



**GOVERNMENT OF INDIA  
CENTRAL PUBLIC WORKS DEPARTMENT**

---

**TENDER DOCUMENT**

FOR

**Extra Ordinary repair of 52.607 Km of IBB Road, Link road and embankment protection work along with parapet repair and painting of one concrete bridge, in various stretches in Murshidabad district of West Bengal along Indo-Bangladesh Border.**

**Executive Engineer  
Border Fencing Division-VII, IBBZ-I, CPWD,  
Cossimbazar, Murshidabad, PIN-742102  
Tel: 03482 275537**

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**Notice to be uploaded on website.**

|                                        |                                                                                                                                                                                                                                                          |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Name of Work</b>                    | <b>Extra Ordinary repair of 52.607 Km of IBB Road, Link road and embankment protection work along with parapet repair and painting of one concrete bridge, in various stretches in Murshidabad district of West Bengal along Indo-Bangladesh Border.</b> |
| <b>Estimated Cost</b>                  | <b>Rs. 24,96,22,741/-</b>                                                                                                                                                                                                                                |
| <b>Earnest Money</b>                   | <b>Rs. 34,96,227/-</b>                                                                                                                                                                                                                                   |
| <b>Performance Guarantee</b>           | <b>As per schedule "E"</b>                                                                                                                                                                                                                               |
| <b>Security Deposit</b>                | <b>2.5% of tendered Value</b>                                                                                                                                                                                                                            |
| <b>Completion Period</b>               | <b>09(Nine) Months.</b>                                                                                                                                                                                                                                  |
| <b>NIT No.</b>                         | <b>02/NIT/CE/IBBZ-I/06/EE/BFD-VII/2026-27</b>                                                                                                                                                                                                            |
| <b>Last date for submission of Bid</b> | <b>Upto 3:00 pm on 13.08.2026</b>                                                                                                                                                                                                                        |

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|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <b>Name of Work:</b> | <b>Extra Ordinary repair of 52.607 Km of IBB Road, Link road and embankment protection work along with parapet repair and painting of one concrete bridge, in various stretches in Murshidabad district of West Bengal along Indo-Bangladesh Border.</b> |             |
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**CENTRAL PUBLIC WORKS DEPARTMENT  
NOTICE INVITING e-TENDER**

The Executive Engineer, Border Fencing Division-VII, IBBZ-I, CPWD, Cossimbazar, Murshidabad, PIN-742102, (Email id: [mbdeebfd7.cpwd@gov.in](mailto:mbdeebfd7.cpwd@gov.in)) on behalf of the President of India invites online percentage rate bids from approved and eligible contractors of CPWD enlisted in appropriate class for the following work:-

**NIT No: 02/NIT/CE/IBBZ-I/06/EE/BFD-VII/2026-27**

**Name of Work: - Extra Ordinary repair of 52.607 Km of IBB Road, Link road and embankment protection work along with parapet repair and painting of one concrete bridge, in various stretches in Murshidabad district of West Bengal along Indo-Bangladesh Border.**

**Estimated Cost: Rs. 24, 96, 22,741/-**

**Period of Completion: 09 (Nine) Months.**

**Earnest Money: Rs.34, 96,227/-**

**Performance Guarantee: As per schedule "E"**

**Security Deposit: 2.5% of tendered Value.**

**Last date and time of submission of bid 13.08.2026 up to 3:00 PM.**

The bid forms and other details can be obtained from website <https://etender.cpwd.gov.in> or [www.cpwd.gov.in](http://www.cpwd.gov.in) the press notice is also available on [www.eprocure.gov.in](http://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 Maintenance 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-VII, IBBZ-I, CPWD, Cossimbazar, Murshidabad, PIN-742102, (Email id: [mbdeebfd7.cpwd@gov.in](mailto:mbdeebfd7.cpwd@gov.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       | 2/NIT/CE/IBBZ-I/06/EE/BFD-VII/2026-27 | Extra Ordinary repair of 52.607 Km of IBB Road, Link road and embankment protection work along with parapet repair and painting of one concrete bridge, in various stretches in Murshidabad district of West Bengal along Indo-Bangladesh Border | Rs.24,96,22,741/-         | Rs. 34,96,227/- | 09 (Nine) Months.                       | Up to<br>15:00 Hrs<br>on<br>13.08.2026                                                                                                          | At 15.30<br>Hrs.<br>on<br>13.08.2026 |

1. 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.
2. Information and Instructions for bidder posted on website shall form part of bid document.
3. 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](http://www.cpwd.gov.in) free of cost.
4. But the bid can only be submitted after deposition of original EMD either in the office of the Executive Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission and uploading the mandatory scanned documents such as Insurance Surety Bonds, Account payee Demand Draft or Bankers Cheque or Fixed deposit Receipt (FDR) or/ and Bank guarantee (for balance amount as prescribed) from any of the commercial bank towards EMD in favour of Executive Engineer as mentioned in NIT, receipt for deposition of original EMD to Division office of any Executive Engineer (including NIT issuing EE), CPWD and other documents as specified. A part of earnest money is acceptable in the form of Bank Guarantee also. In such case 50% of earnest money or Rs.20 lakh whichever is less, will have to be deposited in shape prescribed



above and balance can be accepted in the form of Bank Guarantee issued by a commercial Bank and shall be valid for period of 180 days or more from the date of submission of bid. EMD shall be made / issued only from the account of the bidder / tenderer submitting the bid/tender. EMD made/ issued from the account other than that of the bidder/ tenderer submitting the bid, shall not be accepted.

5. Those contractors who are not registered or have not updated their profile on the website mentioned above, are required to get registered/update their profile beforehand. The necessary training materials including the videos with step-to-step process are available on download section of <https://etender.cpwd.gov.in>
6. The intending bidders must have valid Class-III digital signature certificate with encryption key (combo type) to perform any operation /transactions on the e-tendering portal/ website and the bidder should download and install the eMSigner on their system as per instructions available on download section of <https://etender.cpwd.gov.in>
7. On opening date, the Bidder can login and see the bid opening process. After opening of bids, he will receive the competitor bid sheets.
8. Contractor can upload documents in the form of JPG format and PDF format.
9. If any information furnished by the applicant is found incorrect at a later stage, he shall be liable to be debarred from tendering/taking up of works in CPWD. The department reserves the right to verify the particulars furnished by the applicant independently.

**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. **EMD shall be made / issued only from the account of the bidder / tenderer submitting the bid/tender. EMD made/ issued from the account other than that of the bidder/ tenderer submitting the bid, shall not be accepted.**
2. Copy of receipt for deposition of Original EMD.
3. Enlistment Order of the Contractor of appropriate class.
4. GST Registration Certificate, if already obtained by the bidder.

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

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

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

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

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

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

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

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

Signature of notary  
With seal

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

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

# Part-A

**CPWD-6 FOR e-Tendering**

1. The Executive Engineer, Border Fencing Division-VII, IBBZ-I, CPWD, Cossimbazar, Murshidabad, PIN-742102, (Email id: [mbdeebfd7.cpwd@gov.in](mailto:mbdeebfd7.cpwd@gov.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 :-

**Extra Ordinary repair of 52.607 Km of IBB Road, Link road and embankment protection work along with parapet repair and painting of one concrete bridge, in various stretches in Murshidabad district of West Bengal along Indo-Bangladesh Border.**

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.24, 96, 22,741/-**-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](http://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 **09 (Nine) 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 is available.
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 <http://etender.cpwd.gov.in> or [www.cpwd.gov.in](http://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-VII, CPWD, Murshidabad**) shall be scanned and uploaded to the e-Tendering website within the period of bid submission. The original EMD should be deposited either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission. The EMD receiving Executive Engineer (including NIT issuing EE) shall issue a receipt of deposition of earnest money deposit to the bidder in a prescribed format uploaded by tender inviting EE in the NIT. This receipt shall also be uploaded to the e-tendering website by the intending bidder within the period of bid submission. EMD shall be made / issued only from the account of the bidder / tenderer submitting the bid/tender. EMD made/ issued from the account other than that of the bidder/ tenderer submitting the bid, shall not be accepted.

A part of earnest money is acceptable in the form of bank guarantee also. In such case, minimum 50% of earnest money or **Rs. 20 lakh**, whichever is less, shall have to be deposited in shape prescribed above, and balance may be deposited in shape of Bank Guarantee issued by a commercial bank having validity for a period of 180 days or more from the date of submission of the tender which is to be scanned and uploaded by the intending bidder.

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

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

The bid submitted shall be opened at **3.30 PM on 13.08.2026**

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 Surety 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:

**Extra Ordinary repair of 52.607 Km of IBB Road, Link road and embankment protection work along with parapet repair and painting of one concrete bridge, in various stretches in Murshidabad district of West Bengal along Indo-Bangladesh Border.**

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,
- 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.
  - 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.
  - 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: -
- 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.
  - Standard C.P.W.D. Form 7 **General Conditions of Contract 2023 for Maintenance work, CPWD with up-to-date modifications & upto date correction slips** upto 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](mailto:cpwd.support@techmahindra.com). The e-tendering bidders are also advised not to wait to raise any issue till the last date of submission of bid in their own interest.

**Executive Engineer,**  
Border Fencing Division-VII,  
CPWD, Murshidabad.  
(For and on behalf of President of India)

CPWD-7

**GOVERNMENT OF INDIA**  
**CENTRAL PUBLIC WORKS DEPARTMENT**

|               |                    |                                               |
|---------------|--------------------|-----------------------------------------------|
| <b>State</b>  | <b>West Bengal</b> | <b>Zone :- IBBZ-I, CPWD, Siliguri</b>         |
|               |                    | <b>Circle :- BFC-II, CPWD, Krishnanagar</b>   |
| <b>Branch</b> | <b>B &amp; R</b>   | <b>Division :- BFD-VII, CPWD, Murshidabad</b> |

**Percentage Rate Tender & Contract for Works**

**Tender for the work of “Extra Ordinary repair of 52.607 Km of IBB Road, Link road and embankment protection work along with parapet repair and painting of one concrete bridge, in various stretches in Murshidabad district of West Bengal along Indo-Bangladesh Border.”**

- (i) To be uploaded/submitted by tenderers upto **3:00 PM on 13.08.2026** on CPWD web site.
- (ii) To be opened in presence of bidders or their authorized representative who may be present at **3:30 PM on 13.08.2026** in the office of The Executive Engineer, Border Fencing Division-VII, IBBZ-I, CPWD, Cossimbazar, Murshidabad, PIN-742102, (Email id: mbdeebfd7.cpwd@gov.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.

*AE(P)*

*EE(P&A)*



The said Performance Guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

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

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

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

Dated \_\_\_\_\_ \* \_\_\_\_\_

Signature of Contractor

Postal Address \_\_\_\_\_ \* \_\_\_\_\_

Witness: \*\* \_\_\_\_\_

\_\_\_\_\_ \*

Address: \*\* \_\_\_\_\_

Occupation: \*\* \_\_\_\_\_

Telephone No. \_\_\_\_\_ \*

Fax \_\_\_\_\_ \*

E-Mail \_\_\_\_\_ \*

(\*) To be filled in by the Contractor

(\*\*) To be filled in by the Witness

**Acceptance**

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

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

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

For & on behalf of the President of India.

Signatures.....

Designation.....

Dated

*AE(P)*

*EE(P&A)*

**PROFORMA OF SCHEDULES****SCHEDULE A to F****SCHEDULE 'A'**

Schedule of quantities: Page No. 67-72

**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  
Maintenance work, CPWD with upto date  
modifications & up to date correction slips

|                            |   |                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name of Work               | : | Extra Ordinary repair of 52.607 Km of IBB Road, Link road and embankment protection work along with parapet repair and painting of one concrete bridge, in various stretches in Murshidabad district of West Bengal along Indo-Bangladesh Border.                                                                                                                                                                                         |
| Estimated cost of the work | : | Rs. 24,96,22,741/-                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Earnest money              | : | Rs.34,96,227/- (To be returned after receiving performance guarantee)                                                                                                                                                                                                                                                                                                                                                                     |
| Performance Guarantee      | : | (a) 5% of tendered value or Estimated Cost Put to Tender (ECPT) (Whichever is higher).<br><br>(b) Where the tendered amount is less than eighty percent (80%) of the Estimated Cost Put to Tender (ECPT), the additional Performance Guarantee, in addition to the requirement under (a) above, shall be increased by an amount equivalent to the difference between the eighty percent (80%) amount of the ECPT and the tendered amount. |
| Security Deposit           | : | 2.5% of tendered value                                                                                                                                                                                                                                                                                                                                                                                                                    |

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

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

**Definitions:**

|       |                    |   |                                                                                                     |
|-------|--------------------|---|-----------------------------------------------------------------------------------------------------|
| 2(vi) | Engineer-in-Charge | : | Executive Engineer, Border Fencing Division-VII, IBBZ-I, CPWD, Murshidabad or his successor thereof |
|-------|--------------------|---|-----------------------------------------------------------------------------------------------------|

|         |                                                                                      |   |                                                                                                                                                                                                          |
|---------|--------------------------------------------------------------------------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2(viii) | Accepting Authority                                                                  | : | Chief Engineer, IBBZ-I, CPWD, Siliguri <b>or his successor thereof.</b>                                                                                                                                  |
| 2(x)    | <b>Percentage on cost of materials and labour to cover all overheads and profits</b> | : | 15%                                                                                                                                                                                                      |
| 2(x)(a) | <b>Standard Schedule of Rates:</b><br>Civil Items of Work:                           | : | DSR 2023 + Cost Index with up-to-date correction slips & MR for Non-schedule items.                                                                                                                      |
| 2(xi)   | Department:                                                                          | : | Central Public Works Department                                                                                                                                                                          |
| 9(ii)   | Standard CPWD contract Form:                                                         | : | CPWD Form 7 of General Condition of Contract 2023 for Maintenance work, with up-to-date correction slips till last date of submission of bid. This contract form will be integral part of the agreement. |

|                 |                                                                                                                                                                                                                                                              |                                                                                                         |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Clause 1</b> | 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                                                                                                  |
| <b>Clause 2</b> | Authority for fixing Compensation under Clause 2                                                                                                                                                                                                             | Superintending Engineer, Border Fencing Circle-II, IBBZ-I, CPWD, Krishnanagar or his successor thereof. |
| <b>Clause 5</b> | Number of days from the date of issue of letter of acceptance for reckoning date of start of milestone as per table given below:                                                                                                                             | 10 Days                                                                                                 |

| Sl. No.                            | Description of Mile Stone (Financial Progress) | Time allowed in days (from date of start) | Amount to be withheld in case of Non-achievement of each physical Mile stone(s)                                                        |
|------------------------------------|------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 1.                                 | 15% of Contract Value                          | 2 months                                  | 1.00% of tender amount                                                                                                                 |
| 2.                                 | 40% of Contract Value                          | 4 months                                  | 1.00% of tender amount                                                                                                                 |
| 3.                                 | 65% of Contract Value                          | 6 months                                  | 1.00% of tender amount                                                                                                                 |
| 4.                                 | 90% of Contract Value                          | 8 months                                  | 1.00% of tender amount                                                                                                                 |
| 5.                                 | Complete work in all respect                   | 9 months                                  | 1.00% of tender amount                                                                                                                 |
| Time allowed for execution of work |                                                | :                                         | <b>09 (Nine) Months including period on account of rainy seasons from July to Oct every year will not be considered for hindrance.</b> |

|       |                                                                                 |                                                                                                  |
|-------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| (i)   | Authority to convey the decision of shifting of milestone and extension of time | Superintending Engineer, Border Fencing Circle-II, IBBZ-I, Krishnanagar or his successor thereof |
| (ii)  | Authority to decide rescheduling of milestone and extension of time             | Superintending Engineer, Border Fencing Circle-II, IBBZ-I, Krishnanagar or his successor thereof |
| (iii) | Shifting of date of start in case of delay in handing over of site              | Superintending Engineer, Border Fencing Circle-II, IBBZ-I, Krishnanagar 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                     | Total stretch of site without any hindrance as per available.                                                                                                             | 10 <sup>th</sup> day                                                             |
| <b>Clause 6</b>       | Computerized measure book (CMB) / Electronic measurement book (EMB)                                                                                                       | CMB                                                                              |
| <b>Clause 7</b>       | Gross work to be done together with net payment/Adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment. | <b>Rs.5.00 Cr.</b>                                                               |
| <b>Clause7A</b>       | Whether Clause 7A shall be applicable                                                                                                                                     | Yes                                                                              |
| <b>Clause7B</b>       | Whether Clause 7B shall be applicable                                                                                                                                     | Yes                                                                              |
| <b>Clause 8A</b>      | Authority to decide compensation on account if contractor fails to submit completion plans                                                                                | Engineer-in-charge                                                               |
| <b>Clause 10 A</b>    | List of testing equipment to be provided by the contractor at site of the work                                                                                            | As per list at page No. 65                                                       |
| <b>Clause10B (ii)</b> | Whether clause 10B (ii) shall be applicable                                                                                                                               | No                                                                               |
| <b>Clause 10 C</b>    | Component of labour expressed as percentage of value of work                                                                                                              | <b>5%</b>                                                                        |

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                     |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Clause 10 CC |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Not Applicable                                                                                                                                                      |
| Clause 11    | Specifications to be followed for execution of work                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | CPWD Specification for works-2019 Vol- I & II with upto date correction slips till last date of submission of tender (Hereinafter called CPWD specifications also), |
| Clause 12    | Type of work                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Maintenance work i/c addition/alteration work, upgradation work etc.                                                                                                |
|              | <p>The completion cost shall, in no case, exceed 1.5 times the contract amount.</p> <p>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.</p> <p>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.</p> |                                                                                                                                                                     |
| 12.2 (c)     | Deviation Limit beyond which clauses 12.2 (c) shall apply                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No limit                                                                                                                                                            |
| Clause 16    | Competent Authority for Deciding reduced rates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Chief Engineer, IBBZ-I, Siliguri or his successor thereof                                                                                                           |
| Clause 18    | List of mandatory machinery, tools & plants to be deployed by the contractor at site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | As per Page No. 66                                                                                                                                                  |
| 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 per day                                                                                                                                     |
| Clause 25    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | As per amended provision in annexure – I, Page no. 23-26.                                                                                                           |
|              | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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| 25     | <p>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.</p> <p><b>25.1 Conciliation:</b> 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</p> | <p>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.</p> <p><b>25.1.1 Appeal to Chief Engineer</b><br/> <b>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.</b></p> <p><b>25.1.2 Conciliation:</b> 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</p> |



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



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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| <p>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.</p> <p><b>25.3 Appointment of Sole Arbitrator:</b> 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.</p> <p>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.</p> <p>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.</p> <p><b>25.4 Appointment of Arbitral Tribunal of three Arbitrators:</b> 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</p> | <p>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).</p> <p>The aforesaid educational qualification and work experience shall be mandatory for appointment as Arbitrator.</p> <p>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.</p> <p><b>(c) Parties to select Arbitrator:</b> 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 <b>but selected Arbitrator shall be other than past CPWD Official.</b></p> <p><b>Alternately, sole arbitrator or arbitral tribunal can be got appointed from India International Arbitration Centre (IIAC).</b></p> <p><b>25.3 Appointment of Sole Arbitrator:</b> 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.</p> <p>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.</p> <p><b>Alternatively, IIAC can be requested to appoint arbitrator by the arbitrator appointing authority.</b></p> <p><b>25.4 Appointment of Arbitral Tribunal of three Arbitrators:</b> 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</p> |
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| <p>presiding Arbitrator, within 15 days of receipt of choice from both the parties.</p> <p>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.</p> <p><b>25.5 Applicable Law:</b> 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.</p> <p><b>25.6 Fee payable to Arbitrator(s):</b> Fee payable to Arbitrator(s) for arbitration cases, shall be as per the fee given in the fourth schedule of the Arbitration &amp; Conciliation Act, 1996 (or latest amendment), and shall be shared equally by both the parties.</p> <p><b>25.7 Place of Arbitration:</b> 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.</p> | <p>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.</p> <p>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.</p> <p><b>Alternatively, IIAC can be requested to appoint arbitral tribunal by the arbitrator appointing authority.</b></p> <p><b>25.5 Applicable Law:</b> 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.</p> <p><b>25.6 Fee payable to Arbitrator(s):</b> Fee payable to Arbitrator(s) for arbitration cases, shall be as per the fee given in the fourth schedule of the Arbitration &amp; Conciliation Act, 1996 (or latest amendment), and shall be shared equally by both the parties.<br/>The fee of IIAC appointed arbitrator or arbitral tribune will be as per IIAC norms.</p> <p><b>25.7 Place of Arbitration:</b> 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.</p> |
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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                                 | Civil      | Project Manager                                             | 20 (and having experience of one similar nature of works) | 1      | Rs. 60,000/- per month per person                                                                              |
| 2.     | Graduate Engineer                                 | Civil      | Deputy Project Manager                                      | 12 (and having experience of one similar nature of works) | 1      | Rs. 40,000/- per month per person                                                                              |
| 3      | Graduate Engineer<br>or<br>Diploma Engineer       | Civil      | Project /site Engineer                                      | 5<br>Or<br>10<br><br>Respectively                         | 1      | Rs. 25,000/- per month per person                                                                              |
| 4      | Graduate Engineer<br>or<br>Diploma Engineer       | Civil      | Project Planning/quality/ billing Engineer                  | 2<br>Or<br>5<br><br>Respectively                          | 1      | Rs. 15,000/- per month per person                                                                              |

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

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

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

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

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

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

### **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](http://www.cpwd.gov.in) or [www.eprocure.gov.in](http://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.
8. In case of Percentage Rate Tenders only percentage quoted shall be considered. Any tender containing item rates is liable to be rejected. Percentage quoted by the contractor in percentage rate tender shall be accurately filled in figures and words, so that there is no discrepancy. In Percentage Rate Tender, the tenderers shall quote percentage below/above (in figures as well as in words) at which he will be willing to execute the work.
9. 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:-

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



### **Salient Requirements for the Tender**

1. The tenderer is advised to read and examine the tender documents for the work and the set of drawings available with Engineer-in-charge. He should inspect and examine the site and its surroundings by himself before submitting his tender.
2. Schedule of quantity is included in this tender for civil items of work. The contractor shall quote the percentage rates in figures and words accurately so that there is no discrepancy in rates written in figures and words.
3. Time allowed for the execution of work is **09 (Nine) Months**.
4. The contractor(s) shall submit a detailed program of execution in accordance with the master programme/milestone within ten days from the date of issue of award letter.
5. Quality of the project is of utmost importance. This shall be adhered to in accordance with the provisions of CPWD specifications and guidelines given in the relevant paras.
6. The contractor (s) shall make his own arrangements for electricity and water required for the execution of work.
7. Bitumen shall be arranged by the contractor himself
8. Cement shall be arranged by the contractor himself.
9. Steel Reinforcement shall be arranged by the contractor himself.
10. Contractor has to deploy required Plant and machinery on the project. **Minimum number of plant and machinery to be deployed by him is indicated at Page No.66**. In case the contractor fails to deploy the plant and machinery whenever required and as per the direction of the Engineer-in-charge, he (Engineer-in-charge) shall be at a liberty to get the same deployed at the risk and cost of the contractor.
11. **The contractor shall submit the running bills in the shape of the computerized MB in pages of A-4 size as per the standard format of department and shall act as per clause 6 of Standard CPWD contract form defined in Proforma 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.

# **Part-B**

## **(Civil Work)**

## 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 Maintenance 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 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 of 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.

### **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                                                                                                                                                                                                                                                                                                 | 1 No        |
| 2.                 | Adhesion Test kit                                                                                                                                                                                                                                                                                                    | 1 No        |
| 3.                 | MEK test kit                                                                                                                                                                                                                                                                                                         | 1 No        |
| 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<br>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, enamelled 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 moulds of 15x15x15 cm size.                                                                                                                                                                                                                                                                                     | 24 Nos      |
| 20                 | Compression Testing Machine of 100 tonne capacity with<br>(i) Pruning Rods 2 Kg weight length 40 cm and ramming face 25 mm – 1 No.<br>(ii) Extra Bottom plates for 15 cm cube mould – 6<br>(iii) Standard Vibration table for cubes – 1 No.<br>(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 laboratory as approved by the Engineer-in-Charge 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 other laboratories 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 equipments                                         | Minimum Unit |
|------------------------------------------------------------|--------------|
| 1) General Tools sets                                      | 02 Units     |
| 2) Vernier calipers                                        | 02 Units     |
| 3) Micrometer 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 Engineer-in-charge. 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 metalled 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 metalled road. This area shall not cause any obstruction to the free flow of traffic/inconvenience to the pedestrians. It should be ensured by the contractor that no accidents occur on account of such permissible storage.
- 15 The contractor shall take appropriate protection measures like raising wind breakers of appropriate height on all sides of the plot/area using CGI sheets or plastic and / or other similar material to ensure that no construction material dust fly outside the plot area.
- 16 The contractor shall ensure that all the trucks or vehicles of any kind which are used for construction purposes / or are carrying construction material like cement, sand and other allied material are fully covered. The contractor shall take every necessary precautions that the vehicles are properly cleaned

- and dust free to ensure that enroute their destination, the dust, sand or any other particles are not released in air / contaminate air.
- 17 The contractor shall provide mask to every worker working on the construction site and involved in loading, unloading and carriage of construction material and construction debris to prevent inhalation of dust particles.
  - 18 The contractor shall provide all medical help, investigation and treatment to the workers involved in the construction of building/fencing and carry of construction material and debris relatable to dust emission.
  - 19 The contractor shall comply all the preventive and protective environmental steps as stated in the MoEF guidelines, 2010 & its further revision if any.
  - 20 The contractor shall carry out on-Road –Inspection for black smoked generating machinery. The contractor shall use cleaner fuel.
  - 21 The contractor shall ensure that all DG sets comply emission norms notified by MoEF.
  - 22 The contractor shall use vehicles having pollution under control certificate.
  - 23 The contractor shall ensure that the construction material is covered by tarpaulin. The contractor shall take all other precaution to ensure that no dust particles are permitted to pollute air quality as a result of such storage.
  - 24 The 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 upto 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 metre on either side of each row of security fencing and/or 1.5 metre 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 repair of fencing work shall be executed in the following sequence:
  - (i) Construction of embankment for road and fencing with borrowed earth.
  - (ii) Construction of NP3 Hume pipe culvert for cross drainage.
  - (iii) Laying of GSB and WBM in 2 layers with stone aggregate.
  - (iv) Laying 2 mtr wide CC pavement in 2 layers in fencing area.
  - (v) Erection of new design fencing component.
  - (vi) Laying of 50 mm thick base with bituminous macadam and 40 mm thick bituminous concrete 40 mm thick wearing surface with Bituminous concrete.

## 9 LAYING OF C. C. PAVEMENT.

- 9.1 **Mixing of concrete** shall be done in concrete batching plants/site batched mixer only and under no circumstances hand-mixing shall be permitted. For shuttering of concrete work steel shuttering in adequate number of sets are required to be arranged by the contractor.
- 9.2 **Cement concrete pavement shall be laid in alternate panels** of not more than 10 m length. Proper construction joints shall be provided between the adjacent panels.
- 9.3 Nominal temperature steel of 8 mm dia TMT to be laid @300 mm c/c (both ways).
- 9.4 **Expansion joints shall be provided** in the top layer of CC pavement at 30 m intervals. After completion of the CC pavement, the expansion joints may be cleaned and filled with a stiff mixture of sand and bitumen. The cost of this operation shall be deemed to be inclusive in the items of CC pavement and nothing extra shall be payable on this account.
- 9.5 **Contractor shall always maintain a minimum storage of 4000 litres of water** for every km length of fencing taken up for execution of concreting & curing of cement concrete work. Water for concrete work and curing should be stored in polyethylene water storage tanks or other impervious containers of suitable capacity & placed evenly at 8/10 locations and conveniently placed along the alignment of the fencing. For replenishment of the water consumed in the work, the contractor shall also ensure satisfactory arrangement for transportation of water from the source of water supply up to the storage tanks placed along the alignment of fencing. Concreting work shall be permitted by the Engineer-in-charge only after satisfying that sufficient quantity of water has been stored by the Contractor along the alignment of the fencing.

## 10 ROAD WORK

- 10.1 The contractor shall be responsible for sorting, stacking and handing over of serviceable materials obtained during scarifying and / or dismantling of existing roads or a portion of road, culvert and / or its head walls or wing walls, boulder pitching, G.I. crated netting etc. In case of any loss or damage to serviceable materials prior to handing over, the value of the same as assessed by the Engineer-in-charge, shall be recovered from the contractor.
- 10.2 The Contractor shall submit a statement of materials whenever brought to site to the department, in conformity with plan/ programme approved by the Engineer-in-Charge.
- 10.3 Any legal or financial implications resulting out of disposal of earth shall be sole responsibility of the contractor. Nothing extra shall be paid on this account.
- 10.4 Contractor shall take all precautionary measures to avoid any damage to adjoining property. All necessary arrangement shall be made at his own cost.
- 10.5 IBBR No. given in the name of work is only for general guidance actual place / reach for work will be decided by the Engineer-in-charge.

## 11 PROCUREMENT AND ACCOUNTING OF BITUMEN

- 11.1 The contractor shall procure bitumen emulsion medium setting confirming to IS: 8887-1995 from manufacturer like IOCL/BPCL/HPCL/Jalnidhi Bitumen Specialties Pvt Ltd and bitumen of required grade as specified confirming to IS 73 – 2006 from the manufactures like IOCL/BPCL/HPCL.
- 11.2 The contractor will produce original Challan / Voucher for purchase of Bitumen & Bituminous Emulsion as a proof of having purchased the material from manufacturer. The Challan / Voucher shall be returned to the contractor after verification and marking necessary endorsement.
- 11.3 Bitumen of specific grade shall be brought at site in one or more lots. However, quantity in each lot shall not be less than 25% of total theoretical required quantity to be used in the work. In case the contractor brings the material in small lot, the same shall not be allowed to be used until the minimum lot size is achieved & delay on this account shall be entirely attributable to the contractor.

- 11.4 The contractor shall have to obtain and furnish test certificates issued by manufacturer to the Engineer-in-Charge in respect of bitumen procured by him.
- 11.5 Bitumen brought to site and bitumen remaining unused after completion of work shall not be removed from site without written permission of the Engineer-in-Charge. However, nothing extra shall be paid for cartage of bitumen to the site of work for unused bitumen.
- 11.6 The day-to-day receipt and issue accounts of bitumen shall be maintained in the register meant for the purpose and issued by the Engineer-in-charge of the work.

## 12 **Binding Material**

- 12.1 Crushable type such as Screening/Moorum or Gravel comprise of a suitable material as approved by Engineer-in-charge having a Plasticity Index (PI) value of less than 6 and loose quantity required for 75 mm thick compacted thickness of WBM for 10 sqm shall be 0.09 cum.

## 13 **AGGREGATE FOR WBM**

- 13.1 The aggregates shall satisfy the physical requirements set forth as follows: -

Table: Stone Aggregate size: Sub-base / Base Course

| Sl. No. | Name of Test                                      | Specification |
|---------|---------------------------------------------------|---------------|
| 1.      | Aggregate Impact Value                            | Maximum 30%   |
| 2.      | Water absorption                                  | Maximum 2%    |
| 3.      | Soundness                                         | Maximum 12%   |
| 4.      | Combined Flakiness and Elongation Indices (Total) | Maximum 35%   |

- 13.2 The coarse aggregate shall conform to one of the grading's given below in Table as specified.

Table: GRADING FOR GRANULAR SUB-BASE MATERIALS

| IS Sieve designation | Percent by weight passing the sieve |            |             |            |           |            |
|----------------------|-------------------------------------|------------|-------------|------------|-----------|------------|
|                      | Grading I                           | Grading II | Grading III | Grading IV | Grading V | Grading VI |
| 75 mm                | 100                                 | ----       | ----        | ----       | 100       | ----       |
| 53 mm                | 80 - 100                            | 100        | 100         | 100        | 80 - 100  | 100        |
| 26.5 mm              | 55 - 90                             | 70-100     | 55-75       | 50-80      | 55 - 90   | 75 - 100   |
| 9.50 mm              | 35 - 65                             | 50-80      | ---         | ---        | 35 - 65   | 55 - 75    |
| 4.75 mm              | 25 - 55                             | 40-65      | 10-30       | 15-35      | 25 - 50   | 30 - 55    |
| 2.36 mm              | 20-40                               | 30-50      | ---         | ---        | 10-20     | 10-25      |
| 0.85 mm              | ---                                 | ---        | ---         | ---        | 2-10      | ---        |
| 0.425 mm             | 10-15                               | 10-15      | ---         | ---        | 0-5       | 0-8        |
| 0.075 mm             | <5                                  | <5         | <5          | <5         | ---       | 0-3        |

- 13.3 The coarse aggregate shall conform to one of the grading's given below in Table as specified.

Table: Grading Requirements of Coarse Aggregate for W.B.M.

| Grading No | Size Range     | IS Sieve designation | Percent by weight passing the sieve |
|------------|----------------|----------------------|-------------------------------------|
| 1          | 90 mm to 45 mm | 125 mm               | 100                                 |
|            |                | 90 mm                | 90 - 100                            |
|            |                | 63 mm                | 25 - 60                             |
|            |                | 45 mm                | 0 - 15                              |
|            |                | 22.4 mm              | 0 - 5                               |

|   |                  |         |          |
|---|------------------|---------|----------|
| 2 | 63 mm to 45 mm   | 90 mm   | 100      |
|   |                  | 63 mm   | 90 - 100 |
|   |                  | 53 mm   | 25 - 75  |
|   |                  | 45 mm   | 0 - 15   |
|   |                  | 22.4 mm | 0 - 5    |
| 3 | 53 mm to 22.4 mm | 63 mm   | 100      |
|   |                  | 53 mm   | 95 - 100 |
|   |                  | 45 mm   | 65 - 90  |
|   |                  | 22.4 mm | 0 - 10   |
|   |                  | 11.2 mm | 0 - 5    |

- 13.4** Screening to fill voids in the coarse aggregate shall generally consists of the same material as the coarse aggregate. However, where permitted, predominantly non-plastic material such as moorum or gravel (other than river borne rounded material) may be used for this purpose provided liquid limit and plasticity index of such material is below 20 and 6 respectively and fraction passing 75 micron sieve does not exceed 10 percent.

As far as possible screenings shall conform to the grading's set-forth in Table below. Screenings of type A shall be used with coarse aggregate of grade I of Table mentioned in para 16.2. Screenings of type A or B as specified shall be used with coarse aggregates of grading 2. Type B screenings shall be used with coarse aggregates of grading 3.

Table: Grading for Screenings

| Grading Classification | Size of screening | IS Sieve designation | Percent by weight passing the sieve |
|------------------------|-------------------|----------------------|-------------------------------------|
| A                      | 13.2 mm           | 13.2 mm              | 100                                 |
|                        |                   | 11.2 mm              | 95 - 100                            |
|                        |                   | 5.6 mm               | 15 - 35                             |
|                        |                   | 180 micron           | 0 - 10                              |
| B                      | 11.2 mm           | 11.2 mm              | 100                                 |
|                        |                   | 9.5 mm               | 80 - 100                            |
|                        |                   | 5.6 mm               | 50 - 70                             |
|                        |                   | 180 micron           | 05 - 25                             |

## 14 **BITUMINOUS CONCRETE**

- 14.1** Bitumen: - The bitumen shall be viscosity grade paving bitumen complying with the IS 73, for VG 30 bitumen.
- 14.2** Coarse aggregate: - The coarse aggregate shall consist of crushed rock, crushed gravel or other hard material retained on 2.36 mm sieve. It shall be clean, hard durable, of cubical shape, free from dust and soft organic friable matter, and other deleterious substance. Where the Contractor's selected source of aggregates has poor affinity for bitumen, the Contractor shall produce test results that with the use of anti-stripping agents, the stripping value is improved to satisfy the specification requirements. Such a source may be approved on the condition that bitumen shall be treated with an approved anti stripping agent, as per the manufacturer's recommended **at the cost of the Contractor**. The aggregates shall satisfy the requirement specified in Table-1.

Table 1: Physical properties of coarse aggregate

| Test                                      | Requirement (percent maximum) | Test Method        |
|-------------------------------------------|-------------------------------|--------------------|
| Aggregate Impact Value                    | 27                            | IS: 2386 (part IV) |
| Or Los Angeles Abrasion Value             | 35                            | -do-               |
| Flakiness and elongation Index (Combined) | 35                            | IS: 2386 (part I)  |
| Stripping Value                           | 25                            | IS: 6241           |

|                                                  |                              |                    |
|--------------------------------------------------|------------------------------|--------------------|
| Water Absorption                                 | 2                            | IS: 2386(Part III) |
| Coating and stripping of Bitumen Aggregate Mixer | Minimum retained coating 95% | IS:6241            |
| Soundness                                        |                              |                    |
| Loss with Sodium sulphate, 5 cycles              | 12                           | IS: 2386 (part V)  |
| Loss with Magnesium sulphate , 5 cycles          | 18                           | -do-               |

- 14.3** Fine aggregate: - The fine aggregate shall consist of crushed or naturally occurring mineral material or a combination of the two, passing 2.36 mm sieve and retained on 0.075 mm sieve. It shall be clean, hard, durable, uncoated, dry and free from dust and soft or flaky pieces and organic and other deleterious matter.
- 14.4** Filler: - The filler shall be finally divided hydrated line and shall have gradation within the limits given here below-

| IS sieve (mm) | Cumulative % passing by weight of total aggregate |
|---------------|---------------------------------------------------|
| 0.6           | 100                                               |
| 0.3           | 95-100                                            |
| 0.075         | 85-100                                            |

- 14.5** Aggregate grading and bitumen content: - True and representative samples of the aggregates proposed to be used on the work shall be tested in the design laboratory and proper blend of the aggregates shall be worked out so that combined grading of coarse aggregate, fine aggregate and filler in the final composition conform to the limits given in Table 2 here below. The combined grading shall not vary from the lower limit on one sieve to the higher limit on the adjacent sieve to avoid gap grading.

Table 2. Agregate grading (IS 2386 Pt-1,wet seiving method)

| IS Sieve size (mm) | Percent passing by weight |
|--------------------|---------------------------|
| 19 mm              | 100                       |
| 13.2 mm            | 90-100                    |
| 9.5 mm             | 70-88                     |
| 4.75 mm            | 53-71                     |
| 2.36 mm            | 42-58                     |
| 1.18 mm            | 34-48                     |
| 300 micron         | 18-28                     |
| 150 micron         | 12-20                     |
| 75 micron          | 4-10                      |

- 14.6** Job Mix design: - Bitumen content required shall be determined following the Marshall mix design procedure. **Bitumen content in the mix shall be 5.5%** by weight of total mix. However, the binder content shall be optimised to achieve the requirement of the mix given in table-3. The binder content shall be selected to obtain 4% air voids in the mix design.
- 14.7** Requirement of the mix: - Apart from conformity with the grading and quality requirements for individual ingredients, the mixture shall meet the requirements set out in Table -3

Table-3

|                                                                 |    |
|-----------------------------------------------------------------|----|
| (i) Number of compaction blows on each end of Marshall specimen | 75 |
|-----------------------------------------------------------------|----|



|                                                                                                        |               |
|--------------------------------------------------------------------------------------------------------|---------------|
| (ii) Marshall stability in KN at 60 <sup>0C</sup>                                                      | 9             |
| (iii) Marshall flow(mm)                                                                                | 2-4           |
| (iv) Percent air-voids                                                                                 | 3-5           |
| (v) Percent voids in mineral aggregate filled with bitumen                                             | 65-75         |
| (vi) Coating of aggregate particle                                                                     | 95% minimum   |
| (vii) Binder content as percent by weight of total mix (to be decided based on Marshall design method) | 5.5 % minimum |

- 14.8** Job mix formula: - The Contractor shall submit the job mix formula proposed for use in the work at least 15 days before start of the work. While establishing the job mix formula, the Contractor shall ensure that it is based on correct and truly representative sample of the materials that will actually be used in the work and that the mix and its different ingredients satisfy the physical and strength requirements given here above. Job mix formula shall have all the details stipulated hereunder-

|      |                                                                                                                                                                                                                                          |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| i    | Source and location of all material                                                                                                                                                                                                      |
| ii   | Proportion of all material expressed as-<br>(i) Bitumen percentage by weight of total mix<br>(ii) Coarse aggregate/Fine aggregate/Filler as percentage by weight of total aggregate including filler                                     |
| iii  | A single definite percentage passing each sieve for the mix aggregate                                                                                                                                                                    |
| iv   | The individual grading of the individual aggregate fraction and the proportion of each in the combined grading                                                                                                                           |
| v    | The result of mix design such as maximum specific gravity of loose mix (Gmm, compacted specimen densities, Marshal stability, flow, air voids, VBA, VFB and related graphs and test results of AASHTO T 283 Moisture susceptibility test |
| vi   | Where the mixer is a batch mixer, the individual weights of each type of aggregate and bitumen per batch                                                                                                                                 |
| vii  | Test result of physical characteristics of aggregate to be used                                                                                                                                                                          |
| viii | Mixing temperature and compacting temperature                                                                                                                                                                                            |

- 14.9** Permissible variation in job mix formula: - Once the laboratory job mix formula is approved, the contractor shall carry out plant trails to establish that the plant can produce a uniform mix conforming to the approve job mix formula. The permissible variations of the individual percentages of the various ingredients in the actual mix from the job mix formula to be used shall be within the limits as specified in Table-4 and shall remain within the gradation band.

Table-4

| No. | Description of Ingredient                        | Permissible variation by weight of total mix (per cent) |
|-----|--------------------------------------------------|---------------------------------------------------------|
| 1   | Aggregate passing 13.2 or large sieve            | ± 8                                                     |
| 2   | Aggregate passing 11.2 mm sieve and 5.6 mm sieve | ± 7                                                     |
| 3   | Aggregate passing 2.8 mm sieve and 1.4 mm sieve  | ± 6                                                     |
| 4   | Aggregate passing 710 micron sieve and 355       | ± 5                                                     |

|   | mm sieve                           |                          |
|---|------------------------------------|--------------------------|
| 5 | Aggregate passing 180 micron sieve | $\pm 4$                  |
| 6 | Aggregate passing 90 micron sieve  | $\pm 3$                  |
| 7 | Bitumen content                    | $\pm 0.3$                |
| 8 | Mixing temperature                 | $\pm 10^{\circ}\text{C}$ |

## 15 BITUMINOUS Macadam

- 15.1** Bitumen: - The bitumen shall be viscosity grade paving bitumen complying with the IS 73, for VG 30 bitumen.
- 15.2** Coarse aggregate: - The coarse aggregate shall consist of crushed rock, crushed gravel or other hard material retained on 2.36 mm sieve. It shall be clean, hard durable, of cubical shape, free from dust and soft organic friable matter, and other deleterious substance. Where the Contractor's selected source of aggregates has poor affinity for bitumen, the Contractor shall produce test results that with the use of anti-stripping agents, the stripping value is improved to satisfy the specification requirements. Such a source may be approved on the condition that bitumen shall be treated with an approved anti stripping agent, as per the manufacturer's recommended **at the cost of the Contractor**. The aggregates shall satisfy the requirement specified in Table-1.

**Table 1: Physical properties of coarse aggregate**

| Test                                             | Requirement (percent maximum) | Test Method        |
|--------------------------------------------------|-------------------------------|--------------------|
| Aggregate Impact Value                           | 30                            | IS: 2386 (part IV) |
| Or Los Angeles Abrasion Value                    | 40                            | -do-               |
| Flakiness and elongation Index (Combined)        | 35                            | IS: 2386 (part I)  |
| Stripping Value                                  | 25                            | IS: 6241           |
| Water Absorption                                 | 2                             | IS: 2386(Part III) |
| Coating and stripping of Bitumen Aggregate Mixer | Minimum retained coating 95%  | IS:6241            |
| Soundness                                        |                               |                    |
| Loss with Sodium sulphate, 5 cycles              | 12                            | IS: 2386 (part V)  |
| Loss with Magnesium sulphate , 5 cycles          | 18                            | -do-               |

- 15.3** Fine aggregate: - The fine aggregate shall consist of crushed or naturally occurring mineral material or a combination of the two, passing 2.36 mm sieve and retained on 0.075 mm sieve. It shall be clean, hard, durable, uncoated, dry and free from dust and soft or flaky pieces and organic and other deleterious matter.
- 15.4** Filler: - The filler shall be finally divided hydrated line and shall have gradation within the limits given here below-

| IS sieve (mm) | Cumulative % passing by weight of total aggregate |
|---------------|---------------------------------------------------|
| 0.6           | 100                                               |
| 0.3           | 95-100                                            |
| 0.075         | 85-100                                            |

- 15.5** Aggregate grading and bitumen content: - True and representative samples of the aggregates proposed to be used on the work shall be tested in the design laboratory and proper blend of the aggregates shall be worked out so that combined grading of coarse aggregate, fine aggregate and filler in the final

composition conform to the limits given in Table 3 here below. The combined grading shall not vary from the lower limit on one sieve to the higher limit on the adjacent sieve to avoid gap grading.

Table 2: Agregate grading (IS 2386 Pt-1,wet seiving method)& Composite of BM

| Mix Designation                        | Grading 2                                      |
|----------------------------------------|------------------------------------------------|
| Nominal max agg size                   | 19 mm                                          |
| Layer thickness                        | 50-75 or as specified in item                  |
| IS Sieve size (mm)                     | Cumulative % weight of total aggregate passing |
| 25.6 mm                                | 100                                            |
| 19 mm                                  | 90-100                                         |
| 13.2 mm                                | 56-88                                          |
| 4.75 mm                                | 16-36                                          |
| 2.36 mm                                | 4-19                                           |
| 300 micron                             | 2-10                                           |
| 75 micron                              | 0-8                                            |
| Bitumen Content % by mass to total mix | As specified in item                           |

**15.6** Mix design: - Bitumen content required shall be determined following the Marshall mix design procedure. **Bitumen content in the mix shall be 3.5%** by weight of total mix. However, the binder content shall be optimised to achieve the requirement of the mix given in table-3. The binder content shall be selected to obtain 4% air voids in the mix design.

**15.7** Requirement of the mix: - Apart from conformity with the grading and quality requirements for individual ingredients, the mixture shall meet the requirements set out in Table -3

Table-3

|                                                                                                        |              |
|--------------------------------------------------------------------------------------------------------|--------------|
| (viii) Number of compaction blows on each end of Marshall specimen                                     | 75           |
| (ix) Marshall stability in KN at 60 <sup>0C</sup>                                                      | 9            |
| (x) Marshall flow(mm)                                                                                  | 2-4          |
| (xi) Percent air-voids                                                                                 | 3-5          |
| (xii) Percent voids in mineral aggregate filled with bitumen                                           | 65-75        |
| (xiii) Coating of aggregate particle                                                                   | 95% minimum  |
| (xiv) Binder content as percent by weight of total mix (to be decided based on Marshall design method) | Minimum 3.5% |

## **16 Construction Operation**

### **16.1.1 Preparation of the Base**

The base on which bituminous macadam/concrete is to be laid shall be prepared, shaped and compacted to the required profile as appropriate, and a prime coat, shall be applied as specified, in accordance with the provisions or as directed by the Engineer-in-charge. The surface shall be thoroughly swept clean by a mechanical broom, and the dust removed by compressed air, in locations where mechanical broom cannot get access; other approved methods shall be used as directed by the Engineer-in-charge.

Tack coat shall be applied by a self-propelled or sprayer towed bitumen pressure sprayer.

### **16.1.2 Mixing and Transportation of the Mixture**

The Pre-mixed bituminous materials shall be prepared in a hot mix plant of adequate capacity and capable of yielding a mix of proper and uniform quality with thoroughly coated aggregates. Appropriate mixing temperatures are given in Table 6 of these Specifications; the difference in temperature between

the binder and aggregate should at no time exceed 14°C. In order to ensure uniform quality of the mix and better coating of aggregates, the hot mix plant shall be calibrated from time to time. The essential features of the hot mix plants are given in Annex. A of IRC: 27.

**Table 6: Mixing, Laying and Rolling Temperatures for Bituminous Mixes (Degree Celsius)**

| Bitumen Viscosity Grade | Bitumen Temperature | Aggregate Temperature | Mixed Material Temperature | Laying Temperature | *Rolling Temperature |
|-------------------------|---------------------|-----------------------|----------------------------|--------------------|----------------------|
| VG-30                   | 150-165             | 150-170               | 150-165                    | 140 min.           | 90 min.              |

\*Rolling must be completed before the mat cools to these minimum temperatures.

If a continuous type mixing plant is used, the Contractor must demonstrate by laboratory analysis that the cold feed combined grading is within the grading limits specified for that bituminous bound material. In the case of a designed job mix, the bitumen and filler content shall be derived using this combined grading.

Bituminous materials shall be transported in clean insulated vehicles, and unless otherwise agreed by the Engineer, shall be covered while in transit or awaiting tipping. Subject to the approval of the Engineer, a thin coating of diesel or lubricating oil may be applied to the interior of the vehicle to prevent sticking and to facilitate discharge of the material.

#### **16.1.3 Cleaning of Surface :**

The surface on which the bituminous work is to be laid shall be cleaned of all loose and extraneous matter by means of a mechanical broom and air jet. or any other approved equipment/ method as specified in the contract. The use of a high pressure air jet from a compressor to remove dust or loose matter shall be available full time on the site, unless otherwise specified in the Contract.

#### **16.1.4 Spreading :**

Prior to spreading the mix, the base shall be prepared by carrying out the required operation. Except in areas where a mechanical paver cannot get access, bituminous materials shall be spread, levelled and tamped by an approved self-propelled paving machine equipped with an electronic sensing device. The essential features of the paver finisher shall conform to Annex A of IRC: 27. As soon as possible after arrival at site, the materials shall be supplied continuously to the paver and laid without delay.

The rate of delivery of material to the paver shall be regulated to enable the paver to operate continuously. The travel rate of the paver, and its method of operations, shall be adjusted to ensure an even and uniform flow of bituminous material across the screed, free from dragging, tearing and segregation of the material. In areas with restricted space where a mechanical paver cannot be used, the material shall be spread, raked and levelled with suitable hand tools by experienced staff, and compacted to the satisfaction of the Engineer-in-charge.

The minimum thickness of material laid in each paver pass shall be in accordance with the minimum values given in the relevant parts of these Specifications. When laying binder course or wearing course approaching an expansion joint of a structure, machine laying shall stop 300 mm short of the joint. The remainder of the pavement up to the joint, and the corresponding area beyond it, shall be laid by hand, and the joint or joint cavity shall be kept clear of surfacing material.

Bituminous material, with a temperature greater than 145°C, shall not be laid or deposited on bridge deck waterproofing systems, unless precautions against heat damage have been approved by the Engineer-in-charge.

**16.1.5 Rolling/Compaction :**

Bituminous materials shall be laid and compacted in layers which enable the specified thickness, surface level, regularity requirements and compaction to be achieved.

Compaction of bituminous materials shall commence as soon as possible after laying. Compaction shall be substantially completed before the temperature falls below the minimum rolling temperatures stated in the relevant part of these Specifications. Rolling of the longitudinal joints shall be done immediately behind the paving operation. After this, rolling shall commence at the edges and progress towards the centre longitudinally except that on super elevated and unidirectionally cambered portions, it shall progress from the lower to the upper edge parallel to the centre line of the pavement. Rolling shall continue until all roller marks have been removed from the surface. All deficiencies in the surface after laying shall be made good by the attendants behind the paver, before initial rolling is commenced. The initial or breakdown rolling shall be done with 8 – 10 tonnes dead weight smooth-wheeled rollers. The intermediate rolling shall be done with 8 – 10 tonnes dead weight or vibratory roller or with a pneumatic tyred roller of 12 to 15 tonnes weight having nine wheels, with a tyre pressure of at least 5.6 kg/sqcm or 0.56 MPa. The finish rolling shall be done with 6 to 8 tonnes smooth wheeled tandem rollers. Rolling shall be continued until the specified density is achieved, or where no density is specified, until there is no further movement under the roller.

Where compaction is to be determined by density of cores the requirements to prove the performance of rollers shall apply in order to demonstrate that the specified density can be achieved. In such cases the Contractor shall nominate the plant, and the method by which he intends to achieve the specified level of Compaction and finish at temperatures above the minimum specified rolling temperature. Laying trials shall then demonstrate the acceptability of the plant and method used.

Bituminous materials shall be rolled in a longitudinal direction, with the driven rolls nearest the paver. The roller shall first compact material adjacent to joints and then work from the lower to the upper side of the layer, overlapping on successive passes by at least one-third of the width of the rear roll or, in the case of a pneumatic-tyred roller, at least the nominal width of 300 mm.

In portions with super elevated and unidirectional camber, after the edge has been rolled, the roller shall progress from the lower to the upper edge.

Rollers should move at a speed of not more than 5 km per hour. The roller shall not be permitted to stand on pavement which has not been fully compacted, and necessary precautions shall be taken to prevent dropping of oil, grease, petrol or other foreign matter on the pavement either when the rollers are operating or standing. The wheels of rollers shall be kept moist with water, and the spray system provided with the machine shall be in good working order, to prevent the mixture from adhering to the wheels. Only sufficient moisture to prevent adhesion between the wheels of rollers and the mixture should be used. Surplus water shall not be allowed to stand on the partially compacted pavement.

**16.1.6 Joints :**

Where joints are made, the material shall be fully compacted and the joint made flush in one of the following ways:

(a) All joints shall be cut vertical to the full thickness of the previously laid mix. All loosened material shall be discarded and the vertical face coated with a suitable viscosity grade hot bitumen, or cold

applied emulsified bitumen. While spreading the material along the joint the material spread shall overlap 25 mm to 50 mm on the previously laid mix beyond the vertical face of the joint. The thickness of the loose overlap material should be approximately a quarter more than the final

Compacted thickness. The overlapped mix shall be dragged back to the hot lane so that the roller can press the small excess into the hot side of the joint to obtain a high joint density.

(b) By using two or more pavers operating in echelon, where this is practicable, and in sufficient proximity for adjacent widths to be fully compacted by continuous rolling

All longitudinal joints shall be offset at least 300 mm from parallel joints in the layer beneath or as directed, and in a layout approved by the Engineer-in-charge. Joints in the wearing course shall coincide with either the lane edge or the lane marking, whichever is appropriate. Longitudinal joints shall not be situated in wheel track zones.

#### 16.1.7 Opening to Traffic

The newly laid surface shall not be open to traffic for at least 24 hours after laying the completion of compaction, without the approval of the Engineer-in-Charge in writing.

#### 16.1.8 Surface Finish and Quality Control of Work :

The surface finish of the completed construction shall conform to the requirements of section 900 of MORTH Specifications. For control of the quality of materials supplied and the works carried out the relevant provisions of Section 900 of MORTH Specifications.

#### 16.1.9 Arrangement for Traffic:

During the period of construction, arrangements for traffic shall be made in accordance with the provisions of specification and as per direction of the Engineer-in-charge.

#### 16.1.10 Measurement :

Bituminous Macadam shall be measured as finished work in cubic meters correct to two places of decimal.

#### 16.1.11 Rate :

The rate includes the cost of all material, labour, machineries and equipment's in all the operations described above.

16.1.12 The Provision of average thickness 50 mm BM & 40 mm BC is taken in the schedule of Quantities & the contractor has to execute the same thickness during the execution of work. No excess thickness will be measured and paid

### 16.2 Quality Control

- i. Surface Level: - The levels of the BC pavement course shall not vary from those calculated with reference to longitudinal and cross profile of the road beyond  $\pm 6$  mm. Compliance of the above stated requirement of surface level will be checked by taking measurement on a grid of points spaced 6.25 m along the length and at 0.5 m from the edges and at the centre of the pavement.
- ii. Surface evenness: - Measurement and checking of surface unevenness shall be done by a 3.0 m long straight edge. The maximum permissible surface unevenness in longitudinal profile and transverse

profile shall be 6 mm and 4 mm respectively. Maximum permitted number of surface irregularities shall be as under-

|                                |        |
|--------------------------------|--------|
| Irregularity per 300 m length  | 4-6 mm |
| Number of surface irregularity | 40     |

- iii. Surface roughness/Riding quality- Surface roughness/riding quality as measured by standard towed fifth wheel bump indicator shall be less than 2500 mm per Km length of road.

**16.3** Quality control tests during construction: -The material supplied and the work shall conform to the specifications prescribed here above and relevant clauses of MORTH specifications for road and bridges. Adequate quality control at every stage of the work is essential and as such tests and minimum frequency of each test shall be as under-

| S. No. | Test                                                                                              | Frequency                                                                                                                           |
|--------|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| i      | Quality of bitumen                                                                                | Number of sample per lot and tests as per IS:73 or IRC:SP-53                                                                        |
| ii     | Aggregate impact value/Los Angeles Abrasion Value                                                 | One test per 350 cum of aggregate for each source and whenever there is change in quality of aggregate                              |
| iii    | Flakiness and elongation indices                                                                  | -do-                                                                                                                                |
| iv     | Soundness test                                                                                    | One test for each source and whenever there is change in quality of the aggregate                                                   |
| v      | Water absorption of aggregate                                                                     | -do-                                                                                                                                |
| vi     | Sand equivalent test                                                                              | -do-                                                                                                                                |
| vii    | Plasticity Index                                                                                  | -do-                                                                                                                                |
| viii   | Polished stone value                                                                              | -do-                                                                                                                                |
| ix     | Percentage of fractured face                                                                      | One test per 350 cum of aggregate when crushed gravel is used                                                                       |
| x      | Mix grading                                                                                       | One set for individual constituent and mixed aggregate from dryer for each 400 tonnes of mix subject to two tests per day per plant |
| xi     | Moisture susceptibility of mix                                                                    | One test for each mix type whenever there is change in the quality or source of aggregates                                          |
| xii    | Temperature of bitumen in boiler, aggregate in dryer and mix at the time of laying and compaction | At regular interval                                                                                                                 |
| xiii   | Bitumen content                                                                                   | One set for each 400 tonne of mix subject to two test per day per plant                                                             |
| xiv    | Rate of spread of mix                                                                             | After every 5 <sup>th</sup> truck                                                                                                   |
| xv     | Density of compacted layer                                                                        | One test per 700 m <sup>2</sup> of area                                                                                             |



## **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 metalled 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 metalled road. This area shall not cause any obstruction to the free flow of traffic/inconvenience to the pedestrians. It should be ensured by the contractor that no accidents occur on account of such permissible storage.
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 alongwith 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.

|   | <b>Component</b> | <b>Preferred Make</b>                                                                          |
|---|------------------|------------------------------------------------------------------------------------------------|
| 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 | Paint            | Akzo Nobel, Berger, Jonson's and Nicholson, Asian Paints, Nerolac                              |

**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..... (Rupees .....in 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.....(Rupees ..... only)
4. We, ..... (indicate the name of the Bank) ....., further undertake to pay the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor in any suit or proceeding pending before any Court or Tribunal, our liability under this Bank Guarantee being absolute and unequivocal. The payment so made by us under this Bank Guarantee shall be a valid discharge of our liability for payment there under and the Contractor shall have no claim against us for making such payment.
5. We, ..... (indicate the name of the Bank)....., further agree that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligation here under to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said contractor and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said Contractor

or for any forbearance, act of omission on the part of the Government or any indulgence by the Government to the said Contractor or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. We, ..... (indicate the name of the Bank) ....., further agree that the Government at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor at the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee the Government may have in relation to the Contractor's liabilities.
7. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor.
8. We, ..... (Indicate the name of the Bank) ....., undertake not to revoke this guarantee except with the consent of the Government in writing.
9. This Bank Guarantee shall be valid up to ..... unless extended on demand by the Government. Notwithstanding 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 180days 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: -Extra Ordinary repair of 52.607 Km of IBB Road, Link road and embankment protection work along with parapet repair and painting of one concrete bridge, in various stretches in Murshidabad district of West Bengal along Indo-Bangladesh Border.**

**1. NIT No: 02/NIT/CE/IBBZ-I/06/EE/BFD-VII/2026-27**

**2. Estimated Cost: Rs.24, 96, 22,741/-**

**3. Amount of Earnest Money Deposit: Rs.34, 96,227/-**

**4. Last date of submission of bid up to 03:00PM on 13.08.2026**

**1. Name of contractor .....#.....**

**2. Form of EMD .....#.....**

**3. Amount of Earnest Money Deposit .....#.....**

**4. Date of submission of EMD .....#.....**

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

**(\* & # to be filled by EMD receiving EE)**

**LIST OF MINIMUM EQUIPMENTT 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     |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| <b>A</b> | <b>Concrete and other works</b>                                                                                                                                                                                                                                                                                              |             |
| 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 moulds of 15x15x15 cm size.                                                                                                                                                                                                                                                                                             | 24 Nos      |
| 20       | Compression Testing Machine of 100 tonne capacity with<br><br>(i) Pruning Rods 2 Kg weight length 40 cm and ramming face 25 mm – 1 No.<br>(ii) Extra Bottom plates for 15 cm cube mould – 6 No.<br>(iii) Standard Vibration table for cubes – 1 No.<br>(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.      |

| <b><u>List of Machinery, Tools &amp; Plants required for execution at site by the bidder.</u></b> |                                                                                                                                       |       |
|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-------|
| 1.                                                                                                | Bulldozer / crawler tractor/angle dozer 80-100 HP & 180-192 HP                                                                        | 01 No |
| 2.                                                                                                | Excavator 200-220 HP                                                                                                                  | 01 No |
| 3.                                                                                                | Front End loader (1.5-2.0 cum)                                                                                                        | 01 No |
| 4.                                                                                                | Mobile Hot Mix Plant of suitable capacity                                                                                             | 01 No |
| 5.                                                                                                | Paver finisher hydrostatic                                                                                                            | 01 No |
| 6.                                                                                                | Sprayer                                                                                                                               | 01 No |
| 7.                                                                                                | Air Compressor (diesel)                                                                                                               | 01 No |
| 8.                                                                                                | Mechanical Broom (Hydraulic)                                                                                                          | 01 No |
| 9.                                                                                                | Mechanical cleaner using compressed Air                                                                                               | 01 No |
| 10.                                                                                               | Tipper                                                                                                                                | 02 No |
| 11.                                                                                               | Tractor                                                                                                                               | 02 No |
| 12.                                                                                               | Needle vibrator (petrol)                                                                                                              | 02 No |
| 13.                                                                                               | Generator Set (30-300 KVA)                                                                                                            | 01 No |
| 14.                                                                                               | Light weight Tandem Roller                                                                                                            | 01 No |
| 15.                                                                                               | Self propelled single smooth drum vibratory roller (8 to 12 tonne)                                                                    | 01 No |
| 16.                                                                                               | Water tanker                                                                                                                          | 02 No |
| 17.                                                                                               | Mobile truck / tractor mounted self-loading batch mix plant (semi-automatic-with printing facility) having capacity 6 cum/hr or more) | 01 No |

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

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

**Schedule of Quantities**

**Name of Work: Extra Ordinary repair of 52.607 Km of IBB Road, Link road and embankment protection work along with parapet repair and painting of one concrete bridge, in various stretches in Murshidabad district of West Bengal along Indo-Bangladesh Border.**

| Sl. No.      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Qty.     | Unit | Rate           | Amount             |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------|----------------|--------------------|
| <b>SH: I</b> | <b>Earthwork</b>                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |      |                |                    |
| 1            | Earth work by mechanical/manual means in rough excavation, banking excavated earth in layers not exceeding 20cm in depth, breaking clods, watering, rolling each layer with ½ tonne roller or wooden or steel rammers, and rolling every 3rd and top-most layer with power roller of minimum 8 tonnes and dressing up in embankments for roads, flood banks, marginal banks and guide banks or filling up ground depressions, lead upto 5 K M and all lift. |          |      |                |                    |
| 1.1          | All kinds of soil.                                                                                                                                                                                                                                                                                                                                                                                                                                          | 22968.00 | cum  | 438.00         | 1,00,59,984        |
| 2            | Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.                                                                                               |          |      |                |                    |
| 2.1          | All kinds of soil.                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2647.00  | cum  | 260.30         | 6,89,014           |
| 3            | Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc in layers not exceeding 20cm in depth. Consolidating each deposited Layer by ramming and watering lead up to 50 m and lift up to 1.50 m.                                                                                                                                                                                                                   | 794.00   | cum  | 196.00         | 1,55,624           |
| 4            | Clearing grass and removal of the rubbish up to a distance of 50 m outside the periphery of the area cleared.                                                                                                                                                                                                                                                                                                                                               | 12650.00 | sqm  | 8.95           | 1,13,218           |
|              | <b>Total:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                               |          |      |                | <b>1,10,17,840</b> |
|              | <b>Total of DSR Items:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |      |                | <b>1,10,17,840</b> |
|              | Modified DSR 2023 item total cost after using Correction factor on account of GST @ 0.973 as per DG CPWD OM issued vide file number 158/SE(TAS)/GST/2024/02-E dated 08/08/2024, i.e on                                                                                                                                                                                                                                                                      |          |      | 1,10,17,840.00 | 1,07,20,358        |
|              | Add for Cost Index for Murshidabad (Behrampore) @ 15 % above DSR 2023 items vide SDG(Kolkata) OM no 34(1)/SDG(Kol)/Cost Index/2025/1316 dated 27.08.2025, M.Factor = (115-100)/100 = 15% on DSR items i.e on                                                                                                                                                                                                                                                |          |      | 1,07,20,358.00 | 16,08,054          |
|              | <b>Total (A):</b>                                                                                                                                                                                                                                                                                                                                                                                                                                           |          |      |                | <b>1,23,28,412</b> |

| SH:<br>II : | Road and toe wall work                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |         |     |         |             |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----|---------|-------------|
| 5           | Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |     |         |             |
| 5.1         | 1:5:10 (1 cement : 5 coarse sand (zone-III) derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 42.00   | cum | 6518.60 | 2,73,781    |
| 6           | Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets, sunken floor etc., up to floor five level, excluding the cost of centering, shuttering and finishing:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |         |     |         |             |
| 6.1         | 1:2:4 (1 Cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 20.00   | cum | 9895.20 | 1,97,904    |
| 7           | Providing and laying in position ready mixed or site batched design mix cement concrete for plain cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland pozzolana cement content as per approved design mix, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete to improve durability and workability without impairing strength ; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering , shuttering and finishing as per direction of Engineer-in-charge; for the following grades of concrete.<br>(Note: - Extra Cement upto 10% of the min. specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified min. cement content, the contractor shall have discretion to either redesign the mix or bear the cost of extra cement.) |         |     |         |             |
| 7.1         | All work upto plinth level.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |         |     |         |             |
| 7.1.1       | Concrete of M10 grade with min. cement content of 220 Kg/cum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 184.00  | cum | 8835.15 | 16,25,668   |
| 7.1.2       | Concrete of M15 grade with min. cement content of 240 Kg/cum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1466.00 | cum | 8986.15 | 1,31,73,696 |
| 8           | Centering and shuttering including strutting, propping etc. and removal of form for                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |         |     |         |             |
| 8.1         | Foundations, footings, bases of columns, etc. for mass concrete                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 609.00  | sqm | 392.15  | 2,38,819    |
| 8.2         | Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7044.00 | sqm | 927.25  | 65,31,549   |
| 8.3         | Lintels, beams, plinth beams, girders, bressumers and cantilevers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 49.00   | sqm | 736.40  | 36,084      |

|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |        |         |         |           |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------|---------|-----------|
| 8.4    | Columns, Pillars, Piers, Abutments, Posts and Struts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 26.00  | sqm     | 961.30  | 24,994    |
| 9      | Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |         |         |           |
| 9.1    | Thermo-Mechanically Treated bars of grade Fe-500D or more.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 560.00 | kg      | 107.85  | 60,396    |
| 10     | Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 1.10 times of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement. |        |         |         |           |
| 10.1   | All works upto plinth level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |        |         |         |           |
| 10.1.1 | Concrete of M25 grade with minimum cement content of 330 kg /cum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 7.00   | cum     | 9504.75 | 66,533    |
| 11     | Add for using extra cement in the items of design mix over and above the specified cement content therein.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 395.00 | quintal | 733.50  | 2,89,733  |
| 12     | Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |         |         |           |
| 12.1   | Cement mortar 1:4 (1 cement : 4 coarse sand)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 315.00 | cum     | 7370.65 | 23,21,755 |
| 13     | 12 mm cement plaster of mix :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |        |         |         |           |
| 13.1   | 1:4 (1 cement: 4 coarse sand)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 760.00 | sqm     | 357.35  | 2,71,586  |
| 14     | 6 mm cement plaster of mix :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        |         |         |           |
| 14.1   | 1:3 (1 cement : 3 fine sand)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 125.00 | sqm     | 300.45  | 37,556    |
| 15     | Finishing walls with Acrylic Smooth exterior paint of required shade :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |        |         |         |           |
| 15.1   | New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 243.00 | sqm     | 160.60  | 39,026    |
| 16     | Removing dry or oil bound distemper, water proofing cement paint and the like by scrapping, sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 118.00 | sqm     | 25.15   | 2,968     |
| 17     | Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 7.00   | cum     | 3551.25 | 24,859    |

|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |     |         |             |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----|---------|-------------|
| 18     | Supplying and stacking at site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |     |         |             |
| 18.1   | 90 mm to 45 mm size stone aggregate                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 426.00    | cum | 2098.40 | 8,93,918    |
| 18.2   | 63 mm to 45 mm size stone aggregate                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 778.00    | cum | 1636.05 | 12,72,847   |
| 18.3   | 53 mm to 22.4 mm size stone aggregate                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 4224.00   | cum | 1842.30 | 77,81,875   |
| 18.4   | Stone screening 13.2 mm nominal size (Type A)                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 156.00    | cum | 2034.35 | 3,17,359    |
| 18.5   | Stone screening 11.2 mm nominal size (Type B)                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1564.00   | cum | 2247.75 | 35,15,481   |
| 18.6   | Stone dust                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 763.00    | cum | 1661.15 | 12,67,457   |
| 19     | Laying, spreading and compacting stone aggregate of specified sizes to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road/vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required density.                                                                                                      | 6491.00   | cum | 1046.95 | 67,95,752   |
| 20     | Scarifying metalled (water bound) road surface including disposal of rubbish lead upto 50 m and stacking the scarified material received from scarifying.                                                                                                                                                                                                                                                                                                                                                   | 66926.00  | sqm | 18.70   | 12,51,516   |
| 21     | Dry stone pitching 22.5 mm thick including supply of stone and preparing surface complete.                                                                                                                                                                                                                                                                                                                                                                                                                  | 22325.00  | sqm | 883.15  | 1,97,16,324 |
| 22     | Providing and applying tack coat using bitumen emulsion conforming to IS: 8887, using emulsion pressure distributor including preparing the surface & cleaning with mechanical broom.                                                                                                                                                                                                                                                                                                                       |           |     |         |             |
| 22.1   | With medium setting bitumen emulsion                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |     |         |             |
| 22.1.1 | On W.B.M / W.M.M. @ 0.4kg/sqm                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 66926.00  | sqm | 21.20   | 14,18,831   |
| 22.1.2 | On bituminous surface @ 0.25kg/sqm                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 233533.00 | sqm | 14.05   | 32,81,139   |
| 23     | Painting road surface marking with adequate nos of coats to give uniform finish with ready mixed road marking paint conforming to IS : 164, on bituminous surface in white/yellow shade, including cleaning the surface of all dirt, scales, oil, grease and foreign material etc. complete.                                                                                                                                                                                                                |           |     |         |             |
| 23.1   | New work (Two or more coats)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10521.00  | sqm | 288.90  | 30,39,517   |
| 24     | Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge. |           |     |         |             |
| 24.1   | 50 mm average compacted thickness with bitumen of grade VG-30 @ 3.50% (percentage by weight of total mix) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.                                                                                                                                                                                                                                                                                                                                        | 7613.00   | cum | 8413.00 | 6,40,48,169 |



|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |      |          |                     |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|----------|---------------------|
| 25                             | Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.                                                                                                                                                                                                                                                   |         |      |          |                     |
| 25.1                           | 40 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in drum Type Hot Mix Plant of 60-90 TPH capacity.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 5928.00 | cum  | 12026.80 | 7,12,94,870         |
| 26                             | Providing weep holes in Brick masonry/ Plain /Reinforced concrete abutment, wing wall/return wall, Toe wall/Retaining wall with 75 mm dia high density polyethylene (HDPE) pipe, extending through the full width of the structure with slope of 1V:20H towards drawing face complete as per drawing and Technical specification.                                                                                                                                                                                                                                                                                                                                                                                                           | 932.00  | mtr. | 273.95   | 2,55,321            |
| 27                             | Providing and laying of filter media with materials/stone aggregates satisfying granual crushed the requirements laid down in clause 2504.2.2 of MoRTH&H specifications to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and Technical Specification. Unit= cum                                                                                                                                                                                                                                                          | 168.00  | cum  | 6170.40  | 10,36,627           |
| 28                             | Providing and applying of swellable type water stop tape, 19mm x 25mm thick in linear meter (expansive nature) for construction joints treatment of RCC structure such as raft slab, retaining walls, water storage tank and at the junctions of raft slab with the retaining walls etc.. After cleaning the surface, one coat of required primer for swellable water stop tape shall be applied throughout the length of the joint @3.78 litre per 240 running meter. Over the primed surface swellable type water stop tape shall be placed. The work shall be carried out all complete as per specification and the direction of the Engineer-In-Charge. The product performance shall carry guarantee for 10 years against any leakage. | 122.00  | mtr. | 573.45   | 69,961              |
| <b>Total:</b>                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |      |          | <b>21,24,73,871</b> |
| <b>Total of DSR Items:</b>     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |      |          | <b>20,86,62,950</b> |
| <b>Total of Non-DSR Items:</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |      |          | <b>38,10,921</b>    |

|  |                                                                                                                                                                                                                 |              |                     |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------|
|  | Modified DSR 2023 item total cost after using Correction factor on account of GST @ 0.973 as per DG CPWD OM issued vide file number 158/SE(TAS)/GST/2024/02-E dated 08/08/2024, i.e on                          | 20,86,62,950 | 20,30,29,050        |
|  | Add for Cost Index for Murshidabad (Behrampore) @ 15 % above DSR 2023 items vide SDG(Kolkata) OM no 34(1)/SDG(Kol)/Cost Index/2025/1316 dated 27.08.2025, M.Factor = $(115-100)/100 = 15\%$ on DSR items i.e on | 20,30,29,050 | 3,04,54,358         |
|  | <b>Total (B):</b>                                                                                                                                                                                               |              | <b>23,72,94,329</b> |
|  | <b>Total (A+B):</b>                                                                                                                                                                                             |              | <b>24,96,22,741</b> |

| Central Public Works Department                   |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                   |                                                                      |                                                                        |                    |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------|--------------------|
| N.I.T. No: 02/NIT/CE/IBBZ-I/06/EE/BFD-VII/2026-27 |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                   |                                                                      |                                                                        |                    |
| Name of work:                                     |                                                                                                                                                                                                                                                   | Extra Ordinary repair of 52.607 Km of IBB Road, Link road and embankment protection work along with parapet repair and painting of one concrete bridge, in various stretches in Murshidabad district of West Bengal along Indo-Bangladesh Border. |                                                                      |                                                                        |                    |
| PROFORMA FOR QUOTING TENDER                       |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                   |                                                                      |                                                                        |                    |
| Name of the Contractor:                           |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                   |                                                                      |                                                                        |                    |
| Sl. No.                                           | Name of component                                                                                                                                                                                                                                 | Estimated cost<br>( Rs )                                                                                                                                                                                                                          | Percentage<br>above or<br>below the<br>estimated<br>cost in<br>words | Percentage<br>above or<br>below the<br>estimated<br>cost in<br>figures | Total Cost<br>(Rs) |
| 1                                                 | 2                                                                                                                                                                                                                                                 | 3                                                                                                                                                                                                                                                 | 4                                                                    | 5                                                                      | 6                  |
| 1                                                 | Extra Ordinary repair of 52.607 Km of IBB Road, Link road and embankment protection work along with parapet repair and painting of one concrete bridge, in various stretches in Murshidabad district of West Bengal along Indo-Bangladesh Border. | 24,96,22,741/-                                                                                                                                                                                                                                    |                                                                      |                                                                        |                    |

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

Signature of Contractor

Executive Engineer  
Border Fencing Division-VII,  
IBBZ-I, CPWD, Murshidabad.

AE(P)

EE