



**GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT**

TENDER DOCUMENT

FOR

NAME OF WORK- Conversion of border security fencing from phase II/III to new design fence in West Bengal between BP No.243/MP to 764/2-S (Length 210.028 km) (SH : Providing & Fixing Two Layers of concertina coil as pilot project on the counterpart side strapped on the ground in a stretch from BP no. 387/MP to 387/5-S having length of 2.1km)

**Executive Engineer
Border Fencing Division-II, CPWD, IBBZ-I,
Islampur, Uttar Dinajpur-733202
Phone : (03526)-257964, Email : isleeicd.cpwd@nic.in
Phone No. 8010764805**

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Notice to be uploaded on website.

Name of Work		Conversion of border security fencing from phase II/III to new design fence in West Bengal between BP No.243/MP to 764/2-S (Length 210.028 km) (SH : Providing & Fixing Two Layers of concertina coil as pilot project on the counterpart side strapped on the ground in a stretch from BP no. 387/MP to 387/5-S having length of 2.1km)
Estimated Cost	:	Rs. 60,04,173.00
Earnest Money	:	Rs. 1,20,083/-
Performance Guarantee	:	As per schedule "E"
Security Deposit	:	2.5% of tendered Value
Completion Period	:	02 (Two) Months
NIT No.	:	06/NIT/EE/BFD-II/2026-27(1 st Re-Call)
Last date for submission of Bid	:	Up to 11:00 AM on 10.08.2026

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

The Executive Engineer, Border Fencing Division-II, IBBZ-I, CPWD, Islampur, Uttar Dinajpur-733202, Phone : (03526)-257964, Email : isleecid.cpwd@nic.in 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/EE/BFD-II/2026-27(1st Re-Call)

Name of Work: Conversion of border security fencing from phase II/III to new design fence in West Bengal between BP No.243/MP to 764/2-S (Length 210.028 km) (SH: **Providing & Fixing Two Layers of concertina coil as pilot project on the counterpart side strapped on the ground in a stretch from BP no. 387/MP to 387/5-S having length of 2.1 km**)

Estimated Cost: Rs. 60,04,173/-

Period of Completion: 02 (Two) Months

Earnest Money: Rs. 1,20,083/-

Performance Guarantee: As per schedule “E”

Security Deposit: 2.5% of tendered Value.

Last date and time of submission of bid Up to 11:00 AM on 10.08.2026.

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-II, IBBZ-I, CPWD, Islampur, Uttar Dinajpur-733202, Phone : (03526)-257964, Email : isleecid.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/EE/IBFD-II/2026-27(1 st Re-Call)	Conversion of border security fencing from phase II/III to new design fence in West Bengal between BP No.243/MP to 764/2-S (Length 210.028 km) (SH : Providing & Fixing Two Layers of concertina coil as pilot project on the counterpart side strapped on the ground in a stretch from BP no. 387/MP to 387/5-S having length of 2.1km)	Rs. 60,04,173.00	Rs. 1,20,083.00	02 (Two) Months	Up to 11:00 AM on 10.08.2026	At 11.30 AM on 10.08.2026

- 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.

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 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.

Part-A

CPWD-6 FOR e-Tendering

1. The Executive Engineer, Border Fencing Division-II, IBBZ-I, CPWD, Islampur, Uttar Dinajpur-733202 Phone : (03526)-257964, Email : isleeicd.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 :-

Conversion of border security fencing from phase II/III to new design fence in West Bengal between BP No.243/MP to 764/2-S (Length 210.028 km) (SH : Providing & Fixing Two Layers of concertina coil as pilot project on the counterpart side strapped on the ground in a stretch from BP no. 387/MP to 387/5-S having length of 2.1km)

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. 60,04,173/-**. 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 **02 (Two)** 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, BFD-II, CPWD, Islampur**) 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.

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 **11.30 AM on 10.08.2026**

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.

11. The description of the work is as follows:

Conversion of border security fencing from phase II/III to new design fence in West Bengal between BP No.243/MP to 764/2-S (Length 210.028 km) **(SH : Providing & Fixing Two Layers of concertina coil as pilot project on the counterpart side strapped on the ground in a stretch from BP no. 387/MP to 387/5-S having length of 2.1km)**

The length 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.
 20. The agency will be given part site i.e. 1.00 km length approximately initially for execution of the work. The next stretch of 0.50 (half) km will be handed over, when contractor will be complete work in 0.50 km of existing site already made available to him. The process will continue till completion of the work. The department does not bound to execute full scope of work 2.1 km. In case, the scope of work is executed is less than 2.10 km. or scope of work limited by the department up to any extent, the contractor will not claim anything extra on this account and department will not entertain any claim on this account.

Executive Engineer,
Border Fencing Division-II,
CPWD, Islampur
(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-II, CPWD, Islampur

Percentage Rate Tender & Contract for Works

Tender for the work of:

- (i) Conversion of border security fencing from phase II/III to new design fence in West Bengal between BP No.243/MP to 764/2-S (Length 210.028 km) (SH : Providing & Fixing Two Layers of concertina coil as pilot project on the counterpart side strapped on the ground in a stretch from BP no. 387/MP to 387/5-S having length of 2.1km)
- (ii) To be uploaded/submitted by tenderers up to **11:00 AM on 10.08.2026** on CPWD web site.
- (iii) To be opened in presence of bidders or their authorized representative who may be present at **11.30 AM on 10.08.2026** in the office of The Executive Engineer, Border Fencing Division-II, IBBZ-I, CPWD, Islampur Phone No : (03526)-257964, Email :isleeicd.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.

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

AE(P)

EE(P&A)

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 of work, when executed by affirm must also be signed by all the partners, except where contractors are described in the tender as a firm, in which case the receipts must be signed in the name of the firm by one of the partners, or by some other person having due authority to give effectual receipts for the firm.
4. **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 contractor 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 SE of the circle, or CE of the zone 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.
9. 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 tenderers 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.

10. On acceptance of the tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from the Engineer-in-Charge shall be communicated in writing to the Engineer-in-Charge.
11. GST 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.
12. The contractor shall give a list of both gazetted and non-gazetted C.P.W.D. employees related to him.
13. 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.
14. The contractor shall submit list of works which are in hand (progress) in the following form:-

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

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 02 (Two) 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.
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:- Conversion of border security fencing from phase II/III to new design fence in West Bengal between BP No.243/MP to 764/2-S (Length 210.028 km) (SH : Providing & Fixing Two Layers of concertina coil as pilot project on the counterpart side strapped on the ground in a stretch from BP no. 387/MP to 387/5-S having length of 2.1km)

1. NIT No: 06/NIT/EE/BFD-II/2026-27 (1st Re-Call)
2. Estimated Cost : Rs. 60,04,173.00
3. Amount of Earnest Money Deposit: Rs. 1,20,083.00
4. Last date of submission of bid up to 11:00 AM on 10.08.2026
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

Part-B

(Civil Work)

PROFORMA OF SCHEDULES (CIVIL PART)**SCHEDULES A to F****SCHEDULE 'A'****Schedule of quantities: Page No.72****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	:	Conversion of border security fencing from phase II/III to new design fence in West Bengal between BP No.243/MP to 764/2-S (Length 210.028 km) (SH : Providing & Fixing Two Layers of concertina coil as pilot project on the counterpart side strapped on the ground in a stretch from BP no. 387/MP to 387/5-S having length of 2.1km)
Estimated cost of the work	:	Rs. 60,04,173.00
Earnest money	:	Rs. 1,20,083.00 (To be returned after receiving performance guarantee)
Performance Guarantee / Additional 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 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-II, IBBZ-I, CPWD, Islampur 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.

AE(P)

EE(P&A)

Definitions:

2(vi)	Engineer-in-Charge	:	Executive Engineer, Border Fencing Division-II, IBBZ-I, CPWD, Islampur or his successor thereof
2(viii)	Accepting Authority	:	Executive Engineer, Border Fencing Division-II, IBBZ-I, CPWD, Islampur 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
<i>Time allowed for execution of work</i>		: 02 (Two) Months.

A. For construction period

(i) Authority to convey the decision of shifting of milestone and extension of time	Executive Engineer, Border Fencing Division-II, IBBZ-I, CPWD, Islampur or his successor thereof
(ii) Authority to decide rescheduling of milestone and extension of time	Executive Engineer, Border Fencing Division-II, IBBZ-I, CPWD, Islampur or his successor thereof
(iii) Shifting of date of start in case of delay in handing over of site	Executive Engineer, Border Fencing Division-II, IBBZ-I, CPWD, Islampur 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 part site i.e. 1.00 km length approximately initially for execution of the work. The next stretch of 0.50 (half) km will be handed over, when contractor will complete the work in 0.50 km of existing site already made available to him. The same process will continue till completion of the work.
II	Portion with encumbrances	Nil
III	Portions dependent on work of other agencies	Nil
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.	Rs. 20.00 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. 71
Clause 10B (ii)	Whether clause 10B (ii) shall be applicable	No
Clause 10 C	Component of labour expressed as percentage of value of work	5%
Clause 10 CC		Not Applicable

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

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	Construction 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	No Limit

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.	NA
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	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
1	Graduate Engineer or Diploma Engineer	Civil	Project/Planning/ quality/billing Engineer	2 Or 5	1	Rs. 15,000/- 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 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% Labour Cess 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 fencing work		
1.	DFT Check instrument	2 Nos.
2.	Adhesion Test kit	2 Nos.
3.	MEK test kit	2 Nos.
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.

Laboratory at Manufacturing Unit of Approved Fencing Brand :

Name of equipment's	Minimum Unit
1) General Tools sets	02 Units
2) Vernier calipers	02 Units
3) Micro-meter 0-25 mm	02 Units
4) Measuring tapes	05 Units
5) Electronic weighting Scale	01 Unit
6) Cross Hatch Tape Test Kit	01 Unit
7) Tensile & Elongation Testing Machine	01 Unit
8) Galvanizing Testing machine & lab equipment's	01 Unit
9) Micron testing machine -Coating thickness 1-1000 micron	01 Unit
10) Weld sheet testing grippers	01 Unit
11) Piece Counter Meter (Range 0-99999 counts)	04 Units

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 relating 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 smoke 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 existing CC pavement may require to be dismantled only when execution of fencing/extension of cross drainage works warrant to do so.
- 25 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.
- 26 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.
- 27 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.
- 28 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.

- 29 Availability of Earth shall be ensured from local area except ROW of IBB road by the contractor during execution of work.
- 30 The contractor shall submit neatly prepared fencing inventory of each component in triplicate to department after completion of work.
- 31 The contractor will follow guideline/protocol issued by Central Govt. and concerned State Govt. to control spread of Covid-19.
- 32 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.
- 33 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.

PARTICULAR SPECIFICATIONS & SOP

- 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.
- 2 **Contractor is responsible and nothing extra shall be payable** to the contractor for:
 - 2.1 **Dewatering** resulting from rain, flood or underground spring,
 - 2.2 **Bailing out/pumping out** sub-soil water, if any,
 - 2.3 **For laying concrete in or under water, if any,**
 - 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.
 - 2.5 **Arranging all relevant sieves** for sieve analysis of coarse and fine aggregate for concrete, aggregate for WBM and also screening at site.
- 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.
- 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.
- 5 **Procurement schedule of material to be submitted by Contractor** so as to complete the work in time.
- 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.
- 7 **Sufficient number of plants and machinery** shall be deployed in order to ensure completion of the work well within stipulated period of completion.
- 8 **Sequence of Execution:** -The installation of Concertina coil fencing work shall be executed in the following sequence:
 - (i) Double Layer Concertina Coil mounted on Equal angle post is a high-security perimeter protection system manufactured from Stainless Steel Concertina Coil reinforced with a high-strength spring steel core wire. The system consists of two concentric concertina coils installed one above the other to provide enhanced deterrence, increased obstacle width, and superior anti-climb and anti-intrusion performance.

[B] LIST OF MANDATORY TEST

Material Work	Clause / Test Para No.	Test	Field /Laboratory	Test Procedure	Frequency of Testing	Acceptance Criteria
Galvanized Circular Hollow Section post	1.1	Outer Diameter	Field	IS1161	3 per 10T	88.9 mm+/-1%
		Thickness	Field	IS1161	3 per 10T	4.00 mm+/-10%
		Mass of Zinc Coating (DFT/GSM)	MTC/Lab	IS6745	1 per 10T	Minimum 360 GSM (Total of inside & outside of pipe)
Welded Mesh panels	1.6	General Dimensions	Field	General	1 per 300 pieces	As per drawing
		Mesh Size	Field	EN 10223-7	1 per 300 pieces	76.0 mm (+/- 3.0 mm) X 12.7mm (+/- 2.0mm) (W X H)
		Weld Shear Strength in KN	Lab	EN 10223-7	1 per 600 pieces	Min. 3.5kN Load or 275 N/sq. mm Weld Shear strength: The average weld shear strength of 4 welds taken at random shall not be less than 50% of the breaking the strength of smallest wire (In this case the vertical wire)
Galvanized Wire of welded mesh panel	1.6	Diameter	Field	IS 280	5 per 300 pieces	4.0mm(+/-0.05mm)
		Mass of Zinc Coating	Lab	IS 6745	1 per heat number	50+/-5GSM
		Ultimate Tensile Strength	Lab	IS 1608	1 per heat number	Minimum 550N/Sq.mm
		% Elongation	Lab	IS 1608	1 per heat number	Min. 8% for gauge length 100 mm
		Adhesion of Zinc coating on wire	MTC/Lab	IS 4826	1 per heat number	When a wire is wound around a mandrel of Dia. 6 times of its own diameter, the zinc coating shall remain adhered to the core wire and doesn't flake off nor crack to certain extent that there is possibility of removing any zinc with rubbing of bare finger. Use of finger nails is not allowed.
		Wrapping test for Ductility	Lab	IS 280	1per heat	The wire shall withstand without breaking or splitting being wrapped 9 times around its own Dia and subsequently straitened.
Angle for Y arm	1.4 & 1.5	Leg Length	Field	IS 1852	3 per 200 pieces	+/-2mm
		Thickness	Field	IS 1852	3 per 200 pieces	+/-0.50mm
		Mass of Zinc Coating (DFT/GSM)	MTC/Lab	ISO 2808/IS745	3 per 200 pieces	Minimum 65 microns, Minimum 360GSM
SS316 Razor wire tape	1.7	Diameter Mechanical properties Chemical Composition	Field	IS4454	1 per 1000m	3.5mm(+/-0.05mm)
			Lab	IS 1608	1 per 2000m	Min.1400 to 1500 N/sq.mm
			Lab	IS 228	1 per 4000m	SS 304
SS 316 Razor wire Coil	1.7	Blade Dimensions	Field	BTO-30	1 per 25 coil	BTO-30

AE(P)

EE(P&A)

Thermo-Plastic coating (TP Con Post and accessories)	(TBBT)	Coil Diameter	Field	General	1 per 25 coil	850mm+/-50 mm
		No of loops	Field	General	1 per 25 coil	56
		Verification of the Powder Supplier MTC	Review TDS of powder in Lab	General	1 per 10T	Axalta Plascoat PPA571ES
		Color	Field	EN ISO3668	1 per 10T	RAL6005Green
		Surface Preparation (Blast clean SA2.5) and Surface treatment (7 tank or 10 tank process)	In Lab before coating in presence of E-in-Charge or his representative.		1 per 10T	(blast clean SA2.5) is recommended to ensure good adhesion to the surface should be carried every lot Surface treatment chemical parameter record for every batch.
		Dry film Thickness	In Lab before coating in presence of E-in-Charge or his representative	EN ISO 2808	1 per 10T	Min. 250 Microns. The galvanized panels are subsequently Thermoplastic Powder coated after welding with a thickness of Min. 250 microns.
		Surface Appearance	In Lab before coating in presence of E-in-Charge or his representative	EN 13438	1 per 10T	The surface of the TPC shall be smooth, shiny, free from irregularities and uniform in color. No scratched through to the substrate, No blisters, Pinholes, Scratches or Craters should be visible from 3m.
		Adherence	Review TDS of Powder	ISO2409	1 per 10T	Should Pass Adhesion Test X Cut test
		Salt Spray Test	Review TDS of Powder	ISO 9227	1 per 10T	Salt Spray test for 1440 Hrs. as specified by EN 10245-1/ IS 13871 and with ASTM B117
		Permeability Test (Boiling water)	Review TDS of Powder	BS EN 13438	1 per Batch	Noc cracking or delamination of the coating
		Gloss	Review TDS of power	EN ISO 2813	1 per batch	Min. 70GU (60° Angle)
		Impact Resistance	Review TDS of powder	ASTM D2794/ ISO6272	1 per batch	Direct 23°C (0.7mm plate)- Greater than 27 Joule Reverse 0°C (0.07mm plate) - Greater than 27 Joules Reverse 0°C (3mm plate)- 18.0Joules Direct 23°C (3mm plate)- 2.7 Joules
		Verification of the Supplier MTC- for powder	Review TDS of powder in Lab	General	1	Epoxy Primer-(G Shield Manu Grey) / Primer Xtend Topcoat-Jotun Façade 1407 Joules)
		Polyester Powder	Review TDS of powder	AAMA	1	AAMA2603 Qualicoat class 1
		Colour	Witness	EN ISO3668	1	RAL 6005 Green
		Surface preparation(Blast clean SA2.5) and Surface treatment (7 tank or 10 tank process)	In Lab before coating in presence of E-in-Charge of his representative.		1	(Blast clean SA 2.5) is recommended to ensure good adhesion on the surface should be carried every lot Surface treatment
		Dry Film Thickness	In Lab before coating in presence of E-	EN ISO 2808	1 per batch	Primer – 60-80 Microns Top Coat 60-80 Microns. The galvanized weld mesh panels

			in-Charge or his representative			are subsequently dual coated after welding with a thickness of Min 120 microns with avg 150 microns.
		Surface appearance	In Lab before coating in presence of E-in-Charge or his representative	EN ISO 3668	1 per batch	The Surface shall be smooth, shiny, free from irregularities and uniform in color. Noblisters, Pinholes scratches or craters should be visible from 1 m.
		Salt Spray Test	Review TDS of powder	ISO 9227	1 per Batch	Salt spray test for 1000 hrs as specified by EN 10245-1/IS 13871 and with ASTM B117
		Accelerated weathering	Review TDS of powder	ASTM G154-B/ISO 16474-3	1 per Batch	1000 Hrs. UVA
		Adherence	Witness before coating	ISO2409	1 per Batch	Cross cutest G to(10% adhesion) EN ISO 2409
		Permeability Test (Boiling Water)	Review TDS of powder	EN 10245-4	1 per Batch	No Blistering of the coating
		Erichsen Cupping Test	Review TDS of powder	EN ISO 1520	1 per Batch	No cracking or delamination of the coating
		Gloss	Review TDS of powder	EN ISO 2813	1 per Batch	Min. 70GU (60° Angle)
		Impact resistance	Review TDS of powder	ASTM D2794/ISO 6272	1 per Batch	>60kg.cm (direct)
		Curing Test (MEK test)	Review TDS of powder	ASTM D4752	1 per Batch	30 rubs

[C] NOTE:-

- 1) *Manufacturers' Test Certificate of all the above fencing material including their raw materials and various coatings are to be provided by the agency during supply.*
- 2) ***All fencing materials should have laser marking Embossed of approve manufacturer.***
- 3) *All components of fencing material should be procured from same manufacturer.*
- 4) *A site engineer for supervision during fencing erection work shall be provided by the approved manufacturer of the for proper erection and installation of new design fence.*
- 5) *The contractor shall supply all the invoices of all raw materials including powder coating, galvanizing, thermo-plastic coating and e-way bill for the supply of fencing materials from the manufacturer of the new design fencing.*
- 6) *Contractor/OEM will provide certificate from the coating manufacturer assuring that their coating has been used in the materials which guarantee for at least 15 years.*
- 7) *The guarantee/warranty certificate for at least 10 years against any defects in the powder coating, galvanizing, thermo-plastic coating material shall also be provided by the approved fence manufacturers from the manufacturers/applicators/supplier of powder coating material, galvanizing, thermo-plastic coating material.*
- 8) *A Testing lab is to be established at site free of cost which would have following testing facility : a) DFT Check, b) Immersion (Permeability) Test, c) Adhesion Test, d) MEK Test.*
- 9) *Third Party Quality Assurance (TPQA) of all material during the process to be done by the Manufacturer (OEM) for free of cost. Such certificate shall be provided by the contractor before supply of each lot at site of work.*
- 10) *Standard operating procedure for fencing work to be followed as mentioned in the agreement.*
- 11) *As requested by BSF, for additional line of defense, wherever existing old fence (Phase I/II/III) is required to be dismantled, it must be ensure that at least the Bangladesh side old fence layer is kept intact. However, at locations of sufficient width available from roads, the complete layers (all three layers) of existing old fence be kept intact.*

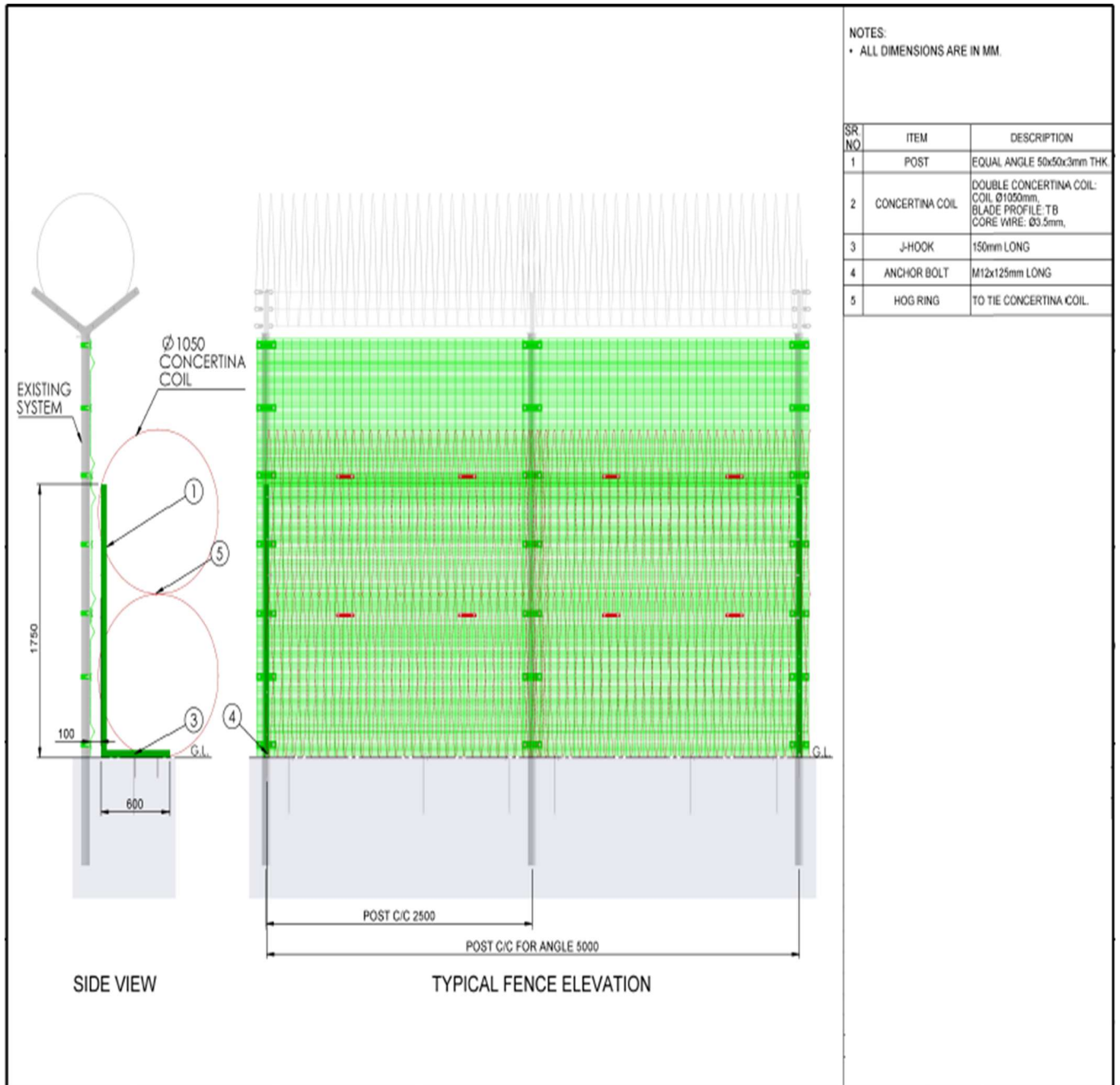
CHECK LIST FOR NEW DESIGN FENCING AS PER CPWD SPECIFICATION

A.	CHS POST to be checked for:	To be verified by Field unit.	
	(i) Physical Properties comprising of -		
	(a) Thickness of the GI coating (design coating of minimum	Yes	No
	(b) Whether GI coating is available inside the pipe.	Yes	No
	(c) Weight of the pipe		Kg.
	(d) Thickness of the pipe		mm
	(e) Yield strength of the pipe		MPa
	(f) MTC from the raw material supplier.	Yes	No
	(ii) Chemical properties of the pipe to be checked as per MTC (for various components) -		
	(iii) Coating properties to be checked		
	(a) Coating of the pipe with thermoplastic		Micron
	(b) Brand of thermoplastic powder used.		
	(c) Certificate of “certified applicator” issued by the thermoplastic powder provider in favour of the manufacturer.	Available	Not Available
	(iii) Testing of coating to be done prior to dispatch -		
	(a) Thickness of the coating		Micron
	(b) Adhesion properties to be checked by scratch test.	Yes	No
	(c) Glossiness properties to be checked by gloss meter (between 70-80%).		%
	(d) Tensile properties to be checked for elasticity of coated material when subjected to bending in raw material MTC.	Yes	No

B.	WIRE MESH to be checked for:		
	(i) Physical properties comprising of –		
	(a) Facility for cutting of the wires available at manufacturing unit.	Yes	No
	(b) Thickness of the GI coating		GSM
	(c) Weight of the wire without GI coating (removed by dipping in HCL) to check the weight of raw wire).	Yes	No
	(d) Thickness of the wire		mm
	(e) MTC from the raw material supplier.	Yes	No
	(f) Tensile strength of wire		N/mm ²
	(ii) Chemical properties of the wire to be checked as per MTC (for various components) -		
	(iii) Coating properties to be checked -		
	(a) Coating of the wire with polyester powder		Micron
	(b) Brand of polyester powder used.		Brand
	(c) Certificate of “certified applicator” issued by the polyester powder provider in favour of the manufacturer.	Given	Not Given
	(iv) Testing of coating on grill to be done prior to dispatch -		
	(a) Thickness of coating		Micron

		(b)	Tensile strength of welding joints	Yes	No
		(c)	Dimension of assembled grill	Yes	No
		(d)	Spacing between wires	Yes	No
C.	Y-ARM straining/intermediate to be checked for:				
	(i)	Physical Properties comprising of -			
		(a)	Facility for weighing of Y-Arm straining/intermediate available at manufacturing unit	Yes	No
		(b)	Physical dimension (50x50x6), one arm length 510mm/(50x50x6), one arm length 510mm	Yes	No
		(c)	Thickness of the GI coating	Yes	No
		(d)	MTC from the raw material supplier.	Yes	No
	(ii)	Chemical properties of the Y-Arm to be checked as per MTC (for various components) -			
	(iii)	Coating properties to be checked			
		(a)	Coating of the Y-Arm straining/intermediate with thermoplastic powder		Micron
		(b)	Brand of thermoplastic powder used.		
		(c)	Certificate of "certified applicator" issued by the thermoplastic powder provider in favour of the manufacturer.	Given	Not Given
	(iii)	Testing of coating to be done prior to dispatch -			
		(a)	Thickness of the coating	Yes	No
		(b)	Adhesion properties to be checked by scratch test.	Yes	No
		(c)	Glossiness properties to be checked by gloss meter (between 70-80%).		%
		(d)	Tensile properties to be checked for elasticity of coated material when subjected to bending.	Yes	No
D.	RBT Coil and Razor Tape:				
	(i)	Physical properties of the coil -			
		(a)	Coil diameter		mm
		(b)	Length of blade		mm
		(c)	Spacing between blades		mm
		(d)	No. of loops		Nos.
		(e)	Weight per coil		Kg.
		(f)	Thickness of core wire		mm
	(ii)	MTC from the raw material supplier to check the chemical properties of RBT material -			
		(a)	Grade of wire (SS-304 grade).	Yes	No
E.	List of Instruments:				
	(i)	Available in manufacturing units:			
		(a)	DFT Meter.	Yes	No
		(b)	Glossy Meter.	Yes	No
		(c)	Tensile strength test (UTM).	Yes	No
		(d)	Weld strength testing machine.	Yes	No
		(e)	Impact testing machine.	Yes	No
		(f)	Salt spray chamber.	Yes	No
		(g)	PH chemical testing instrument.	Yes	No

	(h)	Scratch test.	Yes	No
	(i)	Measuring tape (steel).	Yes	No
	(j)	HCL solution.	Yes	No
	(k)	Weighing machine (digital).	Yes	No
	(l)	Moly kit tester (grade test).	Yes	No
	(m)	Vernier caliper.	Yes	No
	(n)	Shade card (K5 or K7).	Yes	No
	(o)	MEK solution (Methyl Ethyl ketone).	Yes	No
	(p)	Screw gauge.		
F.	Available at site for testing the material:			
	(a)	DFT meter.	Yes	No
	(b)	Scratch test instrument.	Yes	No
	(c)	Measuring tape (steel).	Yes	No
	(d)	Screw gauge.	Yes	No
	(e)	Vernier caliper	Yes	No
	(f)	MEK (Methyl Ethyl ketone) test	Yes	No
	(g)	Weighing machine (digital)	Yes	No





1. Product Description

Double Layer Concertina Coil mounted on Equal angle post is a high-security perimeter protection system manufactured from Stainless Steel Concertina Coil reinforced with a high-strength spring steel core wire. The system consists of two concentric concertina coils installed one above the other to provide enhanced deterrence, increased obstacle width, and superior anti-climb and anti-intrusion performance.

2. Product Construction

SS Core Wire - SS304.

- Manufactured from high-quality Stainless steel wire conforming to IS 6528.
- Provides the required tensile strength, flexibility, and dimensional stability.

Razor/Concertina Blade Profile - SS304.

- Manufactured from high-quality Stainless steel wire conforming to IS 6911.
 - The construction of the blade is as per BT028 / BT030 for Tear Blade profile.
-

HDG + PC Equal Angle Post

- Manufactured from Hot Rolled Medium and High Tensile Structural Steel confirming to IS 2062 E250 Grade.
- Hot Dip Galvanisation as per IS 4759.
- Thermosetting powder coating of min 60 - 80 microns.

3. Technical Specifications for Concertina Coil.

Parameter	Specification
Blade Profile	Tear Blade Barb Tape (TBBT) as per BT030/28.
Blade Thickness	0.5 ± 0.05 mm as per IS 6911
Core Wire Diameter	3.50 ± 0.05 mm as per IS 6528
Coil Diameter	Dia 1050 mm $\pm$ 10 mm (Unstretch condition)
No of Loops	56 ± 1 loop per coil.
Tensile Strength of core wire	1350 – 1550 N/mm ²
MOC of Wire & Blade	SS 304 . As per IS 6528 and IS 6911
Blade Length	70 mm $\pm$ 2 mm
Blade Spacing	31 mm $\pm$ 2 mm
Stretch length per Coil	10 Mtr per Coil.

Technical Specification for HDG + PC Equal Angle.

Type: Equal Angle.

Material: MS angle as per IS 2062 Gr. E250.

Size: 50x50x3 mm as per IS 1852

Coating: Hot dip galvanized with minimum 460 GSM coating as per IS 2629/IS 4759/ASTM A123 / IS 4736

Uniformity of Coating: As per IS 2629

Adhesion test for coating: As per IS 6745 / IS 2629

Powder Coating: The Galvanized Equal Angle are subsequently Thermosetting Powder coated after fabrication with a thickness of minimum 60-80 microns thickness.

Other coating requirement: Powder coating should withstand 720 Hours of salt spray test as specified by EN 10245-1/ IS 13871 and with ASTM B117

Powder coating make:- Jotun Facade 1407 with AMMA 2603 Qualicoat class 1

The OEM should have an in-house plant and machinery for manufacturing and Thermosetting powder coating. The powder coating plant shall be suitable and equipped with in-house testing facilities for Thermosetting powder coating required as per coating specification. The OEM shall have a facility for Surface Preparation (Blast clean SA 2.5) and Surface treatment (7 tank or 10 tank process) for better longevity of the coating.

The OEM shall have a valid applicator certificate from Jotun for Thermosetting Powder coating.

Type Test Certificate to be provided by the Fence OEM for the quality of powder coating and Thermosetting coating along with the technical bid. Type Test Certificate should be from a competent authority like CECRI, Central ElectroChemical research lab.

Anchor Rod.

Material: Long Anchor Bolt with hex nut and washer.

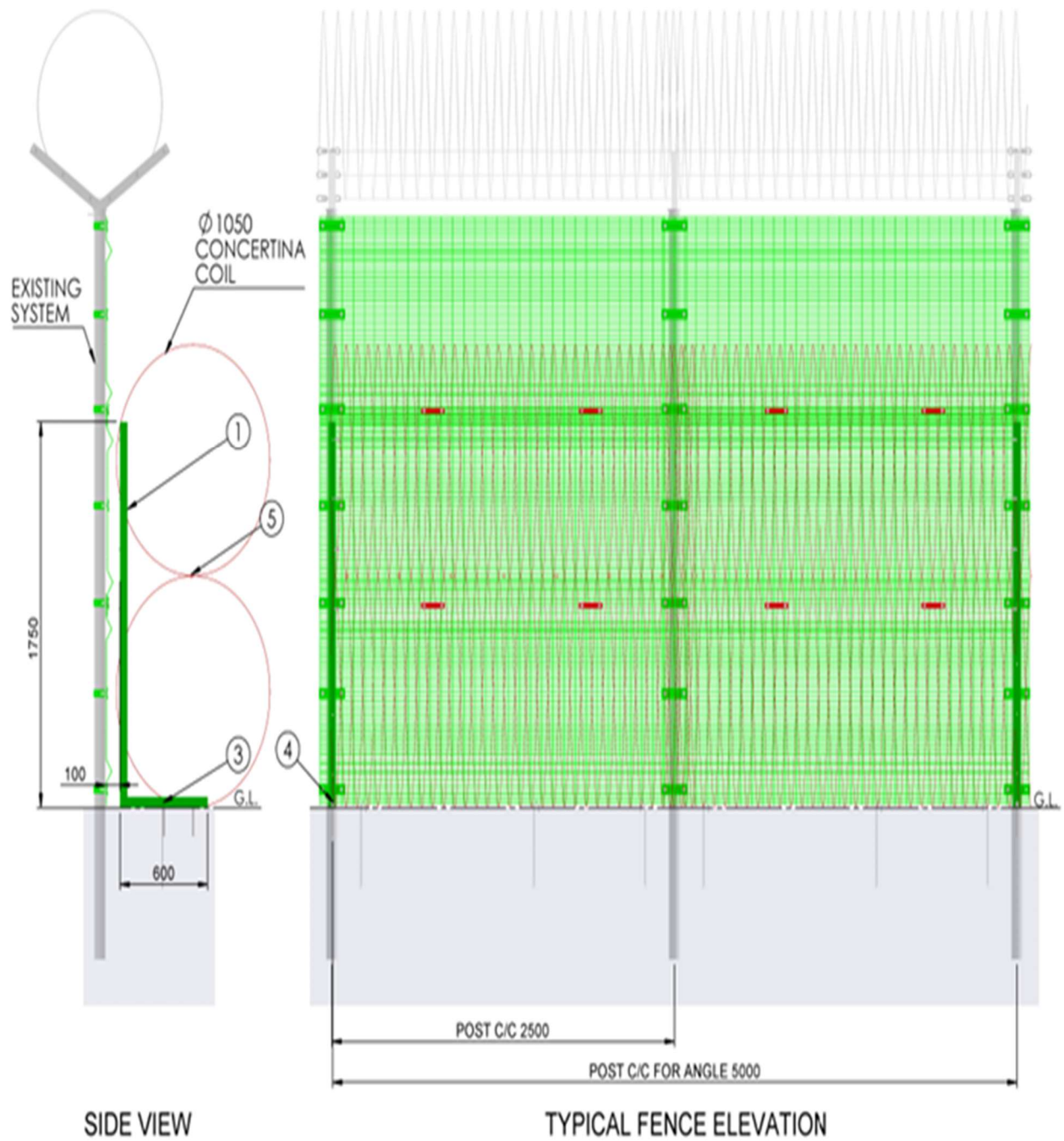
MOC : SS304 as per IS 8535-1987

Size: M12 X 125 mm

. Applicable Standards

The product is manufactured and tested in accordance with the following standards:

Standard	Description
IS 6528	Stainless steel wire
IS 6911	Stainless steel plate, sheet and strip
IS 4759	Hot-dip zinc coatings on structural steel.
IS 2062	Hot Rolled Medium and High Tensile Structural Steel.
IS 1608	Tensile Testing of Metallic Materials
EN 10245-1 / IS 13871	Organic Coatings / Powder Coatings
RAL Colour Standards	Colour Verification and Shade Matching
Customer Specifications	Project-Specific Requirements



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 compulsory 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.*

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, Dalmia Bharat Cement, Star Cement, Nuvoco
2	TMT bars	SAIL, RINL, TATA, JSW Neo steel, Jindal panther
3	Bitumen	IOCL, BPCL, HPCL
4	Bitumen Emulsion	BIS Certified follows relevant IS code
5	RCC NP2/NP3 pipe	BIS Certified
6	Structural Steel/ MS angle	BIS certified with raw materials i.e. billet procured from TATA/SAIL/JINDAL
7	CHS Post MS Tubes	Tata, Jindal, SAIL, APL-Apollo,Utkarsh
8	Welding Electrodes	ESAB, Advani-Oerlikon, weld Alloy
9	4mm M.S. wire for Weld mesh Panel	Ambica Dhatu Pvt Ltd, Systematic, Nirmal wires Pvt. Ltd. , Bansal Wire with raw material i.e. rods procured from TATA/JINDAL/SAIL.
10	S S Bolts & Nuts	BIS Certified

11	Fabrication of modular fence, gate, PTCC, Razor wire and gabion mesh system	1) A-1 Fence Products Company Pvt. Ltd., Mumbai, 2) Camwell Industries Private Ltd, Ghaziabad 3) Tirupati Fence, Siliguri, West Bengal, 4) Guru krupa Wire Netting Industries, Anand Gujarat. 5) S.K.Weldmesh Ltd, Kolkata (WB), 6) Eastern Weld mesh Pvt Ltd, Kolkata (WB) 7) M/s Unifence Solutions India Private Limited
12	SS 304 Wire	Bansal, KEI Industries, Viraj Systematic with raw material from JINDAL/SAIL/Mukund
13	SS 304 sheet for PTCC/Razor tape	SAIL/JINDAL
14	Thermo plastic powder	Axalta plascoat PPA 571 ES
15	Polyester powder coating	Jotun façade 1407 with AMMA 2603 Qualicoat class-1
16	MS Angle for Y-Arm	BIS Certified with raw material from TATA/SAIL/JINDAL
17	Omega Clamp :	BIS Certified with raw material from TATA/SAIL/JINDAL
18	Paint	Akzo Nobel, Berger, Jonson's and Nicholson, Asian Paints, Nerolac

Inspection at Factory/Work's and Laboratory Testing

1. The contractor must intimate to the Engineer-in-Charge at least fifteen days in advance, about the probable dates for factory/work's inspection of fencing materials . The contractor shall coordinate and make arrangements at factory/works for inspection. The contractor shall furnish certified copies of all the Test Certificates, as prescribed in the relevant BIS standards to inspecting officers.
2. The Engineer-in-charge or his authorized representative shall inspect the material at the manufacturer's/work's premises 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, carried out at the manufacturers premises/work's shall be furnished to the Engineer-in-charge. The cost of visit of the Departmental officials to the factory/work shall be borne by the Department.
3. The Department reserves the right to waive off such factory/work's inspection in lieu of suitable test certificate, at its discretion. The details of testing of fencing material are described in this tender document under Particular Specifications.
4. The outside laboratory test of fencing material shall be conducted in CBRI, Central Institute of Plastic Engineering & technology, National Test House, Regional Research Laboratory, Laboratories of IIT/NIT, any other NABL accredited Test House. The contractor shall provide samples from the material brought at site "free of cost". The contractor shall also assist in inspection and 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. On completion of factory/work's inspection, dispatch instruction shall be issued by the Inspecting officer of the department. Only those materials as passed in inspection by the Inspecting Officer shall be dispatched. The inspecting officer will get the stickers {marked "INSPECTED"} pasted on all items inspected and an additional sticker marked "TESTED" only on the items tested. The fencing material 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 at manufacturer's premises, 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.

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 stress on all parts at specified conditions of operation (c) Satisfactory operation during the maintenance period-
2. **All fencing components shall be guaranteed for satisfactory performance and/or damages 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	Fencing materials	10 Years
2	Powder coating / Galvanization / Thermoplastic coating	10 Years

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 manufacturer / supplier/ applicator will unconditionally support the lowest tenderer technically throughout the execution of contract and during the guarantee period.
- c) The manufacturer / supplier/ applicator 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.

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.
B	For fencing work	2 Nos.
1	DFT Check instrument	2 Nos.
2	Immersion (Permeability) test kit	2 Nos.
3	Adhesion Test kit	2 Nos.
4	MEK test kit	2 Nos.

SCHEDULE OF QUANTITY

NAME OF WORK- Conversion of border security fencing from phase II/III to new design fence in West Bengal between BP No.243/MP to 764/2-S (Length 210.028 km) (SH : **Providing & Fixing Two Layers of concertina coil as pilot project on the counterpart side strapped on the ground in a stretch from BP no. 387/MP to 387/5-S having length of 2.1km**)

Item No	Description of item	Quantity	Rate in Rs.	Unit	Amount in Rs.
	Fencing				
1.1	Providing and fixing SS 304 double-layer Razor Wire Punched Tape concertina coil of 1050 mm $\pm$ 10 mm diameter (unstretched), comprising 56 $\pm$ 1 loops per coil with 10 m openable length, Tear blade profile having SS blade(SS 304) of length of 30 mm, thickness 0.45 mm ($\pm$ 0.05 mm), C/ C distance of blades as 50 mm with core wire diameter 3.5 mm SS 304, manufactured from SS 304 blade tape and core wire, fixed over 50 $\times$ 50 $\times$ 3 mm MS equal angle having length of 2350 mm (1750mm verticle + 600mm horizontal) supports at 5.00 m c/c, hot-dip galvanized with minimum 460 GSM zinc coating conforming to IS 2629, IS 4759, IS 4736 and ASTM A123, followed by thermosetting powder coating (Jotun Facade 1407 or equivalent) conforming to AMMA 2603, Qualicoat Class 1 with 60–80 micron DFT, secured to concrete using SS 304 anchor rods of size M12 $\times$ 125 mm, with concertina coil anchored at 1.00 m intervals using M10 $\times$ 200 mm J-hooks and SS 304 hog rings manufactured from 3 mm dia wire having nominal weight of 0.005 kg each, complete in all respects as per the directions of the Engineer-in-Charge.	2100	2859.13	Mtr	60,04,173.00
			Gross Total		60,04,173.00

Central Public Works Department**N.I.T. No: 06/NIT/EE/BFD-II/2026-27 (1st Re-Call)**

Name of work:	Conversion of border security fencing from phase II/III to new design fence in West Bengal between BP No.243/MP to 764/2-S (Length 210.028 km) (SH : Providing & Fixing Two Layers of concertina coil as pilot project on the counterpart side strapped on the ground in a stretch from BP no. 387/MP to 387/5-S having length of 2.1km)
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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
	Conversion of border security fencing from phase II/III to new design fence in West Bengal between BP No.243/MP to 764/2-S (Length 210.028 km) (SH : Providing & Fixing Two Layers of concertina coil as pilot project on the counterpart side strapped on the ground in a stretch from BP no. 387/MP to 387/5-S having length of 2.1km)	Rs. 60,04,173.00			

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