEADS AND DEPTHS**

Unless otherwise specified in tender document, the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths for the work and nothing extra shall be payable to him on this account.

17. **DAMAGE CAUSED BY RAIN, SNOWFALL, FLOOD OR ANY OTHER NATURAL CALAMITY**

No payment shall be made for any damage caused by rain, snowfall, flood or any other natural calamity, whatsoever during the execution of the work. The contractor shall be fully responsible for any damage to the government property and the work for which payment has been advanced to him under the contract and he shall make good the same at his risk and cost. The contractor shall be fully responsible for safety and security of his material, T&P/Machinery brought to the site by him.

18. **SETTING OUT**

18.1 It shall be responsibility of the contractor to ensure correct setting out of alignment. Real Time Kinematics / Total Station survey instruments only shall be used for layout, fixing boundaries, and center lines, etc., Nothing extra shall be payable on this account.

18.2 Though the site levels are indicated in the drawings the contractor shall ascertain and confirm the site levels with respect to benchmark from the concerned authorities. The contractor shall protect and maintain temporary/ permanent benchmarks at the site of work throughout the execution of work. These benchmarks shall be got checked by the Engineer-in-Charge or his authorized representatives. The work at different stages shall be checked with reference to bench marks maintained for the said purpose. Nothing extra shall be payable on this account.

- 18.3 The contractor shall be entirely and exclusively responsible for the horizontal, vertical and other alignments, the level and correctness of every part of the work and shall rectify effectively any errors or imperfections therein. Such rectifications shall be carried out by the Contractor at his own cost to the entire satisfaction of the Engineer-in-Charge.

19. **SUBMISSION AND DOCUMENTATION**

- 19.1 The Contractor shall display all permissions, licenses, registration certificates, bar charts, other statements etc under various labour laws and other regulations applicable to the works, at his site office. He should also keep at site at least one set of BIS / IRC/ MoRTH Codes and other relevant codes at site and produce the same if asked for by Engineer-in-Charge. In case of non-compliance, these codes will be purchased from the market and actual cost of purchase will be recovered from the next RA Bill of the Contractor.
- 19.2 The Contractor shall make available four (04) sets of completed Project Drawings and services drawings like cross drainage “As Built Drawings” along with literatures, manuals, warranty certificates etc. of various installed fittings, fixtures and equipment for the completed projects. This shall be the prerequisite for payment of final bill.

20. **PROGRAMME CHART:**

The Contractor shall prepare an integrated programme chart within 10 days of issue of award letter 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 and submit the same for approval of the Engineer-in-Charge. These shall be submitted by the contractor through electronic media besides forwarding hard copies of the same. The integrated programme chart so submitted should not have any discrepancy with the physical milestones attached in the contract agreement. The programme chart should include the following:

- 20.1 Descriptive note explaining sequence of various activities.
- 20.2 Construction Programme prepared on Microsoft Projects Software, which will indicate resources in financial terms, manpower and specialized equipment for every important stage.
- 20.3 Programme for procurement of materials by the contractor.
- 20.4 Programme for arranging and deployment of manpower both skilled and unskilled so as to achieve targeted progress.
- 20.5 Programme of procurement of machinery/equipment having adequate capacity, commensurate with the quantum of work to be done within the stipulated period, by the contractor.
- 20.6 Programme for achieving fortnightly micro milestones and periodic milestones.

- 20.7 In case of noncompliance/delay in compliance in this, a recovery @ Rs. 5,000/- per day will be imposed which will be recovered from the immediate next R/A Bill of the Contractor.
- 20.8 If at any time, it appears to the Engineer-in-Charge that the actual progress of work does not conform to the approved programme referred above, the contractor shall produce a revised program within seven days showing the modifications to the approved program by additional inputs to ensure completion of the work within the stipulated time. A recovery of Rs. 5,000/- shall be made on per day basis in case of delay in submission of the modified programme.
- 20.9 The submission for approval by the Engineer-in-Charge of such programme or the furnishing of such particulars shall not relieve the contractor of any of his duties or responsibilities under the contract. This is without prejudice to the right of Engineer-in-Charge to take action against the contractor as per terms and conditions of the agreement.
- 21. DE-WATERING**
- 21.1 De-watering required, if any, shall be done conforming to BIS Code IS: 9759 (guide lines for dewatering during construction) and / or as per the specifications approved by the Engineer-in-Charge. Design of an appropriate and suitable dewatering system shall be the Contractor's responsibility.
- 21.2 Such scheme shall be modified / augmented as the work proceeds based on fresh information discovered during the progress of work, at no extra cost. At all times during the construction work, efficient drainage of the site shall be carried out by the Contractor and especially during the laying of plain cement concrete, taking levels etc. The Contractor shall also ensure that there is no danger to the nearby properties and installations on account of such lowering of water table. If needed, suitable precautionary measures shall be taken by the Contractor. Also the scheme of dewatering adopted shall have adequate built in arrangement to serve as stand-bye to attend to repair of pumps etc. and disruption of power / fuel supply. Nothing extra shall be payable on this account.
- 21.3 In trenches where surface water is likely to get into cut / trench during monsoons, a ring bund of puddle clay or by any other means shall be formed outside, to the required height, and maintained by the Contractor. Also, suitable steps shall be taken by the Contractor to prevent back flow of pumped water into the trench. Nothing extra shall be payable on this account.
- 21.4 For works below ground level the contractor shall keep that area free from water. If dewatering or bailing out of the water is required, the contractor shall do the same at his own cost and nothing extra shall be paid. Nothing extra shall be paid for execution of work in or under water and / or liquid mud including pumping out of water as required.
22. The huts for labour are not to be erected at the site of work by the contractors. He is required to make his own arrangements for labour accommodation and nothing extra shall be paid by CPWD on this account. He shall also arrange place for yard for keeping various materials, cement/ steel store outside of campus. No space is available at the site of work,

however for keeping chowkidar, site office, lab, samples room, toilets for labour etc., working yard and other essential requirements such as cement store for day-to-day requirement, some space shall be made available near the campus. All labour and staff of contractor shall possess valid identity cards such as Aadhar Card, Voter Card etc. Before tendering, he shall visit the site and assess the manner in which he is able to arrange the above facilities. The Engineer-in-Charge shall in no way be responsible for any delay on these accounts and no claim, whatsoever, on these accounts shall be entertained.

23. The original copies of challan/cash memos / invoices towards the quantity of various materials procured shall be made available by the contractor at the request from the Engineer-in-Charge and a copy of the same shall be kept in record. Warranty / Guarantees cards of various materials shall also be submitted by the contractor during handing over of the buildings to the client.

SPECIAL CONDITIONS

1. The work is required to be carried out in UT of Ladakh. The contractor shall not be compensated in case; the work is not executed in part or in full. No claim whatsoever shall be entertained on this account.
2. The contractor shall submit a detailed programme in the form of BAR chart to the Engineer-in-charge within 10 days of award of work and shall be got approved from him. The programme chart should include the following: -
 - (i) Network CPM/ PERT/ BAR diagram prepared as per existing practice.
 - (ii) Programme for procurement of materials by the contractors.
 - (iii) Programme of mobilization of machinery/ equipment and their deployments.
3. The programme chart will have to be updated on monthly basis and will be submitted to Engineer-in-charge regularly.
4. The approval by the Engineer-in-charge of such programme or the furnishing of such particulars shall not relieve the contractor of any of his duties or responsibility under the contract. This is without prejudice to the right of the Engineer-in-charge to take action against contractor as per terms and conditions of the agreement.
5. The contractor shall have to use plate vibrators for casting of RCC slab/laying of cement concrete in roads in addition to needle vibrator if so required.
6. All tools, plant and machinery provided by the contractor shall, when brought to the site, be deemed to be exclusively intended for construction and completion of this work and contractor shall not remove the same or any part thereof without the consent of the Engineer-in-charge.
7. The rates quoted by the contractor shall be all inclusive keeping in view the specifications, additional and special conditions and lead involved for various material and other inputs for carrying out the work, nothing extra shall be payable whatsoever, unless otherwise specified.
8. Labour Cess @ 1% of Gross value of work done shall be deducted from each bill as per Building & other Construction Workers Welfare Cess Act 1996.
9. GST/Income Tax and Education Cess shall be deducted from each bill as per Govt. Orders.

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

11. Foreign consultants / sub-consultants and foreign bidders shall not be allowed.

12. TESTING OF MATERIAL

12.1 The cost of samples including packing, transportation and any other incidental charges and testing charges thereof shall be borne by the Contractor.

12.2 The test results shall be final and binding on the contractor. The decision of the Engineer-in-Charge in this regard shall be final and binding on the contractor.

12.3 All necessary tests as per the CPWD specifications /MoRT&H specifications /relevant BIS codes shall be carried out on all the materials whatsoever ISI marked or otherwise. Wherever CPWD specifications/ MoRT&H specifications /relevant BIS codes are not available, the tests shall be carried out as per the directions of the Engineer-In-Charge. Nothing extra, what so ever, shall be payable on this account.

13. No payment will be made to the contractor for damages caused by cyclones, hurricanes, sand storms, flood waters or by pounding of water due to any reason etc. during execution of the work and no claim on these accounts will be entertained.

14. The contractor shall take all necessary measures for the safety of traffic during construction and provide, erect and maintain such barricades, including signs, markings, flags, lights and flagman, as necessary at either end of the excavation/embankment and at such intermediate points as directed by the Engineer-in-Charge for the proper identification of construction area. He shall be responsible for all damages and accidents caused due to negligence on his part.

15. The malba/garbage, removed from the site shall be disposed off by the contractor at any suitable place as directed by the Engineer-in-Charge.

16. Some restrictions may be imposed by the security Staff/BSF/Army etc. on the working and or movement of labour, materials etc. and the contractor shall be bound to follow all such restriction / instructions and nothing extra shall be payable on this account or due to less reduced working hours etc.

17. Location, B.P. or chainage /R.D. given in the Name of work is only for broad guidance. Actual place /reach for the work will be decided at site by the Engineer-In-Charge and no

claim what so ever on this account shall be entertained by the department.

18. Wherever any reference to the Indian Standard Codes of BIS has been made, it shall be with reference to the latest revisions upto the date of receipt of tender.
19. No compensation shall be payable to the contractor for any damage caused by rains, lightening wind, storm, flood, tornados, earthquakes or other natural calamity or unforeseen accidents / incidents during execution of work. The contractor shall make good all such damages at his own cost and no claim on this account will be entertained.
20. The contractor shall be responsible to arrange at his own cost all necessary tools and plants required for execution of the work.
21. Royalty at the prevalent rates wherever payable, shall have to be paid by the contractor on the, boulders, metal, shingle, sand and bajri etc. or any other materials collected by him for the work direct to revenue authority of the District /State Government concerned.
22. The rates for all items of work, shall unless clearly specified otherwise include cost of all labour, materials T&P and other inputs involved in the execution of the item.
23. Unless otherwise specified in the schedule of quantities, the rate for all items of the work shall be considered as inclusive of pumping out or bailing out water from all depths if required for which no extra payment will be made. This will include water encountered from any source, such as rains, floods, sub-soil, water being high due to any other cause what so ever etc.
24. The work shall be carried out in a manner so as not to cause any obstruction or to affect the progress of the works being carried out in the area.
25. Necessary platforms of required size etc. shall be made by the contractor to prevent the construction material from coming in to direct contact with the local soil. Nothing extra shall be payable on this account.
26. Whenever any reference to any Indian Standard Specifications occurs in the documents relating to this contract the same shall be inclusive of all the amendments issued there to or revision thereof, if any, up to the date of receipt tenders.
27. The work shall be executed and measured as per metric dimensions given in the schedule of Quantities, Drawings etc. (F.P.S. Units wherever indicated are for guidance only).
28. The contractor shall ensure that sufficient quantity of water of approved quality is

available at site for proper execution of work. Nothing extra for arranging water at site will be paid to the contractor by the department.

29. The attached drawings are schematic drawing not to scale. They shall neither be scaled nor element in them counted. The decision of Engineer-in-Charge in regard to interpretation of drawing shall be final and binding.
30. The work shall be carried out strictly in conformity with the drawings and in accordance with the nomenclature of the items, specifications etc. Any discrepancy in the drawing /nomenclature of item /additional specification etc shall be got clarified from Engineer in Charge. Decision of Engineer in Charge shall be final and binding on the agency.
31. The contractor has to start the work after submitting the programme duly approved by the Engineer-in Charge. Physical progress shall be similar to the programme submitted by the contractor and in accordance with the mile stone as in schedule 'F'.
32. The Engineer-in-Charge shall be at the liberty to appoint 3rd party inspection team from IIT /NIT or any other professional body to check the quality of the work. The contractor shall be liable to the provisions under clause 16 of GCC 2023 construction works in this respect also.
33. The security deposit will be refunded after the prescribed period as stipulated in the agreement or after the final bill has been prepared and passed for payment or after the work is handed over to BSF authorities in all respect, whichever is later.
34. The contractor will procure all the materials in advance so that there is sufficient time for testing and approving of the materials and clearance of the same before use in work.
35. All materials brought by the contractor for use in the work will be got checked from the Engineer-in-charge or his authorized representative of the work on receipt of the same at site, before use.
36. The contractor will also employ necessary watch and ward establishment for the safe custody of materials at his own cost.
37. The contractor shall not store /dump construction material or debris on islands.
38. The contractor shall get prior approval from Engineer-in-charge for the area where the construction material or debris can be stored beyond the islands.
39. The contractor shall ensure that all the trucks or vehicles of any kind which are used for construction purposes/or are carrying construction material like cement, sand and other

allied material are fully covered. The contractor shall take every necessary precaution that the vehicles are properly cleaned and dust free to ensure that enroute their destination, the dust, sand or any other particles are not released in air/ Contaminate air.

40. The contractor shall provide mask to every worker on the construction site and involved in loading, unloading and carriage of construction material and construction debris to prevent inhalation of dust particles.
41. The contractor shall provide all medical help, investigation and treatment to the workers involved in the construction of building and carry of construction material and debris relatable to dust emission.
42. The contractor shall ensure that C&D waste is transported to the C&D waste site only and due record shall be maintained by the contractor.
43. The contractor shall compulsorily use of wet jet in grinding and stone cutting.
44. The contractor shall comply all the preventive and protective environmental steps as stated in the MoEF guidelines, 2010.
45. The contractor shall carry out on-Road- Inspection for black smoke generating machinery. The contractor shall use cleaner fuel.
46. The contractor shall ensure that all DG sets comply emission norms notified by MoEF.
47. The contractor shall use vehicles having pollution under control certificate. The emissions can use reduced by a large extent by reducing the speed of a vehicle to 20 kmph. Speed bumps shall be used to ensure speed reduction. In cases where speed reduction cannot effectively reduce fugitive dust, the contractor shall divert traffic to nearby paved areas.
48. The contractor shall ensure that the construction material is covered by tarpaulin. The contractor shall take all other precaution to ensure that no dust particles are permitted to pollute air quality as a result of such storage.
49. The contractor shall make arrangement for creating a working platform for stacking of construction materials, Batch mix plant, setting of field lab, cement godown etc at a sufficient height from natural ground level at their own cost.

PARTICULAR SPECIFICATIONS

1. The work, in general, shall be executed as per description of item, specifications attached, MoRT&H specifications, CPWD Specifications 2019 Vol. I & II with correction slips issued up to the date of receipt of tender and relevant BIS / IRC/ MoRTH Codes, BSEN codes, ISO Codes & ASTM Codes.
2. All the works unless otherwise specified hereinafter or permitted by Engineer- in-charge shall be done in accordance with the latest editions of MoRT&H specification and relevant BIS / IRC/ MoRTH Codes, BSEN codes, ISO Codes & ASTM Codes as on the date of receipt of tenders or any other specified code.

Any additional standard specifications or criteria published by the BIS / IRC/ MoRTH or other foreign standard and in practice upto the date of receipt of tenders shall also take into account. In the absence of any definite provisions on any particular issue in the above-mentioned specifications / relevant BIS / IRC/ MoRTH Codes, BSEN codes, ISO Codes & ASTM Codes, the design and construction shall be in conformity with the Sound Engineering Practice and in all such matters the decision of the Engineer-in-charge shall be final and binding on the contractor and nothing shall be paid extra.

In case of any discrepancy or contradiction amongst the specified standard the following order of preferences shall generally prevail.

- i. Nomenclature of items etc. given in Schedule of Quantities.
- ii. Particular Specifications, Special conditions and additional specifications as per tendered document if any.
- iii. Drawings attached with the tender.
- iv. General Condition of Contract 2023 construction work, amended upto last date of submission of bid.
- v. MoRT&H Specifications for Roads & Bridge works (2019) published by IRC.
- vi. CPWD Specifications, 2019 Vol. I & II with up-to-date correction slips.
- vii. All relevant BIS / IRC Codes with the latest revisions.
- viii. Foreign standards, such as BSEN, ISO, ASTM etc. and accepted international practice as approved by Engineer-in-Charge.
- ix. Sound Engineering Practice as per directions of the Engineer-in-Charge.

If there are varying or conflicting provision made in any document forming part of the contract, the Engineer-in-charge shall be the deciding authority with regard to the Intention / interpretation of the document and his decision shall be binding without any reservations.

3. The contractor shall ensure quality control measures on different aspects of construction materials, workmanship and correct construction methodologies to be adopted. He shall have to submit quality assurance programme within two weeks of the award of the work. The quality assurance programme should include method statement for various items of work to be executed along with check list to enforce quality control.
- 3.1 The contractor shall submit least three brand / make of various materials from preferred make list brand / make of various materials to be used for the approval of the Engineer-in-Charge along with samples and once approved, he shall stick to it.

- 3.2 The contractor shall submit shop drawings of staging and formwork arrangement etc. for the approval of Engineer-in-Charge. Unless stated otherwise, the rate for concrete in plain concrete or reinforced concrete or prestressed concrete, shall be deemed to include all formwork required in accordance with this Section, which shall not be measured separately. The contractor shall also submit bar bending schedule for approval of Engineer-in-charge before execution.
- 3.3 The contractor shall get the water tested with regard to its suitability for use in the works and get written approval from the Engineer-in-charge before the proceeds with the use of same for execution of works. Water charges shall not be recovered in case arrangement of water is made at his own by the contractor.
- 3.4 Wherever any reference to any Indian Standard Specifications and other relevant codes occur in the documents relating to this contract same shall be inclusive of all amendments issued thereto or revision thereof, if any, upto date of receipt of the tender.
- 3.5 All the drawings shall at all times be properly correlated by the contractor before executing the work and no claim what so ever shall be entertained for failing to do so. In case of any discrepancy in the specifications, Schedule of Quantity and drawings, the decision of the Engineer-in-charge shall be final, conclusive and binding on the contractor.
- 3.6 Rates for the items are inclusive of all labour, materials, T&P, incidental charges, contractor's profit and overheads and Taxes etc. unless, otherwise, specified. The contractors shall quote the rates accordingly.

4. GENERAL CONDITIONS FOR SUPPLY OF MATERIALS

- 4.1 The sample of all the items shall have to be got approved by the Contractor from the Engineer-in-charge before the supply commences and shall be without prejudice to the right of Engineer-in-Charge to get random samples tested out of the actual lot received.
- 4.2 The contractor shall if required furnish the manufacturer's certificate that the material supplied satisfy the requirements of the relevant specifications.
- 4.3 The Engineer-in-charge shall be at liberty to take respective sample (s) of each item of schedule of quantity in any approved laboratory as decided by him. The sample for testing shall be provided by the contractor. All other expenditure required to be incurred for taking sample, conveyances and packing etc. shall be borne by the contractor himself. In case any sample particular lot fails in testing the contractor shall be bound to replace the entire lot with fresh material of prescribed specification and the rejected lot shall be returned to the contractor only after fresh lot is supplied.
- 4.4 Rejected materials shall have to be removed by the contractor at his own cost immediately of the instructions of doing so.
- 4.5 In case of any dispute regarding rejection of quality of materials the decision of the Engineer-in-charge shall be final and binding upon the contractor.
- 4.6 Royalty octroi terminal, tax etc. at prevalent rates shall have to paid by the contractor himself and the rates quoted by him shall include these duties and nothing extra on, this account shall be payable.

- 4.7 The contractor shall have to produce the cash memo to satisfy department that the material has been purchased from the authorized dealer and the GST has been paid.

5 MINIMUM QUALITY ASSURANCE PLAN

- 5.1 The contractor shall also assist inspection and collection of samples by Engineer in charge for testing. The samples of material/items of work required for testing by Engineer in Charge or his representative shall be provided free of charge by the contractor. **The cost incurred in collection of samples and its packing and transportation to the CPWD approved lab/field laboratory including testing charges shall be borne by the contractor.**
- 5.2 Tests which are mandatory as per CPWD specification 2019 Vol. I & II, MoRT&H Specifications are to be carried out by the contractor at the frequency mentioned in contract document & relevant specifications. While deciding these criteria CPWD Specifications, MoRT&H Specifications & Provisions of BIS / IRC/ MoRTH Code and Standard Practices may be referred.
- 5.3 Machinery and other Tool & Plants required to be deployed at site by the contractor as per requirement. Entire Machinery and T&P may not be required at the start of work, therefore, a proper time schedule by which each Machinery & T&P is to be brought at site should be submitted by the contractor to the Engineer-in-Charge before start of the work.
- 5.4 The contractor shall submit the design mix for each layer of the flexible pavement and RCC structure (if any), duly vetted by any reputed IIT or NIT. The submitted design mix must comply with the minimum requirements specified in the contract and relevant IRC & IS codes. The charges shall be borne by contractor.
- 5.5 QAP shall be prepared in accordance with quality assurance manual available at CPWD website and shall be got approved from Engineer-in-Charge CPWD.
- 5.6 The contractor shall ensure quality control measures on different aspects of construction including materials, workmanship and correct construction methodologies to be adopted.
- 5.7 The contractor shall get the source of various raw materials namely bitumen, aggregate, cement, sand, steel, water etc. to be used on the work, approved from the Engineer-in-Charge and trial mixes for controlled concrete shall be done using the approved materials. The contractor shall stick to the approved source unless it is absolutely unavoidable. Any change shall be done with the prior approval of the Engineer-in-Charge for which tests etc. shall be done by the contractor at his own cost.
- 5.8 Similarly, the contractor shall submit brand/make of various materials to be used for the approval of the Engineer-in-Charge along with samples and once approved, he shall stick to it. Any change will have to be got approved from engineer in charge in advance.
- 5.9 The contractor shall submit shop drawings of staging and shuttering arrangement, stone cladding and other works including mock work as desired by Engineer-in-Charge for his approval before execution. The contractor shall also submit bar bending schedule for approval of Engineer-in-Charge before execution.

- 5.10 The contractor shall depute Quality Engineer exclusively for enforcement of quality control. For other staff to be deployed for quality assurance, the contractor may refer to clause 32 under schedule “F”.

Testing

(A) For determining that the works conform to the Specifications and Standards, the Engineer-in-Charge shall require the contractor to carry out or cause to be carried out tests, at such time and frequency and in such manner as specified in this Agreement and in accordance with sound engineering practice for quality assurance. Frequency and the manner in which tests shall be conducted shall be as per the CPWD specifications 2019.

(B) The tests which are not possible in field laboratory, shall be conducted at Government labs/IITs/NITs and other approved laboratories by the Engineer-in-Charge for testing of materials.

(C) All the tests in field lab setup at construction site shall be carried out by the QA Staff deployed by the contractor and shall be witnessed by the Engineer-in-Charge or his authorized subordinates as specified in NIT. The contractor shall provide all necessary facility to them for witnessing the tests in the field laboratory.

(D) The cost of samples including packing and transportation and other incidental charge including testing charges shall be borne by the agency.

6 MAINTENANCE OF REGISTER OF TESTS-

- 6.1. All the registers of tests carried out at Construction Site or in outside laboratories shall be maintained by the contractor which shall be issued to the contractor by Engineer-in-charge at the time of issue of award letter.
- 6.2 All samples of materials including cement concrete cubes shall be taken by contractor jointly with JE in charge of work and out of this atleast 50% samples shall be taken in presence of AE in charge. If there is no JE, all samples of materials including Cement Concrete Cubes shall be taken by contractor in presence of AE in charge of work. All the necessary assistance shall be provided by the contractor. Cost of sample materials is to be borne by the contractor and he shall be responsible for safe custody of samples to be tested at site.
- 6.3 All the test in field lab setup at Construction Site shall be carried out by the Engineering Staff deployed by the contractor in presence of JE-in-charge and at least 50% of tests in presence AE-in-charge. At least 10% of tests shall be carried out in presence of Executive Engineer.
- 6.4 All the entries in the registers will be made by the designated Engineering Staff of the contractor and same should be presented before JE/AE/Divisional Engineer for their review.
- 6.5 Contractor shall be responsible for safe custody of all the test registers.
- 6.6 It is mandatory to the contractor to submit copy of all test registers, Material at Site Register along with each alternate Running Account Bill and Final Bill.

If all the test registers is not submitted by contractor along with each alternate R/A Bill & Final Bill, no payment shall be released to the contractor.

6.7 Maintenance of Material at Site (MAS) Register:-

- 6.7.1 All the MAS Registers including Cement and Steel Registers shall be maintained by Contractor which shall be issued to the contractor by Engineer- in-charge along with the award letter.
- 6.7.2 The contractor shall get 100% test checked by JE or by AE after each entry of receipt of material at site in MAS register.
- 6.7.3 The contractor shall get MAS Register test checked by JE at least twice a week and at least once a week by AE. If there is no JE is available then MASregister must be checked by AE at least twice a week.
- 6.7.4 Cement register shall be got reviewed by Divisional Engineer at least once in a month by the contractor.

7 Filed Laboratory

- 7.2 The agency shall set-up field laboratory with the equipment as laid down in MoRT&H and sub clauses there under of MORT&H Specifications or as directed by Engineer-in-charge with the water and electricity facilities and manpower as needed for carrying out the requisite tests on materials and finished work and shall maintain the same till the time of completion of thework or till such time as directed by the Engineer-in-Charge. Nothing extra will be paid on this account.
- 7.3 Wherever possible, the materials shall get tested in the field lab of agency. The cost of samples including packing, transportation and other incidental charges shall be borne by the Bidder.
- 7.4 The testing of materials, if required by the Officer in charge of the QualityControl Wing of CPWD or his authorized representative, shall also be carriedout in the field Laboratory of the Bidder wherever possible. The cost of samples including packing and transportation and other incidental charges shall be borne by the agency.
- 7.5 In case the tests are conducted at any Laboratory other than field Lab of the agency, the testing charges shall be borne by the contractor. The cost of samples including packing and transportation and other incidental charges shall also be borne by the agency.
- 7.6 The decision of Engineer –in- Charge regarding test results shall be final and binding on agency.

CONDITION FOR COARSE AND FINE AGGREGATE, WATER & ADMIXTURE

1. SOURCE OF MATERIALS

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

2. COARSE AGGREGATES

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

The nominal maximum size of aggregate to be used in R.C.C work shall be 20 mm, while for factory made precast it shall be 12 mm due to self-compacting concrete as per EFNARC of EN.

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

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

3. FINE AGGREGATES

Fine aggregate shall consist of clean, hard, strong and durable pieces of crushed stone, crushed gravel, or a suitable combination of natural sand, crushed stone or gravel. They shall not contain dust, lumps, soft or flaky, materials, mica or other deleterious materials in such quantities as to reduce the strength and durability of the concrete, or to attack the embedded steel. Motorized sand washing machines should be used to remove impurities from sand. Fine aggregate having positive alkali-silica reaction shall not be used. All fine aggregates shall conform to IS: 383 and tests for conformity shall be carried out as per IS: 2386, (Parts I to VIII). The contractor shall submit the entire information indicated in Appendix A of IS:383 for approval of Engineer-in-charge. In case the aggregate tested do not comply with any requirement of the specifications, the source for the same shall be rejected. No further samples from the rejected source shall normally be considered for approval.

Regarding storage of fine aggregate, provisions as specified for coarse aggregate shall apply.

5 ADMIXTURES

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

- 5.1 Normal dosage and detrimental effects, if any, of under dosage and over dosage.
- 5.2 The chemical names of the main ingredients in the admixtures.
- 5.3 The chloride content, if any, expressed as a percentage by the weight of the admixture.
- 5.4 Values of dry material contents, ash content and relative density of the admixture which can be used for Uniformity Tests.
- 5.5 Whether or not the admixture leads to the entrainment of air when used as per the manufacturer's recommended dosage, and if so to what extent.
- 5.6 Where two or more admixtures are proposed to be used in any one mix, confirmation as to their compatibility.
- 5.7 There would be no increase in risk of corrosion of the reinforcement or other embedment as a result of using the admixture.
- 5.8 Admixture in addition to conformity to the requirement IS: 9103-1999 shall satisfy the following conditions.
- 5.9 "Plasticizers" and "Super-Plasticizers" shall meet the requirements indicated for "Water reducing Admixture".

SPECIAL CONDITION FOR CEMENT AND SAND

1 CONDITION FOR CEMENT

Cement OPC/PPC of 43 or 53 Grade required for the work shall be procured by the contractor.

Every delivery of cement shall be accompanied by producer's certificate confirming that the supplied cement confirms to relevant specifications. These certificates shall be endorsed to the engineer in charge for his record.

- 1.1 The cement shall be brought at site in supply of approximately 50 tons or more as decided by the Engineer-in-charge.
- 1.2 Cement store shall be provided with a single door with two locks. The keys of one lock shall remain with CPWD Engineer-in-charge or his authorized person and that of other lock with the authorized agent of the contractor at the site of work so that the cement is issued from godown according to the daily requirement with the knowledge of both the parties. The account of daily receipt and issue of cement shall be maintained in a register in the prescribed Performa and signed daily by the contractor or his authorized agent in token of its correctness.
- 1.3 The contractor shall be responsible for the watch and ward and safety of the cement godown. The contractor shall facilitate the inspection of the cement godown by the Engineer-in-Charge at any time.
- 1.4 Samples of cement arranged by the contractor shall be taken by the Engineer-in charge and got tested in accordance with provisions of relevant BIS codes as and when testing required by Engineer-in-Charge. In case test results indicate that the cement arranged by the contractor does not confirm to the relevant BIS codes, the same shall stand rejected and shall be removed from the site by the contractor at his own cost within a week's time of written order from the Engineer-in-charge to do so.
- 1.5 The contractor shall supply free of charge the cement required for testing. The cost of tests shall be borne by the contractor.
- 1.6 The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract.
- 1.7 The theoretical, consumption of cement shall be worked out as per procedure prescribed in agreement conditions and shall be governed by conditions laid therein. No payment for excess consumption of cement will be allowed.
- 1.8 For non-schedule items, the decision of the Superintending Engineer regarding theoretical quantity of cement, which should have been actually used, shall be final and binding on the contractor.
- 1.9 Cement brought to site and remaining unused after completion of work shall not be removed from site without written permission of the Engineer-in-charge.

PROFORMA FOR THE CEMENT REGISTER

PARTICULARS OF RECEIPT			PARTICULARS OF ISSUE			REMARK							
Date of receipt	Quantity received	Progressive Total	Date of issued	quantity issued	Item of work for which issued	Quantity returned at the end of the day	Total issued	Daily Balance in hand	Contractors initials	J.E.'s initials	Asstt. Engg. initials	A.E. E.E initials	Periodical Check
1	2	3	4	5	6	7	8	9	10	11	12	13	14

2 CONDITIONS FOR STEEL REINFORCEMENT

- 2.1** The contractor shall procure steel reinforcement TMT bars (High Corrosion Resistant) of Fe-500 D or higher grade conforming to relevant BIS codes from primary Steel producers such as SAIL, Tata Steel Ltd., RINL, Jindal Steel & Power Ltd. and JSW Steel Ltd. The contractor shall have to obtain and furnish test certificate to the Engineer in charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to BIS codes, the same shall stand rejected and shall be removed from the site of work by the contractor at his own cost within a week's time by written orders from the Engineer in charge to do so.
- 2.2** The steel reinforcement shall be brought at site in supply of 10 tons or more as decided by the Engineer in charge.
- 2.3** The steel reinforcement shall be stored by the contractor at site of work in such a way as to prevent distortion and corrosion and nothing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.
- 2.4** For checking nominal mass, tensile strength, bend test & re-bend test etc. specimen of sufficient length shall be cut from each size of the bar at random at frequency not less than the specified below:

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

- 2.5** The contractor shall supply free of cost the required steel bars for testing. The cost of tests shall be borne by the contractor

- 2.6** The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in clause 38 of the contract and shall be governed by conditions laid there in.
- 2.7** Steel brought to site and remaining unused shall not be removed from site without the written permission of Engineer-in-Charge.
- 2.7.1** Reinforcement shall be measured in length including hooks, if any, separately for different diameters as actually used in work, excluding overlaps. From the length so measured, the weight of reinforcement shall be calculated on the basis of IS: 1732 duly accounting for Wastage, overlaps, couplings, welded joints, spacer bars, chairs, stays and hangers. The annealed steel wire or other methods for binding and placing shall not be measured and cost of these items shall be deemed to be included in the rates for reinforcement.
- 2.7.2** The standard sectional weights referred to shall be as in Table 5.4 in para 5.3.4 in CPWD specifications 2019 Vol. 1 will be considered for conversion of length of various sizes of High Corrosion Resistant Steel bars in to standard weight. Record of actual sectional weights shall also be kept dia wise and lot wise. The average sectional weight for each diameter shall be arrived at from samples from each lot of steel received at site. The decision of the Engineer in charge shall be final for the procedure to be followed for determining the average sectional weight of each lot. Quantity of each diameter of steel received at site of work each day will constitute one single lot for the purpose. The weight of steel by conversion of length of various sizes of bars based on the actual weighted average sectional weight shall be termed as Derived Actual Weight.
- 2.7.3** If the derived weight is less than the standard weight as in sub-para (ii) above, then the Derived Actual Weight shall be taken for payment.
- 2.7.4** If the derived actual weight is found more than the standard weight, then standard weight as worked out in sub para (ii) above shall be taken for payment and nothing shall be paid extra for the difference in Derived Actual Weight and standard weight.
- 2.8** The reinforcing steel brought to site of work shall be stored on brick or timber platform of 30/40-cm height, nothing extra shall be paid on this account.

GENERAL CONDITIONS FOR PLANNING & DESIGN

1. The Conceptual drawing is enclosed with NIT. The working/ execution drawings including architectural, MEP and other services shall be prepared by the agency. The structural drawings shall also be preparing the agency and shall be proof checked by any IIT/NIT / Govt. institution. The cost of proof checking shall also be borne by contractor. **All the drawings shall be submitted by the contractor within 10 days of date of start of the work.**

2.0 SCOPE OF SERVICES

- 2.1 The contractor shall provide drawings of following: -

- (i) All Architectural Services including building plans.
- (ii) All Civil & Structural Engineering Services.
- (iii) Any other services which are required but not specifically indicated.

3.3.1.1 Layout Plan showing:

- Levels of proposed buildings.
- Coordinated External services.

3.3.1.2 Schedules / Shop Drawings to be submitted by contractor as per specifications mentioned in NIT

- Floor plans, fully coordinated with all services/disciplines
- Wall profiles
- Doors & Window details
- Flooring pattern and details

3.3.1.3 Any other details required for completion of the buildings/services.

3.3.1.4 Inspect the works and attend meetings during execution to give clarifications, if any, and to modify the drawings as per the site/construction requirements.

3.4 CIVIL AND STRUCTURAL ENGINEERING SERVICES

- 3.4.1 The execution shall be based on the concerned IS codes / IRC / NBC / International codes / guidelines. Some of the design codes are being mentioned here under:-

❖ Bureau of Indian Standard Codes

- Reinforced concrete member as per IS 456:2000
- Precast elements design as per IS 15916:2010
- For design loads as per IS : 875 (Part 1 & 2) 1987
- For design loads as per IS :875 (Part 3) 2015
- Design and Construction of foundations in soils as per IS 1904:1986
- Criteria for earthquake resistance design as per IS 1893:2016
- Ductile design and detailing of reinforced concrete structure IS 13920:2016
- Guidelines for the design and construction of geo-synthetic reinforced embankment on soft soil as per IRC : 113-2013
- Design and construction for ground improvement as per IS 15284 (Part 1 & 2)
- Selection of ground improvement techniques for foundation in weak soils as per IS 13094:1992
- IS 11447

3.4.1.1 Shop drawing to be submitted by contractor for PUBLIC HEALTH ENGINEERING

3.4.1.2 All the design and drawings should be well coordinated with Architecture, structure and other services drawings.

3.4.1.3 All designs shall be as per the latest Indian Standards, Local bye-laws and Statutory norms/regulation.

3.4.1.4 Design of Public Health & Engineering services taking into account various topographical, meteorological, Hydrological etc. reports, identify the source and quality of water, conduct survey of existing water supply system, Sewerage system, Drainage system, Fire-fighting system, other site development works etc. for planning of services.

4.0 NUMBER OF DOCUMENTS AND COPY RIGHTS

4.1 Ensure the preparation of AS-BUILT drawings of building and services and submission in three copies.

LIST OF PREFERRED MAKES FOR CIVIL WORKS

Specification/brands names of materials to be used as per the scope of work are listed here. The efforts should be made by the agency to use indigenous products. The agency should also consider the availability of spares parts/components for maintenance purposes while proposing any brand/manufacturer. The materials of any other brand/manufacturer may be proposed for use by the agency in case the brands specified below are not available in the market and/or agency intends to use some other brand better than the brands mentioned in this list. The alternate brand can be used only after the approval of Engineer-in-Charge.

S. No.	Description of Item	Preferred Makes
STRUCTURE		
1	Ordinary Portland Cement/ Portland Pozzolana Cement	ACC /ULTRATECH / SHREE/ AMBUJA /JK CEMENT
2	White Cement	BIRLA CEMENT/J K WHITE/ TRAVANCORE
3	Reinforcement Steel	SAIL/ TATA STEEL LTD/ RINL/ JINDAL STEEL & POWER LTD / JSW
4	Parallel Threaded Couplers	DEXTRA / HALFEN/ MOMENTS/ TATA TISCON
5	Re-barring Chemical	HILTI / 3M INDIA/WURTH
6	HR Structural Steel	TATA / SAIL / JSW STEEL LTD / JINDAL STEEL & POWER LTD / RINL
7	LGS Frame/ CR Coil	TATA BLUE-SCOPE / EVEREST/ JINDAL STEEL & POWER LTD
8	Fiber Cement Board	EVEREST / HYDERABAD INDUSTRIES/ RAMCO
9	Gypsum Board	USG BORAL / SAINT GOBAIN / EVEREST/
10	Mineral wool panels for external & internal walls	ROXUL ROCKWOOL INSULATION /LLOYD / KINGSPAN JINDAL/ EPACK
11	Rock Wool insulation	ROXUL ROCKWOOL INSULATION / LLOYD INSULATION / POLYBOND INSULATION/ EPACK
12	Galvanized Steel deck sheet	TATA BLUE / JSW / JINDAL
13	Fire Coating for steel structure	AKZO NOBEL / FSI LTD. / JOTUN / WEBER (SAINT GOBAIN)
14	Plasticizer / Super Plasticizer /Admixtures /Other construction chemicals	FOSROC / BASF / BULWARK / WEBER (SAINT GOBAIN)
15	AAC Blocks	AEROCON / JK LAXMI / BIRLA / J.K. /Fincrete

16	CC Paver Blocks	BIRLA / NITCO / KK / Jullay Tiles ANY OTHER MAKE WITH PRIOR APPROVAL OF ENGINEER-IN-CHARGE AFTER INSPECTION OF THE FACTORY OF PROPOSED MANUFACTURER
17	AAC Block Adhesive, Block Jointing Mortar	ENDURA / JK LAXMI / BIRLA / J.K. / WEBER (SAINT GOBAIN)
18	Polymer modified cementations adhesive, mortar & Grout for tiling etc.	WEBER (SAINT GOBAIN) / KERAKOLL / MAPEI/ CHOKSEY
19	High-performance epoxy-based resin anchor system	BASF / FOSROC / HILTI / SUPREME BITUCHEM / CHOKSEY / WEBER (SAINT GOBAIN)
20	Solvent based silicone repellent coating	PIDILITE / GE / AKEMI / CHOKSEY / WEBER (SAINT GOBAIN)
21	PU coatings for structural steel	MARRIS POLYMERS/ CHOKSEY / WEBER (SAINT GOBAIN) / FOSROC
22	Cement based Ready Mix Plaster	SIKKA / WEBER SAINT GOBAIN/ FOSROC/FERROUS CRETE
23	Crystalline Admixture	PENETRON, BULWARK, WEBER (SAINT GOBAIN) / KUNAL CONCHEM

For WATER PROOFING

1	Single Component Liquid PU Elastomeric Membrane (spray applied) for Deck Waterproofing, Sunken waterproofing, Polymeric Cementation Coating, Elastomeric Acrylic PU coating (UV resistant) liquid applied coating	FOSROC / BULWARK / MARRIS POLYMER / WEBER (SAINT GOBAIN) / PENETRON(I)/ZYPEXX BIOTECH
2	PVC WATER STOPS	PIDILITE / FOSROC / BASF / MARRIS POLYMER / WEBER (SAINT GOBAIN) / CHRYSO
3	POLYSULPHIDE / SILICON SEALANT	GE / DOW CORNING / PIDILITE / 3M / SUPREME BITUCHEM / WEBER (SAINT GOBAIN)

For DOOR / WINDOWS & WOODWORK

1	Laminated Particle Board / Particle board / Laminates / Plywood	MERINO / GREENLAM / CENTURY / DECOLAM/ ARCHIDPLY / KITLAM / GREEN PLY
2	Flush door shutters	GREENPLY/ ARCHIDPLY / MERINO / CENTURY / KITPLY

3	Polycarbonate Sheet	GE LEXAN / DANPALON/ GALLINA
4	Natural wood veneer	SONEAR / GREEN PLY / TRUWOOD / ARCHID
5	Anti-static high-pressure laminate	FORMICA / BAKELITE HYLAM / DECOLAM MERINO / KITMICA / CENTURY
6	Fire Sealant	HILTI / 3M / FISHER / WURTH / SAINT GOBAIN
7	Extruded Polystyrene Board	STP / SUPREME / OWNECORNING / SHALIMAR
8	u-PVC Door/Windows profile section	SAINT GOBAIN / DECEUNINCK / FENESTA / REHAU / PROMINANCE
9	u-PVC Door/Windows hardware fittings	HEFFLE / HETTICH / FISHER / DNV / PEGO /ROTO/PROMINANCE/KINGLONG
10	Adhesives for wooden surface	FEVICOL / ANCHOR / DUNLOP / 3M / PIDILITE / THERMOSHIELD / VAMORGANIC / SAINT GOBAIN
11	PU Polish for Wood Works	ASIAN / DULUX / IKEA/SIRCA
12	Ready Mix Plaster	Ultratech/JSW/Birla
13	Gypsum Plaster	Gyproc/Asian Paint/Birla white/JK Laksmi

For FINISHING

1	WOOD FINISH (MELAMINE & PU POLISH)	ASIAN / BERGER / NEROLAC / PIDILITE / WEMBLEY / BASF / DULUX
2	Polyester Powder Coating Shades	NEROLAC / BERGER / DULUX
3	Wall Putty	WONDER / JK WHITE / SAINTGOBAIN WEBER / BERGER
4	Oil Bound Washable / Acrylic Distemper	ASIAN PAINTS / BERGER / NEROLAC / DULUX
5	Cement Primer	BERGER / ASIAN / NEROLAC / DULUX
6	Steel / Wood Primer	DULUX / NEROLAC / BERGER / ASIAN / JENSON & NICHOLSON

7	PLASTIC / ACRYLIC EMULSION PAINT	ASIAN / BERGER / NEROLAC / BASF / DULUX
8	Textured Exterior Finish	ASIAN / BERGER / DULUX
9	Synthetic Enamel Paint	ASIAN / BERGER / NEROLAC/ DULUX / NIPPON
10	SFRC/ Precast CC Covers	KK / JAIN / PRAGATI / HINDUSTAN / HP

11	Poly Carbonate Sheet	SABIC LEXAN / BAYER / COXABELL
12	Terracotta tiles	DALAL / UNICRETE / UNISTONE / KK / ABC

For STEEL & ALUMINIUM WORKS

1	Stainless Steel Railing / Accessories etc. (Grade SS 316)	OZONE / DORMA / KICH / HETTICH / REHAU or fabricated by authorized fabricator using material produced by JINDAL / HINDALCO / BHORUKA
2	Powder coated Aluminium frame with glass glazing	AXSYS SOLUTIONS / FAÇADE ONE
3	Aluminium Railing system	ART& GLASS / AXSYS SOLUTIONS
4	Welding Electrodes	ADVANI-OERLIKON / MODI
5	Dash / Anchoring Fasteners	HILTI / FISHER / BOSCH / AXEL/ TRIKEL FROM AXEL INDIA/ CANON/WURTH
6	Aluminium Sheet	NOVELIS / EURAMAX
7	SS Wire Mesh	HAVER STANDARD / GRAND METAL / STRELING / TRIMURTI / TIGER / GKD / WMW
8	Panic Exit Device	HETTICH / HAFFLE / DORMA / HILTI / FISHER

CEILINGS

1	Gypsum Board False Ceiling	SAINT GOBAIN GYPROC / KNAUF / EVEREST / GYPCORE
2	Metal False Ceiling	SAINT GOBAIN GYPROC / KNAUF / EVEREST / TECHNO CEILING
3	Acoustical False Ceiling & Wall Paneling Grid system	SAINT GOBAIN GYPROC / KNAUF / EVEREST / TECHNO CEILING
4	Calcium Silicate False Ceiling Tiles Grid system	SAINT GOBAIN GYPROC / KNAUF / EVERES / TECHNO CEILING AEROLITE / RAMCO HILUX
5	Aluminium Composite Panel	ALUCOBOND / ALPOLIC / WONDER / REYNOBOND / ALUSTONE

FLOORINGS		
1	Tiles: Ceramic / Vitrified / Antiskid / Matt / Glazed / Heat Resistant / Solar Reflective	KAJARIA / JOHNSON / SOMANY / ORIENT / RAK CERAMICS / SIMERO / AGL
2	Engineered stone - Marble / Quartz	ASIAN / JOHNSON / KALINGA / QUTONE
3	Bamboo Flooring	EPITOME / ECOGREEN FLOORING / FLOOR INDIA/VIBRANT
4	Engineered Hardwood Flooring	TARGET / VIBRANT / VISTA / PARQUET / RESPONSIVE / MIKASA
GLAZINGS		
1	Glazing Structural / Suspended /Skylight/Clear / Float /Frosted Glass/Mirror/skylight/ Toughened Glass/Hermetically sealed performance glass Interior partitions	AIS / MODIGUARD / SAINT GOBAIN / GUARDIAN
2	Modular Toughened Glass for Partitions	AIS / MODIGUARD / SAINT GOBAIN / GUARDIAN
3	Glass Spider Fittings	DORMA / OZONE / HAFEFLE / HETTICH / KICH / HILTI / FISHER
4	High-Performance Solar Toughened Glass	AIS / MODIGUARD / SAINT GOBAIN / GUARDIAN
5	Fire Rated Glass/ Hardware	GEZE / OZONE / DORMA / HAFEFLE / HETTICH / ST. GOBAIN
6	Two-Hour Fire Rated Metal Glass Door / Hardware	PILKINGTON / SCHOTT / AIS/ SAINT GOBAIN / SUKRI
HARDWARE		
1	Nuts / Bolts & Screws	GKW / HILTI / ATUL / TW BUILDDEX & BOUSTED / CORROSHIELD / ATUL FATERNERS LTD/WURTH
2	All type of hardware and fitting for all type of glazing /doors/ windows etc. including mortise latch & lock / tower bolt / ball bearing butt hinges / friction stay hinges / sliding door bolts / lever handle / magic eye, door closer etc.	DORMA / HAFEFLE / GEZE / GODREJ/ ASSA- ABLOY / OZONE / HETTICH
3	Toilet Cubicles	MERINO / GREEN / CENTURY / FUNDERMAX

4	Hardware for Fire Check Door/ panic bar/ panic trim/ door closer/ hinges/ mortise lock	DORMA / OZONE / HAFLE / HETTICH / KICH / HILTI / FISHER
5	EPDM Gasket	HANU / ANAND / OSAKA
6	Hydraulic Door Closure/Floor Spring	GODREJ / DORMA / HAFELE / GEZE / OZONE / HILTI / HETTICH

PLUMBING & SANITARY

1	GI Pipes	JINDAL (HISAR) / TATA/ PRAKASH SURYA
2	GI Fittings	UNIK / ZOLOTO / SURYA / KS / ICS / K.S / NVR / JINDAL / R BRAND / AMCO
3	GI pipe Jointing Materials	LOCTITE 55/DR. FIXIT / MC BAUCHEMIE
4	SS Pipes & Fittings	JINDAL / VIEGA / J-PRESS
5	HDPE Pipes	RELIANCE / JAIN IRRIGATION / KISAN/ ORIPLAST / SUPREME
6	CI Double Flanged Sluice Valve/ Non-Return Valve	KIRLOSKAR / SONDHI / KEJRIWAL/ IVC/ BURN / SIR
7	Ball, Butterfly, Float Valves	LEADER / SANT / ZOLOTO / CASTLE / IBP / ARCO/ KSB / SIR
8	Soil Waste Pipe	JAYSWAL NECO / RIF / SKF / RPMF
9	Sewage Water/ Rainwater Pipes	ASTRAL / PRINCE / SUPREME / FINOLEX / PRAKASH / AJAY / ASHIRWAD / BIRLA AEROCON / KISAN
10	SFRC / RCC Manhole Covers, Frames & Gratings	KK / OCR / PARGATI / T-CON / JAIN / PRAGATI / BIC / KAPILANSH DHATU UDHYOG / NECO / RIF / BCM / S.S. & CO./ GRATING
11	Stoneware Pipes and Gully Traps	PERFECT / PARRY / BURN / ANAND / RK / HIND
12	Sanitary CP Fittings & Accessories (As Per Series Specified in The Scope of Work/ Specifications of Civil Works)	JAQUAR / GROHE / KOHLER / ROCA/HAGAR
13	UPVC /PP-R pipe & Fittings	ASTRAL / SUPREME / FINOLEX / ASHIRWAD / PRINCE / PRAKASH / AJAY / BIRLA AEROCON/ KISAN / APL APOLLO
14	Stainless Steel Sink	NEELKANTH / NIRALI / CERA / JAYNA
15	RCC Pipes	LAKSHMI / SOOD & SOOD / JAIN & CO. / PRAGATI CONCRETE / KK / USHA / DIWAN SPUN PIPE / JAIN

16	Centrifugally Cast (Hub less) Iron Pipes & Fittings (IS: 15905)/Centrifugally Cast (Spun) Iron Pipes (Is:1536)	JAYSWAL NECO / RIF / SKF/RPMF
17	C.I. Manholes Covers	BIC / KAPILANSH DHATU UDHYOG / NEECO / RIF / BCM / SKF / HIF/RPMF
18	SS Hinged Grating	GMGR / NEER / CHILLY
19	Masking Tapes	SUNCONTROL / WONDER POLYMER
20	Treatment on MS Brackets	GALVANISED BRACKETS AS PER IS: 4759 - 1996 / 610
21	Floor Trap	JAINA / CHILLY / NIRALE / KICH
MISCELLANEOUS		
1	FRP water tank / SMC Panel water tank/PVC tank	SINTEX / POLYCON / SFMC/ SPL / UNITEK / SHEETAL/VECTUS

NOTE:

(i) A List of Preferred Brand Names of Various Materials/ Products are shown above for usage in execution of Work. However, approved equivalent material of any other Specialized Companies/ Firms may also be used, in case it is established that the Brands Specified below are not available in the market or in other unavoidable circumstances and subject to Approval of the alternate Brand by the Engineer- In -charge. However, in case, the equivalent model so approved, is cheaper than the model already mentioned in item/approved makes list, the price adjustment will be made based on the difference in market rate. In case, the rate of subsequently approved model is more, no extra payment will be made on this account.

(ii) It must be ensured, in general, that all materials to be used in the works shall bear BIS Certification mark. In cases where for a particular material/product, BIS Certification Mark is not available, then the material proposed to be procured can be used subject to the condition that it should conform to CPWD Specifications and relevant BIS codes. In such cases written approval of the Engineer-in -Charge shall be obtained before use of such material in their works.

(iii) The list given below does not absolve the Executing Agency from their responsibility for using these products. It is only after, they are satisfied about the quality and performance, the products shall be used. To achieve this, proper check on the quality of the product, actually to be used, should be exercised.

(iv) The Chief Engineer, Leh, CPWD, Leh or his successors reserves the right to add or delete any materials and brands in the list of approved makes. However, in case, the equivalent model so approved, is cheaper than the model already mentioned in item/approved makes list, the price adjustment will be made based on the difference in market rate. In case, the rate of subsequently approved model is more, no extra payment will be made on this account.

Scope & Specifications of Electrical & Mechanical Works

INDEX

Sr. No	Description
1	Schedule A to F (Electrical Component)
2	Terms & Conditions for Association of Specialized Firms for E & M Works
3	Form-G, Form-H, Form-I, Annexure-X
4	General Conditions
SH: 1	Internal & External Electrical Installations

PROFORMA OF SCHEDULES**SCHEDULE 'A'**

Schedule of quantities: As per NIT document.

SCHEDULE 'D'	
Extra schedule for specific requirements / document for the work, if any:	As per NIT document.
SCHEDULE 'E'	
Reference to General Conditions of Contract:	General Conditions of Contract 2023 Construction Works, CPWD with amendments issued upto the last date of submission of tender.
Name of Work:	Construction of toilets and other works at ISPW Station Leh, UT of Ladakh.
Estimated cost of Electrical Work:	5,17,227/-
Earnest Money:	As per major component
Performance Guarantee:	As per major component
Security Deposit:	As per major component
SCHEDULE 'F' (GENERAL RULES & DIRECTIONS)	
Officer Inviting Tender:	As per PART-A
Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.1 & 12.2:	As per major component
Definitions:	
2(v) Engineer-in-Charge:	Executive Engineer cum Senior Manager (E), LPED Leh or successor thereof
2(viii) Accepting Authority:	As per major component
2(x) Percentage on cost of materials and labour to cover all overheads and profits.	15 percent
2(xi) Standard Schedule of Rates:	DSR-2025 (E&M), with upto date correction slips + Effective Cost Index
2(xii) Department:	Central Public Works Department
9(ii) Standard CPWD contract Form GCC	General Conditions of Contract-2023 for Construction Works in CPWD corrected up to the last date of the submission of bids.
Clause 1	
Time allowed for submission of Performance Guarantee, programme chart (Time and progress) and applicable labour licenses, registration with EPFO, ESIC, and BOCW welfare board or proof of applying thereof from the date of issue of letter of acceptance:	As per major component.
Maximum allowable extension with late fee @ 0.1% per day of Performance Guarantee amount beyond the period provided in (i) above:	As per major component.
Clause 2	
Authority for fixing compensation under Clause 2	As per major component.
Clause 5	
Number of days from the date of issue of letter of acceptance for reckoning date of start Mile stone(s) as per table given below:-	As per major component.

Sl. No.	Description of Milestone	Time allowed in days (from date of start)	Amount to be withheld in case of non-achievement of milestone
As per major component			
Time allowed for execution of work:			As per major component.
Extension of time			As per major component.
Rescheduling of mile stones			As per major component.
Shifting of date of start in case of delay in handing over of site			As per major component.

PROFORMA OF SCHEDULES Clause 5 Schedule of handing over of site

PROFORMA OF SCHEDULES Clause 5 Schedule of handing over of site			
Part	Portion of site	Description	Time period for handing over reckoned from date of issue of letter of intent
Part A	As per major component		
Part B			
Part C			
Clause 7			
Gross work to be done together with net payment/adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment		Rs. 1,00,000 or part thereof as agreed	
Clause 7A			
Whether clause 7A shall be applicable		Yes Applicable.	
Clause 8A			
Authority to decide compensation on account if contractor fails to submit completion plans		As per major component.	
Clause 10A			
List of testing equipment to be provided by the contractor at site lab.		Lux Meter, Earth tester, TDS meter, Tong tester, Multimeter, Digital Thermometer, Conduit Bending Machine, Digital Vernier Caliper, Digital Screw Gauge, Megger, Electrical wire drawing equipment, weighing machine, measuring tap etc. The above-mentioned list is not exhaustive in nature and the testing equipment to be provided at the site shall be as per actual requirement.	
Clause 10B(ii)			
Whether Clause 10 B(ii) shall be applicable		No	
Clause 10C			
Component of labour expressed as percent of value of work:		Not applicable	
Clause 10CA		Not applicable	
Clause 10CC			
Clause 10CC to be applicable in contracts with stipulated period of completion exceeding the period shown in next column		Applicable	
Component of Electrical construction materials expressed as percent of value of E&M component of work:		80%	
Component of labour—expressed as percent of value of E&M component of work:		20%	
Clause 11			

Specifications to be followed for execution of work	As per CPWD General specifications for Electrical Works, Part-I Internal (2023), Part-II External (2023). (I) All above specifications shall be applicable with corrections slips up to the last date of submission/uploading of bid. (II) Wherever the CPWD Specification are not given, the works shall be executed as per the additional Specification & terms & conditions mentioned in the NIT, BIS Specifications & NBC 2016. (III) The direction of the Engineer-in-Charge shall be followed in absence of the above two at Serial No. I & II.
Clause 12	Applicable
Type of Work	Construction work
Clause 12.1 & Clause 12.2	As per Major component
Clause 16	
Competent Authority for deciding reduced rates	As per major component.
Clause 17	As per major component.
Clause 19	Competent Authority to decide penalty for each default:
Clause 19C	
Authority to decide penalty for each default	EE cum SM (E) LPED or successor thereof
Clause 19D	
Authority to decide penalty for each default	EE cum SM (E) LPED or successor thereof
Clause 19G	
Authority to decide penalty for each default	EE cum SM (E) LPED or successor thereof
Clause 19K	
Authority to decide penalty for each default	EE cum SM (E) LPED or successor thereof
Clause 25	
Constitution of Dispute Redressal Committee (DRC) Conciliator- Arbitrator Appointing Authority- Place of Arbitration-	Same as per major component.

Clause 32

The Agency who will provide the Technical Staff have adequate Knowledge E&M services

Terms & Conditions for Association of specialized firms for E&M Works

Estimated cost of various electrical & Mechanical services & similar works definition are as under:

NOTE: - If the main contractor associate the OEM or its authorized channel partner for the execution of any of the subhead given below then the minimum eligibility criteria given below shall not be applicable.

Sl. No	Component of E&M works	Estimated cost Rs.	Minimum Eligibility
1.	Internal & External Electrical Installations	5,17,227/-	The main contractor, if does not fulfill the criteria himself, shall associate with contractor for execution of this Sub head of work, possessing valid Electrical Contractor License of appropriate Voltage/Class.

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

However, the contractor shall also be allowed to carry out the works included in the enlistment provisions as per the eligibility and the category of the enlistment, without associating any specialized agency provided.

The contractor shall have to associate other agency(s) for execution of each of the work(s) mentioned above including works of Fire Fighting & Fire Alarm System, UPS, Solar PV Power Plant and other specialized E&M Services forming part of the tender, which fulfills the eligibility criteria for these works(s) duly taking prior approval from the department. However, the contractor shall also be eligible to carry out himself any or all of these works without associating any specialized agency provided:

He fulfills the prescribed eligibility criteria respectively for these work(s).

Or

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

Eligibility criteria of each such agency to be associated are to be set out in the tender documents. The Contractor and the associated specialized agencies shall give required affidavit to confirm their association.

The Department may approve change of associated agency in case it is required during the currency of the contract.

Note. The main contractor/agency has to submit details of such agency to be associated to the Engineer- in- charge (of E&M Work) within 15 days from date of start of work. The associated agency shall be approved by Engineer-in-charge (of E&M Work). In case the main contractor intends to change associated agency/agencies during the operation of the contract, he shall obtain prior approval of Engineer- in-charge (of E&M Work). The new agency/agencies shall also have to satisfy the laid down eligibility criteria mentioned above. In case Engineer-in-charge is not satisfied with the performance of any agency, he can direct the main contractor to change the agency executing such items of work and this shall be binding on the contractor.

Approval of the specialized agencies for each specialized work shall be obtained from the Engineer- in-Charge (E&M works) within 15 days of award of work. Even if, such specialized items of work shall be executed by the specialized agencies at later date the

work shall be deemed to be executed by the tenderer for all purposes and the responsibility of the quality of items of works executed etc. shall continue to be that of the tenderer only. The applicant should submit the willingness from eligible electrical contractors to get associated with the applicant for execution of the electrical component of works in wholesome manner and as per the conditions set out in the MOU to be entered into, between the one who is awarded the work and the associated eligible electrical contractor. (Format of willingness and MOU is given below)

In support of the eligibility conditions of the proposed associated electrical contractor, copy of their registration documents, Electrical Contractor's License, GST documents, eligibility documents duly attested by the applicants (Main Contractor) shall be submitted to the EE(E) who will submit these documents to the CE&ED for deciding the eligibility. Such associate electrical contractor will certify that they are not debarred as on the day of application for sale of tender.

In the event of the concerned E&M agency not performing satisfactorily or failure of associate/ sub- contractor to complete the E&M work, the main contractor on the written direction of the department, shall remove the Associate/sub-contractor deployed on the work and shall submit name of new associate who fulfills the conditions mentioned in NIT to execute the leftover work without any loss of time or variation in cost to the department in this regard. Such associates shall also enter into Agreement with the main tenderer shall meet all the guarantee for the equipment already supplied for which payment has been released by the department in part. If any equipment supplied for the work, during the currency of the earlier Associate/sub-contractor and paid partly by the department becomes redundant /not in a position to be installed and commissioned and put to beneficial use due to change in agency for execution of E&M work, the main contractor shall be liable for replacement of the equipment(s) at no cost to Department. No change of Electrical Contractor will be allowed without prior approval of the CE& ED.

Executive Engineer (E) shall be the Engineer-in-charge as far as electrical works are concerned. Special Conditions for each of electrical work subhead 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.

All the equipment/items shall be in consensus with the local climatic condition of the Leh-Ladakh i.e. (-40°C to 40°C).

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.

The main contractor has to enter into agreement with contractor(s) associated by him for execution of E&M subheads. Copy of such agreement shall be submitted to EE(E) in charge as well as to EE(C).

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.

The agencies executing the Electrical work should have valid license for LT/HT as applicable.

NET Metering facility shall be provided by the main agency to supply surplus energy generation from the building to the main grid. If there is no policy of evacuation of surplus electricity generation by the Power distribution department (PDD)/utility service department of the UT of Ladakh (on daily basis and annual basis) to be submitted by the bidder.

FORM-G**PROPOSAL FOR ELIGIBLE ASSOCIATING AGENCIES FOR MINOR COMPONENTS OF WORK**

Sl. No	Name of Associated Contractor	Category and Class of registration	Enlistment copy/completion registration	Monetary Limit of work	Validity of registration	Consent letter attached (Yes/No)
1	Internal & External Electrical Installations					

If I/we hereby propose the following agencies as per mentioned against each for executing corresponding minor components of work. Their consent letters are also attached.

Note: Self Attested photocopies of enlistment order, valid electrical contractor license, work experience certificates of each agency for each component of E&M work shall be submitted

Signature of Contractor

CONSENT LETTER FROM ELIGIBLE ASSOCIATE AGENCY OF MINOR COMPONENT OF WORK

Name of Work: **Construction of toilets and other works at ISPW Station Leh, UT of Ladakh.**

I / We hereby give my consent to associate with M/s.....

For executing the minor component of work of.....
(Mention category).

I / We will execute the work as per specifications and conditions of the agreement and as per directions of the Engineer-in-Charge for the corresponding minor work till the completion of the work.

I / We will be responsible for necessary action to handover the installations and for rectifications of defects and repair during the maintenance / warranty period.

Also I / We will employ full time technically qualified Engineer / Supervisor for the minor components of the work as required for the work. I / We will attend inspection of officers of the department as and when required.

Date:

Signature with date of Major component
Component Contractor

Signature with date of Associate/Minor
Contractor

Address

Address

Witness with address
(From major component contractor side)
side)

Witness with address
(From minor component contractor
side)

AFFIDAVIT OF MEMORANDUM OF UNDERSTANDING (MOU)

(To be submitted for each and every E&M component)

M/s (Name of the firm with full address) Enlistment Status

Valid Upto:

(Henceforth called the main Contractor)

M/s (Name of the firm with full address) Enlistment Status

Valid Upto:

(Henceforth called Associated Contractor) For the execution of E&M Work

Name of Work: **Construction of toilets and other works at ISPW Station Leh, UT of Ladakh.**

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 (CPWD) can enforce all the terms and conditions of the agreement for execution of the work. Both of us shall be responsible for the execution of the work as per agreement to the extent this MOU allows. Both the parties can 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 by the Engineer-in-Charge. Any of us may appeal against the mediation to the Chief Engineer cum Executive Director, CPWD, Leh. His decision shall be final and binding on both of us.

We have agreed as under:

1. The Associated Contractor will execute all E&M works in the whole some manner as per terms and conditions of the agreement.
2. The Associated Contractor shall be liable for disciplinary action if he fails to discharge the actions(s) and other legal action as per agreement.
3. All the machinery and equipment, tools and tackles required for execution of the E&M works, as per agreement, shall be the responsibility of the Associated Contractor.
4. The site staff required for the E&M work shall be arranged by the Associated Contractor as per terms and conditions of the agreement.
5. In case the associate agency file a complaint with CPWD regarding the non-payment by the main contractor then the payment shall directly we credited to the account of associate agency by the department.
6. 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.

All the corresponding regarding execution of the E&M work shall be done by the department 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
CONTRACTOR

SIGNATURE OF ASSOCIATED

Date:

Date:

Place:

Place:

1. Witness with address

2. Witness with address

(From major component contractor side)

(From minor component contractor side)

NOTE: Affidavit to be furnished on a 'Non-Judicial' stamp paper worth Rs. 100/-

ANNEXURE – X**UNDERTAKING LETTER FROM MANUFACTURES OF LED FITTINGS**

We hereby agree that :

All the LED fittings supplied by us are guaranteed for five years including drivers from the date of handing over.

In case of discontinuation of model and non-availability of spares, we will replace the fittings with equivalent/high end model in case of manufacturing defect during the warranty period of 5 years.

For M/S.....

(Authorized Signatory of Manufacturer of LED luminaries)

Counter Signature,

Major Contractor

GENERAL CONDITIONS (Electrical & Mechanical Services)

Name of Work: **Construction of toilets and other works at ISPW Station Leh, UT of Ladakh.**

Scope of work covers planning, Engineering, designing, supply, installation, fixing, execution, testing and commissioning of all Electrical & Mechanical services required to be provided in the said scheme & as detailed in the NIT. The work shall be executed as per scope & specifications of E & M works given hereafter in respective head / part of the scheme or sub-head. If any services/work required to make the building/ scheme habitable & functional, including the statutory compliance, is not specifically mentioned in the scope of services, the same is deemed to be included within the scope of this tender and nothing extra shall be paid on this account. The agency has to get approval of the Engineer in charge/ CPWD for every stage of planning and execution.

The tenderer is advised to read and examine the tender documents for the work and the set of drawings in the tender document and also available in office of Engineer-in-charge. He should himself inspect and examine the site and its surroundings before submitting his tender. Separate conditions & specification and scope are included in this tender for each of the sub-head. The contractor shall quote the amount/rates lump-sum in figure/percentage accurately in schedule of financial quote, as prescribed there.

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

Agency has to provide the fully furnished and fully heated site office suitable for all weather condition for CPWD staff having minimum area of 50 Sq m with the supporting skilled, semiskilled and unskilled staff as per direction of Engineer-in-Charge

Note:

All words have to be executed as per specifications provided in the bid document, CPWD Specifications, National building Code 2016 (in case of difference, if any, stringent/ higher specification of the two shall be followed) and ECBC2017 Code. In absence of CPWD Specifications, IS Codes, National Building Code 2016 sound engineering practices shall be adopted as per order of precedence defined in the contract. The scope of works & specification are given in general but they are not exhaustive i.e. does not mention all the incidental works required to be carried out for complete execution of the item of work. The work shall be carried out, all in accordance with true intent and meaning of the specifications and the drawings taken together, regardless of whether the same may or may not be particularly shown on the drawings and /or described in the specification, provided that the same can be reasonably inferred there from.

There may be several incident works, which are not mentioned in the contract document/specifications but will be necessary to complete the item in all respect. All these incidental works/ costs which are not mentioned, but are necessary to complete the work shall be deemed to have been costs which are not mentioned, but are necessary to complete the work shall be deemed to have been included in the overall amount quoted by the contractor for various components of work. No adjustment of rates shall be made for any variation in

quantum of incidental works due to variation/change in actual working drawings. Also, no adjustment of rates shall be made due to any change in incidental works or any other deviation in such element of work (which is incidental to the items of work and are necessary to complete such items in all respects) on account of the directions of Engineer-in-charge. Nothing extra shall be payable on this account.

In case, some items are missing in the scope of work or specifications in the bidding documents the same shall be taken from the specification mentioned in similar type of items mentioned for similar type of building in the scope of work or shall be executed as given in the CPWD Specifications, NBC-2016, IS Codes or according to sound engineering practices so as to make the building including related services fully functional. No claim what so ever may be entertained at later stage. All cost of providing and making building with services works fully complete in all aspect unless specifically mentioned in the contract document and making buildings with services fully are included in the cost tendered for this work.

clearances, structural design & drawings, constructions, & commissioning of buildings & services and obtaining completion certificate in accordance with layout plan and architectural / structural drawings.

Local Body Approval:-

Agency will get the scheme approved from the local bodies wherever required before start of the work and clearance as required after completion of the work also. However, if modification is required in any of the architectural drawings by any of the local bodies, the same shall be carried out by the contractor at his cost.

The contractor shall obtain all mandatory approval and No Objection Certificate / Consent for Establishment / Clearance etc. from local body authorities like local Fire Department, Local Town Planning Authority, Local Ground Water Authority, Local Electricity Supply Authority, Local Pollution Control Board, Forest Department, Environment Clearance, Lift Inspectorate, Central Electricity Authority etc.

The contractor has to prepare all the documents as required and submit directly to the local statutory bodies. The contractor shall at his own cost collect field samples and carry out all necessary tests required for submission of necessary applications. All such applications / approvals shall be in the name of the client department.

The contractor has to comply and, if necessary, resubmit applications which are required by the local bodies.

The contractor has to appoint at his own cost consultants for obtaining local body approval. All statutory payments or fees shall be paid or reimbursed by the Department.

Three final copies of the documents prepared shall be submitted to Engineer-in-Charge for record. All the documents created out of the assignment will become the sole property of the Department. The contractor shall obtain completion certificate after completion of the project from statutory local bodies before handing over.

The contractor (s) shall make his own arrangements for storage, custody, electricity and water required for the execution of work.

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

The contractor shall submit technical data sheet of various equipment and machinery and shop drawings of various E&M services mentioned in the tender as per requirement of sites before execution of work for approval.

Frequency and type of tests of various Materials/items/ article shall be conducted as per specifications and relevant BIS-Codes. The test results confirm to the specification/code. In addition to above any data and detail asked by Engineer in charge to finalize and accept the scheme shall be provided on the established standard/guidelines/codes etc.

Clearances to be taken by the firm before start of work: The above schemes of all the E&M works shall have to meet all the requirements of local bodies / CEA/ NBC norms as applicable & also meet the technical specifications of various relevant CPWD specifications/ BIS codes / NBC2016/ ECBC2017 for electrical & mechanical services.

All the above schemes shall be got approved by respective local bodies / CFO etc. as applicable before commencement of execution of work at site. During execution, if the local bodies etc. require a modification, the same shall be executed without any extra cost. Finally, after execution, obtaining clearances from CEA (central electrical authority), local fire authorities, DPCC and any other local body, shall be the responsibility of the contractor All statutory fees / charges required for obtaining clearances from CEA shall be paid by the contractor.

Three final copies of the documents prepared shall be submitted to Engineer-in-Charge for record. All the documents created out of the assignment will become the sole property of the Department. The contractor shall obtain completion certificate after completion of the project from statutory local bodies before handing over.

Climatic Conditions

All electrical equipment, accessories and fittings employed in electrical installation shall be specified, designed and derated for continuous and trouble-free operation in the climatic conditions of the equipment location which are summarized as follows:

a)	Maximum ambient air temperature	:	30° C
b)	Minimum ambient air temperature	:	-30° C
c)	Maximum relative humidity	:	85%RH

GENERAL AND COMMERCIAL CONDITION OF WORK

GENERAL

The works shall be executed as per CPWD's General specification for Electrical Works amended up to the date of opening of eligibility bid, Part-I (Internal- 2023); Part-II (External)- 2023, IE Rules, Indian Standards amended up to date and as per direction of Engineer- in-Charge. The additional specifications are to be read with above and in case of any variations; specifications given along with the tender shall apply.

In case of discrepancy between the List of Makes, Tech. Specifications, Drawings etc the following order of preference shall be observed:

Technical Specifications

CPWD General Specifications

IS/ IEC/International Codes

List of Makes

Note:- The firm is to execute the works using materials of makes specified. However, if the make of same items is mentioned in more than one sub head/make list, then firm may if so desire, submit its request for the approval for using that make. The department reserves the right to approve the same, if so considered fit. The decision of the department shall be final & binding on the firm.

In case of any discrepancy of specifications/conditions in the tender document the following order of preference will be observed:

Drawings

CPWD general specifications

NBC-2016

IS/IEC/International Codes

The Provision with higher specifications

Decision of Engineer in Charge

Best engineering practice being followed in such works

SPECIAL CONDITIONS FOR ALL SPECIALIZED E & M COMPONENTS

The main tenderer has to submit the following documents for association of contractor within one month from the start of the work. And shall get approval of association of agency from Engineer in charge of E&M work (minor component).

In support of the eligibility conditions of the proposed Associated Contractor, copy of their Registration documents, Electrical License, GST documents, completion certificate, copy of the final bill duly attested by the applicants (Main Contractor) shall be submitted to the Executive Engineer cum Senior Manager (E), CPWD, Leh for deciding the eligibility. Each such Associated Contractor will certify that they are not debarred as on the day of application for tender participation. Proposal for associating agency for minor components of work shall be submitted in Form- "G" of this tender document from each associate independently for all electrical and mechanical components.

The main contractor should submit an affidavit of MoU signed with eligible associated contractor. The MoU in the enclosed Form 'I' shall be signed by both the parties, main contractor as 1st party and associated contractor as 2nd party independently for all electrical and mechanical components.

In the event of the concerned E&M agency not performing satisfactorily or failure of associated contractor to complete the E&M work, the main contractor on written directions of the Engineer in charge, shall remove the Associate contractor deployed on the work and shall submit name of new associate agency who fulfill the conditions mentioned in the tender document to execute the left-over work without any loss of time or variation in the cost to the department. Such associates shall also give an undertaking along with the main tenderer but both of them together will stand guarantee for the equipments already supplied for which payment has been released by the department in part. If any equipment supplied for the work, during the currency of the earlier Associate contractor and paid partly by the Dept., becomes redundant / not in a position to be installed and commissioned and put to beneficial use due to change in agency for execution of E&M work, the main contractor shall be liable for replacement of the equipment(s) at no cost to Department. No change of Associated Contractor will be allowed without prior approval of the Engineer-in-charge of the work.

2) In respect of all works, the materials shall be procured only from the original equipment manufacturers / authorized dealers of OEM. The contractor shall submit all documentary details in fulfillment of this conditions regarding procurement of materials including relevant test certificates. The Contractor has to submit in respect of all material the Bill, Manufacturer test certificates, transportation detail, Dealer certificate, Operation, maintenance and Installation manual, Warranty/ Guarantee certificate, custom certificate etc. and any other document as asked by Engineer in charge. The work executed by Proposed associate agency shall be complete work including material, labour, T&P and other related activities) (No petty/labour contract work will be considered).

It will be obligatory on the part of the contractor / tenderer to upload the tender documents for all the component parts. The main contractor shall be responsible and liable for proper and complete execution of the E&M work and ensure coordination and completion of both civil and E&M work. The main contractor has to enter into agreement with contractor associated by him for execution of minor component. Copy of such agreement shall be submitted to Executive Engineer (E) in charge of minor component. The Associate contractor as well as main contractor shall attend the inspection of the work by the Engineer-in-Charge of E&M works as and when required.

Before completion of defect liability period, the main contractor has to submit security deposit of 5% of 80% of the price of LED fittings for the remaining years warranty period for Led fittings in acceptable form i.e. FDR/ Bank guarantee to concerned Executive

Engineer (E). The Security Deposit deducted from the bills of contractor shall be refunded to the main contractor only after submission of above security deposit. Deposit deducted for total work and balance amount only will be refunded after completion of defect liability period. The LED Security Deposit will be released after completion of warranty period of 5 years to the main contractor.

Works to be done by the contractor

In addition to Planning, Engineering, Designing, supply, installation, testing and commissioning of all the equipment, as per schedule of work, and specifications, the following works shall be deemed to be included within the scope of work to be executed by the contractor. Nothing will be paid extra on this account.

Tools and tackles required for handling and installation of equipment.

Protection required for the equipment from rain, dust storm etc. during transportation i.e. polythene cover and tarpaulin till completion & handing over to department.

Necessary equipment for commissioning/site testing.

Supplying, Installation and testing commissioning of E&M services as per the scope and specification given in the respective sub head.

Making arrangement of electricity and water required for installation.

Providing cement & concrete foundation as per manufacturer standard and approved drawing by the department.

Minor/Major building work i/c repairing/ closing of all holes for cable entry etc. complete as required.

RATES

No foreign exchange shall be made available by the Department for importing (purchase) of equipment, plants, machinery, materials of any kind or any other items required to be carried out during execution of the work. No delay and no claim of any kind shall be entertained from the Contractor, on account of variation in the foreign exchange rate.

The rates quoted by the tenderer, shall be firm and inclusive of all taxes (including works contract tax), GST, octroi, entry tax, duties and levies and all charges for packing forwarding, insurance, freight and delivery, installation, testing, commissioning etc. at site i/c temporary constructional storage, risks, overhead charges, general liabilities/obligations and clearance from local authorities.

COMPLETENESS OF TENDER

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

STORAGE AND CUSTODY OF MATERIALS

The Sub Station room/ or space as allowed, may be used for storage of sundry materials and erection equipment or else the agency has to make its own arrangements. No separate storage accommodation shall be provided by the department. Watch and ward of the stores and their safe custody shall be the responsibility of the contractor till the final taking over of the installation by the department.

CARE OF THE BUILDING

Care shall be taken by the contractor while handling and installing the various equipment and components of the work to avoid damage to the building. 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 cost all unwanted and waste materials arising out of the installation from the site of work.

COMPLETION PERIOD

The completion period indicated in the tender documents is for the entire work of planning, designing, approval of drawings etc., arrangement of materials & equipment, delivery at site including transportation, installation, testing, commissioning and handing over of the entire system to the satisfaction of the Engineer-in-charge.

GUARANTEE

All equipment shall be guaranteed for a period of minimum 24 months, from the date of taking over the installation by the user department i.e. Central GST, against unsatisfactory performance and/or break down due to defective design, workmanship or material. The equipment or components, or any part thereof, so found defective during guarantee period shall be forthwith repaired or replaced free of cost, to the satisfaction of the Engineer-in-Charge. In case it is felt by the department that undue delay is being caused by the contractor in doing this, the same will be got done by the department at the risk and cost of the contractor. The decision of the Engineer-in-charge in this regard shall be final & binding on the contractor.

The tenderer shall guarantee among other things, the following:

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

Safe mechanical and electrical stress on all parts under all specified conditions of operation. Satisfactory operation during the maintenance period.

POWER SUPPLY/ 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.

ACCEPTABLE MAKES OF VARIOUSEQUIPMENT

The acceptable makes of various equipment/components/accessories have been indicated in the List of Acceptable Makes of equipment/ materials”.

DATA MANUAL AND DRAWINGS TO BE FURNISHED BY THE TENDERER

After award of work, the tenderer shall furnish the design and drawings as per the details given.

The successful tenderer should furnish well in advance three copies of detailed instructions and manuals of manufacturers for all items of equipment regarding installation, adjustments, operation and maintenance including preventive maintenance & trouble shooting together with all the relevant data sheets, spare parts catalogue etc. all in triplicate.

EXTENT OF WORK

The work shall comprise of entire labour including supervision and all materials necessary to make a complete installation and such tests and adjustments and commissioning, as may be required by the department. The term complete installation shall not only mean major items of the plant and equipment covered by specifications but all incidental sundry components necessary for complete execution and satisfactory performance of installation with all layout charts whether or not those have been specifically mentioned in the tender document.

INSPECTION AND TESTING

Copies of all manufacturers' routine and type test, certificates of the equipment shall be furnished to the inspecting officer at the time of inspection at the factory.

17 INDEMNITY

The successful tenderer shall at all times indemnify the department, consequent on this works contract. The successful tenderer shall be liable, in accordance with the Indian law

and regulations for any accident occurring due to any cause and the contractor shall be responsible for any accident or damage incurred or claims arising there from during the period of erection, construction and putting into operation the equipment and ancillary equipment under the supervision of the successful tenderer in so far as the latter is responsible. The successful tenderer shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the successful tenderer on account of the above.

18. COOPERATION WITH OTHER AGENCIES

The successful tenderer shall ensure proper coordination between various associate contractor executing the work of different E&M services in the construction of buildings, if any, and exchange freely all technical information so as to make the execution of this work/contract smooth. No remuneration should be claimed from the department for such technical cooperation. If any unreasonable hindrance is caused to other agencies and any completed portion of the work has to be dismantled and re-done for want of cooperation and coordination by the tenderer during the course of work, such expenditure incurred will be recovered from the successful tenderer if the restoration work to the original condition or specification of the dismantled portion of the work was not undertaken by the tenderer himself.

19.0 INSURANCE AND STORAGE

All consignments are to be duly insured up to the destination from warehouse at the cost of the contractor. The insurance covers shall be valid till the equipment is handed over to the user department duly installed, tested and commissioned.

20.0 PAINTING

The work shall include cost of painting of the entire installation. The major equipment shall be factory final finish painted. The agency shall be required to do only touching to the damages caused to the painting during transportation, handling & installation at site, if there is no major damage to the painting. However hangers, supports etc. of bus trunking shall be painted with required shade including painting with two coats of anticorrosive primer paint at site.

21.0 TRAINING

The scope of works includes the on job technical training of two persons of department at site. Nothing extra shall be payable on this account.

22.0 Quality Assurance:

The technical data sheet and manufacturing drawing of all equipment and materials as per contract specifications shall be prepared by the respective manufacturer's and will be submitted by contractor duly signed before placing the order or manufacturing the material. The engineer-in-charge shall approve as per contract conditions.

All the materials to be used in the work shall be new and of good quality and shall be got approved from the Engineer-in-Charge before use at site. The equipment shall be not older more than 6 months from the date of receipt at site or year of manufacturing should be current. The equipment shall be procured directly from the manufacturer or authorized dealer and delivery challan/invoice/ proof of dispatch of material of the Agency from where the material is purchased in support of genuineness of material shall be submitted along with bill for verification. Manufacturer test certificates of all the equipment and material shall be submitted along with supply. The sub head wise General Guidelines for quality assurance of different materials will be as per table given below. Engineer in charge may extend the testing criteria as per the requirement of IS code or any other standard available. The firm has to arrange the inspection for which nothing extra will be paid.

All electrical & mechanical fittings / fixtures / appliances, to be provided for the work, should have latest minimum 5-star rating (of BEE), as available in market.

TESTING PLANS

The testing plan for quality control for major E&M services is attached as Annexure-A. These plans are to be read along with following guiding notes:-

All routine tests shall be conducted before dispatch of equipment. No equipment shall be dispatched from the manufacture's premises without such tests being conducted and test result recorded. These test certificates shall be given along with the supply of equipment. The Engineer In-charge shall, if he so desires inspect and witness the pre- delivery tests. For this purpose, the contractor shall give 15 days' advance notice. Agency shall arrange for inspection by the department. Department shall bear expenses for inspection as far as traveling, boarding and / lodging is concerned. However, waiver if any, for inspection shall be at the discretion of the department without any cost implication but ROUTINE TEST& TYPE TEST Certificates shall have to be submitted for equipment .Prior to dispatch, all equipment shall be adequately protected & insured for the whole period of transit, storage and erection against corrosion and incidental damages etc. from the effect of vermin sunlight, rain, heat and humid climate.

23.0 Completion Plan

Contractor shall periodically submit completion drawings for all the E&M services as and when work in all respects is completed in a particular area. These drawings shall be submitted in the form of four sets of CD's / Pen Drive and four in hard copy (300 x 450 mm) each containing complete set of drawings on approved scale indicating the work as - installed. These drawings shall clearly indicate following:

Preferred makes

1. Internal and External Works

S.No.	Description of Items	Approved Makes
1.	M.S. Conduit & Accessories (IS Marked)	BEC/AKG/NIC/RMCON/Steel Craft
2.	PVC Insulated FRLSH Copper Conductor Wires 1.1 KV Grade (ISI Marked)	Polycab /Grandly/ Havells / RR Kable / Finolex /Gloster / Goldmedal / Batra Hanley /Adhunik/AKG/Anchor
3.	Modular Plate/Modular Switch & Socket/GI Boxes/ Fan Regulator/ Telephone/RJ-45/RJ- 11/Modular Socket/Bell	Legrand(Arteor)/ABB(Tvisha)/MK(Orna)/ Adhunik /Crabtree (Athena)/ L&T (Entice)/INDOASIAN/Panasonic
4.	MCB /Isolator /DB/RCCB/ELCB	Legrand / Schneider / Adhunik/ Havells/ABB/ Siemens /L&T/ INDOASIAN/Anchor
5.	LED Luminaires / Light Fittings	Philips/Trilux/ Adhunik/ Hitech /Jaquar /Havells/ LT/ Wipro
6.	Ceiling Fan / Exhaust Fan (IS Marked)	Havells / Crompton / Usha / Orient /Adhunik
7.	Telephone Cables / Wires (IS Marked) / Co- Axial TV Cables	Finolex/ Polycab / Havells / Adhunik/ RR Kable / Delton / Batra Hanley
8.	Cat 6/Cat 6A/ Fiber Optic cable & Associated Items	Schneider/Siemon/ Legrand / Adhunik/ Beldon/D- Link/Commscope / Delton/AKG /Gloster
9.	Telephone Tag Block DP Boxes	Krone (Germany) / D Link / ITL/AKG
10.	Double Wall Corrugated (DWC) HDPE Pipe (IS Marked)	Rex / Duraline /Tirupati / Gemini /SFMC/Astral
11.	1.1 KV XLPE (Alumium/Cu) Cable (IS Marked)	Polycab / Havells / Adhunik/ AKG /Grandly/ RR Kable/Gloster/Goldmedal/ Delton/Finolex
12.	Occupancy & Daylight Sensor	Philips / Wipro / ABB / HoneyWell / Legrand/ Panasonic
13.	Electrical Control Panels	SPC Electrotech Pvt Ltd/Krypton/ Precision System Control/ Globle Techno Engineering/ Tricolite/ Adlec/ Neptune/ Pristine
14.	Feeder Pillars	SPC Electrotech Pvt Ltd/Krypton/ Precision System Control/ Tricolite/ Adlec/Globle Techno Engineering/Neptune/ Pristine/Application Control Panels/ Globle Techno Engineering
15.	ACBs	L&T (U-Power)/ Siemens (3WA)/ Schneider (Master Pact – MVS) / ABB(E-Max)/Equivalent model of Legrand/Havells
16.	MCCBs	Siemens (3VL)/ Schneider (Master Pact – NSX) / Equivalent Model in ABB/ L & T/Goldmedal Equivalent model of Legrand/Havells/ INDOASIAN/ Adhunik/
17.	Data Rack & Accessories	Schneider /Rittal/ Valrack / D-Link
18.	Current Transformers	Automatic Electric/ Kappa/ L&T
19.	Potential Transformer	Automatic Electric/ Kappa/ L&T
20.	Digital Indicating Measuring Instruments/ Multifunction Meters/ Digital Energy Meter	L&T/Conzerv/Automatic Electric /ABB
21.	Selector Switch	L&T/ Kaycee/ Siemens /ABB/ Automatic Electric/ Kappa/ Schneider

Correction = NIL, Insertion = NIL, Overwriting = NIL, Deletion = NIL

AE(P)

EE&SM

22.	Indication Lamp & Push Button/ Relay/Timer/Contactor	L&T/ Kaycee/ Siemens /ABB/ Automatic Electric/ Kappa/ Schneider
23.	APFC Relays	L&T / Siemens / Schneider / Ducati/ ABB/ Automatic Electric / Kappa
24.	Bus Trunking, Rising Main & Tap- Off Box	Legrand / L&T/ Schneider/ Globle Techno Engineering/ C & S / ABB
25.	Cable Trays & Accessories	Legrand / Venus/ Slotco / Pilco/ Reeco / Steel Craft
26.	Capacitor (IS Marked)	Neptune / Siemens / L&T / Schneider
27.	Cable Gland/ Lugs/ Thimbles	Commet/ Dowells / Raychem / Gripwell Jainsan
28.	Emergency/Exit Lighting System and Components, Fixtures	Hochiki / Teknoware / Tm / Asm / Cooper
29.	Heating Tape/Self Regulating Heat Cable	Thermazon / Crown sales industries/ NAVEEN IMPEX

Note:	
1.	The material shall be procured as per preferred make list given above Make in India Policy and Government of India, Ministry of Commerce and Industry order No. P-45021/2/2017-PP (BE-11) dated 04.06.2020 and order of Govt. of India, Ministry of Finance, Department of Expenditure (PPD) F.No.6/18/2019-PPD dated 23.07.2020 and as per Government of India, Ministry of Commerce and Industry order No. P-45021/2/2017-PP (BE-11) dated 16.09.2020 and any other guidelines issued in this regard. In this regard, certificate to be furnished by Agency and their specialized agency under Rule 144(XI) in the general Financial Rule 2017.
2.	The contractor will use one of the approved makes as approved by the Engineer-in-Charge subject to verification of TDS.
3.	In case of different quality/pattern of same make, the pattern/quality shall be approved by Engineer-in –charge.
4.	For materials/equipment to be used in items of work for which approved makes are not given herein, the make of such materials/equipment having equivalent specifications shall be as decided by Engineer –in-charge.

<u>SCHEDULE OF QUANTITIES (Civil Work)</u>						
Name of Work: Construction of toilets and other works at ISPW Station Leh, UT of Ladakh.						
S. No.		Description of Items	Qty	Unit	Rate	Amount
1	2.7	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.				
1.1	2.7.1	Ordinary rock	15.00	Cum	498.90	7484.00
2	2.10	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 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 :				
2.1	2.10.1	All kinds of soil				
2.1.1	2.10.1.2	Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	15.00	metre	352.15	5282.00
3	2.25	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 upto 1.5 m.	8.00	Cum	196.00	1568.00

4	2.25 A	Excavating, supplying and filling of local earth (including royalty) by mechanical transport up to a lead of 5 km, also including ramming and watering of the earth in layers not exceeding 20 cm in trenches, plinth, sides of foundation etc., complete.	12.00	Cum	700.50	8406.00
5	2.27	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	0.36	Cum	2123.75	765.00
6	2.28	Surface dressing of the ground including removing vegetation and inequalities not exceeding 15 cm deep and disposal of rubbish, lead up to 50 m and lift up to 1.5 m.				
6.1	2.28.1	All kinds of soil	200.00	sqm	34.15	6830.00
7	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
7.1	4.1.3	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)	8.00	cum	7878.50	63028.00
7.2	4.1.8	1:4:8 (1 Cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 40 mm nominal size derived from natural sources) cum	3.00	Cum	6812.00	20436.00
8	4.7	Providing and fixing up to floor five level precast cement concrete solid block, including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand), cost of required centering, shuttering complete :				

8.1	4.7.1	1:1½:3 (1 Cement: 1½ coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	7.00	cum	17889.25	125225.00
9	5.10	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 :				
9.1	5.1.2	1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size de rived from natural sources)	7.00	Cum	9045.75	63320.00
10	5.3	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 size derived from natural sources).	1.10	cum	11505.50	12656.00
11	5.9	Centering and shuttering including strutting, propping etc. and removal of form for				
11.1	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete	7.00	Sqm	392.15	2745.00
11.2	5.9.2	Walls (any thickness) including attached pilasters, butteresses,plinth and string courses etc.	37.00	sqm	842.50	31173.00

11.3	5.9.3	Suspended floors, roofs, landings, balconies and access platform	6.00	sqm	927.50	5565.00
12	5.9.1 6	Edges of slabs and breaks in floors and walls				
12.1	5.9.1 6.1	Under 20 cm wide	39.00	metre	208.55	8133.00
13	5.2	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto all level.				
13.1	5.22.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.	1025.00	kg	107.85	110546.00
14	5.23	Smooth finishing of the exposed surface of R.C.C. work with 6 mm thick cement mortar 1:3 (1 Cement : 3 fine sand).	2.00	sqm	300.45	601.00
15	7.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) upto plinth level with :				
15.1	7.1.1	Cement mortar 1:6(1 cement :6 coarse sand)	12.00	cum	7311.25	87735.00
16	8.31	Providing and fixing Ist 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 : 3coarse sand) and jointing with grey cement slurry @ 3.3kg per	25.00	sqm	1267.95	31699.00

		sqm, including pointing in white cement mixed with pigment of matching shade complete.				
17	9.74	Providing and fixing bright finished brass tower bolts (barrel type) with necessary screws etc. complete :				
17.1	9.74.1	250x10 mm	1.00	each	441.60	442.00
18	9.75	Providing and fixing Brass sliding bolts, ISI marked, of approved make fixed with brass screws etc. complete as per direction of Engineer-in-charge.				
18.1	9.75.1	250x16x5 mm	1.00	Each	322.20	322.00
19	9.81	Providing and fixing Brass fancy handle of approved make fixed with Brass screws etc. complete as per direction of Engineer-in-charge.				
19.1	9.81.1	125 mm	2.00	Each	256.65	513.00
20	11.39	Providing and laying rectified Glazed Ceramic floor tiles of size 300x300 mm or more (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in colours 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 @ 3.3 kg/ sqm including grouting the joints with white cement and matching pigments etc., complete.	3.00	Sqm	1330.00	3990.00

21	12.21	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 10 mm and down gauge), including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design :				
21.1	12.21.1	In 75x75 mm deep chase	6.00	metre	305.15	1831.00
22	12.22	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1 m x 1 m x 400 micron, finished with 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement, rounding the edges and making and finishing the outlet complete.	1.00	each	298.25	298.00
23	12.41	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.				
23.1	12.41.1	75 mm diameter	4.00	metre	248.80	995.00
24	12.42	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.				
24.1	12.42.3	Single tee with door				

24. 1.1	12.42 .3.1	75x75x75 mm	1.00	each	164.20	164
25		Shoe (Plain)				
25. 1	12.42 .6.1	75 mm Shoe	1.00	each	93.10	93.00
26	12.43	Providing and fixing unplasticised - PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50x50x50 mm hard wood 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.				
26. 1	12.43 .1	75 mm	2.00	each	369.85	740
27	13.4	12 mm cement plaster of mix :				
27. 1	13.4. 1	1:4 (1 cement: 4 coarse sand)	21.00	sqm	357.35	7504.00
28	13.45	Finishing walls with textured exterior paint of required shade :				
28. 1	13.45 .1	New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including priming coat of exterior primer applied @ 2.20kg/10 sqm	21.00	sqm	223.60	4696.00
29	13.8	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.	23.00	Sqm	156.05	3589.00
30	15.60 .	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to	8	cum	263.95	2112.00

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		approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.				
31	17.3	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 :				
31.1	17.3.1	W.C. pan with ISI marked white solid plastic seat and lid	1.00	Each	8006.60	8007.00
32	17.8	Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.	1.00	each	1683.35	1683.00
33	17.22 B	Providing and fixing CP Brass Single lever telephonic wall mixer of quality & make as approved by Engineer in charge.				
33.1		(a) 15 mm nominal dia	2.00	each	6940.75	13882.00
34	17.28	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.				
34.1	17.28.2	Flexible pipe				
34.1.1	17.28.2.1	32 mm dia	1.00	Each	119.55	120.00

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35	17.25	Providing and fixing white vitreous china wash basin including making all connections but excluding the cost of fittings :				
35.1	17.25.2	Flat back wash basin of size 550x400 mm	1.00	each	992.60	993.00
36	17.31	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.	1.00	Each	1607.95	1608.00
37	17.35	Providing and fixing soil, waste and vent pipes :				
37.1	17.35.1	100 mm dia				
37.1.1	17.35.1.2	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989	6.00	Metre	1180.75	7085.00
38	17.36	Providing and filling the joints with spun yarn, cement slurry and cement mortar 1:2 (1 cement : 2 fine sand) in S.C.I./ C.I. Pipes :				
38.1	17.36.2	100 mm dia pipe	14.00	Each	198.15	2774.00
39	17.39	Providing and fixing plain bend of required degree.				
39.1	17.39.1	100 mm dia				
39.1.1	17.39.1.2	Sand cast iron S&S as per IS : 3989	2.00	Each	570.05	1140.00
40	17.44	Providing and fixing single equal plain junction of required degree :				
40.1	17.44.1	100x100x100 mm				
40.1.1	17.44.1.2	Sand cast iron S&S as per IS - 3989	2.00	Each	811.90	1624.00

41	17.57	Providing and fixing collar :				
41.1	17.57.1	100 mm				
41.1.1	17.57.1.2	Sand cast iron S&S as per IS - 3989	1.00	each	513.15	513.00
42	17.6	Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors :				
42.1	17.60.1	100 mm inlet and 100 mm outlet				
42.1.1	17.60.1.1	Sand cast iron S&S as per IS: 3989	3.00	Each	1996.50	5990.00
43	17.73	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.				
43.1	17.73.1	450 mm long towel rail with total length of 495 mm, 78 mm wide and effective height of 88 mm, weighing not less than 170 gms	2.00	each	673.40	1347.00
44	18.4	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes confirming to IS 15801, UV stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply, including all PP - R plain & brass threaded polypropylene random fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes testing of joints complete as per direction of Engineer-in-Charge.				
44.1	18.4.3	PN - 16 Pipe, 32 mm OD (SDR-7.4)	20.00	metre	362.90	7258.00

45	18.5	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes confirming to IS:15801, UV stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply, including all PP - R plain & brass threaded polypropylene random fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes 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 wall etc.				
45.1	18.5.1	PN - 16 Pipe, 20mm OD (SDR-7.4)	24.00	metre	477.85	11468.00
46	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :				
46.1	18.17.2	32 mm nominal bore.	1.00	each	689.60	690.00
47	18.22	Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet :				
47.1	18.22.2	150 mm diameter	1.00	each	222.35	222.00
48	18.48	Providing and placing on terrace (at all floor levels) four layered heavy duty 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.	500.00	per litre	11.00	5500.00

49	18.49	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931 :				
49.1	18.49.1	15 mm nominal bore	2.00	each	506.80	1014.00
50	18.51	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.				
50.1	18.51.1	15 mm nominal bore.	1.00	Each	798.95	799.00
51	18.52	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931.				
51.1	18.52.1	15 mm nominal bore	4.00	Each	670.45	2682.00
52	18.53	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931				
52.1	18.53.1	15mm nominal bore.	4.00	Each	574.30	2297.00
53	18.74	Providing and fixing unplasticised P.V.C. connection pipe with PTMT Nuts, collar and bush of approved quality and colour.				
53.1	18.74.2	15 mm nominal bore with 45 cm length.	2.00	Each	121.90	244.00
54	19.1	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 :				
54.1	19.1.2	150 mm diameter	15.00	Metre	695.80	10437.00

55	19.2	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 :				
55.1	19.2.2	150 mm diameter S.W. pipe	15.00	metre	1179.85	17698.00
56	19.4	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:				
56.1	19.4.3	180 x 150 mm size P type				
56.1.1	19.4.3.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	2.00	Each	2802.15	5604.00
57	19.7	Constructing brick masonry manhole in cement mortar 1:4 (1cement : 4 coarse sand) with R.C.C. top slab with 1:1.5:3 mix (1cement : 1.5 coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4coarse 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 :				

57.1	19.7.1	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) :				
57.1.1	19.7.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	2.00	Each	12770.55	25541.00
58	19.21	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement and making necessary channels for the drain etc. complete :				
58.1	19.21.1	For pipes 100 to 250 mm diameter	4.00	Each	810.45	3242.00
59	19.32	Making soak pit 2.5 m diameter 3.0 metre deep with 45 x 45 cm dry brick honey comb shaft with bricks and S.W. drain pipe 100 mm diameter, 1.8 m long complete as per standard design.				
59.1	19.32.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	1.00	Each	26861.90	26862.00
60		Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying:				
		(a) after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing				

		cement compound @ 0.253 kg/sqm.				
		(b) laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm.				
		(c) third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around.				
		(d) fourth and final layer of cement concrete grading (which will be paid for separately.				
60.1	22.6	For the purpose of measurement the entire treated surface will be measured.	2.40	sqm	688.90	1653.00
61	22.14	Grading roof for water proofing treatment with				
61.1	22.14.1	Cement concrete 1:2:4 (1 cement : 2 coarse sand :4 graded stone aggregate 20mm nominal size)	0.20	cum	8042.30	1608.00
62	26.86	Providing and fixing factory made single extruded WPC (Wood Polymer Composite) solid door/window/clerestory windows & desertory 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				

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		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 ² , modulus of elasticity 900 N/mm ² 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.				
62.1	26.865	Frame size 65 x 100 mm	5.00	metre	1111.3	5557.00
63	26.87	Providing and fixing factory made single extruded WPC (Wood Polymer Composite) solid plain flush door shutter of required size comprising of virgin 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) having minimum density of 650 kg/cum and screw withdrawal strength of 1800 N (Face) & 900 N (Edge), minimum compressive strength 50				

		N/mm ² , modulus of elasticity 850 N/mm ² and resistance to spread of flame of Class A category with property of being termite/borer proof, water/moisture proof and fire retardant and fixing with stainless steel butt hinges of required size with necessary full body threaded star headed counter sunk S.S screws, all as per direction of Engineer-In- Charge. (Note: stainless steel butt hinges and necessary S.S screws shall be paid separately)				
63.1	26.871	30mm Thick	1.00	Sqm	4346.7	4347.00
	Total					801975.00
	Deduct on account of GST correction factor @ 0.973 on DSR 2023					-21653.00
	Total					780322.00
	Add Cost Index @54.21 % Total =					423012.00
	Total (A)					1203334.00
64	MR	Insulation to water storage tank of 500 litre capacity by wrapping with 32mm thick nitrile rubber sheet, 50mm thick glass wool 24 kg/m ² , chicken wire mesh and aluminium sheet all complete as per direction of engineer-in-charge. (1.00mtr thick)	1.00	Each	7756.42	7756.00
65	MR	Providing and fixing self regulating heating cable, on existing water pipeline of all dia and wrapped with nitrile rubber insulation, rock wool sheet, Rabbit/Chicken wire mesh and aluminium sheet all complete as per manufacturer's specification and direction of Engineer-in-charge.	20.00	mtr	2688.7	53,774.00
	Total (B) =					61530.00
	Total (A+B) =					12,64,864
	TOTAL CIVIL WORKS =					12,64,864

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SCHEDULE OF QUANTITIES (Electrical Work)

Name of Work- Construction toilets & other works at ISPW Station, Leh, UT of Ladakh.

S. No	Remarks	Description of Item	Qty		Rate	Unit	Amount
1	M/R	Supplying, Installation, Testing and Commissioning of 3 dimensional LED backlit out door type IP-66 display board in bilingual language (Hindi & English) as per approved colour and design, stainless steel i/c back side 4mm thick sun board and in the front laser cut acrylic sheet of 3mm thick of approved quality and colour as per letter pattern having 1" to 2" collar(as per Board size) to fixed in side the SS letter and joints to be filled up with water proof silicon where ever required to make the whole structure water proof and dust proof. Providing in side the letter power LED modules each consisting of 3 Nos. LED(as per Board size) of 0.24 to 0.48 watt each(as per Board size), injection moulded module of 1.2 to 2.4 watt(as per Board size) , 75 lumen per watt, 100 mA power current, 12 volt in two rows along the periphery of each alphabet, shall be fixed in such a way to give uniform bright light to the characters letter and other accessories to be fixed on aluminium composite panel (ACP) of 4mm thick exterior grade aluminium foil not less than 0.5mm of approved brand and fixed on the MS welded structure made out of 2mm thick of 50mm x 50mm MS square pipe section with stiffeners welded vertically and horizontally	24	Sq.ft	6563.00	P/sq ft	157512.0

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AE(P)

EE&SM

		in regular interval with pipe frame and the pipe frame shall be covered from the back front facia shall be covered by the ACP along with letters shall be fixed and riveted all the sides i/c wiring the entire board with specially designed power cables for power LED shall be out door grade, Appx. Size. (Actual size of Various board to be approved by Engineer-in-Charge before fixing)					
2	M/R	Supplying, Installation, Testing & Commissioning of Kerosene Oil Fired Bukhari Complete with Exhaust pipes, including all accessories etc complete as required.	1	Nos	64058.00	Each	64058.00
3	M/R	Supplying, Installation, Testing & Commissioning of Oil heater of OFR 15 wave fin 2900 watt with 3 Heat Setting DUO Tech PTC & OFR (Black), Cord storage and rear safety cover, Frequency (hertz): AC 50 Hz. Power input : 230 V, Over heat protection and tilt over switch for safety, Thermostatic heat control, quick heating with PTC fan and castor wheels for easy mobility 3 power settings 1000/1500/2500 watts and an additional 400 watts (Heater + Fan) etc. complete as reqd.	4	Nos	23857.00	Each	95428.00
4	M/R	Supplying, installation, testing & commissioning of 25 ltrs. Rating Minimum 4 star capacity water storage vertical /horizontal type geyser working on 230 +/- 10 V single phase 50 Hz Frequency, tank with ultra thick super cold rolled steel plates, puff insulation, rated pressure: 8 bar, Temperature range 75 degree C, heating indicator, temperature setting: manual, power	1	Nos	15833.00	Each	15833.00

		consumption: min 2 kw i/c Thermostate, Thermal cut off, multifunctional safety valve complete with necessary accessories & flexible heavy duty pvc connection of suitable length (2 Nos.) and 25 amp plug top etc, as reqd.					
5	M/R	SITC of 25 LPH RO + Hot + Cold Water Dispenser storage Normal - 25 L, Hot -4 L, Cold -25 L, Normal Tank- LLDPE, Cooling Tank & Hot Tank - SS 304, Refrigerant- R 134 a / R22 , Filter- 10micron filter, 10" GAC, 5"micron filter , Post Carbon, Dimension (mm)- H 1350 × L 445 × W 415 having suitable Nos. of membranes, sediment filter, ACF etc, suitable for operation on 230 Volts ± 10%, 50 Hz,. AC supply including water inlet & outlet connection etc. as required.	1	Nos	63959.00	Each	63959.00
6		Online UPS - Input supply: Single Phase, Output Supply : Single Phase Supplying, installation, Testing & Commissioning of following capacity at full load (Unity Power Factor) ON LINE Uninterrupted Power Supply (UPS) system suitable for Single Phase input, Single Phase output AC Supply. The UPS shall include a Rectifier, inverter, battery bank suitable for 30 minutes back up (Battery VAH capacity shall not be less than 1600 VAH per KVA of UPS rating per Hour backup time) on full load (Battery shall be VRLA, SMF in ABS Container) and Static Bypass switch along with provision for manual bypass, suitable isolation transformer for additional protection against					

		neutral faults etc. The UPS systems shall be Microprocessor based Digital Control, using Insulated Gate Bipolar Transistor (IGBT)'s both for the rectifier & inverter with PWM (Pulse Width Modulation) Technology. The quality of design, manufacturing and inspection process should confirm to the relevant International standards such as IEC/EN/VDE. The operating efficiency of the UPS systems shall be >95% at 100% non-linear loads. Current total harmonic distortion (ITHD)/ total demand distortion (TDD) on the input grid shall be < 5% at 100% load. (The required LC filters shall be included in UPS cost), extreme power factor kit to be include to limit the input pf to 0.99 and output power factor shall be unity (i.e. kw rating of the UPS shall be kva rating x 1) however UPS shall be suitable to take load at 0.7 lagging to 0.7 leading power factor loads. UPS shall be suitable for incoming supply AC single phase 160-270V 50 Hz and delivering output AC supply true sine wave single phase 220/230/240 Volt, 50Hz +/- 0.2Hz, Overload capacity of 120% for 10 mins and 150% for 1 minute.					
		Operating temperature 0 to 40 deg C, Relative humidity 0-95%non condensing, noise level less than 60db at 1 meter distance, Protection for Under voltage, over voltage, abnormal output voltage, battery over charging, output over current, short-circuit, battery deep discharge , 10 KV surge. Display for watt/VA, Amp and Voltage power parameters etc. UPS shall					

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		comply with low voltage electromagnetic compatibility (EMC) achieved as per EN 6204, EN6204 Part I and Part 2, it shall be a Voltage and Frequency Independent (VFI) type UPS (as per standard IEC 62040-1, 2 & 3) . The UPS should be with IGBT Based Inverter Technology, Communication RS232/RS485/SNMP port open protocol for BMS integration as per approved by Engineering in charge. Required battery racks, DC breaker of suitable rating and interconnecting copper conductor cable of suitable size and connectors and all required accessories are inclusive in the cost. The UPS should have QR code which should contain drawing, test report OEM manual, Geo- Tag of manufacturing location etc.					
i)	DSR 2025 code 26.1.3	6 KVA	1	Nos	109793.0	Each	109793.0
7	M/R	Supplying, Installation, Testing & Commissioning of Luxury Cool Mist Room Humidifier for Adults and Baby Bedroom 4.5L capacity up to 200-300mL/h allowing 12-22 hours of continuous working with chosen moisture output level, Use it for 12-22 hours continuously without the worry of frequently adding water etc complete as required.	3	Nos	3548.00	Each	10644.00
		Grand Total					517227.00

Financial Quote

Name of work: Construction of toilets and other works at ISPW Station Leh, UT of Ladakh.

S.No.	Description of item	Estimated cost (In rupees)	% above or below the estimated cost	Percentage in figures	Total Cost (in rupees)
1.	Construction of toilets and other works at ISPW Station Leh, UT of Ladakh. <i>Civil Work</i> = Rs. 12,64,864/- E&M Works = Rs 5,17,227/-	Rs. 17,82,091/-			
	Total	Rs. 17,82,091/-			

Executive Engineer & Senior Manager,
Leh Project Division-I,
CPWD, Leh, UT of Ladakh