



**GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT**

TENDER DOCUMENT

FOR

Name of Work- Construction of 121 nos. Sentry Post (Single Storied) from GIN 115 to GIN 255 (BP No. 247/1-S to 790/6-S) along IBB in the state of West Bengal. SH: Construction of 56 Nos. Sentry Post (Single Storied) from BP No. 247/1-S to 326/4-S in Dakshin Dinajpur, West Bengal (Package-I).

**Executive Engineer
Border Fencing Division-VIII, CPWD, IBBZ-I,
Deepali Nagar, Balurghat-733101
Phone No : (03522)-249031, 9680940179
Email : baluceblcd1.cpwd@nic.in**

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Notice to be uploaded on website.

Name of Work		Construction of 121 nos. Sentry Post (Single Storied) from GIN 115 to GIN 255 (BP No. 247/1-S to 790/6-S) along IBB in the state of West Bengal. SH: Construction of 56 Nos. Sentry Post (Single Storied) from BP No. 247/1-S to 326/4-S in Dakshin Dinajpur, West Bengal (Package-I).
Estimated Cost	:	Rs. 6,74,34,176/- (Civil- Rs. 6,41,87,352.00 + Electrical- Rs 32,46,824.00)
Earnest Money	:	Rs.13,48,684/-
Performance Guarantee	:	As per schedule “E”
Security Deposit	:	2.5% of tendered Value
Completion Period	:	15(Fifteen) Months.
NIT No.	:	06 /NIT/CE/IBBZ-I/2026-27
Last date for submission of Bid	:	Up to 3:00PM on (15/10/2026)

Assistant Engineer (P)
IBBZ-I, CPWD, Siliguri

Executive Engineer (P&A)
IBBZ-I, CPWD, Siliguri

Superintending Engineer (P&A)
IBBZ-I, CPWD, Siliguri

NIT amounting to Rs. 6,74,34,176/- (Rupees Six Crore Seventy Four Lakh Thirty Four Thousand One Hundred and Seventy Six) marked serially from 1 to 95 (Total-95) pages is hereby approved.

Chief Engineer
IBBZ-I, CPWD, Siliguri

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Executive Engineer(P&A)
IBBZ-I, CPWD, Siliguri

Superintending Engineer(P&A)
IBBZ-I, CPWD, Siliguri

Chief Engineer
IBBZ-I, CPWD, Siliguri

**CENTRAL PUBLIC WORKS DEPARTMENT
NOTICE INVITING e-TENDER**

The Executive Engineer, Border Fencing Division-VIII, IBBZ-I, CPWD, Deepali Nagar, Balurghat-733101, Email : balueebldl.cpwd@nic.in Phone No. 9680940179 on behalf of the President of India invites online percentage rate bids from approved and eligible contractors of CPWD enlisted in appropriate class for the following work:-

NIT No: 06 /NIT/CE/IBBZ-I/2026-27

Name of Work: Construction of 121 nos. Sentry Post (Single Storied) from GIN 115 to GIN 255 (BP No. 247/1-S to 790/6-S) along IBB in the state of West Bengal. SH: Construction of 56 Nos. Sentry Post (Single Storied) from BP No. 247/1-S to 326/4-S in Dakshin Dinajpur, West Bengal (Package-I).

Estimated Cost: Rs. 6,74,34,176/- (Civil- Rs. 6,41,87,352.00 + Electrical- Rs 32,46,824.00)

Period of Completion: 15(Fifteen) Months.

Earnest Money: Rs.13,48,684/-

Performance Guarantee: As per schedule “E”

Security Deposit: 2.5% of tendered Value.

Last date and time of submission of bid **15/10/2026** up to **3:00 PM**.

The bid forms and other details can be obtained from website <https://etender.cpwd.gov.in> or www.cpwd.gov.in. The press notice is also available on www.eprocure.gov.in

Check List For Contractors For Submission Of Tenders Online:

- 1 Tender to be witnessed at specified page of tendered documents at the time of drawing agreement with the successful bidder.
- 2 The tender / tenders containing conditions contrary to those specified in this document shall be summarily rejected.
- 3 In schedules of quantities appended to the tender documents, the rates in terms of overall percentage above or below the total estimated amount put to tender must be filled both in figures and words on specified page of tender document.
- 4 The contractor/ agency shall quote the rate keeping in view that they have to give an undertaking before award of work that **“they will install/ arrange field testing instruments and essential T&P/ technical representatives specified in the tender document/specification.**
- 5 It will be mandatory to first refer any dispute related to execution of this work to the conciliator. Contractor or department can only seek arbitration if not satisfied with the decision of the conciliator. This should be read along with provisions of clause 25 of GCC 2023 for construction works duly amended & modified with corrections up to date of submission of tender.

Information and Instructions for contractors for e-tendering forming part of NIT and to be posted on website

The Executive Engineer, Border Fencing Division-VIII, IBBZ-I, CPWD, Deepali Nagar, Balurghat-733101 Phone No : (03522)-249031, Email : balueebcd1.cpwd@nic.in on behalf of the President of India invites online percentage rate bids from approved and eligible contractors of CPWD enlisted in appropriate class and category for the following work:-

Sl. No.	NIT No.	Name of work & location	Estimated cost put to bid	Earnest Money	Stipulated Period of Completion of work	Last date & time of submission of bid, original EMD, copy of receipt for deposition of original EMD and other Documents as specified in the NIT	Date of time of opening of bid
1	2	3	4	5	6	7	8
1	06/NIT/CE/IBBZ-I/2026-27.	Construction of 121 nos. Sentry Post (Single Storied) from GIN 115 to GIN 255 (BP No. 247/1-S to 790/6-S) along IBB in the state of West Bengal. SH: Construction of 56 Nos. Sentry Post (Single Storied) from BP No. 247/1-S to 326/4-S in Dakshin Dinajpur, West Bengal (Package-I).	Rs 6,74,34,176/- (Civil- Rs. 6,41,87,352.00 + Electrical- Rs 32,46,824.00)	Rs. 13,48,684/-	15 (Fifteen) Months.	Up to 15:00 hrs on 15/10/2026	At 15.30 Hrs. on 15/10/2026

- The intending bidders 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.
- Information and Instructions for bidder posted on website shall form part of bid document.
- The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website <https://etender.cpwd.gov.in> or www.cpwd.gov.in free of cost.
- But the bid can only be submitted after deposition of original EMD either in the office of the 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 Bankers Cheque or Fixed deposit Receipt (FDR) or/ and 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), CPWD and other documents as specified. A part of earnest money is acceptable in the form of Bank Guarantee also. In such case 50% of earnest money or Rs.20 lakh whichever is less, will have to be deposited in shape prescribed above and balance can be accepted in the form of Bank Guarantee issued by a commercial Bank and shall be valid for period of 180 days or more from the date of submission of bid. EMD shall be made / issued only from the account of the bidder / tenderer submitting the bid/tender. EMD made/ issued from the account other than that of the bidder/ tenderer submitting the bid shall not be accepted.

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 bidders must have valid Class-III digital signature certificate with encryption key (combo type) to perform any operation /transactions on the e-tendering portal/ website and the bidder should download and install the eMSigner on their system as per instructions available on download section of <https://etender.cpwd.gov.in>.
7. On opening date, the Bidder 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. If any information furnished by the applicant is found incorrect at a later stage, he shall be liable to be debarred from tendering/taking up of works in CPWD. The department reserves the right to verify the particulars furnished by the applicant independently.
10. The intending bidders must have **valid Electrical License applicable in West Bengal**. If the bidder has not Valid Electrical License as applicable, then he shall associate a CPWD enlisted agency of appropriate category having Valid Electrical License, for execution of E & M works within 15 days from the date of receipt of award letter.
11. The site will be handed over in parts. If the full site is not handed over, the work is to be completed by the contractor with available site and no claim will be accepted from the contractor.

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

1. Insurance Security Bond, Demand Draft / Account Payee Banker's Cheque / FDR / Bank Guarantee on any commercial Bank against EMD.
2. Copy of receipt for deposition of Original EMD.
3. Enlistment Order of the Contractor of appropriate class.
4. GST Registration Certificate, if already obtained by the bidder.

If the bidder has not obtained GST registration as applicable, then he shall scan and upload following undertaking along with bid documents.

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

5. ERP Training Certificate of bidder.
6. Undertaking on structural stability & soundness as per prescribed format given below.
7. Any other document as specified in the NIT.

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

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

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

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

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

Signature of notary
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).

Part-A

CPWD-6 FOR e-Tendering

1. The Executive Engineer, Border Fencing Division-VIII, IBBZ-I, CPWD, Deepali Nagar, Balurghat-733101 Phone No : (03522)-249031, Email : balueebldl.cpwd@nic.in on behalf of the President of India invites online percentage rate bids from approved and eligible contractors of CPWD enlisted in appropriate class& category for the work of :-

Construction of 121 nos. Sentry Post (Single Storied) from GIN 115 to GIN 255 (BP No. 247/1-S to 790/6-S) along IBB in the state of West Bengal. SH: Construction of 56 Nos. Sentry Post (Single Storied) from BP No. 247/1-S to 326/4-S in Dakshin Dinajpur, West Bengal (Package-I)".

The enlistment of the contractors should be valid on the last date of submission of tenders.

In case the last date of submission of tender is extended, the enlistment of contractor should be valid on the original date of submission of tender.

- 1.1 The work is estimated to cost **Rs.6,74,34,176/-** This estimate, however, is given merely as a rough guide.
2. Agreement shall be drawn with the successful tenderers on prescribed Form No. CPWD 7 which is available as a Govt. of India Publication and also available on website www.cpwd.gov.in. Bidder shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
3. The time allowed for carrying out the work will be **15(Fifteen) months** from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the tender documents.
4. The site for the work shall be made available in parts as described under Schedule F.
5. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen on website <https://etender.cpwd.gov.in> or www.cpwd.gov.in free of cost.
6. After submission of the bid the contractor can re-submit revised tender any number of times but before last time and date of submission of tender as notified.
7. 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 tender as notified.
8. Earnest Money in the form of Insurance Surety Bonds, Account payee Demand Draft, Fixed deposit Receipt, Bankers Cheque or Bank Guarantee (for balance amount as prescribed) from any commercial bank (drawn in favour of **(Executive Engineer, Border Fencing Division-VIII, IBBZ-I, CPWD, Deepali Nagar, Balurghat-733101)**) shall be scanned and uploaded to the e-Tendering website within the period of bid submission. The original EMD should be deposited either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission. The EMD receiving Executive Engineer (including NIT issuing EE) shall issue a receipt of deposition of earnest money deposit to the bidder in a prescribed format uploaded by tender inviting EE in the NIT. This receipt shall also be uploaded to the e-tendering website by the intending bidder within the period of bid submission.

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

A part of earnest money is acceptable in the form of bank guarantee also. In such case, minimum 50% of earnest money or **Rs. 20 lakh**, whichever is less, shall have to be deposited in shape prescribed above, and balance may be deposited in shape of Bank Guarantee issued by a commercial

bank having validity for a period of 180 days or more from the date of submission of the tender which is to be scanned and uploaded by the intending bidder.

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 press notice shall be scanned and uploaded to the e-Tendering website within the period of bid submission. However, certified copy of all the scanned and uploaded documents as specified in press notice shall have to be submitted by the lowest bidder only 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, whose EMD deposited in Prescribed manner with any division office of CPWD and other documents scanned and uploaded are found in order.

The bid submitted shall be opened at 3.30 PM on 15/10/2026

9. The bid submitted shall become invalid and e-Tender processing fee shall not be refunded if:
 - I. The tenderer is found ineligible.
 - II. The tenderer does not upload scanned copies of all the documents stipulated in the tender document including earnest money deposit.
 - III. If any discrepancy is noticed between the documents as uploaded at the time of submission of tender and hard copies as submitted physically by the lowest tenderer in the office of tender 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 finally accepted will be required to furnish performance guarantee of specified amount within the period as specified in **Schedule F**. This guarantee shall be in the form Insurance Security Bonds, Account payee Demand Draft, Fixed deposit Receipt or Bank Guarantee from any of the commercial banks in accordance with the prescribed form given in NIT. 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 be 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 agency for the said work within the period specified in Schedule-F.

(*) To be filled by EE

The description of the work is as follows:

Construction of 121 nos. Sentry Post (Single Storied) from GIN 115 to GIN 255 (BP No. 247/1-S to 790/6-S) along IBB in the state of West Bengal. SH: Construction of 56 Nos. Sentry Post (Single Storied) from BP No. 247/1-S to 326/4-S in Dakshin Dinajpur, West Bengal (Package-I).

The location is tentative. The work will be executed as per actual site requirements. Intending Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The tenderers 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 tender by a tenderer implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

In addition to above the tenderer shall fully acquaint himself about the conditions with regard to site , nature of soil , availability of material , suitable location for construction of godowns, stores and labour huts, the extent of leads and lifts involved in the work (over the entire duration of the contract) including local conditions of site, bad weather, landslides, avalanches, snowfalls, hilly terrain, atmospheric temperature, rainfall, humidity, altitude, labour availability, working window in the different season, working culture, traffic restrictions and other conditions as required for satisfactory execution of the works. His rates shall take into consideration all such factors and contingencies. No extra claim whatsoever on this account shall be entertained by the department. The period of monsoon season from July to October every year has already been included in duration of contract **and no hindrance shall be allowed for normal monsoon seasons from July to October every year.**

12. The competent authority on behalf of the President of India does not bind himself to accept the lowest or any other tender and reserves to himself the authority to reject any or all the tenders received without the assignment of any reason. All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the tenderers shall be summarily rejected.
13. Canvassing whether directly or indirectly, in connection with tenderers is strictly prohibited and the tenders 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 tender and the tenderers shall be bound to perform the same at the rate quoted.
15. The contractor (enlisted or non-enlisted in CPWD) shall not be allowed to participate in the tender for work(s) in the CPWD Zone / Circle /Division / Sub-Division responsible for award and/or execution of contract(s) in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of the Chief Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working or are subsequently employed by him and who are near relatives to any Officer working in the CPWD. Any breach of this condition by the contractor would render him liable to be debarred for a period upto two years from tendering in CPWD as decided by the accepting authority mentioned in Schedule F and his decision will be excepted from clause 25.

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 tender or engagement in the contractor's service.
17. The bids for the works shall remain open for acceptance for a period of **Thirty (30) days** from the date of opening of bids. Further,
 - (i) If any tenderer withdraws his tender or makes any modification in the terms and conditions of the tender which is not acceptable to the department within 7 days after last date 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 or makes any modification in the terms and conditions of the tender which is not acceptable to the department after expiry of 7 days after last date of submission of bids, then the Government shall without prejudice to any 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) In case of forfeiture of earnest money for the reasons as described 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 Tender shall form a part of the contract document. The successful tenderers/contractor, on acceptance of his tender by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of: -
 - (a) The Notice Inviting Tender, all the documents including additional conditions, specifications and drawings, if any, forming part of the tender as uploaded at the time of invitation of tender and the rates quoted online at the time of submission of tender and acceptance thereof together with any correspondence leading thereto.
 - (b) Standard C.P.W.D. Form 7 GCC-2023 for construction work modified 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 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 issue till the last date of submission of bid in their own interest.

Executive Engineer,
Border Fencing Division-VIII,
IBBZ-I, CPWD, Balurghat
(For and on behalf of President of India)

CPWD-7

GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT

State	West Bengal	Zone	IBBZ-I, CPWD, Siliguri
		Circle	BFC-I, CPWD, Siliguri
Branch	B & R	Division	BFD-VIII, CPWD, Balurghat

Percentage Rate Tender & Contract for Works

Tender for the work of:

- (i) Construction of 121 nos. Sentry Post (Single Storied) from GIN 115 to GIN 255 (BP No. 247/1-S to 790/6-S) along IBB in the state of West Bengal. SH: Construction of 56 Nos. Sentry Post (Single Storied) from BP No. 247/1-S to 326/4-S in Dakshin Dinajpur, West Bengal (Package-I).
- (ii) To be uploaded/submitted by tenderers up to 3:00 PM on **15/10/2026** on CPWD web site.
- (iii) To be opened in presence of bidders or their authorized representative who may be present at 3:30 PM on **15/10/2026** in the office of The Executive Engineer, Border Fencing Division-VIII, IBBZ-I, CPWD, Deepali Nagar, Balurghat-733101 Phone No: (03522)-249031, Email : balueebld1.cpwd@nic.in

TENDER

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

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

I/We agree to keep the tender open for Thirty (30) days from the due date of actual opening of bid 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.

AE(P)

EE(P&A)

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 said President of India or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that President of India or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

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

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

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

Dated _____ * _____

Signature of Contractor

Postal Address _____ * _____

Witness: ** _____

_____ *

Address: ** _____

Occupation: ** _____

Telephone No. _____ *

Fax _____ *

E-Mail _____ *

(*) To be filled in by the Contractor

(**) To be filled in by the Witness

Acceptance

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

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

- (a)
- (b)
- (c)

For & on behalf of the President of India.

Signatures.....

Designation.....

Dated

General rules and Directions

1. All work proposed for execution by contract will be notified in a form of invitation to tender published digitally and can be seen and downloaded from website <https://etender.cpwd.gov.in> or www.cpwd.gov.in or www.eprocure.gov.in free of cost. This form will state the work to be carried out, as well as the date of submitting and opening tenders and the time allowed for carrying out the work, also the amount of earnest money to be deposited with the tender, and the amount of the security deposit and Performance guarantee to be deposited by the successful tenderer and the percentage, if any, to be deducted from bills. Copies of the specifications, designs and drawings and any other documents required in connection with the work signed for the purpose of identification by the officer inviting tender shall also be open for inspection by the contractor at the office of officer inviting tender during office hours.
2. In the event of tender being submitted by affirm, it must be signed separately by each partner thereof or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power of attorney authorizing him to do so, such power of attorney to be produced with the tender, and it must disclose that the firm is duly registered under the Indian Partnership Act 1932.
3. Receipts for payment made on account to work, when executed by affirm must also be signed by all the partners, except where contractors are described in the tender as affirm, in which case the receipts must be signed in the name of the firm by one of the partners, or by some other person having due authority to give effectual receipts for the firm.
4. **Applicable for Percentage Rate Tender only (CPWD-7)**

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

- I. The contractor does not quote percentage above/below on the total amount of tender or any section / sub head of the tender.
- II. The percentage above / below is not quoted in figures & words both on the total amount of tender or any section /sub head of the tender.
- III. The percentage quoted above /below is different in figures & words on the total amount of tender or any section / subhead of the tender.

Tenders, which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort including condition all rebates, will be summarily rejected.

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

In case any of such contractors refuses to submit revised offer, then it shall be treated as withdrawal of his tender before acceptance and 50% of earnest money shall be forfeited.

If the revised tendered amount of two more contractors received in revised offer is again found to be equal, the lowest tender, among such contractors, shall be decided by draw of lots in the presence of CE of the zone and EE(s) in-charge of major & minor component(s) (also DDH in case Horticulture work is also included in the tender), & the lowest contractors those have quoted equal amount of their tenders.

In case all the lowest contractors those have quoted same tendered amount, refuse to submit revised offers, then tenders are to be recalled after forfeiting 50% of EMD of each contractor. Contractor(s), whose earnest money is forfeited because of non-submission of revised offer, shall not be allowed to participate in the re-tendering process of the work.

5. The officer inviting tender or his duly authorized assistant will open tenders online in the presence of any intending contractors who may be present at the time.
6. The officer inviting tenders shall have the right of rejecting all or any of the tenders and will not be bound to accept the lowest or any other tender.
7. The receipt of an accountant or clerk for any money paid by the contractor will not be considered as any acknowledgment or payment to the officer inviting tender and the contractor shall be responsible for seeing that he procures a receipt signed by the officer inviting tender or a duly authorized Cashier.
8. In case of Percentage Rate Tenders only percentage quoted shall be considered. Any tender containing item rates is liable to be rejected. Percentage quoted by the contractor in percentage rate tender shall be accurately filled in figures and words, so that there is no discrepancy. In Percentage Rate Tender, the tenderer shall quote percentage below /above (in figures as well as in words) at which he will be willing to execute the work.
He shall also work out the total amount of his offer and the same should be written in figures as well as in words in such a way that no interpolation is possible. In case of figures, the word 'Rs.' should be written before the figure of rupees and word 'P' after the decimal figures, e.g. 'Rs. 2.15P' and in case of words, the word 'Rupees' should precede and the word 'Paisa' should be written at the end.
 - (i) The Contractor, whose tender is accepted, will be required to furnish performance guarantee of 5% (Five Percent) of the tendered amount within the period specified in Schedule F. This guarantee shall be in the form of Account payee Demand Draft of a commercial bank or Bankers Cheque of a commercial bank or Fixed deposit Receipt of a commercial bank or Insurance Surety Bonds or Bank Guarantee from a commercial bank.
 - (ii) The contractor whose tender is accepted will also be required to furnish by way of Security Deposit for the fulfilment of his contract, an amount equal to 2.5% of the tendered value of the work. The Security deposit will be collected by deductions from the running bills as well as final bill of the contractor at the rates mentioned above. The Security amount will also be accepted in account payee Demand Draft of a commercial bank or Bankers Cheque of a commercial bank or Fixed deposit Receipt of a commercial bank or Insurance Surety Bonds or Bank Guarantee from a commercial bank.

9. On acceptance of the tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from the Engineer-in-Charge shall be communicated in writing to the Engineer-in-Charge.
10. GST or any other tax applicable in respect of inputs procured by the contractor for this contract shall be payable by the Contractor and Government will not entertain any claim whatsoever in respect of the same. However, component of GST at time of supply of service **(as provided in CGST Act 2017)** provided by the contract shall be varied if different from that applicable on the last date of receipt of tender including extension if any.
11. The contractor shall give a list of both gazetted and non-gazetted C.P.W.D. employees related to him.
12. The tender for composite work includes, in addition to building work, all other works such as sanitary and water supply installations drainage installation, electrical work, horticulture work, roads and paths etc.
13. The contractor shall submit list of works which are in hand (progress) in the following form:-

Name of work	Name and particulars of Division where work is being executed	Value of work progress	Position of works in Hand	Remarks
1.	2.	3.	4.	5.

Salient Requirements for the Tender

1. The tenderer is advised to read and examine the tender documents for the work and the set of drawings available with Engineer-in-charge. He should inspect and examine the site and its surroundings by himself before submitting his tender.
2. Schedule of quantity is included in this tender for civil items of work. The contractor shall quote the percentage rates in figures and words accurately so that there is no discrepancy in rates written in figures and words.
3. Time allowed for the execution of work is **15 (Fifteen) Months**
4. The contractor(s) shall submit a detailed program of execution in accordance with the master programme/milestone within ten days from the date of issue of award letter.
5. Quality of the project is of utmost importance. This shall be adhered to in accordance with the provisions of CPWD specifications and guidelines given in the relevant paras.
6. The contractor (s) shall make his own arrangements for electricity and water required for the execution of work.
7. Bitumen shall be arranged by the contractor himself
8. Cement shall be arranged by the contractor himself.
9. Steel Reinforcement shall be arranged by the contractor himself.
10. Contractor has to deploy required Plant and machinery on the project. **Minimum number of plant and machinery to be deployed by him is indicated at Page No.68** In case the contractor fails to deploy the plant and machinery whenever required and as per the direction of the Engineer-in-charge, he (Engineer-in-charge) shall be at a liberty to get the same deployed at the risk and cost of the contractor.
11. **The contractor shall submit the running bills in the shape of the computerized MB in pages of A-4 size as per the standard format of department and shall act as per clause 6 of Standard CPWD contract form defined in Performa of Schedules of this NIT document.**
12. Contractor has to provide reinforcement cover blocks made of approved proprietary pre packed free flowing mortars (Can be extra as manufactured by M/s Fosroc Chemical India Ltd. or equivalent as approved) of high early strength.

Format for Authority Letter for Payment to third party

- (a) The contractor gives an authority letter addressed to the engineer-in-charge on a non-judicial stamp paper of Rs.100 in the format given below.

I/We authorize the Executive Engineer, Division, CPWD to pay directly on my/our behalf to (name of the third party) an amount of Rs.....(Rupeesin words) for the work done or supplies made by (name of the third party). I/We shall be responsible for the quality and quantity of the same under the provisions of agreement number

Signature of the contractor

- (b) The total payment to third party (or parties) shall not exceed 10% of the agreement cost of the work.

On non-judicial stamp paper of minimum Rs.100
(Guarantee offered by Bank to CPWD in connection with the execution of contracts)
Form of Bank Guarantee for Earnest Money Deposit /Performance Guarantee/Security
Deposit/ Mobilization Advance

1. Whereas the Executive Engineer..... (name of Division)....., CPWD on behalf of the President of India (herein after 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) (herein after 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 (herein after called "The Government") has entered in to an agreement bearing number.....with.....(name and address of the contractor)

(Herein after called "the Contractor") for execution of work..... (name of work).....The Government has further agreed to accept an irrevocable bank Guarantee for Rs.....(Rupees.....only) valid upto.....(date)..... as **Performance Guarantee / Security Deposit / Mobilization Advance** from the said Contractor for compliance of his obligations in accordance with the terms and conditions of the agreement.

2. We,.....(indicate the name of the bank)..... (herein after referred to as "the Bank"),
 Hereby under take 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 before any Court or Tribunal, our liability under this Bank Guarantee being absolute and unequivocal. The payment so made by us under this Bank Guarantee shall be a valid discharge of our liability for payment there under and the Contractor shall have no claim against us for making such payment.
5. We, (indicate the name of the Bank)....., further agree that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligation here under to vary any of the terms and conditions of the said agreement or to 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 with out proceeding against the Contractor and not with standing 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. Not withstanding any thing 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

Name and address

Designation

2. Signature.....

Staff code no.

Name and address

Bank seal

*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, as the case maybe.

Annexure-AReceipt of deposition of original EMD

(Receipt No.....date... ..)

Name of Work:- Construction of 121 nos. Sentry Post (Single Storied) from GIN 115 to GIN 255 (BP No. 247/1-S to 790/6-S) along IBB in the state of West Bengal. SH: Construction of 56 Nos. Sentry Post (Single Storied) from BP No. 247/1-S to 326/4-S in Dakshin Dinajpur, West Bengal (Package-I).

1. NIT No: 06 /NIT/CE/IBBZ-I/2026-27

2. Estimated Cost : Rs. 6,74,34,176/-
(Civil- Rs. 6,41,87,352.00 + Electrical- Rs 32,46,824.00)

3. Amount of Earnest Money Deposit : Rs.13,48,684/-

4. Last date of submission of bid up to 03:00PM on **15/10/2026**

5. Name of contractor#.....

6. Form of EMD#.....

7. Amount of Earnest Money Deposit#.....

8. Date of submission of EMD#.....

Signature, Name and Designation of EMD
receiving officer (EE/AE(P)/AAO) along with
Office stamp

(# To be filled by EMD receiving EE)

Part-B

(Civil Work)

PROFORMA OF SCHEDULES (CIVIL PART)**SCHEDULES A to F****SCHEDULE 'A'****Schedule of quantities: Page No.69-77****SCHEDULE 'D'**

Extra schedule for specific requirements/document for : **NIL**
the work, if any.

SCHEDULE 'E'

Reference to General Conditions of contract – **General Conditions of Contract 2023 for Construction work, CPWD with up to date modifications & up to date correction slips**

Name of Work	:	Construction of 121 nos. Sentry Post (Single Storied) from GIN 115 to GIN 255 (BP No. 247/1-S to 790/6-S) along IBB in the state of West Bengal. SH: Construction of 56 Nos. Sentry Post (Single Storied) from BP No. 247/1-S to 326/4-S in Dakshin Dinajpur, West Bengal (Package-I).
Estimated cost of the work	:	Rs. 6,74,34,176/- (Civil - Rs. 6,41,87,352.00 + Electrical- Rs. 32,46,824.00)
Earnest money	:	Rs.13,48,684/- (To be returned after receiving performance guarantee)
Performance Guarantee	:	a. Performance Guarantee(P.G) :5% of tendered value of the Estimated Cost put to tender (ECPT) or contract amount (whichever is higher) b. Additional Performance Guarantee (A.P.G) : In case of quoted bid amount is lesser than 80% of the ECPT the bidder shall be required to submit Additional Performance (APG) in addition to the standard performance guarantee (PG). The amount of Additional Performance (APG) shall be equivalent to the difference between the 80 % amount of ECPT and quoted amount. The additional performance (APG) shall in the prescribed format of performance guarantee and has to be submitted within the time frame prescribed for submission of the prescribed for submission of performance guarantee. The other terms and conditions of recovery / release etc. of APG shall be same as that of PG.
Security Deposit	:	2.5% of tendered value

SCHEDULE 'F'**GENERAL RULES & DIRECTIONS:**

Officer inviting tender	:	Executive Engineer, Border Fencing Division-VIII, IBBZ-I, CPWD, Balurghat or his successor thereof
Maximum percentage of quantity of items of work to be executed beyond which rates are to be determined in accordance with Clause 12.2.& 12.3	:	Defined under clause 12 here-in-after.

Definitions:

2(vi)	Engineer-in-Charge	:	Executive Engineer, Border Fencing Division-VIII, IBBZ-I, CPWD, Balurghat or his successor thereof
2(viii)	Accepting Authority	:	Superintending Engineer, BFC-I, IBBZ-I, CPWD, Siliguri or his successor thereof.
2(x)	Percentage on cost of materials and labour to cover all overheads and profits	:	15%
2(x)(a)	Standard Schedule of Rates: Civil Items of Work:	:	DSR 2023 + Cost Index with up to date correction slips & MR for Non-schedule and MoRTH items.
2(xi)	Department:	:	Central Public Works Department
9(ii)	Standard CPWD contract Form:	:	CPWD Form 7 of General Condition of Contract 2023 for Construction work, with up-to-date correction slips till last date of submission of bid. This contract form will be integral part of the agreement.

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 as provided in (i) above	3 Days
Clause 2	Authority for fixing Compensation under Clause 2	Superintending Engineer, Border Fencing Circle-I, IBBZ-I, CPWD, Siliguri or his successor thereof.
Clause 5	Number of days from the date of issue of letter of acceptance for reckoning date of start of milestone as per table given below:	10 Days

Sl. No.	Description of Mile Stone (Financial Progress)	Time allowed in days (from date of start)	Amount to be withheld in case of Non-achievement of each physical mile stone(s)
1.	Complete Mobilization of requisite equipment & machinery, lab setup at site, submission of Job Mix/ Design Mix of appropriate grade as per schedule and getting proof check, completion of all work up to plinth level for 15 no Sentry post.	3.00 months	1% of tender amount
2.	Completion of all work up to plinth level for next 20 no Sentry post. (Total-35 Nos.) and completion of super structure work of 1 st 15 Nos. Sentry Post and related electrical works.	6.00months	1% of tender amount
3.	Completion of all work up to plinth levels for next 21 no Sentry post. (Total-56 Nos.) and completion of super structure work of 2 nd 20 Nos. Sentry Post (Total-35 Nos) and completion of finishing work and handing over to BSF for 1 st 15 Nos. Sentry post and related electrical works.	9.00 months	1% of tender amount
4.	Completion of super structure work of 3 rd 21 Nos. Sentry Post (Total-56 Nos.) and completion of finishing work and handing over to BSF for 2 nd 20 Nos. Sentry post (Total- 35 Nos.) and related electrical works.	12.00 months	1% of tender amount
5.	Completion of all work in all respect including electrical works of all 56 Nos. Sentry post in all respect and handing over to BSF.	15.00 months	1% of tender amount
Time allowed for execution of work		:	15 (Fifteen) Months including period on account of rainy seasons from July to October every year will not be considered for hindrance

(i) Authority to convey the decision of shifting of milestone and extension of time	Executive Engineer, Border Fencing Division-VIII, IBBZ-I, CPWD, Balurghat or his successor thereof
(ii) Authority to decide rescheduling of milestone and extension of time	Superintending Engineer, Border Fencing Circle-I, IBBZ-I, Siliguri or his successor thereof
(iii) Shifting of date of start in case of delay in handing over of site	Superintending Engineer, Border Fencing Circle-I, IBBZ-I, Siliguri or his successor thereof

PROFORMA 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 acceptance
I	The site will be given part site	The site will be given in parts.
II	Portion with encumbrances	Nil
III	Portions dependent on work of other agencies	Nil
Clause 6	Computerized measure book (CMB) / Electronic	CMB

	measurement book (EMB)	
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. 50.00 Lakh
Clause 7A	Whether Clause 7A shall be applicable	Yes
Clause 7B	Whether Clause 7B shall be applicable	Yes
Clause 8A	Authority to decide compensation on account if contractor fails to submit completion plans	Engineer-in-charge
Clause 10 A	List of testing equipment to be provided by the contractor at site of the work.	As per list at page no. 67
Clause 10B (ii)	Whether clause 10B (ii) shall be applicable	No
Clause 10 C	Component of labour expressed as percentage of value of work	Not Applicable
Clause 10 CC		Applicable

A. For construction period

<i>Sl No.</i>	<i>Relevant component of material / labour for price escalation</i>	<i>Percentage of total value of work</i>
1.	Component of cement	8 %
2.	Component of labour	25%
3.	Civil component of other construction material	27 %
4.	Electrical and mechanical component of construction material	5 %
5.	Component of POL(Diesel)	NA
6.	Reinforcement of Steel Bar/ TMT/Structural steel (including strands and cables)	35 %
7.	Component of Bitumen	NA
Total		100%

Clause 11	Specifications to be followed for execution of work	CPWD Specification for works-2019 Vol- I & II with up to date correction/Additional Specifications issued till last date of submission of tender (Hereinafter called CPWD specifications also),
	Type of work	Original work
Clause 12	The completion cost shall, in no case, exceed 1.5 times the contract amount. Contractor will devise a system to keep a watch on quantum of work taken up vis-à-vis balance items required to complete defined scope of work and will give the alerts to Engineer-in-Charge before taking up extra item(s), deviation(s) so that completion cost does not exceed above limit. Work executed beyond above limit will neither be recorded nor be paid. Engineer-in-charge will verify and confirm the alerts before assigning deviation(s) and/or extra item(s) to the contractor. If additional work(s) is required to complete defined scope of work beyond above limit the Engineer-in-charge may take up such work(s) separately. The contractor will not have any claim(s) whatsoever on this account.	

12.2 (c)	Deviation Limit beyond which clauses 12.2 (c) shall apply	100%
Clause 16	Competent Authority for Deciding reduced rates	Superintending Engineer, BFC-I, IBBZ-I, Siliguri or his successor thereof
Clause 18	List of mandatory machinery, tools & plants to be deployed by the contractor at site.	As per Page no. 68
Clause 19C	Authority to decide penalty for each default	Engineer-in-charge
Clause 19D	Authority to decide penalty for each default	Engineer-in-charge
Clause 19G	Authority to decide penalty for each default	Engineer-in-charge
Clause 19K	Rate of compensation to be paid	Rs. 781/- per tradesman / day
Clause 25		As per amended provision in annexure – I, Page no. 33-36.
	Conciliator	Additional Director General, Border
	Arbitrator Appointing Authority	Chief Engineer, IBBZ-1
	Place of Arbitration	Siliguri, West Bengal

ANNEXURE-I

Amendment to Clause 25 of Construction and EPC GCC

Clause	Existing provision	Amended provision
25	Except where otherwise provided in the contract, all questions and disputes relating to the meaning of the specifications, designs, drawings and instructions hereinbefore mentioned and as to the quality of workmanship or materials used in the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter. 25.1 Conciliation: If the contractor considers any work demanded of him to be outside the requirements of the contract, or disputes any drawing, record or decision given in writing by the Engineer-in-Charge; or if the Engineer-in-Charge considers any act or decision of the contractor on any matter in connection with or arising out of the contract or carrying out of the work to be unacceptable and disputed; such party may promptly refer such disputes and amount claimed for each dispute to the Conciliator (Special Director General or the Additional Director General concerned with the work, as applicable) in the proforma prescribed in Appendix XVII mentioned in Schedule F, under intimation to the other party. The Conciliator may then request each party to submit to him a brief written statement describing the disputes and the points at issue. Each party shall send a copy of such statement to the other party. At any stage of the conciliation proceedings, the Conciliator may request a party to submit to him such additional information as he deems appropriate. When it appears to the Conciliator that there exist elements of a settlement which may be acceptable to the parties, he shall formulate the terms of a possible settlement and submit them to the parties for their observations. After receiving the observations of the parties, he may re-formulate the terms of a possible settlement in the light of such observations. If the parties reach agreement on a settlement of the disputes, they may draw up and sign a written settlement agreement on non-judicial stamp paper as per Stamp Act. The Conciliator shall authenticate the settlement agreement and furnish a copy thereof to each party. The termination of conciliation proceedings shall be in accordance with Section 76 of The Arbitration and Conciliation Act, 1996. No party	Except where otherwise provided in the contract, all questions and disputes relating to the meaning of the specifications, designs, drawings and instructions hereinbefore mentioned and as to the quality of workmanship or materials used in the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter. 25.1.1 Appeal to Chief Engineer If the contractor considers any work demanded of him to be outside the requirements of the contract, or disputes any drawings, record or decision given in writing by the Engineer-in-Charge or if the Engineer in Charge considers any act or decision of the contractor on any matter in connection with or arising out of the contract or carrying out of the work, to be unacceptable and is disputed, such party shall promptly within 15 days of the arising of the disputes request the Chief Engineer/ CPM, along with a list of disputes with amounts claimed if any in respect of each such dispute. The Chief Engineer/CPM shall give his decision within a period of 30 days from the receipt of reference from Contractor/Engineer-in-charge. Provided that no party shall be represented before the Chief Engineer/CPM by an advocate/legal counsel etc. 25.1.2 Conciliation: If the aforesaid appeal proceedings fails (fully or partly) or the Chief Engineer/CPM fails to resolve disputes full or partly within the aforesaid period; such party may promptly refer unresolved disputes and amount claimed for each dispute to the Conciliator (Special Director General or the Additional Director General concerned with the work, as applicable) in the proforma prescribed in Appendix XVII mentioned in Schedule F, under intimation to the other party. The Conciliator may then request each party to submit to him a brief written statement describing the disputes and the points at issue. Each party shall send a copy of such statement to the other party. At any stage of the conciliation proceedings, the Conciliator may request a party to submit to him such additional information as he deems appropriate. When it

shall be represented before the said Conciliator by an advocate or legal counsel. The conciliation proceedings shall be completed within 45 days from the receipt of reference. This time may be enlarged by 15 days by the Conciliator. The conciliation proceedings shall be deemed to have been terminated at the end of 60 days from the receipt of reference.

25.2 Arbitration: If the aforesaid conciliation proceedings fail or the Conciliator fails to give proposal for settlement within the aforesaid period, either party may promptly give notice in the proforma prescribed in Appendix XVIII, under intimation to the other party, to the Chief Engineer or the Superintending Engineer concerned with the work (as applicable), hereinafter referred to as the Arbitrator Appointing Authority as indicated in Schedule F, for appointment of Arbitrator.

However, a party may seek appointment of Arbitrator without taking recourse to the process of conciliation mentioned in sub-clause 25.1 above.

In the event of either party giving a notice to the Arbitrator Appointing Authority for appointment of Arbitrator, the said Authority shall appoint Arbitrator as per the procedure given below and refer such disputes to arbitration.

(a) Number of Arbitrators: If the contract amount is less than Rs.100 crore, the disputes may be referred for adjudication by a sole Arbitrator. If the contract amount is Rs.100 crore or more, the disputes may be referred to an Arbitral Tribunal of three Arbitrators.

(b) Qualification of Arbitrators: It is a term of this contract that each member of the Arbitral Tribunal shall be Graduate Engineer (in Civil or Electrical or Mechanical Engineering) with experience in execution of public works engineering contracts, and he should have worked earlier at a level not lower than the Chief Engineer (equivalent to level of Joint Secretary to the Government of India).

The aforesaid educational qualification and work experience shall be mandatory for appointment as Arbitrator.

The age of Arbitrator at the time of appointment shall not exceed 75 years. An Arbitrator may be appointed notwithstanding the total number of active arbitration cases with him.

(c) Parties to select Arbitrator: Based on the

appears to the Conciliator that there exist elements of a settlement which may be acceptable to the parties, he shall formulate the terms of a possible settlement and submit them to the parties for their observations. After receiving the observations of the parties, he may re-formulate the terms of a possible settlement in the light of such observations. If the parties reach agreement on a settlement of the disputes, they may draw up and sign a written settlement agreement on non-judicial stamp paper as per Stamp Act. The Conciliator shall authenticate the settlement agreement and furnish a copy thereof to each party. The termination of conciliation proceedings shall be in accordance with Section 76 of The Arbitration and Conciliation Act, 1996. No party shall be represented before the said Conciliator by an advocate or legal counsel. The conciliation proceedings shall be completed within 45 days from the receipt of reference. This time may be enlarged by 15 days by the Conciliator. The conciliation proceedings shall be deemed to have been terminated at the end of 60 days from the receipt of reference.

25.2 Arbitration: If the aforesaid conciliation proceedings fail or the Conciliator fails to give proposal for settlement within the aforesaid period, either party may promptly give notice in the proforma prescribed in Appendix XVIII, under intimation to the other party, to the Chief Engineer or the Superintending Engineer concerned with the work (as applicable), hereinafter referred to as the Arbitrator Appointing Authority as indicated in Schedule F, for appointment of Arbitrator.

It is a term of contract that each party invoking arbitration must exhaust the aforesaid mechanism of settlement of claims/disputes prior to invoking arbitration in sub-clause 25.1.1 and 25.1.2 above.

In the event of either party giving a notice to the Arbitrator Appointing Authority for appointment of Arbitrator, the said Authority shall appoint Arbitrator as per the procedure given below and refer such disputes to arbitration.

(a) Number of Arbitrators: If the contract amount is less than Rs.100 crore, the disputes may be referred for adjudication by a sole Arbitrator. If the contract amount is Rs.100 crore or more, the disputes may be referred to an Arbitral Tribunal of three Arbitrators.

(b) Qualification of Arbitrators: It is a term of this contract that each member of the Arbitral Tribunal shall be Graduate Engineer (in Civil or Electrical or Mechanical Engineering) with

criteria specified above, a list of empanelled Arbitrators has been prepared in CPWD, and the parties shall have option to select an Arbitrator from the list sent to them.

25.3 Appointment of Sole Arbitrator: The parties may opt for appointment of the Arbitrator of the Ministry of Housing and Urban Affairs. In such cases, the party seeking arbitration has to submit an express agreement in writing as per Appendix XIX towards waiver of Section 12(5) of the Arbitration and Conciliation Act, 1996 along with the notice for appointment of Arbitrator in the proforma prescribed in Appendix XVIII, under intimation to the other party. The Arbitrator Appointing Authority shall, within 30 days of receipt of the said notice, appoint Arbitrator of the Ministry of Housing and Urban Affairs as Arbitrator in the matter, provided the other party also submits waiver of Section 12(5), *ibid* in Appendix XIX within 7 days of the receipt of the said notice.

Where any one of the parties does not opt for the Arbitrator of the Ministry of Housing and Urban Affairs, or does not submit the waiver agreement, the Arbitrator Appointing Authority shall propose five Arbitrators from the list of CPWD Empanelled Arbitrators to the party seeking arbitration under intimation to the other party within 15 days of receiving the notice. The party seeking arbitration shall give his choice for one of them within 15 days of receiving the list, and the Arbitrator Appointing Authority shall appoint the chosen person as the Sole Arbitrator within 15 days of the receipt of choice.

It is a term of this arbitration agreement that if the parties fail to select, within the period prescribed above, an Arbitrator of their choice from the list of CPWD Empanelled Arbitrators forwarded to them, the Arbitrator Appointing Authority shall himself select and appoint Arbitrator from the said list.

25.4 Appointment of Arbitral Tribunal of three Arbitrators: The Arbitrator Appointing Authority shall prepare two separate lists of five Arbitrators each from the list of CPWD Empanelled Arbitrators, and send one to the party seeking arbitration and other to the responding party, within 15 days of the receipt of notice. The parties will then choose any one Arbitrator from the list provided to them within 15 days of receipt of the list. The Arbitrator Appointing Authority shall then appoint those chosen by the respective parties as Arbitrators and also a third Arbitrator from the list of CPWD Empanelled Arbitrators to act as

experience in execution of public works engineering contracts, and he should have worked earlier at a level not lower than the Chief Engineer (equivalent to level of Joint Secretary to the Government of India).

The aforesaid educational qualification and work experience shall be mandatory for appointment as Arbitrator.

The age of Arbitrator at the time of appointment shall not exceed 75 years. An Arbitrator may be appointed notwithstanding the total number of active arbitration cases with him.

(c) Parties to select Arbitrator: Based on the criteria specified above, a list of empanelled Arbitrators, has been prepared in CPWD, and the parties may have option to select an Arbitrator from the list sent to them but selected Arbitrator shall be other than past CPWD Official.

Alternately, sole arbitrator or arbitral tribunal can be got appointed from India International Arbitration Centre (IIAC).

25.3 Appointment of Sole Arbitrator: The Arbitrator Appointing Authority shall propose five Arbitrators from the list of CPWD Empanelled Arbitrators (non ex-CPWD) to the party seeking arbitration under intimation to the other party within 15 days of receiving the notice. The party seeking arbitration shall give his choice for one of them within 15 days of receiving the list, and the Arbitrator Appointing Authority shall appoint the chosen person as the Sole Arbitrator within 15 days of the receipt of choice.

It is a term of this arbitration agreement that if the parties fail to select, within the period prescribed above, an Arbitrator of their choice from the list of CPWD Empanelled Arbitrators forwarded to them, the Arbitrator Appointing Authority shall himself select and appoint Arbitrator from the said list.

Alternatively, IIAC can be requested to appoint arbitrator by the arbitrator appointing authority.

25.4 Appointment of Arbitral Tribunal of three Arbitrators: The Arbitrator Appointing Authority shall prepare two separate lists of five Arbitrators each from the list of CPWD Empanelled Arbitrators (non ex-CPWD), and send one to the party seeking arbitration and other to the responding party, within 15 days of the receipt of notice. The parties will then choose any one Arbitrator from the list provided to them within 15 days of receipt of the list. The Arbitrator Appointing Authority shall then appoint those chosen by the respective parties as Arbitrators and also a third Arbitrator from the list of CPWD Empanelled Arbitrators to act as

presiding Arbitrator, within 15 days of receipt of choice from both the parties. It is a term of this arbitration agreement that if the parties fail to select, within the period prescribed above, an Arbitrator of their choice from the list of CPWD Empanelled Arbitrators forwarded to them, the Arbitrator Appointing Authority shall himself select and appoint Arbitrator from the said list. 25.5 Applicable Law: The provisions of the Arbitration and Conciliation Act, 1996 (Act 26 of 1996) and any further statutory modification or re-enactment thereof shall be applicable. Further, the fast-track procedure for arbitration contained in Section 29B of the said Act shall apply. 25.6 Fee payable to Arbitrator(s): Fee payable to Arbitrator(s) for arbitration cases, shall be as per the fee given in the fourth schedule of the Arbitration & Conciliation Act, 1996 (or latest amendment), and shall be shared equally by both the parties. 25.7 Place of Arbitration: The place of arbitration shall preferably be as mentioned in Schedule F. However, the Arbitral Tribunal may decide the place in consultation with both the parties.	Arbitrator from the list provided to them within 15 days of receipt of the list. The Arbitrator Appointing Authority shall then appoint those chosen by the respective parties as Arbitrators and also a third Arbitrator from the list of CPWD Empanelled Arbitrators (non ex-CPWD) to act as presiding Arbitrator, within 15 days of receipt of choice from both the parties. It is a term of this arbitration agreement that if the parties fail to select, within the period prescribed above, an Arbitrator of their choice from the list of CPWD Empanelled Arbitrators forwarded to them, the Arbitrator Appointing Authority shall himself select and appoint Arbitrator from the said list. Alternatively, IIAC can be requested to appoint arbitral tribunal by the arbitrator appointing authority. 25.5 Applicable Law: The provisions of the Arbitration and Conciliation Act, 1996 (Act 26 of 1996) and any further statutory modification or re-enactment thereof shall be applicable. Further, the fast-track procedure for arbitration contained in Section 29B of the said Act shall apply. 25.6 Fee payable to Arbitrator(s): Fee payable to Arbitrator(s) for arbitration cases, shall be as per the fee given in the fourth schedule of the Arbitration & Conciliation Act, 1996 (or latest amendment), and shall be shared equally by both the parties. The fee of IIAC appointed arbitrator or arbitral tribune will be as per IIAC norms. 25.7 Place of Arbitration: The place of arbitration shall preferably be as mentioned in Schedule F. However, the Arbitral Tribunal may decide the place in consultation with both the parties.
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EE(P)

Approved

SE(P)

SDG(B)

Clause 32 :Requirement of Technical Representative(s) and recovery rate

S. No.	Minimum Qualification of Technical Representative	Discipline	(Principal Technical Designation/ Technical Representative)	Minimum Experience (Years)	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 32
						Figures
1.	Graduate Engineer	Civil	Project Manager	5 (and having experience of one similar nature of works)	1	Rs. 25,000/- per person per month
2.	Graduate Engineer or Diploma Engineer	Civil	Project/ Planning/ Quality / Billing Engineer	2 Or 5 Respectively	1	Rs. 15,000/- per person per month

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

Diploma holders with minimum 10 years relevant experience with a reputed construction co. can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineers.

Clause 32(iii):(iii) For works with estimated cost more than Rs. 10 Crores and stipulated time period more than 6 months :

The contractor shall ensure that at least one deployed technical representative shall be trained in courses related to CPWD specifications, labour laws, safety rules etc. of duration not less than 5 working days either through National CPWD Academy (NCA) or National Institute of Construction Management and Research (NICMAR) or CIDC or any other similar reputed and recognized Institute managed or certified by State/Central Government. The training cost and other cost related to training shall be borne by the contractor. The contractor shall ensure that at least one technical representative is trained within six months of start of work. The time period of six months can be relaxed by the Engineer-in-Charge depending upon the frequency of training course organized by NCA.

If the contractor fails to ensure that at least one technical representative is trained in the above mentioned course till completion of work or one year from start of work, whichever is earlier, then a non-refundable recovery of Rs. 50,000/- shall be made from the bill of the contractor. Decision of Engineer-in-Charge in this regard shall be final and binding on the contractor.

Clause 38			
i)	a)	Schedule/ statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates 2023 printed by CPWD	D.S.R. 2023 with up to date correction slips
ii)		Variations permissible on theoretical quantities	
	a)	Cement	2% plus/minus
	b)	Bitumen all works	2.5% plus only & nil on minus side
	c)	Steel reinforcement and structural steel Sections for diameter, section and category.	2% plus/minus
	d)	All other materials	Nil

General Conditions

1. The structural and architectural drawings shall at all times be properly correlated before executing any work. However, in case of any discrepancy in the item given in the schedule of quantities appended with the tender and architectural drawings relating to the relevant item, the former shall prevail unless and otherwise given in writing by the Engineer-in-Charge.
2. The civil work shall be carried out as per **CPWD specifications for works-2019 Vol. I & II** with up to date correction slips unless otherwise specified in the nomenclature of individual item or in the specifications and special conditions, where specifications are silent, the decision of Engineer-in-Charge shall be final and binding on contractors. Road work shall be executed as per latest MORTH specifications.
3. The rates quoted by the contractor shall be taken as net and nothing extra shall be paid on any account i.e. royalty, cartage, GST and stacking at required places & working in restricted area etc.
4. The rates for different items of work shall apply for all heights and depths, leads and lifts unless otherwise specified in the agreement or specifications applicable to the agreement.
5. Any damage done by the contractor to any existing work during the course of execution of the work shall be made good by him at his own cost.
6. Articles manufactured by the reputed firms and approved by Engineer-in-Charge shall only be used. Only articles classified, as 'first quality' by the manufacturer shall be used unless otherwise specified. In case articles bearing ISI certification are not available in the market, quality of samples brought by the contractor shall be judged by standards laid down in the relevant CPWD specifications. For the items not covered by CPWD specifications relevant BIS standards shall apply. The sample of materials to be brought to site for use in work shall be got approved from the Engineer-in-Charge before actual execution of work.
7. The quantities of each item shall not be exceeded beyond the agreement quantities without prior permission of Engineer-in-Charge.
8. Income tax as per Income tax rules, GST as per rules, 1% LabourCess and 1% water charges (if departmental water used) will be recovered from the gross amount of the bill.
9. Contractor is to make own arrangement of electricity as department is not obliged to provide electricity, however if departmental electricity is used then 1% electricity charges will be recovered from the gross amount of work done but the contractor shall arrange the necessary electrical fittings and cables etc. for taking the electrical power from nearest electrical point to the work site at his own cost.
10. All types of mortars to be used in the work shall be mixed in the mechanical mixer and hand mixing shall not be permitted.
11. The contractor shall make his own arrangement for getting the permission to ply the trucks from the traffic police or any other authority in this regard.
12. No payment shall be made to the contractor for any damage caused by rain, snow fall, floods or any other natural causes whatsoever during the execution of work. The damage caused to work shall have to be made good by the contractor at his own cost and no claim on this account shall be entertained.

13. Some restrictions may be imposed by the security staff etc. on the working and or movement of labour and materials, etc., the contractor shall be bound to follow all such restrictions/instructions and nothing shall be payable on this account.
14. The contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards. He shall be responsible for all damages and accidents caused due to negligence on his part. No hindrance shall be caused to traffic during the execution of the work by storing materials on the road, VIP's corridor extra.
15. The contractor shall be fully responsible for the safe custody of the material brought by him to site for doing the work.

16. Testing of materials

Samples of various materials required for testing shall be provided free of cost by the contractor unless otherwise specified in the item. Testing charges shall also be borne by the contractor. All other expenditures required to be incurred for taking the samples, conveyance, packing etc. shall also be borne by the contractor himself.

17. The rate for all items of work, shall unless otherwise clearly specified include cost of all labour, material and other inputs involved in the execution of the items.
18. The order of preference in case of any discrepancy as laid down in condition no. 8.1 under "Conditions of Contract" given in the **General Conditions of Contract for Central P.W.D work 2023** for Construction work may be read as under-
 - a) Nomenclature of item as per Schedule of Quantities
 - b) Particular specifications and special conditions if any.
 - c) General Conditions
 - d) Additional conditions
 - e) Contract Clauses of GCC for Central P.W.D work 2023 for Construction work.
 - f) CPWD Specifications 2019 and MoRTH specification as applicable.
 - g) Architectural/structural drawings and specifications mentioned in drawings.
 - h) Indian Standard Specifications of BIS
 - i) Sound engineering practice as per directions of the Engineer-in-Charge.
 - j) Manufacturers specifications.
19. Any reference made to any Indian Standard Specifications and other specifications mentioned in the respective items in these documents, shall imply to the latest version of that standard, including such revisions / amendments as issued by the Bureau of Indian Standards up to last date of receipt of tenders. The contractor shall keep at his own cost all such publications of relevant Indian Standards applicable to the work at site.
20. The contractor will not have any claim in case of any delay by the Engineer-in-Charge in removal of trees or shifting, removing of telegraph, telephone or electric lines (overhead or underground), water and sewer lines and other structure etc., if any which may come in the way of the work. However, suitable extension of time can be granted to cover such delay.
21. The malba /garbage generated at site due to construction activities shall be removed from the site immediately & shall be disposed off by the contractor to the approved dumping site identified by the

Engineer-in-charge. The surplus soil/earth shall be disposed of as per the directions of Engineer-in-charge separately.

22. The contractor shall clean the site thoroughly of scaffolding materials, rubbish, equipment left out of his work and dress the site around the fencing to the complete satisfaction of the Engineer-in-charge before the work is treated as completed.
23. **Maintenance of Register of Tests-** All the registers of tests carried out at construction site/site lab or in outside laboratories shall be maintained by the contractor which shall be issued to the contractor by Engineer-in-Charge.
24. **Maintenance of Material at Site (MAS) Register-** 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. All the authenticated copy of bills/ invoices of the materials entered in the MAS should be retained and recorded (OM No. DG/SE/CM/Misc./77 dated: 04.05.2018).
25. Contractor shall be responsible for safe custody of all the test registers.
26. Contractor shall provide permanent bench marks and other reference points for the proper execution of work and these shall be preserved till the end of work. All such reference points shall be in relation to the levels and locations, given in the Architectural and plumbing drawings
27. The contractor shall fully comply with all legal orders and directions of the Public or local authorities or municipality and adhere by their rules and regulations and pay all fees and charges for which he may be liable in this regard. Nothing extra shall be paid/reimbursed for the same.
28. The fencing work shall be carried out in the manner complying in all respects with the requirements of the relevant bylaws and regulations of the local body under the jurisdiction of which the work is to be executed or as directed by the Engineer-in-charge and nothing extra shall be paid on this account.
29. It shall be ensured by the contractor that no electric live wire is left exposed or unattended to avoid any accidents in this regard.
30. The contractor shall maintain in perfect condition, all portions executed till completion of the entire work allotted to him. Where however phased delivery of work is contemplated these provisions shall apply separately to each phase.
31. Existing drains, pipes, cables, over-head wires, sewer lines, water lines and similar services encountered in the course of the execution of work shall be protected against the damage by the contractor at his own expense. The contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services.
32. The contractor shall be responsible for the watch and ward/guard/safety/ of the Road, retaining/breast wall, Culverts and Bailly Bridge, signage's etc. provided by him against pilferage and breakage during the period of installations and thereafter till the work. is physically handed over to the department. No extra payment shall be made on this account.
33. The contractor shall bear all incidental charges for cartage, storage and safe custody of materials, if issued by department.

34. Any cement slurry added over base surface for continuation of concreting for better bond is deemed to have been built in the items and nothing extra shall be payable for extra cement considered in consumption on this account.
35. The contractor shall take instructions from the Engineer-in-charge for stacking of materials. No excavated earth or fencing materials etc. shall be stacked/ collected in areas where other buildings, roads, services, compound walls etc. are to be constructed.
36. All the materials such as stone aggregate, screening materials, sand, bricks, cement and pipes etc. to be used in the work, shall have to be got approved from the Engineer-in-charge or his authorized representative prior to use in the work failing which work shall not be measured & paid for.
37. Roadside proper accommodation for labour / workmen, as per contract labour regulation Act, shall be provided by the contractor at his own cost & nothing extra shall be paid by the department.
38. The contractor shall at all-time carry out the works on the road in a very systematic manner without interference to the flow of traffic and consistent with the satisfactory & timely execution of the work. For all works, the contractor shall maintain a passage for traffic either along a part of the existing carriage-way under improvement or along temporary diversion constructed close to the road for this purpose as directed by Engineer-in-Charge for which nothing extra shall be paid.
39. The contractor shall also provide necessary barricade, informatory boards, lights and flagmen at either end of the execution area and at such intermediate points as required and as directed by the Engineer-in-charge at no extra cost.
40. The work shall have to be executed in Indo-Bangladesh Border areas. Contractor(s) should inspect the site, so as to apprise himself / themselves of the site condition, before tendering. Being a Border area, there could be some restriction by Security agencies and the contractor has to follow and no extra claim on this account shall be entertained by the department.
41. The Executive Engineer by prior notice in writing to the contractor may reduce/increase the scope of work.
42. In case of deviation in quantities, no extra claim except as otherwise provided in the contract shall be entertained by the department.
43. The contractor(s) shall submit "Time & Progress chart" for execution of work in different reaches showing activities distinctly along with Bar-Chart within fifteen days of the letter of acceptance of work in direct relation to the time stated in the contract document for completion of items of the works as per different milestone fixed indicating the forecast of date of commencement and date of completion of various items / activities kilometer wise from start point to end point of road as per agreement for adherence during execution.

If 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 programme showing the modifications to the approved programme by additional inputs to ensure completion of the work within the stipulated time. In case the contractor fails to achieve individual milestone as specified in Schedule F, action shall be taken as per clause 5 & other relevant clauses of the General Conditions of Contract 2023 Construction work.

44. The item of concreting/bituminous work shall be started / executed strictly under prior written approval of the Executive Engineer at appropriate time indicating the quantities and reaches / length (BP No./ K.M.) In

case the Contractor violates the directions, the responsibility shall evolve on him and shall be liable for any consequences of wastage / damage / loss / non-payment etc.

45. In case of any calamity or injury to any labour / workmen etc. or loss / wastage of materials due to nature or insurgency, contractor shall have to bear the cost of compensation and no claim to this effect shall be entertained by the department.
46. The contractor may not be allowed to carry more than 5 MT weight of material in 1 truck for execution of work on the Border Roads. The decision of Engineer-in-Charge in this respect shall be final and binding to the contractor.
47. Royalty / Octroi at the prevalent rates and all other incidental expenditure shall have to be paid by the contractor, on all the boulders, road metal, stone aggregate, river bed shingle, earth, sand, bajri etc., collected by him for the execution of the work direct to the concerned Revenue Authority of the State or Central Government. The rates mentioned in the documents relating to this contract are deemed to include all such expenditure and nothing extra shall be paid on this account.
48. The tenderer shall abide by the rules and regulations of respective GST Act etc. Necessary deductions on account of taxes shall be made on the gross value of the work done from the bills of the contractor as per the provisions of above stated Acts. Necessary certificates for tax deduction at source shall be issued to the contractor by the Engineer in Charge. The decision of the Engineer in Charge regarding quantum of tax deducted at source shall be final and binding on the contractor.
49. Necessary permit etc. for utilization of forest product would be obtained by the contractor directly from the Forest Authority. Necessary Forest Royalty Clearance Certificate (FRCC) from the Forest Authority shall be submitted by the Contractor to the Engineer-in-Charge along with the Bills for the work. Engineer-in-Charge reserves the right to deduct any sum considered reasonable towards forest royalty from the Running Accounts Bills of the Contractor, in the event of non-submission of FRCC. In case the contractor does not submit FRCC a sum considered reasonable towards payment of forest royalty would be deducted by the Engineer-in-Charge from the final bill of the work and credited to the Government accounts. The Engineer-in-Charge would determine the quantum of materials consumed on which such royalty is payable and also the rate of royalty payable. The decision of the Engineer-in-Charge shall be final and binding on the matter.
50. The work has to be carried out at different stretches of different IBBR and nothing extra will be payable on account of shifting of T&P, Machinery, Labour and materials etc.
51. Unless otherwise specified in the schedule of quantities, the rates for all items of the work shall be considered as inclusive of pumping out or bailing out water if required and, therefore, no extra payment will be made on this account. This will include water encountered from any source, such as rains, floods, subsoil water or any other cause whatsoever.

Additional Conditions

1. The contractor shall prepare one sample each of all items which should be got approved from the Engineer-in-Charge. Only on acceptance of sample work, contractor will be allowed to commence the work and sample is to be preserved by contractor till the whole work is completed. The quality of work should be as per approved samples.
2. The contractor and/ or his authorized representative should inspect the site order book every day and got the compliance on the observations noted by the JE/ AE/ Engineer-in-Charge.
3. If the work is carried out in more than one shift or during night, no claim on this account shall be entertained.
4. The dismantling wherever required shall be done in a manner so that no other portions of the fencing or its fixtures are damaged. If any damage is done to the fencing it shall be made good by the contractor at his own cost and no claim whatsoever shall be entertained on this account.
5. Due to Security reason the contractor shall have to arrange time table of labour according to the requirement of security staff and the instructions of the Engineer-in-Charge. The contractor should see the site before tendering.
6. The contractor shall be responsible for behavior and conduct of his worker. No worker with doubtful integrity or having a bad record shall be engaged by the contractor.
7. Defective work, sub-standard work or work not done according to the specifications of the contract shall be liable for summarily rejection and shall not be measured and paid for. This shall be without prejudice to taking any other action against the contractor in accordance with the other terms and conditions of the contract.
8. The agency can be asked to submit documentary proof of procurement from the mentioned agencies i.e. Bill/ Invoice etc.
9. The OEM shall have a valid applicator certificate from Jotun for polyester powder coating and a valid applicator certificate from Axalta for Thermoplastic coating.
 - 9.1 Fence post, Profile Plate & Omega Clamp should be mandatorily Laser embossed Logo manufacturer.
 - 9.2 In case of any discrepancy between the specifications and the nomenclature of the item, the Nomenclature of the item will prevail.
 - 9.3 The existing concrete of required width to be dismantled by machine cutting without damaging rest of concrete. Any concrete damage beyond required width during dismantling will be made good by contractor at his own expense.

10. Quality Assurance

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

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

10.3 Test Laboratories:

A) Laboratory at site:

The contractor shall establish testing lab at site and provide testing equipment and materials as specified in tender document. Nothing extra shall be payable to him on this account.

List of Field Testing equipment :

For Concrete Work :		
Sl. No.	Name of Equipment	Numbers
1	Oven – Electrically operated, thermostatically controlled, range upto 200 C sensitivity 1 C	2 Nos.
2	Platform balance 300 kg capacity	2 Nos.
3	Balance 20 kg capacity-self indicating type	2 Nos.
4	Electronic Balance 5 kg capacity accuracy 0.5 gm	2 Nos.
5	Water bath-electrically operated and Thermostatically controlled with adjustable Shelves, sensitivity 1 C	1 No.
6	Thermometers: Mercury-in-glass thermometer range 0 to 250 C Mercury-in-steel thermometer with 30 cm Stem, range upto 300 C for bituminous work	2 Nos.
7	Kerosene or gas stove or electric hot plate	2 Nos.
8	Glass wares, spatulas, wire gauzes, Steel scales, measuring tape, casseroles, Karahis, enameled trays of assorted sizes, Pestle-mortar, porcelain dishes, gunny bags, Plastic bags, chemicals, digging tools like Pickaxes, shovels etc.	As required
9	Water testing kit	2 set
10	First aid box	2 set
11	Standard measures of 30, 15 and 3 litres capacity along with standard tamping rod	2 set
12	3 m straight edge	2 No.
13	Camber board	2 No.
14	Total Station Survey Instrument	1 No
15	Levelling Instrument	1 No.

16	Set of Brass and metal sieves of required size for testing coarse and fine aggregate.	2 Nos.
17	Graduated measuring cylinder.	2 set
18	Slump cone with tamping rod and non-absorbent platform, steel scales & scoop.	2 Nos.
19	Cube molds of 15x15x15 cm size.	24 Nos
20	Compression Testing Machine of 100 tonne capacity with (i) Pruning Rods 2 Kg weight length 40 cm and ramming face 25 mm – 1 No. (ii) Extra Bottom plates for 15 cm cube mould – 6 (iii) Standard Vibration table for cubes – 1 No. (iv) Dial gauges 25 mm travel – 0.01 mm/ division Least count – 1 No.	2 No.
21	Compaction Test Equipment both 2.5 Kg and 4.5 Kg Rammers (Light and Heavy compactive efforts)	2 Nos.
22	Dry Bulk Density Test apparatus (sand pouring Cylinder, tray, can etc.) complete	2 Nos.
23	Speedy Moisture Meter complete with chemicals Glassware, spatulas, wire gauzes, steel scales, measuring tape, casseroles, Karahis, enameled trays of assorted sizes, Pestle-mortar, porcelain dishes, gunny bags, Plastic bags, chemicals, digging tools like Pickaxes, shovels etc. --- As required	2 Nos.

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

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

B) Other Laboratories:

- B1 The contractor shall arrange carrying out all tests required under the agreement through the Govt. Engineering College laboratory or as approved by the Competent Authority and shall bear all charges in connection therewith including incidental charges.
- B2 If the tests, which were to be conducted in the site laboratory are conducted in Govt. Engineering College laboratory or as approved by the Competent Authority for any the reasons, the cost of such tests shall be borne by the contractor.

10.4 Sampling of Materials:

- 10.4.1 Sample of building materials fittings and other articles required for execution of work shall be got approved from the Engineer-in-Charge. Articles manufactured by companies of repute and approved by the Engineer-in-Charge shall only be used. Articles bearing BIS certification mark shall be used in case the above are not available, the quality of samples brought by the contractor shall be judged by standards laid down in the relevant BIS specifications. All materials and articles brought by the contractor to the site for use shall conform to the samples approved by the Engineer-in-Charge which shall be preserved till the completion of the work.
- 10.4.2 The contractor shall ensure quality construction in a planned and time bound manner. Any sub-standard material/work beyond set out tolerance limit shall be summarily rejected by the Engineer-in-Charge.
- 10.4.3 BIS marked materials except otherwise specified shall be subjected to quality test at the discretion of the Engineer-in-Charge besides testing of other materials as per the specifications described for the item/materials. Wherever BIS marked materials are brought to the site of work, the contractor shall if required, by the Engineer-in-Charge furnish manufacturers test certificate to establish that the material produced by the contractor for incorporation in the work satisfies the provisions of BIS codes relevant to the material and/or the work done.
- 10.4.4 The contractor shall procure all the materials in advance so that there is sufficient time to testing and approving of the materials and clearance of the same before use in work.
- 10.4.5 All materials brought by the contractor for use in the work shall be got checked from the Engineer-in-Charge or his authorized representative of the work on receipt of the same at site before use.
- 10.4.6 The contractor shall be fully responsible for the safe custody of the materials issued to him even if the materials are in double lock and key system.
- 10.4.7 In case there is any discrepancy in frequency of testing as given in the list of mandatory test and that in the individual sub-head of work as per CPWD specification 2019 Vol. 1 & 2 the higher of the two frequencies of testing shall be adopted.

11 Design Mix/ Job Mix Formula

The job mix formula for all batch mix concrete / Bituminous material shall be got designed by the contractor from a Govt. engineering college / institute as approved by the Competent authority. The contractor shall submit the approved samples of material to the aforesaid institution, on the basis of which job mix formula shall be finalized. Once the source of material is finalized, it will not be changed. If any change is inevitable due to reasons beyond the control of contractor, the job mix shall be got redesigned from such approved institution. The payment for getting the design/re-design mix shall be made by the contractor direct to the aforesaid institution & nothing extra shall be paid by the department on this account.

12 Trial Mix of concrete

Trial mix for design proportion will be conducted at site for conformity of design mix submitted if any difference in proportion is occurred the mix will be get redesign. Delay for change in design mix will be responsibility of agency and no hindrance will be considered on this account

- 13 The contractor shall not store/dump construction material or debris on metaled road.
- 14 The contractor shall get prior approval from Engineer-in-Charge for the area where the construction material or debris can be stored beyond the metaled road. This area shall not cause any obstruction to the free flow of traffic/inconvenience to the pedestrians. It should be ensured by the contractor that no accidents occur on account of such permissible storage.
- 15 The contractor shall take appropriate protection measures like raising wind breakers of appropriate height on all sides of the plot/area using CGI sheets or plastic and / or other similar material to ensure that no construction material dust fly outside the plot area.
- 16 The contractor shall ensure that all the trucks or vehicles of any kind which are used for construction purposes / or are carrying construction material like cement, sand and other allied material are fully covered. The contractor shall take every necessary precautions that the vehicles are properly cleaned and dust free to ensure that enroute their destination, the dust, sand or any other particles are not released in air / contaminate air.
- 17 The contractor shall provide mask to every worker working on the construction site and involved in loading, unloading and carriage of construction material and construction debris to prevent inhalation of dust particles.
- 18 The contractor shall provide all medical help, investigation and treatment to the workers involved in the construction of building/fencing and carry of construction material and debris relatable to dust emission.
- 19 The contractor shall comply all the preventive and protective environmental steps as stated in the MoEF guidelines, 2010 & its further revision if any.
- 20 The contractor shall carry out on-Road –Inspection for black smoked generating machinery. The contractor shall use cleaner fuel.
- 21 The contractor shall ensure that all DG sets comply emission norms notified by MoEF.
- 22 The contractor shall use vehicles having pollution under control certificate.
- 23 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.
- 24 The work is of sensitive nature and meant for National Security, target date for completion of the work has to be adhered strictly. The contractor shall plan and execute the work, adhering to the scheduled date of completion, which may require simultaneous taking up the work at various locations by deploying additional manpower and machinery at his own cost for which nothing extra shall be paid. All the staff deployed by the contractor shall be of sound integrity and the antecedents of the staff needs to be got verified from the police authorities. The contractor shall have to coordinate with police

authorities, if required. The contractor and his men shall have to abide by the security instructions of BSF authorities and the normal working time shall be in day time. No claim of idle labour or any other claim on this account shall be entertained by the Department.

- 25 In case of reduction in scope of work, the contractor shall have no claim on account of loss of expected profit, consequential overheads etc. Due to reduction in value of work.
- 26 The contractor will take full precaution & safety measure during execution of work. If any kind of mis-happenings/human loss occurs during execution of work at site, the contractor will be fully responsible for it and liable to bear all losses and has to pay full compensation to the workman. The department will not take any responsibility for such type of happening.
- 27 BSF authorities may restrict the normal working time due to security concern at times. The contractor shall have no claim of idle labour or any other claim on this account. No claim from contractor for extra payment on account of any change in working hours shall be entertained by the department.
- 28 Availability of Earth shall be ensured from local area except ROW of IBB road by the contractor during execution of work.
- 29 The contractor will follow guideline/protocol issued by Central Govt. and concerned State Govt. to control spread of Covid-19.
- 30 The contractor will make his own arrangements for transportation of his men and materials up to the site of work and taking the men and material upto place of installation. Security and watch& ward of the materials brought at site and the work/installation executed by him, safety of his men and materials shall be his responsibility till the work as a whole is completed and handed over to the department for its beneficial use and nothing extra shall be paid by the department on this account.
- 31 All repairs & patch work shall be neatly carried out to match with the original finish & all damages caused to the electrical installations during the execution of work, shall have to be made good by the contractor immediately at his own cost to the entire satisfaction of Engineer-in-charge. In case contractor fails to comply with the instructions, the Engineer-in-charge shall be at liberty to get the work done by any third agency at the cost of the contractor and recover such amount paid from the bill(s) of the contractor.

32 Particular specifications:

- 32.1** BP No. given in the “Salient Requirement of the Tender” is only for general guidance. Actual places/reach for road and fencing will be decided by the Engineer-in-charge.
- 32.2** Contractor is responsible and nothing extra shall be payable to the contractor for:
 - 32.2.1** Dewatering resulting from rain, flood or underground spring,
 - 32.2.2** Bailing out/pumping out sub-soil water, if any,
 - 32.2.3** For laying concrete in or under water, if any,
 - 32.2.4** Dressing by cutting, cleaning and removing vegetation, shrubs, bamboo cluster or any undesirable vegetation up to a distance of 3 metres on either side of each row of security fencing and/or 1.5 meter from the toe of embankment to be constructed for fencing, if required.
 - 32.2.5** Arranging all relevant sieves for sieve analysis of coarse and fine aggregate for concrete, aggregate for WBM and also screening at site.

- 32.3** The contractor will use only such vehicles for carrying all types of construction material exclusively on IBB road, whose individual net laden weight is up to 5(five) Metric Tonnes.
- 32.4** The Contractor shall not use the IBB Road for storage of material and/or carrying out the construction work of fencing, in any manner whatsoever except for vehicular movement for transportation of material and manpower. The IBB Road shall however be used in such a manner that it shall not hinder the movement of men and materials of BSF/CPWD or for any other user under any circumstances.
If any part of the road is damaged as a consequence of misuse of the road by the contractor, the same shall be restored to original condition on completion of fencing work at the cost to be borne by the contractor. In case of failure on part of the contractor in restoring the damaged road to the original condition, the same shall be got restored by the Engineer-in-charge at the risk and cost of the contractor.
- 32.5** Procurement schedule of material to be submitted by Contractor so as to complete the work in time.
- 32.6** Sample items of work shall be got approved by the Contractor from the Engineer-in-charge before commencement of the work in any length.
- 32.7** Sufficient number of plants and machinery shall be deployed in order to ensure completion of the work well within stipulated period of completion.

PARTICULAR SPECIFICATIONS

1 R.C.C. work: - As per CPWD Specifications

2 Design Mix Concrete

2.1 The RCC work shall be done with Design Mix Concrete. Wherever letter M has been indicated, the same shall imply for the Design Mix Concrete. The Design Mix Concrete will be designated based on the principles given in IS: 456, 10262 & SP 23. The Conditions & Specifications stated herein shall have precedence over all conditions & specifications stated in relevant I.S. Codes / C.P.W.D. Specifications. The concrete mix shall be designed for the specified target mean compressive strength in order to ensure that work test result do not fall below the acceptance criteria specified for the concrete mix. The Contractor shall get done design mixes for each class of concrete indicating that the concrete ingredients and proportions will result in concrete mix meeting the requirements specified.

2.1.1 The contractor has to submit design mix and nothing extra is to be paid to contractor on account of adding admixtures, if used.

2.1.2 The sources of coarse aggregate, fine aggregate, water, admixture & cement to be used in concrete work shall be identified by the contractor & he will satisfy himself regarding their conforming to the relevant specifications & their availability before getting the same approved from the Engineer-In-Charge.

(a) **Coarse Aggregate** : As per CPWD Specifications

(b) **Fine Aggregate** : As per CPWD Specifications

(c) **Water** : It shall conform to requirements laid down in IS:456-2000 / Para 3.1.1 of CPWD Specifications

(d) **Cement** : PPC conforming to IS-1489 (Part I)/ OPC 43 Grade conforming to IS-8112/PSC) conforming to IS- 455-1989 shall be used for design mix concrete. However, if the contractor uses higher grade of cement nothing extra shall be paid

(e) **Admixture/ Plasticizer** : The admixture shall conform to IS: 9103. The admixture of approved quality & approved make only shall be used to attain the required workability. Nothing extra on account of use of Admixture / Plasticizer shall be payable.

2.1.3 The Contractor shall engage approved laboratories / test house for designing the concrete mix in accordance with relevant IS Code and to conduct laboratory tests to ensure the target strength & workability criteria for a given grade of concrete.

The various ingredients for mix design / laboratory tests shall be sent to the lab / test houses through the Engineer-in-charge and the samples of such aggregates, sent for design mix, shall be preserved at site by the department.

2.1.4 The contractor shall submit the report on design mix from any of above approved laboratories for approval of Engineer in Charge within 30 days from the date of issue of letter of acceptance of the tender. No concreting shall be done until the design mix is approved. In case of White Portland Cement and the likely use of admixtures in concrete with ordinary Portland/White Portland Cement, the contractor shall design and test the concrete mix by using trial mixes with white cement and / or admixtures also, for which nothing extra shall be payable.

- a) In case of change of source or characteristic properties of the ingredients used in the concrete mix during the work, the contractor, as per the directions of the Engineer-in-charge, shall submit a revised laboratory mix design report conducted at laboratory established at site.
- b) All cost of mix designing and testing, connected therewith, including charges payable to the laboratory shall be borne by the Contractor including redesigning of the concrete mix whenever required & as directed by Engineer-In-Charge.
- c) The mix design for a specified grade of concrete shall be done for a target mean compressive strength $T_{ck} = F_{ck} + 1.65s$

Where F_{ck} = Characteristic compressive strength at 28 days.
 s = Standard deviation which depends on degree of quality control.

The standard deviation for different grades of concrete shall be as follows: -

GRADE OF CONCRETE	STANDARD DEVIATION
M-20	4.0
M-25	4.0
M-30	5.0
M-35	5.0

Trial Batches

- 1 The designed mix proportions shall be checked for target mean compressive strength by means of trial batches.
- 2 Minimum three sets of separate preliminary tests shall be carried out for each trial batch of concrete mix. Each test shall comprise of six specimens and only one test-set of six specimens shall be made on any particular day.
- 3 The quantities of materials for each trial mix shall be sufficient for at least six specimens (cubes) and the concrete required for carrying out workability tests.
- 4 The workability of trial mix No.1 shall be measured, and mix shall be carefully observed for freedom from segregation, bleeding and its finishing characteristics. The water content, if required, shall be adjusted corresponding to the required changes in the workability.
- 5 With the modified Water Content, the mix proportions shall be recalculated by keeping with water cement ratio unchanged. The mix proportion, as modified, shall form the Trial Mix No.2 and tested for the specified strength and workability.
- 6 In addition, trial mix No.3 and 4 shall be designed by keeping water contents same as that determined for trial mix 2 but varying the water cement ratio by ± 10 percent of the specified value and tested for their design characteristics.

- 7 Out of the six specimens of each set, three shall be tested at seven days and remaining three at 28 days. The preliminary tests at seven days are intended only to indicate the strength to be attained at 28 days, while the design mix shall be approved only on the basis of test strength at 28 days.

2.1.9 APPROVAL OF DESIGN MIX

The design mix shall be considered satisfactory and approved if at least three preliminary test-sets individually satisfy the following strength and workability criteria:

- B) The average strength of each test-set is not less than the specified target mean compressive strength (T_{ck}).
- C) The strength of any specimen cube is not less than $0.85 T_{ck}$.
- D) The concrete mix is of required degree of workability and acceptable concrete finish.

2.2 BATCHING & MIXING:-

- ii) All design mix concrete shall be done using semi-automatic batching plant conforming to IS: 4925 of minimum 5 cum per hour capacity. The automatic batching plant shall be charged by devices when actuated by a single starter switch, will automatically start the weighing operation of each material (i.e. stone aggregate, sand, cement, water, admixture etc.) and stop automatically when designated weight of each material has reached and also it should have rated capacity (in terms of concrete in a single batch). It shall have control panel for operation of the batching plant complete with computerized printing facility.
- iii) The contractor shall be free to use Ready Mix Concrete (RMC) in place of Batch mix concrete at his own cost. The contractor shall ensure that transit mixtures shall transport the concrete to site. All the precautions shall be taken during the transportation and handling of concrete to achieve the desired strength, durability, etc. as envisaged in the Mix Design. Contractor has to get the approval from Engineer-In-Charge regarding source of RMC by giving the details of such plants indicating name of owner / company, its location, technical establishment, past experience and text of Memorandum of Understanding (proposed to be entered between purchaser and supplier). The Engineer-in-Charge, after satisfying himself about quality / capability of the company shall give approval in writing (subject to drawing of MOU). The MOU shall be drawn with RMC plant owner / company and submitted to Engineer-in-Charge within a week of such approval. The contractor will not be allowed to purchase RMC without completion of above formalities for use in the project. Notwithstanding the approval granted by Engineer-in-Charge in aforesaid manner, the contractor shall be fully responsible for quality of concrete including input control, production, transportation and placement etc. The Engineer-in-Charge will reserve the right to deploy his supervisor at RMC plant site to inspect at any such stage and reject the material / concrete etc. if he is not satisfied about quality of material / product.
- iv) All measuring equipment shall be maintained in a clean and serviceable condition and their accuracy shall be checked at least once a month.
- v) Only single sized good quality stone aggregate shall be brought to site of work from the approved source. The grading of the stone aggregate shall be controlled by blending the aggregate of different sizes in the required proportions at site of work

The aggregate of different sizes shall be stock piled separately, preferably a day before use.

The grading of coarse and fine aggregates shall be checked as frequently as possible and as directed by the Engineer-In-Charge to ensure that the specified grading and quality of aggregate is maintained.

- vi) It is important to maintain the Water Cement Ratio constant at its specified or approved value by making adjustment for the moisture contents of both fine and coarse aggregates.

The moisture contents in the aggregate shall be determined as frequently as possible in keeping with the weather conditions and as per the provisions of IS: 2386 (Part-III).

2.3 OTHER OPERATIONS: -

All other operations in concreting work like mixing, slump, laying, placing of concrete, compaction, curing etc. not mentioned in these particular specifications for Design Mix of Concrete shall be as per CPWD Specifications.

2.4 SAMPLING:-

- Samples from fresh concrete shall be taken as per IS 1199-1959 and the test cubes shall be made, cured and tested in accordance with IS: 516-1959.
- Each test sample shall comprise of six test cubes (specimen), three of which shall be tested at 7 days and remaining for testing at 28 days.
- FREQUENCY OF SAMPLING: -
 1. A random sampling procedure shall be adopted to ensure that the sampling is spread over the entire period of concreting and cover all mixing units. The concrete work shall be notionally divided into lots as under for the purpose of sampling conditions.
 - Footings, rafts etc.
 - Columns and walls at all levels.
 - Beams at all levels.
 - Slabs at all levels.
 2. At least one test sample shall be taken for each lot of concrete work.
 3. Each grade of concrete shall form different lot for testing.
 4. The minimum frequency of sampling of concrete of each grade shall be in accordance with CPWD specification 2019, Vol.- I with upto date correction slips.
 5. The concrete work shall be assessed on a day-to-day basis & samples shall be taken as specified.
 6. Work strength test shall be conducted in accordance with IS: 516 on random sampling.

2.4.1 TEST RESULTS OF SAMPLES: -

The test results of the sample shall be the average of the strength of three specimens. The individual variation shall not be more than $\pm 15\%$ of the average. If variation is more, the test results shall be treated as invalid. 90% of the total tests shall be done at the laboratory established at site by the contractor and remaining 10% in any other laboratory as directed by the Engineer-in-Charge.

2.4.2 STANDARD OF ACCEPTANCE: -

- (i) In case the test results of all the samples are above the characteristic compressive strength, the concrete shall be accepted.
- 1 In case the test result of one or more samples fails to meet the requirement (i) above, it shall be accepted if it meets the requirement as laid down in CPWD Specification.

- 2 Concrete of each grade shall be assessed separately.
- 3 Concrete is liable to be rejected, if it is porous or honeycombed or its placing has been interrupted without providing a proper construction joint or the reinforcement has been displaced beyond the tolerances specified, or construction tolerances have not been met.

2.5 MEASUREMENT –

- (i) As per CPWD Specifications.
- (ii) In respect of all projected slabs at all levels including cantilever, canopy, the payment for the RCC work shall be made under the item RCC slabs. The payment for shuttering at the edges shall be made under item of centering and shuttering for RCC slabs. Nothing extra shall be paid for the side shuttering at the edge of these projected balconies / projected verandah slabs.

2.6 TOLERANCES - As per CPWD Specifications.

2.7 RATES: -

- (i) The rate includes the cost of materials, labour and T&P, including mixing, placing, transportation involved in all the operations described above except for the cost of centering, shuttering & reinforcement which will be paid for separately.
- (ii) In case of rejection of concrete on account of unacceptable compressive strength, governed by para “Standard of Acceptance” as above, the work for which samples have failed shall be redone at the cost of contractor. However, the Engineer-in-charge may order for additional tests (like cutting cores, ultrasonic pulse velocity test, load test on structure or part of structure, etc.) to be carried out at the cost of contractor to ascertain if the portion of structure wherein concrete represented by the sample has been used, can be retained on the basis of results of individual or combination of these tests. The Contractor shall take remedial measures necessary to retain the structure as approved by the Engineer-in-charge without any extra cost. However, for payment, the basis of rate payable to contractor shall be governed by the 28 days cube test results and reduced rates shall be regulated in accordance with CPWD Specifications.

2.8 RCC WORK (ORDINARY)

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

2.8.2 Water Cement ratio for Ordinary RCC work shall not be more than 0.5. Contractor shall use concrete mixture of proper design having arrangement for measuring water for mixing of concrete.

2.9 FORM WORK

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

2.9.2 Only M.S. centering / shuttering and scaffolding material unless & otherwise specified shall be used for all R.C.C. work to give an even finish of concrete surface. However, marine-ply shuttering as per site requirement may be used on specific request from contractor to be approved by the Engineer-in-Charge.

2.9.3 Nothing extra shall be paid for the centering and shuttering, circular in shape whenever the formwork is having a mean radius exceeding 6m in plan.

2.9.4 Nothing extra shall be paid for grid beams and the corresponding slabs having clear span more than 1.20 metres.

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

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

- 2.9.6 Steel shuttering as approved by the Engineer-in-Charge shall be used by the contractor. Minimum size of shuttering plates shall be 600mm x 900mm except for the case when closing pieces are required to complete the shuttering panels.

Dented, broken, cracked, twisted or rusted shuttering plates shall not be allowed to be used on the work.

The shuttering plates shall be cleaned properly with electrically driven sanders to remove any cement slurry or cement mortar or rust. Proper shuttering oil or de-bonding compound shall be applied on the surface of the shuttering plates in the requisite quantity before assembly of steel reinforcement.

2.10 REINFORCEMENT: -

- 2.10.1 The reinforcement shall be done as per CPWD Specifications.

- 2.10.2 The rate of item of reinforcement of RCC work includes all operations including straightening, cutting, bending, welding, binding with annealed steel or welding and placing in position at all the floors with all leads and lift complete as per CPWD Specifications.

- i) The contractor shall provide approved type of support for maintaining the bars in position and ensuring required spacing and correct cover of concrete to reinforcement as called for in the drawings, spacer blocks of required shape and size. Chairs and spacer bars shall be used in order to ensure accurate positioning of reinforcement. Spacer blocks shall be cast well in advance with approved proprietary pre-packed free flowing mortars (Conbextra as manufactured by M/S Fosroc Chemicals India Ltd. or approved equivalent) of high early strength and same colour as surrounding concrete, Pre-cast cement mortar/concrete blocks/blocks of polymer shall not be used as spacer blocks unless specially approved by the Engineer-in-charge, rate of RCC items is inclusive of cost of such cover blocks.

2.11 PRE-CAST RCC WORK

- 2.11.1 The work shall be done in accordance with CPWD Specifications.

- 2.11.2 Pre-cast reinforced concrete units shall be of grade or mix as specified. Provision shall be made in the mould to accommodate fixing devices such as hooks etc. and forming of notches and holes. Each unit shall be cast in one operation. A sample of the unit shall be got approved from Engineer-in-charge before taking up the work.

- a) Pre-cast units shall be clearly marked to indicate the top of member and its location.

- b) Pre-cast units shall be stored, transported and placed in position in such a manner that these are not damaged.
- c) The compaction of the concrete shall be done by vibrating, table or external vibrator, as approved by Engineer-in-charge. The rate quoted for the item shall include the element for framework and mechanical vibration.
- d) Rate for item includes cost of all materials, labour, and all operations involved. Cost of M.S. frames, lugs including their welding, lifting hooks is also included.

3.0 BRICK WORK:-

- 3.1 The brick work shall be carried out with local first class bricks of crushing strength not less than 75 kg/cm² and conforming to class designation 7.5 as per relevant IS Code. Clay Brick shall be of red colour, and produce ringing sound when struck and homogenous in formations, regular in shape and size. Fly ash Bricks Should be conforming to IS:12894
- 3.2 The rate shall also include for leaving chases / notches for dowels / cramps for all kinds of cladding to come over brick work.
- 3.3 Brick work provided around shaft or lift walls or around slab cutouts shall be measured in the brick for corresponding floor level. Nothing extra shall be paid on this account.

4.0 STONE / MARBLE WORK :-

- 4.1 General: -The execution of stones work shall be in general as per CPWD Specifications.
- 4.2 SAMPLES FOR STONE WORK:-
Samples of each item of stone work either individually or in combination shall be prepared for approval of Engineer-in-charge before commencement of work.

5.0 WOOD WORK:-

- 5.1 The wood work in general shall be carried out as per CPWD Specifications.
- 5.2 The sample of timber to be used shall be deposited by the contractor with Engineer-in-charge before commencement of work.
- 5.3 Glazing for toilets shall be of translucent type.
- 5.4 The shape and size of beading shall be as per drawings. The joints of beading shall be mitred.
- 5.5 Timber shall be of specified species, good quality and well-seasoned. It shall have uniform colour, reasonably straight grains and shall be free from knots, cracks, shakes and sapwood. It shall be close grained. The contractor shall deposit the samples of species of timber to be used with the Engineer-in-Charge for testing before commencement of the work.
- 5.6 Wood work shall not be painted, oiled or otherwise treated before it has been approved by the Engineer-in-charge. All portion of timber including architrave abutting against masonry, concrete, stone or embedded in ground shall be painted with approved wood preservative or with boiling coal tar.

- 5.7 The contractor(s) shall produce cash voucher and certificates from approved Kiln Seasoning Plants about the timber used on the work having been kiln seasoned and chemically treated by them, falling which it would not be so accepted as kiln seasoned and/or chemically treated.
- 5.8 Transparent sheet glass conforming to IS: 2835 – 1977 shall be used. Thickness being governed as under unless otherwise specified in the item in wood work/steel work:

Area of Glazing	Thickness
(a) For glazing area up to 0.50 sqm	4.0 mm
(b) For glazing area more than 0.50 sqm	5.5 mm

5.9 **Factory made paneled / wire gauge door shutters**

- 5.9.1 The work shall be executed through specialized agencies to be approved by the Engineer in Charge.
- 5.9.2 The shutters should be fabricated in factories & fabrication should conform to CPWD Specifications Para 9.6.6 & IS 1003 Part-I.
- 5.9.3 The contractor shall propose well in advance to Engineer-in-Charge, the names and address of the factory where from the contractor intends to get the shutters manufactured along with the credential of the firm. The contractor shall place the order for manufacturing of shutters only after obtaining approval of the Engineer in Charge whose decision in this case shall be final & binding. In case, the firm is not found suitable, he shall propose another factory. The factory may also be inspected by a group of officers before granting approval; shutters shall however be accepted only if these meet the specified test.
- 5.9.4 Contractor will arrange stage wise inspection of the shutters at factory by the Engineer-in-Charge or his authorized representative. The contractor will have no claim if the shutters brought at site in part or full lot are rejected by the Engineer-in-Charge due to bad workmanship / quality. Such defective shutters will not be measured and paid. The contractor shall remove the same from the site of work within 7 days after the written instruction in this regard are issued by the Engineer-in-Charge.
- 5.9.5 The shutters should be brought at site without primer / painting.

6.0 **STEEL WORK:-**

- 6.1 The work shall be carried out as per CPWD Specifications.
- 6.2 **Pressed Steel Frame / T Iron Frames:** - The work shall be done as per CPWD Specifications. The frames shall be fabricated in approved workshops. The angle and flat iron frames for cupboard shall also be fabricated from the above approved workshops.
- 6.3 **Steel windows / ventilators:** The work shall be done strictly as per CPWD Specifications. Flash butt-welded steel windows / ventilators only shall be provided and shall be procured from the approved manufacturers. The corners should be welded to form a solid fused welded joint conforming to the requirement given below.

2. Weld shall be made all along the place of meeting the member.

3. Weld should be properly grounded.
4. Complete cross section of the corner shall form a solid joint with no cavities, free from cracks, under cutting, overlaps, gross porosity and entrapped slag.

All sub dividing and glazing bars shall be tenoned & riveted into the frames i.e. all centre mullion section F4B and glazing section T2, T6 shall not be directly welded to the frames. For this, a slot has to be cut in the frames, the F4B / T2 / T6 section inserted into it & head be hydraulically tenoned& riveted by Tennon Rivetting Machine.

The thickness of projecting type hinges shall not be less than 3.15 mm. For fixing of hinges to outer frame, slot shall be cut, hinges inserted & welded at the back. For non-projected type hinges, if allowed, the wall thickness shall not be less than 3 mm & total width not less than 40 mm. For fixing, the slot shall be cut in the fixed frames, hinge flap inserted & welded from the back.

The fixing lug shall be as per IS 1038 with adjustable slot & fixed to window frames by screws & nuts. The fixing of unit shall be done as per IS 1081.

- 6.4 **M.S. Sheet Door** – M.S Sheet shall be in one piece i.e. no joint in M.S. Sheet shall be permitted.

7.0 **FLOORING:-**

- 7.1 All work in general shall be carried out as per CPWD Specifications.
- 7.2 Whenever flooring is to be done in patterns of tiles and stones, the contractor shall get samples of each pattern laid and approved by the Engineer-in-charge before final laying of such flooring. Nothing extra shall be payable on this account.
- 7.3 Different stones / tiles used in pattern flooring shall be measured separately as defined in the nomenclature of the item and nothing extra for laying pattern flooring shall be paid over and above the quoted rate. No additional wastage, if any, shall be accounted for any extra payment.
- 7.4 Samples of flooring stones (Kota/ Marble/ Granite etc.) shall be deposited well in advance with the Engineer-in-Charge for approval. Approved samples should be kept at site with the Engineer-in-Charge and the same shall not be removed except with the written permission of Engineer-in-Charge. No payment whatsoever shall be made for these samples.
- 7.5 The Marble/ Kota/ Granite or any other stone shall be fully supported by the details establishing the quarry and its location.
- 7.6 Full width Marble/ Kota/ Granite stone over kitchen platform shall be provided which shall not be less than 900mm long except to adjust for closing pieces. Nothing extra shall be paid on these accounts.

8. **Ceramic Tiles Flooring**

- 8.1 The tiles shall be procured from the approved manufacture of the approved shade & colour.
- 8.2 The tile shall be conforming to IS-13755 & IS-13753 for floor and wall tiles respectively.
- 8.3 Tiles for dado shall be 200mm x 300mm (minimum size) GROUP-III as approved.
- 8.4 Tiles for flooring shall be 300mm x 300mm (minimum size) GROUP-V Tiles as approved.
- 8.5 Test shall be conducted to satisfy the quality of material as per CPWD Specifications

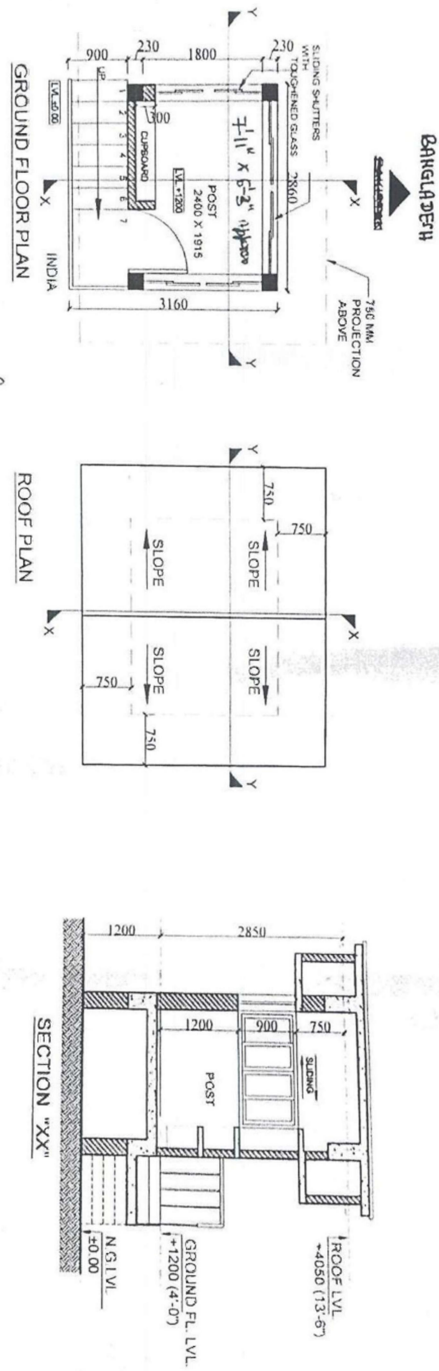
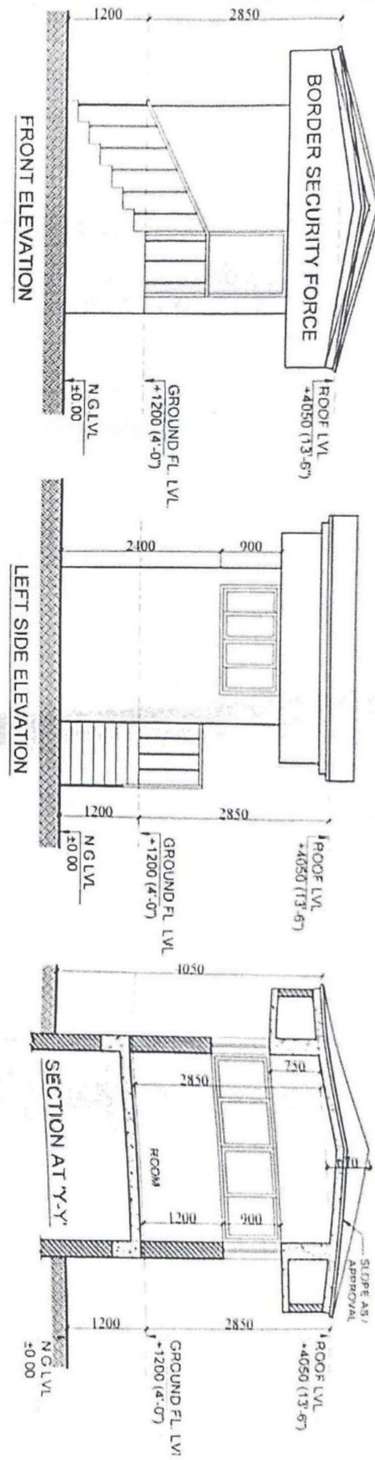
- 8.6 The rate of items of flooring is inclusive of providing sunken flooring in bathrooms, kitchen etc. and nothing extra on this account is admissible. The proper gradient shall be given to flooring for toilets, verandah, kitchen, courtyard, etc. as per the directions of Engineer-in-charge.

9.0. **FINISHING:-**

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

10.0 **SANITARY INSTALLATIONS /WATER SUPPLY / DRAINAGE:-**

- 10.1 The contractor shall submit schematic drawing of water supply and sanitary installation showing details of layout, including internal water supply and drainage details, showing the detail of water supply lines including fittings diameter wise and fixtures connecting to soil waste through traps and connection of W.C. to main shaft pipe for drainage including its ventilation system for approval of Engineer-in-Charge.
- 10.2 For the work of water supply and sanitary installations, the contractor shall engage the approved licensed plumbers and submit the name of proposed plumbing agencies with their credentials for approval of the Engineer-in-Charge.
- 10.3 The work in general shall be carried out as per CPWD Specifications.
- 10.4 The tendered rates shall include the cost of cutting holes in walls, floors, RCC slabs etc. wherever required and making good the same for which nothing extra shall be paid.
- 10.5 The Centrifugally spun cast iron pipe IS: 3989-1984 wherever necessary shall be fixed to RCC columns, beams etc. with Rawl plugs of approved quality and nothing extra shall be paid for on this account.
- 10.6 The pig lead to be used in the jointing should be as per CPWD specifications.
- 10.7 **Nothing extra for providing & fixing CP Brass caps /extension pieces wherever required for CP Brass fittings shall be paid beyond the rates payable for corresponding CP Brass fittings.**
- 10.8 The entire responsibility for the quality of work will however rest with the building contractor only and he shall submit a Guarantee Bond as per prescribed proforma. 10% (ten percent) of the cost of these items would be retained as security deposit and the amount so deducted would be released after two years from the date of completion of the entire work under the agreement, if the performance of the items is found satisfactory. If any defect is noticed during the guarantee period, the contractor should rectify it within seven days and, if not attended to, the same will be got done from another agency at the risk and cost of contractor. However, this security deposit can be released in full, if bank guarantee of equivalent amount is produced and deposited with the department.
11. **Water proofing treatment:** - The water proofing treatment should be as per CPWD specifications.



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Special Conditions

Special Conditions to comply directives of Hon'ble National Green Tribunal and EIA Guidance Manual

1. The contractor shall not store/dump construction material or debris on metaled road.
2. The contractor shall get prior approval from Engineer-in-Charge for the area where the construction material or debris can be stored beyond the metaled road. This area shall not cause any obstruction to the free flow of traffic/inconvenience to the pedestrians. It should be ensured by the contractor that no accidents occur on account of such permissible storage.
3. The contractor shall take appropriate protection measures like raising wind breakers of appropriate height on all sides of the plot/area using CGI sheets or plastic and /or other similar material to ensure that no construction material dust fly outside the plot area.
4. 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.
5. The contractor shall provide mask to every worker working on the construction site and involved in loading, unloading and carriage of construction material and construction debris to prevent inhalation of dust particles.
6. 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.
7. 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.
8. The contractor shall 3compulsory use of wet jet in grinding and stone cutting.
9. The contractor shall comply all the preventive and protective environmental steps as stated in the MoEF guidelines, 2010.
10. The contractor shall carry out on-Road- Inspection for black smoke generating machinery. The contractor shall use cleaner fuel.
11. The contractor shall ensure that all DG sets comply emission norms notified by MoEF.
12. The contractor shall use vehicles having pollution under control certificate. The emissions can be reduced by a large extent by reducing the speed of a vehicle to 20 kmph. Speed bumps shall be used to ensure speed reduction. In cases where speed reduction cannot effectively reduce fugitive dust, the contractor shall divert traffic to nearby paved areas.
13. 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.
14. The paving of the path for plying of vehicles carrying construction material is more permanent solution to dust control and suitable for longer duration projects. The NIT approving authority shall carry out cost benefit ratio analysis of the same.

SPECIAL CONDITION FOR CEMENT AND STEEL

1.0 CEMENT

- 1.1 The contractor shall procure Portland Pozzolana Cement as per IS: 1489 (Part-I) as required in the work from the reputed manufacturers of cement such as ACC, Ultratech, Shree Cement, Ambuja, J. K. Lakshmi, Nuvoco Cement and as per IS: 455-2015 from JSW Cement Ltd. is also permitted. Engineer-in-charge may approve change in brand of cement depending upon availability in local market from any other reputed cement manufacturer having a production capacity not less than one million tonnes per annum conforming to same grade and only with ISI mark, if warranted and requested by the contractor to Engineer-in-charge.
- 1.2 The cement shall be brought at site in bulk supply of approximately 50 tonnes or as decided by the Engineer-in-Charge.
- 1.3 The cement godown of the capacity to store a minimum of 2000 bags of cement or as decided by Engineer-in-charge in case less than 100 MT cement is required for the work, shall be constructed by the contractor at site of work for which no extra payment shall be made.
- 1.4 The contractor shall be responsible for the watch and ward and safety of the cement godown. The contractor shall facilitate the inspection of the cement godown by the Engineer-in-Charge or his authorized representatives at any time.
- 1.5 The cement shall be got tested by the Engineer-in-Charge and shall be used on the work only after satisfactory test results have been received. The contractor shall supply free of charge the cement required for testing including its transportation cost to testing laboratories. The cost of tests shall be borne by the contractor / Department in the manner indicated below: (a) By the contractor, if the results show that the cement does not conform to the relevant BIS codes. (b) By the Department, if the results show that the cement conforms to relevant BIS codes.
- 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. The theoretical consumption of cement shall be worked out as per procedure prescribed in clause 38 of the contract and shall be governed by the conditions laid therein. In case the cement consumption is less than theoretical consumption including permissible variation, recovery at rate so prescribed shall be made after ensuring structural soundness and stability on the basis of testing. In case of excess consumption, no adjustment shall be made.
- 1.7 Cement brought to site and cement remaining unused after completion of work shall not be removed from site without written permission of the Engineer-in-charge.
- 1.8 The damaged cement shall be removed from the site immediately by the contractor on receipt of a notice in writing from the Engineer-in-charge. If he does not do so within 3 days of receipt of such notice, the Engineer-in-charge shall get it removed at the cost of the contractor.
- 1.9 The cement bags shall be stacked on proper floors consisting of two layers of dry bricks laid on well consolidated earth at a level of at least one foot above ground. The stacks shall be in rows of 2 and 10 bags high with minimum of 0.6m clear. Bags should be placed horizontally continuous in each line. Actual size / shape of godown shall be as per site requirement and nothing extra shall be paid on this account. The decision of Engineer-in-charge regarding capacity shall be final.

2 CONDITIONS FOR STEEL

- 2.1 For reinforced cement concrete or pre-stressed concrete works, the reinforcement bars shall consist of following grades confirming to IS 1786 : 2008(Indian Standard specification for high strength deformed steel bars and wires for concrete reinforcement) Fe 415, Fe 415D, Fe 500D, Fe 500S and Fe 550D.
- 2.2 The contractor shall obtain manufacturer's certificate stating the process of manufacture, chemical composition and test sheet giving result of each mechanical test applicable to the material purchased and submit it to the Engineer-in-charge. Each test certificate shall indicate the number of the cast to which it applies, corresponding to the number or identification mark to be found on the material.
- 2.3 Engineer-in-charge shall get each consignment tested for both chemical composition and physical properties (including bend and re-bend test) as specified in IS: 1786 from NABL accredited laboratory or any Government laboratory.
- 2.4 The steel reinforcement bars shall be stored by the contractor at site of work in such a way as to prevent their distortion and corrosion, and nothing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.
- 2.5 For checking nominal mass, tensile strength, bend test, re-bend test etc. Specimens of sufficient length shall be cut from each lot for each size of the bar at random.
- 2.6 The contractor shall supply free of charge the steel required for testing including its transportation to testing laboratories. The cost of tests shall be borne by the contractor.
- 2.7 The procurement 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 therein.
- 2.8 The steel brought to site and steel remaining unused shall not be removed from site without the written permission of the Engineer-in-Charge.
- 2.9 **Only Corrosion Resistant Steel (CRS) bars shall be used.**

LIST OF PREFERED MAKE OF MATERIALS

Note :

- 1) A list of Preferred Brand Names of various materials / products are shown below 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 specific approval in writing of the alternative brand by the Chief Engineer, IBBZ-I, CPWD Siliguri. However, in case, alternative brand is allowed to be used, as stated above. It will be subject to cost adjustment. If such approved material of alternative brand is cheaper than the model/brand already mentioned in item /approved make list, the price adjustment will be made based on the difference in market rates. In case, the rate of approved material of alternative brand is more than the model/brand already mentioned in item/approved make list, no extra payment will be made on this account.
- 2) 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.
- 3) 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.
- 4) All vouchers along with Manufacturer Test Certificate (MTC) of all raw materials used to fabricate fencing components are to be provided by the agency during every consignment. Token of signature with all field Engineers (EE/AE/JE), technical representatives of the contractor to be recorded in MTC register in proper format, serially with date for every type of raw materials.
- 5) It is the duty of Engineer-in-charge to ensure proper checking of MTC and vouchers, placed in record for presenting to the higher authority whenever visited at site.

	Component	Preferred Make
1	Cement	ACC, Ultratech, Shree Cement, Ambuja, J. K. Lakshmi, Bharat Cement, Star Cement, Nuvoco
2	TMT CRS bars	SAIL, RINL Vizag, TATA, Jindal Panther, JSW Neo Steel
3	Bitumen	IOCL, BPCL, HPCL
4	Bitumen Emulsion	BIS Certified follows relevant IS code
5	RCC NP2/NP3 pipe	BIS Certified
6	Structural Steel	TATA/SAIL/JINDAL/RINL/JSW
7	MS angle	TATA/SAIL/JINDAL/RINL/ JSW
8	Welding Electrodes	ESAB, Advani-orlikon, weld Alloy Products Ltd.
9	Pre-coated galvanized iron profile sheet	TATA-Bluescope, Bhushan Power of steel profile sheet, Jindal and other manufacturers approved by Chief Engineer-in-charge.
10	Ceramic / Glazed Tiles	Kajaria, Rak, Orient bell, Jhonson, AGL, Somany,
11	Vitrified / Digital Glazed Vitrified Floor Tiles (DGVT)	Kajaria, Rak, Orient bell, Jhonson, AGL, Somany,
12	Putty	Birla, J.K. Putty or equivalent.
13	Wash Basin and WC PAN	Parryware, Hindware, Johnson, Cera.
14	Clear glass	Modi Guard, Saint Gobain, AIS

15	G.I. pipes and accessories	Tata, Jindal, Prakash, Surya.
16	Hubless centrifugally Cast Iron Spun Pipes & fittings IS:15905	Neco, HEPCO, BIC
17	Brass / CP Brass fittings	Jaquar, Hindware, Parryware
18	Aluminium sections (Anodising by approved anodizing firm)	Jindal, Hindalco, Indian Aluminium Co.
19	Stainless Steel section for stair case railing	Jindal Stainless Steel Ltd., Hardwyn
20	Water proofing compound	PIDILITE, CICO, FOSROC
21	Stainless steel sink	Neelkanth, Nirali
22	Plastic W.C. seat cover	Parryware, Hindware, Johnson
23	PVC tanks	Sintex ,Polycon, Patton.
24	Mirrors	Saint Gobain, Modi Guard & HNG
25	CP waste & flush pipes	As approved by Engineer-in-Charge.
26	PVC flushing cistern.	Parryware, Hindware, Johnson.
27	Tile Fixer / Adhesive	As approved by Engineer-in-Charge.
28	Paint	Akzo Nobel, Berger, Jonson's and Nicholson, Asian Paints, Nerolac

LIST OF MINIMUM EQUIPMENT TO BE PROVIDED IN THE FIELD TESTING LABORATORY BY THE CONTRACTOR AT HIS OWN COST TO BE ESTABLISHED AT LOCATION

Sl. No.	Name of Equipment	Numbers
A	Concrete and other works	
1	Oven – Electrically operated, thermostatically controlled, range upto 200 C sensitivity 1 C	2 Nos.
2	Platform balance 300 kg capacity	2 Nos.
3	Balance 20 kg capacity-self indicating type	2 Nos.
4	Electronic Balance 5 kg capacity accuracy 0.5 gm	2 Nos.
5	Water bath-electrically operated and Thermostatically controlled with adjustable Shelves, sensitivity 1 C	1 No.
6	Thermometers: Mercury-in-glass thermometer range 0 to 250 C Mercury-in-steel thermometer with 30 cm Stem, range upto 300 C for bituminous work	2 Nos.
7	Kerosene or gas stove or electric hot plate	2 Nos.
8	Glass wares, spatulas, wire gauzes, Steel scales, measuring tape, casseroles, Karahis, enameled trays of assorted sizes, Pestle-mortar, porcelain dishes, gunny bags, Plastic bags, chemicals, digging tools like Pickaxes, shovels etc.	As required
9	Water testing kit	2 set
10	First aid box	2 set
11	Standard measures of 30, 15 and 3 litres capacity along with standard tamping rod	2 set
12	3 m straight edge	2 No.
13	Camber board	2 No.
14	Total Station Survey Instrument	1 No.
15	Levelling Instrument	1 No.
16	Set of Brass and metal sieves of required size for testing coarse and fine aggregate.	1 set
17	Graduated measuring cylinder.	2 set
18	Slump cone with tamping rod and non-absorbent platform, steel scales & scoop.	2 Nos.
19	Cube molds of 15x15x15 cm size.	24Nos
20	Compression Testing Machine of 100 tonne capacity with (i) Pruning Rods 2 Kg weight length 40 cm and ramming face 25 mm – 1 No. (ii) Extra Bottom plates for 15 cm cube molds – 6 No. (iii) Standard Vibration table for cubes – 1 No. (iv) Dial gauges 25 mm travel – 0.01 mm/ division Least count – 1 No.	1 No.
21	Compaction Test Equipment both 2.5 Kg and 4.5 Kg Rammers (Light and Heavy compactive efforts)	2 Nos.
22	Dry Bulk Density Test apparatus (sand pouring Cylinder, tray, can etc.) complete	2 Nos.
23	Speedy Moisture Meter complete with chemicals Glassware, spatulas, wire gauzes, steel scales, measuring tape, casseroles, Karahis, enameled trays of assorted sizes, Pestle-mortar, porcelain dishes, gunny bags, Plastic bags, chemicals, digging tools like Pickaxes, shovels etc. --- As required	2 Nos.

List of Machinery, Tools & Plants required for execution at site by the bidder.

1.	Concrete mixer with hopper (Diesel/ Electrical)	01 No
2.	Needle Vibrator (electrical/ Petrol)	02 No
3.	Grinder/ Drilling Machine etc.	02 No
4.	Water Pump (electrical/ Petrol)	02 No
5.	Self-loading mobile concrete mixer	02 No
6.	Water tanker minimum capacity 5000 ltr	02 No
7.	Welding machine 400 amp	01 No
8.	Reinforcement bending machine	02 No
9.	Screener for coarse and fine sand	02 No
10.	Concrete mixer with hopper (Diesel/ Electrical)	01 No
11.	Needle Vibrator (electrical/ Petrol)	02 No

Note: 1. The above list is only indicative and not exhaustive. The Bidder may be required to deploy more T&P as per requirement of work.

2. All the above plants & equipment's are to be deployed as and when required or directed by Engineer-in-Charge.

Schedule of Quantity

Name of work:- Construction of 121 nos. Sentry Post (Single Storied) from GIN 115 to GIN 255 (BP No. 247/1-S to 790/6-S) along IBB in the state of West Bengal. (SH: Construction of 56 Nos. Single storied Sentry Post (West Bengal). (Package-I).

Item No	Description of item	Quantity	Rate in Rs.	Unit	Amount in Rs.
	SH-I: EARTH WORK				
1.1	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and for all lift, as directed by Engineer-in-charge.				
1.1.1	All kinds of soil	4615.00	177.50	Cum	8,19,163.00
1.2	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, for all lift, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.				
1.2.1	All kinds of soil.	51.00	260.30	Cum	13,275.00
1.3	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 and for all lift.	3111.00	196.00	Cum	6,09,756.00
			Total Rs.		14,42,194.00
	Multiplying correction factor 0.973 for DSR-2023 items - 1.1.1, 1.2.1, 1.3 i.e. on Rs.	1442194.00			14,03,255.00
	Add cost index @ $(120-100) \times 100/100 = 20\%$ on Rs.	1403255.00			2,80,651.00
		SH-I: Total		Rs.	16,83,906.00
	SH-II: CONCRETE WORK				
2.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				

2.1.1	1:5:10 (1 cement : 5 coarse sand (zone-III) derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)	112.00	6518.60	cum	7,30,083.00
2.2	Centering and shuttering including strutting, propping etc. and removal of form work for :				
2.2.1	Foundations, footings, bases for columns	129.00	392.15	Sqm	50,587.00
			Total Rs.		7,80,670.00
	Multiplying correction factor 0.973 for DSR-2023 items - 2.1.1, 2.2.1 i.e. on Rs.	780670.00			7,59,592.00
	Add cost index $@(120-100) \times 100/100 = 20\%$ on DSR-2023 items - 2.1.1, 2.2.1 i.e. on Rs.	759592.00			1,51,918.00
		SH-II: Total		Rs.	9,11,510.00
	SH-III: REINFORCED CONCRETE WORK				
3.1	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.				
3.1.1	All works upto plinth level				

3.1.1.1	Concrete of M30 grade with minimum cement content of 350 kg /cum	874.00	9655.70	cum	84,39,082.00
3.1.2	All works above plinth level upto floor V level				
3.1.2.1	Concrete of M30 grade with minimum cement content of 350 kg /cum	364.00	10011.35	cum	36,44,131.00
3.2	Centering and shuttering including strutting, propping etc. and removal of form for				
3.2.1	Foundations, footings, bases of columns, etc. for mass concrete	460.00	392.15	sqm	1,80,389.00
3.2.2	Suspended floors, roofs, landings, balconies and access platform	2190.00	927.25	sqm	20,30,678.00
3.2.3	Lintels, beams, plinth beams, girders, bressumers and cantilevers	2470.00	736.40	sqm	18,18,908.00
3.2.4	Columns, Pillars, Piers, Abutments, Posts and Struts	2767.00	961.30	sqm	26,59,917.00
3.2.5	Stairs, (excluding landings) except spiral-staircases	225.00	764.95	sqm	1,72,114.00
3.2.6	Weather shade, Chajjas, corbels etc., including edges	650.00	951.10	Sqm	6,18,215.00
3.2.7	Extra for additional height in centering, shuttering where ever required with adequate bracing, propping etc., including cost of de-shuttering and decentering at all levels, over a height of 3.5 m, for every additional height of 1 metre or part thereof (Plan area to be measured).				
3.2.7.1	Suspended floors, roofs, landing, beams and balconies (Plan area to be measured)	365.00	384.30	Sqm	1,40,270.00
3.3	Providing, transporting, hoisting and fixing above plinth level up to floor five level precast reinforced cement concrete in shelves, including setting in cement mortar 1:3 (1cement : 3 coarse sand), cost of required centering, shuttering and finishing with neat cement punning on exposed surfaces but , excluding the cost of 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).	11.19	20355.80	Cum	2,27,781.00

3.4	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete up to plinth level.				
3.4.1	Thermo-Mechanically Treated bars of grade Fe-500D or more.	114872.00	107.85	kg	1,23,88,945.00
3.5	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.				
3.5.1	Thermo-Mechanically Treated bars of grade Fe-500D or more.	47565.00	107.85	kg	51,29,885.00
3.6	Smooth finishing of the exposed surface of R.C.C. work with 6 mm thick cement mortar 1:3 (1 Cement : 3 fine sand).	6664.00	300.45	Sqm	20,02,199.00
3.7	Add for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	912.00	78.40	meter	71,501.00
3.8	Add for using extra cement in the items of design mix over and above the specified cement content therein.	433.00	733.50	quintal	3,17,606.00
			Total Rs.		3,98,41,621.00
	Multiplying correction factor 0.973 for DSR-2023 items - 3.1.1.1, 3.1.2.1, 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.2.5, 3.2.6, 3.2.7.1, 3.3, 3.4.1, 3.5.1, 3.6, 3.7, 3.8 i.e. on Rs.	39841621.00			3,87,65,897.00
	Add cost index $@@(120-100) \times 100/100 = 20\%$ on DSR-2023 items - 3.1.1.1, 3.1.2.1, 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.2.5, 3.2.6, 3.2.7.1, 3.3, 3.4.1, 3.5.1, 3.6, 3.7, 3.8 i.e. on Rs.	38765897.00			77,53,179.00
		SH-III: Total		Rs.	4,65,19,076.00
	SH-IV: MASONRY WORK				
4.1	Brick work with common burnt clay machine moulded perforated bricks of class designation 12.5 conforming to IS: 2222 in superstructure above plinth level up to floor five level in cement mortar 1:6 (1 cement : 6 coarse sand) :				
4.1.1	With F.P.S.(non modular) bricks	123.00	9299.90	cum	11,43,888.00
4.2	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level.				

4.2.1	Cement mortar 1:4 (1 cement :4 coarse sand)	683.00	1123.80	sqm	7,67,555.00
			Total Rs.		19,11,443.00
	Multiplying correction factor 0.973 for DSR-2023 items - 4.1.1, 4.2.1 i.e. on Rs.	1911443.00			18,59,834.00
	Add cost index $@(120-100) \times 100/100 = 20\%$ on DSR-2023 items - 4.1.1, 4.2.1 i.e. on Rs.	1859834.00			3,71,967.00
		SH-IV: Total		Rs.	22,31,801.00
	SH-V: STEEL & ALUMINIUM WORK				
5.1	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.				
5.1.1	Fixed to steel windows by welding	6854.00	219.10	kg	15,01,711.00
5.2	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :				
5.2.1	For fixed portion				
5.2.1.1	Powder coated aluminium (minimum thickness of powder coating 50 micron)	2876.00	530.90	Kg	15,26,868.00

5.3	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :				
5.3.1	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately)				
5.3.1.1	Powder coated aluminium (minimum thickness of powder coating 50 micron)	2419.00	634.45	Kg	15,34,735.00
5.4	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge. (Cost of aluminium snap beading shall be paid in basic item):				
5.4.1	With float glass panes of 5 mm thickness (weight not less than 12.50 kg/sqm)	212.90	1505.25	Kg	3,20,468.00
5.5	Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6 mm angle iron and 3 mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer.				
5.5.1	Using M.S. angels 40x40x6 mm for diagonal braces	106.00	5804.35	sqm	6,15,261.00

5.6	Providing and fixing T-iron frames for doors, windows and ventilators of mild steel Tee-sections, joints mitred and welded, including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer.				
5.6.1	Fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	1081.00	141.70	Kg	1,53,178.00
5.7	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts	2576.00	772.40	Kg	19,89,702.00
			Total Rs.		76,41,923.00
	Multiplying correction factor 0.973 for DSR-2023 items - 5.1.1, 5.2.1.1, 5.3.1.1, 5.4.1, 5.5.1, 5.6.1, 5.7 i.e. on Rs.	7641923.00			74,35,591.00
	Add cost index $@@(120 -100) \times 100/100=20\%$ on DSR-2023 items - 5.1.1, 5.2.1.1, 5.3.1.1, 5.4.1, 5.5.1, 5.6.1, 5.7 i.e. on Rs.	7435591.00			14,87,118.00
		SH-V: Total		Rs.	89,22,709.00
	SH-VI: FLOORING				
6.1	Kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement: 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	347.00	2354.70	sqm	8,17,081.00
6.2	Providing and fixing 1st quality ceramic glazed floor tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of cement Mortar 1:3 (1 cement: 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	62.00	1112.70	Sqm	68,987.00

6.3	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.	213.00	1330.00	Sqm	2,83,290.00
			Total Rs.		11,69,358.00
	Multiplying correction factor 0.973 for DSR-2023 items - 6.1, 6.2, 6.3 i.e. on Rs.	1169358.00			11,37,785.00
	Add cost index $[(120-100) \times 100/100 = 20\%$ on DSR-2023 items - 6.1, 6.2, 6.3 i.e. on Rs.	1137785.00			2,27,557.00
		SH-VI: Total		Rs.	13,65,342.00
	SH-VII: FINISHING				
7.1	12 mm cement plaster of mix :				
7.1.1	1:6 (1 cement: 6 coarse sand)	1277.00	343.65	Sqm	4,38,841.00
7.2	15 mm cement plaster on the rough side of single or half brick wall of mix :				
7.2.1	1:6 (1 cement: 6 coarse sand)	829.00	395.35	Sqm	3,27,745.00
7.3	Lettering with black Japan paint of approved brand and manufacture	26566.40	6.15	per letter per cm height	1,63,383.00
7.4	Wall painting with acrylic emulsion paint, having VOC (Volatile Organic Compound) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour				
7.4.1	Two coats	2000.00	137.45	Sqm	2,74,900.00
7.5	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content.				
7.5.1	With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre	2000.00	73.95	Sqm	1,47,900.00

7.6	Finishing walls with ready mixed Premium acrylic emulsion paint (Company Depot Tinted) having VOC less than 50 gm/litre and UV resistance as per IS 15489:2004, Alkali & fungal resistance, dirt resistance exterior paint of required shade with silicon additives.				
7.6.1	New work (Two or more coats applied @ 1.43 litre/ 10 sqm over and including priming coat of exterior primer applied @ 0.90 litre/10 sqm.	3976.00	181.25	Sqm	7,20,650.00
7.7	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :				
7.7.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	500.00	226.25	Sqm	1,13,125.00
			Total Rs.		21,86,544.00
	Multiplying correction factor 0.973 for DSR-2023 items - 7.1.1, 7.2.1, 7.3, 7.4.1, 7.5.1, 7.6.1, 7.7.1 i.e. on Rs.	2186544.00			21,27,507.00
	Add cost index $ @(120-100) \times 100/100=20\%$ on DSR-2023 items - 7.1.1, 7.2.1, 7.3,7.4.1, 7.5.1, 7.6.1, 7.7.1 i.e. on Rs.	2127507.00			4,25,501.00
		SH-VII: Total		Rs.	25,53,008.00
	Grand Total (SH-I to SH-VII)				6,41,87,352.00

PART – C (Electrical Part)

Proforma of Schedule SCHEDULES A to F

SCHEDULE 'A'

Schedule of quantities: **Page No. 91-94 (Electrical)**

SCHEDULE 'B'

Schedule of materials to be issued to the contractor:

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

SCHEDULE 'C'

Schedule of Tools and Plants to be hired to the contractor

S. No.	Description	Hire charges per day	Place of issue
1	2	3	4
-----NIL -----			

SCHEDULE 'D'

Extra schedule for specific requirements/document for the work, if any: **NIL**

SCHEDULE 'E'

Reference to General Conditions of contract –

General Conditions of Contract 2023 for Construction work, CPWD with upto date modifications & upto date correction slips

Name of Work	:	Construction career of 121 Nos. Sentry post (Single Storied) from GIN-115 to GIN- 255 (BP No. 247/1-S to 790/6-S) in state of West Bengal along Indo- Bangladesh border. (Electrical Works) (For C/o 56 Nos. Sentry Post). (Package-I)
Estimated cost of the work (Electrical Portion)	:	₹ 32,46,824/-
i) Earnest money	:	As mentioned in Major Component
ii) Performance Guarantee	:	
iii) Security Deposit	:	

- * LED fittings shall have guarantee for a period of five years to be reckoned from date defined in this document. 50% of the PG of the work shall be refunded after completion of the work or date of offer of handing over of installation to the BSF whichever is later. Remaining 50 % of PG shall be retained as security Deposit. 50% of PG retained as security Deposit Plus 2.5 % Security Deposit already deducted from running bills (Total 2.5% PG +2.5% SD= 5.00 %) shall be refunded proportionately per year in a period of five years which shall be reckoned from the date of completion of work or handing over of installation to the BSFwhichever is later.

SCHEDULE 'F'

GENERAL RULES & DIRECTIONS:

Officer inviting tender	:	Executive Engineer, BFD-VIII, C.P.W.D., Balurghat or his successor thereof
Maximum percentage of quantity of items of work to be executed beyond which rates are to be determined in accordance with Clause 12.2.& 12.3	:	Defined under clause 12 here-in-after.
Definitions: 2(vi)	Engineer-in-Charge For Electrical items of work	: Executive Engineer (E), Border Fencing Electrical Division-I, CPWD, Siliguri or his successor thereof
2(viii)	Accepting Authority	: As mentioned in Major Component
2(x)	Percentage on cost of materials and labour to cover all overheads and profits	: 15%
2(x) (a)	Standard Schedule of Rates: <u>Electrical Items of Work:</u>	Market rate derived on the basis of DSR"25
2 (xi)	Department:	: Central Public Works Department
9(ii)	Standard CPWD contract Form:	: CPWD Form 7 of General Condition of Contract 2023 for Construction work, CPWD with up-to-date correction slips till last date of submission of bid. This contract form will be integral part of the agreement.

Clause 1	iii) 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
	iv) Maximum allowable extension with late fee @ 0.1% per day of Performance Guarantee amount beyond the period as 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 of milestone as per table given below:	As per Major component

Mile stone(s) as per table given below: As per Major Component

Authority to decide	(iv) Extension of time	As per Major component
	(v) Rescheduling of mile stone	As per Major component
	(vi) Shifting of date of start in case of delay in handing over of site	As per Major component

Clause 6	Computerized measure book (CMB) / Electronic measurement book (EMB)	CMB
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.	₹ 5.00 lacs
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	Engineer-in-charge
Clause 10 A	List of testing equipment to be provided by the contractor at site of the work	As per direction of Executive Engineer (Elect.)
Clause 10B(ii)	Whether clause 10B (ii) shall be applicable	No
Clause 10 C	Component of labour expressed as percent of value of work:	Not applicable

Clause 10 CC	Applicable/not applicable	As per Major component
Clause 11	Specifications to be followed for execution work	CPWD Specifications for Electrical work Part-I (Internal)- 2023, Part-II (External)- 2023, Part-IV (Substation) — 2013, and Particular specifications given in this document.
Clause 12	Deviation limit beyond which clauses 12.2 & 12.3 shall apply for all the items	100%
Clause 16	Competent Authority for Deciding reduced rates	As per Major component
Clause 18	List of mandatory machinery, tools & plants to be deployed by the contractor at site.	As required for installation and commissioning of LED fittings
Clause 19C	Authority to decide penalty for each default	Engineer-in-charge
Clause 19D	Authority to decide penalty for each default	Engineer-in-charge
Clause 19G	Authority to decide penalty for each default	Engineer-in-charge
Clause 19K	Rate of compensation to be paid	₹ 781/- per tradesman
Clause 25		As per amended provision in annexure-I , Page no 33-36
	Conciliator	Additional Director General, Border, CPWD
	Arbitrator Appointing Authority	Chief Engineer, IBBZ-1
	Place of Arbitration	Siliguri, West Bengal

Clause 32 : Requirement of Technical Representative(s) and recovery Rate

S. No.	Minimum Qualification of Technical Representative	Discipline	Designation (Principal/ Technical/ Technical Representative)	Minimum Experience (Years)	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 32	
						Figures	Words
1	Graduate Engineer Or Diploma Engineer	Electrical	Project Manager cum planning/ quality/ site / billing Engineer	2 or 5 respectively	1	₹15000/- p.m.	Rupees Fifteen thousand per month, per person

The Retired Executive Engineer/Assistant Engineer who is holding Diploma is treated at par with Graduate Engineers for the operation of the Clause. Diploma holder with minimum 10 year relevant experience with a reputed construction company can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineers.

Clause 38			
i)	a)	Schedule/ statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates 2023 printed by CPWD	D.S.R. 2023 with correction slips up to date
ii)		Variations permissible on theoretical quantities	
	a)	Cement	2% plus/minus
	b)	Bitumen all works	Not Applicable
	c)	Steel reinforcement and structural steel Sections for diameter, section and category.	Not Applicable
	d)	All other materials	Not Applicable

Salient Requirements for the Tender

1. The scope of work includes providing LED lights on Sentry post as per detailed specification, nomenclatures of items in schedule of quantity given in the tender.
2. The tenderer is advised to read and examine the tender documents for the work and the set of drawings available with Engineer-in-charge. He should inspect and examine the site and its surroundings by himself before submitting his tender.
3. This work will be carried at Sentry post. LED fitting & bulkhead fitting to be installed in sentry post. The work consists of MS conduit, Modular box with switch & socket & Cu. cable & installation of LED fittings & fans as per particular specification given in this tender to achieve the illumination level as mentioned in this tender document,
4. Time allowed for the execution of work is **as per mentioned in Major component.**
5. The contractor(s) shall submit a detailed program of execution in accordance with the milestone within seven days from the date of issue of award letter.
6. Quality of the project is of utmost importance. This shall be adhered to in accordance with the provisions of CPWD specifications, particular specification, BIS standard and guidelines given in the relevant paras.
7. Contractor shall deploy required Plant and machinery at the project site. In case the contractor fails to deploy the plant and machinery wherever and whenever required the Engineer-in-charge shall be at liberty to get the same deployed at the risk and cost of the contractor.
8. The contractor shall submit the running bills in the shape of the computerized MB in pages of A-4 size as per the standard format of department and shall act as per clause 6 of Standard CPWD contract form defined in Proforma of Schedules of this NIT document.
9. The agency during 5 years guarantee period, shall repair/replace the defective fittings within 48 hrs. of receiving such information from BSF/CPWD and must keep sufficient manpower, T & P, Spare parts in working condition at his own cost. Nothing extra shall be paid on this account.
10. The intending bidders must have **valid Electrical License applicable in West Bengal.** If the bidder has not Valid Electrical License as applicable, then he shall associate a CPWD enlisted agency of appropriate category having Valid Electrical License, for execution of E & M works within 15 days from the date of receipt of award letter.

Additional Conditions

1. The work is of sensitive nature and meant for National Security, target date for completion of the work has to be adhered strictly. The contractor shall plan and execute the work, adhering to the scheduled date of completion, which may require simultaneous taking up the work at various locations by deploying additional manpower and machinery at his own cost for which nothing extra shall be paid. All the staff deployed by the contractor shall be of sound integrity and the antecedents of the staff needs to be got verified from the police authorities. The contractor shall have to coordinate with police authorities, if required. The contractor and his men shall have to abide by the security instructions of BSF authorities and the normal working time shall be in day time. No claim of idle labour or any other claim on this account shall be entertained by the Department.
2. In case of reduction in scope of work, the contractor shall have no claim on account of loss of expected profit, consequential overheads etc. due to reduction in value of work.
3. The contractor will take full precaution & safety measure during execution of work. If any kind of mis-happenings/human loss occurs during execution of work at site, the contractor will be fully responsible for it and liable to bear all losses and has to pay full compensation to the workman. The department will not take any responsibility for such type of happening.
4. BSF authorities may restrict the normal working time due to security concern at times. The contractor shall have no claim of idle labour or any other claim on this account. No claim from contractor for extra payment on account of any change in working hours shall be entertained by the department.
5. All the work shall be carried out as per CPWD General specification for Electrical work part-1 (Internal 2023), part-2 (External) 2023 and Part- IV (Substation) 2013 amended up to date and should also comply with relevant provisions of the Indian Electricity Rules and/Acts as applicable, amended up to date and particular specifications given in this document.
6. All concealed works and earthing shall have to be done in presence of the Engineer-in-Charge or his authorized representative.
7. Earth continuity and availability shall be ensured by the contractor during execution of work.
8. The contractor shall submit neatly prepared electrical inventory of electrical installations intriplicate to department after completion of work.
9. The dismantled material will be carried away from the site only after written permission of Engineer in Charge or his authorized representatives. Dismantled material shall be credited to the contractor on as is where is basis. The contractor shall be responsible for watch and ward of all dismantled fittings and he will have no claim for missing dismantled MCB/fittings, if any, from site.
10. The contractor shall ensure that all the persons executing the electrical works have the valid electrical license issued by competent authority.

11. The contractor will make his own arrangements for transportation of his men and materials up to the site of work and taking the men and material up to place of installation. Security and watch& ward of the materials brought at site and the work/installation executed by him, safety of his men and materials shall be his responsibility till the work as a whole is completed and handed over to the department for its beneficial use and nothing extra shall be paid by the department on this account.
12. All the cable terminals for connection to MCB's/MCCB's/Switch gear etc. shall be provided with suitable capacity of thimbles/sockets.
13. All repairs & patch work shall be neatly carried out to match with the original finish & all damages caused to the electrical installations during the execution of work, shall have to be made good by the contractor immediately at his own cost to the entire satisfaction of Engineer-in-charge. In case contractor fails to comply with the instructions, the Engineer-in-charge shall be at liberty to get the work done by any third agency at the cost of the contractor and recover such amount paid from the bill(s) of the contractor.
14. Payment for the work done shall be made as per schedule given in the following table-

Sl. no	Stage of work	Payment
	Initial inspection and supplying of materials	NIL
	Supplying, Installation testing and commissioning of MS conduit and laying of Cu wire, Modular box & switch, socket etc and LED fittings, DB & MCB i/c connection etc in all respect.	70% of tendered rate of related items
	Testing commissioning of the fittings/fans.	25% of tendered rate of related items
	Handing over the installation to the BSF for use.	5% of tendered rate of whole items.
15. **All the material (MS conduit, LED Luminaries, DB, MCB, wire etc.) required for the work shall be procured after approval of Engineer-in-charge and directly from the approved manufacturer or their authorized distributors/dealers only. As and when the contractor places order for the MS conduit, LED fittings, DB, MCB, wire etc., a copy of such orders shall be endorsed to the Engineer-In-Charge. Department shall not take back any spare quantity of items, if procured more than what is required at the site.**
16. The contractor shall install MS conduit, Cu wire, LED Luminaries, fans of one make only. However, Engineer-In- Charge, at its discretion may allow more make if the situation demands so.
17. The fixing arrangement of MCB shall be done by the agency by providing din bar where ever required at his own cost.

Factory/Works and Laboratory Testing

1. The contractor must intimate to the Engineer-in-Charge at least fifteen days in advance, about the probable dates for inspection of materials like LED Fittings etc. The contractor shall coordinate and make arrangements for inspection. The contractor shall furnish certified copies of all the Test Certificates, as prescribed in the relevant BIS standards to the department.
2. The Engineer-in-charge or his authorized representative shall inspect the material and carries out the Acceptance and Routine tests as per the prescribed BIS standards, as amended up to date and in accordance with the sampling plan prescribed therein i/c those detailed in Particulars Specifications of individual items. Copies of all documents of routine and test certificates of the equipment shall be furnished to the Engineer-in-charge.
3. The Department reserves the right to waive off inspection in lieu of suitable test certificate, at its discretion. The details of testing of LED fittings are described in this tender document under Particular Specifications.
4. The outside laboratory test of wire/cable shall be conducted in CBRI, Central Institute of Plastic Engineering & technology, National Test House, Regional Research Laboratory, Laboratories of IIT/NIT; the contractor shall provide samples from the material brought at site “free of cost”. The contractor shall also assist in collection of samples for testing by Engineer-in-charge or his authorized representative. All costs incurred in collection of samples, packing & transportation to the approved outside laboratory including cost of testing charges shall be borne by the contractor.
5. In case the contractor or his authorized representative is not present or don't associate themselves in collection of test samples, the department shall send the sample to the approved lab on his own and test results/reports of such tests and consequences thereon shall be binding on the contractor.
6. The LED fittings, Wire/Cables etc damaged in transit, found defective in manufacturing or otherwise shall be replaced with new ones within two weeks of intimation given in this regard.
7. The requirement of testing, in presence of representative of the Department, can be dispensed with / waived off by the Engineer-in-Charge, keeping in view the exigency of works or other administrative reasons.
8. The contractor, after installation, testing and successful commissioning of the complete lighting installations as covered in the scope of this contract, shall operate and maintain the installations for a period of 15 days from the date of commissioning of the entire LED/high mast lighting installations. If during and after the trial run period the working of the lighting installations is found to be satisfactory and subject to the completion of

the work as per specifications and other conditions, the Engineer-in-charge may declare the installation to be put into continuous beneficial use from such date as decided by the Engineer-in-charge after the trial run is over. In case in the opinion of the Engineer-in-charge the trial run period is not satisfactorily completed, then the same is liable to be extended.

Guarantee

1. The contractor shall guarantee among other things, the followings (a) Quality, strength & performance of the materials used as per manufacturers standards (b) Safe mechanical and electrical stress on all parts at specified conditions of operation (c) Satisfactory operation during the maintenance period.
2. All equipment shall be guaranteed against unsatisfactory performance and/or break down due to defective design, workmanship or material, for a period indicated hereafter, to be reckoned from the date of completion of the work or date of offer of installation to the BSF for taking over whichever is later.

Sl. No	Description of items	Guarantee Period
1	LED Luminaires, Bulk head i/c drivers, Fan, accessories.	5 Years
2	Other items	As per defect liability period.

3. The equipment or components, or any part thereof, if found defective during guarantee period shall be forthwith repaired or replaced by the contractor free of cost, to the satisfaction of the Engineer-in-charge. In case, undue delay is caused by the contractor in doing this, the same will be got done by the department at the risk and cost of contractor. The decision of Engineer-in-charge in this regard shall be final and binding.

After acceptance of tender the lowest contractor shall submit an undertaking from OEM regarding:

- a) Authorization certificate.
- b) The OEM will unconditionally support the lowest tenderer technically throughout the execution of contract and during the guarantee period.
- c) OEM will provide all the spares required for healthy functioning of the equipment for at least seven years from the date of supply of equipment. Certificate should be signed by the officer of the rank of Regional Manager or above.

2 Preferred Makes and other accessories:

	Description of Item	Preferred makes
	Light Fittings	Philips, Osram, Lighting technology, Wipro, Crompton, Bajaj, Surya and Orient electric.
	Copper wire/ Conductor	RR Kabel/KEI/ Polycab/Finolex/Havells
	MODULAR PLATE TYPE SWITCH / SOCKET GI BOXES / FAN REGULATOR	SCHNEIDER (ZENCELO) / LEGRAND (ARTEOR) / L&T (Englaze) /Honeywell (Orna)
	MCB, DB	L&T/Siemens/Legrand/Schneider/ABB
	MS conduit	BEC/AKG/ STEEL CRAFT/ RM-CON/
	Ceiling Fan	HAVELLS / CROMPTON / USHA / ALMONARD
	UG Cable	Finolex / Polycab / RR Kabel // Havells/ KEI/Gloster

Schedule of Quantity

Name of work:- - Construction of 121 nos. Sentry Post (Single Storied) from GIN 115 to GIN 255 (BP No. 247/1-S to 790/6-S) along IBB in the state of West Bengal. (SH: Construction of 56 Nos. Single storied Sentry Post (West Bengal). (Package-I).

Item	Description of item	Quantity	Unit	Rate in Rs.	Amount in Rs.
SH-I (Wiring)					
1.1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS/HFFR PVC insulated copper conductor single core cable in surface/ recessed steel conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS/HFFR PVC insulated copper conductor single core cable etc. as required.				
1.1.1	Group-B	280	Nos.	1684.00	4,71,520.00
1.2	Wiring for light/ power plug with 2X4 sq.mm FRLS/HFFR PVC insulated copper conductor single core cable in surface/ recessed steel conduit along with 1 No. 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required	448	Mtrs.	480.00	2,15,040.00
1.3	Wiring for circuit/ submain wiring along with earth wire with the following sizes of FRLS/HFFR PVC insulated copper conductor, single core cable in surface/ recessed steel conduit as required.				
1.3.1	2 X 1.5 sq.mm. + 1 X 1.5 sq.mm earth wire.	224	Mtrs.	370.00	82,880.00
1.4	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 A modular socket outlet and 5/6 A modular switch, connections etc. as required	56	Nos.	545.00	30,520.00
1.5	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 A modular socket outlet and 15/16 A modular switch, connections etc. as required.	56	Nos.	659.00	36,904.00
1.6	Supplying and fixing brass batten/ angle holder including connection etc. as required.	56	Nos.	154.00	8,624.00
				Total	8,45,488.00
SH-II (MCB & DB's & Cable connection)					
2.1	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)				
2.1.1	6 Way, double door	56	Nos.	2390.00	1,33,840.00

2.2	Supplying and fixing 5 A to 32 A rating, 240/415 V, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
2.2.1	Single Pole	224	Nos	285.00	63,840.00
2.2.2	Double Pole	56	Nos.	696.00	38,976.00
				Total Rs.	2,36,656.00
	SH:- III (FAN & Fittings)				
3.1	Supplying, installation, Testing & Commissioning of LED surface mounted Batten light of following body material and construction as per IS : 10322 with driver (Replaceable) as per the requirement with Driver efficiency >85%, Operating voltage AC 140-270 Volt, frequency 50/60 hz, Operating temp range -5 °C to 40 °C, internal surge protection of 2.5 KV with Short & Open circuit protection, THD < 10%, P. F. ≥ 0.95, IP20, CRI ≥ 80, Flicker free (flicker should be below 5 %), life time (LED, Driver & electrical circuitry), of minimum 50000 Burning Hours with 70% of initial Lumen maintained till life ends, CCT 3000°K / 4000°K / 5700°K / 6500°K (As per ANSI Bin), SDCM (Standard Deviation Colour Matching) < 3, Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard. Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. complete in all respect i/c external connections with 1.5 sq.mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥ 120 < 135 lm/Watt output . LM79 & LM80 Test report and all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in- Charge as per requirement. (Thermal management: heat sink of aluminium housing such that LED junction temperature shall not rise above 90°C).				
3.1.1	Powder coated die cast /Extruded aluminium Body (Thickness ≥ 0.50 mm) 18- 22 Watt	56	Nos.	681.00	38,136.00
3.2	Supplying, installation, testing & Commissioning of ceiling of 8-10 W IP66 IK 08 pressure die cast aluminium LED bulkhead light fitting with lumen efficacy not less than 120 lm/watt having 50000 burning hours @70 CCT, 4000K/5700K/6500K complete with Minimum 5 year OEM warranty , I/c connection with 3 X 1.5 sq.mm. FRLS PVC copper conductor cable complete as required.	112	Nos.	2135.00	2,39,120.00
3.3	Supply, Installation, Testing and Commissioning of ceiling fan with Brush Less Direct Current (BLDC) Motor, class of insulation: B, 3 nos. metal (Aluminium alloy) blades, 30 cm long down rod, 2 nos. canopies, shackle kit, safety rope, copper winding, steel/Al body.				

	Power Factor not less than 0.9, Service Value (CM/M/W) minimum as below, 350 RPM (tolerance as per IS : 374-2019), THD (Total Harmonic Distortion) less than 10%, remote (preferably mobile app based) for speed control and all remaining accessories including safety pin, nut bolts, washers, temperature rise=75 °C (max.), insulation resistance more than 2 mega ohm, suitable for 230 V, 50 Hz, single phase AC supply Ceiling Fan compliant to IS 374:2019 fan i/c external connections with 1.5 sq.mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required.				
3.3.1	1200mm, service value ≥ 6.0 CM/Min/Watt, air delivery 210 CM/Min (Minimum)	56	Each	2695.00	1,50,920.00
3.4	Supplying and fixing two module stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	56	Each	402.00	22,512.00
3.5	Supplying and laying of following size DWC HDPE pipe ISI marked along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II complete with fitting and cutting, jointing etc. in the existing trench, complete as required.				
3.5.1	63 mm dia (OD-63 mm & ID-51 mm nominal)	336	Mtrs.	136.00	45,696.00
				Total Rs.	4,96,384.00
	SH:- IV (EARTHING & LIGHTING CONDUCTOR)				
4.1	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 Meter long etc. with charcoal/ coke and salt as required.	56	Set	8351.00	4,67,656.00
4.2	Earthing with G.I. earth pipe 4.5 Meter long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	56	Set	7658.00	4,28,848.00
4.3	Providing and fixing 25 mm X 5 mm G.I. strip in 40 mm dia G.I. pipe from earth electrode including connection with G.I. nut, bolt, spring, washer excavation and re-filling etc. as required.	336	Mtrs.	755.00	2,53,680.00
4.4	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	560	Mtrs.	287.00	1,60,720.00
4.5	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ submain wiring/ cable as required.	392	Mtrs.	50.00	19,600.00
4.6	Providing and fixing of lightning conductor finial, made of 25 mm dia 300 mm long, G.I. tube, having single prong at top, with 85 mm dia 6 mm thick G.I. base plate including holes etc. complete as required.	56	Each	609.00	34,104.00

4.7	Jointing copper / G.I. tape (with another copper/ G I tape, base of the finial or any other metallic object) by riveting / nut bolting/ sweating and soldering etc as required. Each	56	Each	139.00	7,784.00
4.8	Providing and fixing G.I. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For horizontal run)	840	Mtrs.	148.00	1,24,320.00
4.9	Providing and fixing G.I. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For vertical run)	168	Mtrs.	238.00	39,984.00
4.10	Providing and fixing testing joint, made of 20 mm X 3 mm thick G.I. strip, 125 mm long, with 4 nos. of G.I. bolts, nuts, chuck nuts and spring washers etc. complete as required.	56	Each	140.00	7,840.00
4.11	Providing and laying G.I. tape 32 mm X 6 mm from earth electrode directly in ground as required.	560	Mtrs.	221.00	1,23,760.00
				Total Rs.	16,68,296.00
	Grand Total			(SH- I to SH-IV) Rs.	32,46,824.00

Central Public Works Department					
N.I.T. No: 06/NIT/CE/IBBZ-I/2026-27					
Name of work:	Construction of 121 nos. Sentry Post (Single Storied) from GIN 115 to GIN 255 (BP No. 247/1-S to 790/6-S) along IBB in the state of West Bengal. SH: Construction of 56 Nos. Sentry Post (Single Storied) from BP No. 247/1-S to 326/4-S in Dakshin Dinajpur, West Bengal (Package-I).				
PROFORMA FOR QUOTING TENDER					
Name of the Contractor:					
Sl. No.	Name of component	Estimated cost (Rs)	Percentage above or below the estimated cost in words	Percentage above or below the estimated cost in figures	Total Cost (Rs)
1	2	3	4	5	6
1	Construction of 121 nos. Sentry Post (Single Storied) from GIN 115 to GIN 255 (BP No. 247/1-S to 790/6-S) along IBB in the state of West Bengal. SH: Construction of 56 Nos. Sentry Post (Single Storied) from BP No. 247/1-S to 326/4-S in Dakshin Dinajpur, West Bengal (Package-I).	Rs.6,74,34,176/-			

1. The Column Nos. 4 & 5 are mandatory to be filled by the bidders/ tenderers. If all these columns are left blank, the tender become invalid.
2. The amount in figures in column No.6 shall appear automatically corresponding to the percentage quoted in column No.4 & 5.
3. The tenderer is required to quote the percentage only above or below or at par with the estimated cost to cover all the rates of item covered under the respective packages.
4. The percentage shall be written in 2 (two) places of decimal.
5. If the percentage selection in column No 4 is "At Par", by default the percentage will be considered as "Zero" only. In other words, if "At par" is selected in column No.4, then no need to fill column No.5

Signature of Contractor

Executive Engineer
Border Fencing Division-VIII,
IBBZ-I, CPWD, Balurghat.

AE(P)

EE(P&A)