



National Highways & Infrastructure Development Corporation Limited

**(MINISTRY OF ROAD TRANSPORT AND HIGHWAYS)
GOVT. OF INDIA**

NATIONAL COMPETITIVE BIDDING (THROUGH E-TENDERING MODE)

Name of the Work: Emergent slope protection works on valley side for maintenance & upkeep of existing NH-717A between Km 61+180 to 61+266 (Lava-Algarah section) on item rate basis in the State of West Bengal

[Contract Package No.: NHIDCL/PMU-Kalimpong/NH-717A/VA(i)/Emergent M&R/2024]

BID DOCUMENT

VOLUME-I

**R.O. West Bengal & Sikkim (Gangtok)
National Highways & Infrastructure Development Corporation Ltd.
Amdo Golai, Opp. State Veterinary Polyclinic, Gangtok, Sikkim – 737102
Email : ro.sikkim@nhidcl.com**

August, 2024



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Volume-I

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(SECTION-I)
NOTICE INVITING TENDER

1. National Highways and Infrastructure Development Corporation Ltd. (NHIDCL) hereby invites bids **(Item Rate Basis)** through “**e- tendering mode**” from experienced firms/organizations (hereinafter referred to as the “Bidders”) to bid for the works detailed in the table as mentioned below from the eligible bidders, excluding those firms who have been declared as Non- Performer by MoRTH/NHAI/NHIDCL/Any of State PWD/BRO or black listed/debarred for specified period by MoRTH/NHAI/NHIDCL/Any of StatePWD/BRO.

Sl. No.	Section	NH- No.	Location (In Km)	State	Estimated Cost Rs. in Cr. (Excluding GST)	Bid Security Rs. in Cr.
1.	<i>Emergent slope protection works on valley side for maintenance & upkeep of existing NH-717A between Km 61+180 to 61+266 (Lava-Algarah section) on item rate basis in the State of West Bengal</i>	NH-717A	Km 61+280 To Km 63+360	West Bengal	3.72	0.07

Cost of Bid Documents (Non- Refundable): **Rs.11,800/-**

E-Tendering Processing Fee (Non-Refundable): **NIL**

- 1.1 The preliminary requirements (detailed requirements are given in the Bid Document) of bidding firm/contractor for above packages are mentioned as under:

Average Turn-over during last 5 years (Rs. in Cr.)	Single Work of similar nature in any year during last 5 years (Not less than the amount equal to 40% of the total value of contract) (Rs. In Cr.)	Time for completion
3.72	0.07	03 month

The Scope of Work is as per detailed BOQ.

2. Bidding is open to eligible bidders under single stage e-tender wizards system bidding procedure.

3. The currency of the contract shall be only in Indian Currency.

(i) Cost of Bid documents (Non-Refundable): **Rs. 11,800/-** through RTGS into bank a/c no “94113210000020” with Canara Bank, Gangtok, Sikkim having IFSC code “CNRB0019411”.

It is mandatory for all the bidders to have class-III Digital Signature Certificate (With Both DSC Components, i.e. Signing & Encryption in the name of authorized signatory (who will sign the Bid) from any of the licensed Certifying Agency (Bidders can see the list of licensed CA's from the link www.cca.gov.in) to participate in e- tendering of NHIDCL. The authorized signatory holding Power of Attorney shall only be the Digital Signatory. In case authorized signatory holding Power of Attorney and Digital Signatory are not the same, the bid shall be considered non-responsive.

4. To participate in the bidding, it is mandatory for the Bidders to get registered their firm e-procurement portal <https://eprocure.gov.in/eprocure/app> to have user ID & password which has to be obtained free of cost. Following may kindly be noted:

- (i) Registration with e-procurement portal should be valid at least up to the date of submission of BID.
- (ii) BIDs can be submitted only during the validity of registration.

The Bidders shall update their project and other details on the portal on a regular basis and apply to the tenders via the portal.

5. e-Tender Service Provider:

E-Procurement portal developed by National Informatics Centre (NIC).

Critical Date Sheet

Sl. No.	Description	Period
1.	Date of issue of NIT	16.08.2024
2.	Date of issue of Sale of Tender Documents	16.08.2024 (1800 Hrs)
3.	Last date of receipt of pre-bid queries	23.08.2024 (1500 Hrs)
4.	Date of Pre-Bid meeting	26.08.2024 (1500 Hrs)
5.	Date of uploading of reply to the pre-bid queries	27.08.2024 (1500 Hrs)
6.	Last Date of submission of Tender/Bid (online + Hard copies)	30.08.2024 (1800 Hrs)
7.	Date of Opening of Technical Bid	31.08.2024 (1800 Hrs)
8.	Date of Uploading of list of Technically Qualified Applicants	To be intimated later
9.	Date of Opening of Financial Bids of Qualified Applicants	To be intimated later
10.	Date of issue of letter of award (LOA)	To be intimated later
11.	Validity of Bid	120 days
12.	Date of Signing of Agreement	Within 10 days of award of LOA

The amendments/clarifications to the Bid Document if any shall be hosted on said websites.

6. The bidders will be allowed to download the bid documents up to **30.08.2024 upto 1800 Hrs.** The downloading facility of bids on e-tendering portal will be made available even if the day prior to the bid due date falls on Saturday/ Sunday/ Holiday.

7. Bidder shall submit the following **documents physically and online**:
- Written Power of Attorney of the signatory (whose digital signature certificate is used during e-tender submission) of the bidder to commit the bid.
 - An affidavit on a Stamp Paper, duly attested from the Notary Public, that the information furnished with the bid documents is correct in all respects.
 - Proof of online payment for bid document fee.
 - Proof of Earnest Money/Bid Security payment (Bank Guarantee/E-Bank Guarantee/FDR/Demand Draft) and undertaking (In case of FDR as per Format at Page no. 49)
8. The last date for online submission of the Bid is **30.08.2024 upto 1800 Hrs.** (as mentioned on the e-portal only) ("Bid Due Date"). Bidder must submit its Financial Bid and Technical Bid on CPPP e-procurement portal within the above deadline.
- The bids would be opened on **31.08.2024 at 1800 Hrs** online at RO-West Bengal & Sikkim (Gangtok), representatives of the bidders (maximum of two) who choose to attend, may attend the opening of the bids at 1500 Hrs on the date and time as mentioned above.
9. The Bids shall be submitted online on the said websites and physical documents as mentioned in Cl. 7 above in the prescribed format given on or before the date and time as mentioned above for opening of Bid. **No other mode and time of submission is acceptable.** The Technical Bid shall be opened online only and subsequently financial bid shall be opened online, only of those bidders whose technical bid is found responsive.
10. Representatives of the bidders (maximum upto two) who choose to attend may attend the online opening of the bids at Regional Office, West Bengal & Sikkim on the date and time as mentioned above. However, such representatives shall be allowed to attend the opening of the bids only if they produce letter of authority on the letter head of the bidder, at the time of opening of bids as mentioned above.
11. It is clarified that, the bidders have to upload the details of cost of bid document, on or before the last date & time of sale of bid documents mentioned above on the e-tendering portal, otherwise, it will not be possible for them to upload the e-tender documents on the e-tendering portal. Bidders are advised to upload their bids well in time, to avoid last minutes rush on the server or complications in uploading. NHIDCL, in any case, will not be responsible for any type of problem in uploading the bid.
12. Submission of the Bids after the Bid Due date and time shall not be permitted. Time being displayed on e-tendering portal ("Standard Time") shall be final and binding on Bidders. Bids are required to be submitted by Bidders, only as per the Standard Time and not the time as per their location/ country.
13. The Bidders are advised to submit their Bids well before the Bid Due Date. The Authority shall not be responsible for any delay in the submission of Bids for any reason including server and technical problems.
14. NHIDCL reserves the right to accept or reject any or all Bids without assigning any reason thereof.
15. Conditional bids would be rejected.
16. Mandatory e-BG through Induscollect as per NHIDCL-HQ Office order dated 22.03.2023.
17. In case of any problem with the submission of the Bid, the Bidder may have the assistance of help desk or use the help manual given on the said website.

18. The pre-bid meeting will be held on 26.08.2024 at 1500 Hrs at R.O. West Bengal & Sikkim (Gangtok)

19. Address for communication/ clarification if any;

Executive Director (P),
RO West Bengal & Sikkim (Gangtok),
National Highway & Infrastructure Development Corporation Ltd.
Amdo Golai, Opp. State Veterinary Polyclinic, Gangtok, Sikkim -
737102
Email : ro.sikkim@nhidcl.com

DISCLAIMER

The information contained in this Request for Proposal document (the "RFP") or subsequently provided to Bidder(s), whether verbally or in documentary or any other form by or on behalf of the Authority or any of its employees or advisors, is provided to Bidder(s) on the terms and conditions set out in this RFP and such other terms and conditions subject to which such information is provided.

This RFP is not an Agreement and is neither an offer nor invitation by the Authority to the prospective Bidders or any other person. The purpose of this RFP is to provide interested parties with information that may be useful to them in making their financial offers (BIDs) pursuant to this RFP. This RFP includes statements, which reflect various assumptions and assessments arrived at by the Authority in relation to the Project. Such assumptions, assessments and statements do not purport to contain all the information that each Bidder may require. This RFP may not be appropriate for all persons, and it is not possible for the Authority, its employees or advisors to consider the investment objectives, financial situation and particular needs of each party who reads or uses this RFP. The assumptions, assessments, statements and information contained in the Bidding Documents, especially the [Feasibility Report], may not be complete, accurate, adequate or correct. Each Bidder should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in this RFP and obtain independent advice from appropriate sources.

Information provided in this RFP to the Bidder(s) is on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The Authority accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on law expressed herein.

The Authority, its employees and advisors make no representation or warranty and shall have no liability to any person, including any Applicant or Bidder under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this RFP or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the RFP and any assessment, assumption, statement or information contained therein or deemed to form part of this RFP or arising in any way for participation in this BID Stage.

The Authority also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Bidder upon the statements contained in this RFP. The Authority may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this RFP.

The issue of this RFP does not imply that the Authority is bound to select a Bidder or to appoint the Selected Bidder JV or Contractor, as the case may be, for the Project and the Authority reserves the right to reject all or any of the Bidders or BIDs without assigning any reason whatsoever.

The Bidder shall bear all its costs associated with or relating to the preparation and submission of its BID including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by the Authority or

any other costs incurred in connection with or relating to its BID. All such costs and expenses will remain with the Bidder and the Authority shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by a Bidder in preparation for submission of the BID, regardless of the conduct or outcome.

The work may be required to be partially executed or may not be executed at all by NHIDCL. No claim whatsoever from any of the selected bidders on this account shall be entertained in this regard.

**NHIDCL, RO-West Bengal & Sikkim
Gangtok**

(SECTION-II)
INSTRUCTIONS TO BIDDERS
& APPENDIX TO BID

Section II: Instructions to Bidders
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Section II

Instructions to Bidders (ITB)

A. General

1. Scope of Bid

- 1.1 The Employer (i.e. Executive Director on behalf of the Managing Director, National Highways & Infrastructure Development Corporation Ltd.) invites bids for “as described in these documents and referred to as “the works”. The name and identification number of the works is provided in the Notice Inviting Tender.
- 1.2 The successful Bidder will be expected to complete the Works by the intended Completion Date specified in the Contract Data (Part I General Conditions of Contract).
- 1.3 Throughout these bidding documents, the terms “bid” and “tender” and their derivatives (bidder / tenderer, bid / tender, bidding / tendering, etc.) are synonymous.

2. Source of Funds

- 2.1 The expenditure on this project will be met by National Highways & Infrastructure Development Corporation Ltd (NHIDCL).

3. Eligible Bidders

- 3.1 This Invitation for Bids is open to all bidders meeting the qualification requirements prescribed in this document.
- 3.2 Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices and/or declared non-performer by the Central Government, the State Government or any Public Undertaking, Autonomous Body, Authority by whatever name called under the Central or the State Government.

4. Qualification of the Bidder

- 4.1 DELETED.
- 4.2 All bidders shall furnish scanned copy of the following information and documents with their bids as format provided in Section-3, Qualification Information.
 - (a) Scanned Copies of documents defining the constitution or legal status, place of registration, and principal place of business; written power of attorney of the signatory of the Bid to commit the Bidder; and original copy of Written Power of Attorney to be submitted in the envelope of physical form. (refer Clause 12.2 of ITB).

- (b) Scanned Copies of Total monetary value of civil engineering construction works performed for each of the last five years (2019-20, 2020- 21, 2021-22 & 2022-23, 2023-2024) duly certified by CA along with UDIN;
- (c) Scanned Copy of Experience certificate in works of a similar nature and size for each of the last five years with certificates from the concerned officer of the rank of Executive Engineer or equivalent or higher;
- (d) Scanned Copy of Evidence of availability (either owned or leased or rented) of items of construction equipment named in Appendix to ITB Clause 4.4 B (b) (i).
- (e) Scanned Copy of the technical personnel proposed to be employed for the Contract having the qualifications defined in Appendix to ITB Clause 4.4 B (b) (ii).
- (f) Scanned copy of reports on the financial standing of the Bidder, and a certificate from Chartered Accountant along with UDIN as a proof of turnover for the last five years;
- (g) Scanned document in support of evidence access to line (s) of credit and availability of other financial resource facilities (10% of Contract value), certified by bankers (not more than 3 months old).
- (h) Scanned undertaking that the bidder will be able to invest a minimum cash upto 25% of contract value of work, during implementation of work.
- (i) Deleted
- (j) Scanned Copy of Information regarding any litigation or arbitration during the last five years in which the Bidder is involved, the parties concerned, the disputed amount, and the present status;
- (k) An affidavit on a Stamp Paper, duly attested from the Notary Public, that the information furnished with the bidding documents is correct in all respects.
- (l) Deleted.
- (m) Scanned Copy of Earnest Money/ Bid Security (E-Bank Guarantee/Demand Draft/FDR) and undertaking (In case of FDR as per Format at Page no. 49)

- (n) Scanned Copy of Form of Letter of application.
- (o) Scanned copy of undertaking that bidder is not declared as Non-Performer by MoRTH/NHAI/NHIDCL/Any of State PWD/BRO or black listed/debarred for specified period by MoRTH/NHAI/NHIDCL/Any of State PWD/BRO.

4.3 Bids from joint ventures consortiums, combination or any sort of arrangement between two or more than two entities are not allowed.

4.4 A. To qualify for award of the contract, each bidder in its name should have the following;

(a) *achieved an average annual financial turnover (in all classes of civil engineering construction works only) equal to the amount indicated in NIT during last five years ending 31st March of the previous financial year duly certified by Chartered Accountant with UDIN.*

(b) Satisfactorily completed (not less than 90% of Contract value), as a prime contractor (or as a nominated subcontractor, provided further that all other qualification criteria are satisfied) similar works during last five years ending last day of month previous to the one in which bids are invited, at least one contract of similar nature of works of 40% of the value of contract (i.e. Rs.1.49Cr).

[The “similar work” constitutes specialized protection work on National Highways/State Highways]

Following escalation factor shall be used to bring the value of such completed works at the level of current financial year i.e. 2024-25)

Year Before	Multiplying Factor
One	1.10
Two	1.21
Three	1.33
Four	1.46
Five	1.61

4.4 B (a) Each bidder must produce:

- (i) An affidavit on a Stamp Paper, duly attested from the Notary Public, that the information furnished with the bid documents is correct in all respects; and
- (ii) Such other certificates as defined in Section- III.
- (iii) Failure to submit the certificates/documents as specified above shall make the bid non-responsive.**
- (b)** Each bidder must demonstrate:
 - (i) Evidence of availability (either owned or leased or rented) of the key equipments for this work as stated in the Appendix to ITB.
 - (ii) Availability of personnel with qualification & experience as stated in the Appendix to ITB
- (c)** Deleted
- (d)** Failure to demonstrative the certificates as specified above at (i) and (ii) shall make the bid non-responsive.

4.4.C Deleted

- 4.5** Sub-Contractors' experience and resources shall not be taken into account in determining the bidder's compliance with the qualifying criteria.

4.6 Bid Capacity - Bidders who *inter alia* meet the minimum qualification criteria will be qualified only if their available BID capacity is more than the total BID value. The available BID capacity will be calculated as per following, based on information provided in the format provided in this RFP:

Assessed Available **BID capacity** = $(A \times N \times 2 - B)$, Where

N = Number of years prescribed for completion of work for which Bid is invited.

A = Maximum value of civil engineering works executed in any one year during the last five years (escalation factor as specified in this section shall be used to bring the maximum value of civil engineering works to the level of current financial year i.e 2024-25) taking into account the completed as well as works in progress.

B = Value (escalation factor as specified in this section shall be used to bring the maximum value of civil engineering works to the level of current financial year i.e 2024-25) of existing commitments and ongoing works to be completed during the next 03 months (period of completion of the works for which bid is invited).

4.7 Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:

- (i) made misleading or false representations in the forms, statements, affidavits and attachments submitted in proof of the qualification requirements; and/or
- (ii) record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc. or debarring from MoRTH/NHAI/NHIDCL work etc.
- (iii) tampered the bid document in any manner.

5. One Bid per Bidder

5.1 Each Bidder shall submit only one Bid for the work. A Bidder who submits more than one Bid will cause such bids to be disqualified.

6. Cost of Bidding

6.1 The Bidder shall bear all costs associated with the preparation and submission of his Bid, and the Employer will, in no case, be responsible or liable for those costs.

7. Site Visit

7.1 The Bidder, at his own cost, responsibility and risk, is encouraged to visit, examine and familiarize himself with the Site of Works and its surroundings including site geology, source of earth, water, road aggregates and other construction materials etc. and obtain all information that may be necessary for preparing the Bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense. He may contact the Regional Office - Gangtok, NHIDCL in this regard.

Section II

Instructions to Bidders (ITB)

B. Bidding Documents

8. Content of Bidding Documents

- 8.1** The set of bidding documents comprises the documents listed below and addenda issued in accordance with Clause 10:

Volume- I:

- I Notice Inviting Tender
- II Instructions to Bidders & Appendix to Bid
- III Qualification Information
- IV Forms Bank Guarantee, Agreement & LOA
- V Conditions of Contract & Contract Data
- VI Scope of Work
- VII Technical Specifications
- VIII Implementation Manual

Volume - II:

- IX Bill of Quantities for construction works; (Should be filled in the prescribed format uploaded on e-portal).

8.2 Deleted

- 8.3** The bidder is expected to examine carefully all instructions, conditions of contract, contract data, forms, terms, specifications, bill of quantities, etc. in the Bid Document. Failure to comply with the requirements of Bid Documents shall be at the bidder's own risk. Pursuant to clause 26 hereof, bids, which are not substantially responsive to the requirements of the Bid Documents, shall be rejected.

9. Clarifications on Bid Documents

- 9.1** A prospective Bidder requiring any clarification on the bid documents may notify the Employer in writing through e-mail, at the e-mail ID specified in NIT and/or through a letter addressed to the Tender Inviting Authority, indicated in the Notice Inviting Tender. The Employer will respond to any request for clarification received earlier than 5 days prior to the deadline for submission of bids. Copies of the Employer's response will be hosted on NHIDCL website www.nhidcl.com or which are required in the opinion of the Employer including a description of the enquiry, but without identifying its source.

9.2 Pre-bid meeting

- 9.2.1** The bidder or his official representative is invited to attend pre-bid meeting which will take place at the address, venue, time and date as indicated in NIT. The purpose of the meeting will be to clarify issues and to answer question on any matter that may be raised at that stage.
- 9.2.2** The bidder is requested to submit any questions in writing or by electronic mail so as to reach the Employer not later than one week before the meeting.

- 9.2.3** Minutes of the meeting, including the text of the questions raised (without identifying the source of the enquiry) and the responses given will be transmitted without delay on website. Any modifications of the bid documents listed in Clause 8.1, which may become necessary as a result of the pre-bid meeting or which are required in the opinion of the Employer exclusively through the issue of an Addendum pursuant to Clause 10 and not through the minutes of the pre- bid meeting.
- 9.2.4** Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.

10. Amendment of Bidding Documents

- 10.1** Before the deadline for submission of bids, the Employer may modify the bidding documents by issuing addenda.
- 10.2** Any addendum thus issued shall be part of the bidding documents and shall be hosted on CPP portal i.e. www.eprocure.gov.in & www.nhidcl.com. Bidders are advised to keep themselves updated of all the addendums issued on tendering portal by suitably checking the aforementioned website/portal and, NHIDCL/Employer does not assume any responsibility in case the bidder fails to do so and does not take any action, if required, with respect any relevant addendum.
- 10.3** To give prospective bidders reasonable time to take an addendum into account in preparing their bids, the Employer shall extend, as necessary, the deadline for submission of bids, in accordance with Clause 20.2.

Section II

Instructions to Bidders (ITB)

C. Preparation of Bids

11. Language of Bid

11.1 All documents relating to the Bid shall be in English.

12. Documents Comprising the Bid

12.1. The bid to be submitted by the bidder as Volume I of the bid document (refer Clause 8.1) shall be in two separate parts:

Part-I - This shall be named **Technical Bid** and shall comprise of information submitted in section-III to be submitted online

Part-II - It shall be named **Financial Bid** and shall comprise of Priced bill of quantities - to be submitted online

12.2. **Original Documents to be submitted in Physical Form must reach the Executive Director (P), National Highways & Infrastructure Development Corporation Limited, Regional Office, Amdo Golai, Opp. State Veterinary Polyclinic, Gangtok, Sikkim- 737102 Email: ro.sikkim@nhidcl.com on or before the bid due date as mentioned in NIT.**

Though, the scanned copies of following documents are required to be uploaded during submission of e-bid on the e-tendering portal i.e. www.eprocure.gov.in, as per clause 12.1 above, however, following **Original documents** in physical form shall be submitted in a sealed envelope on or before the Bid due Date and Time by the bidder at the address indicated in Clause 20, duly super scribed "Name of Work, Bid due date and time". Name and address of the bidder should also be indicated on the envelope.

- a) **Original Earnest Money/Bid Security (E-Bank Guarantee/FDR/Demand Draft) and undertaking (In case of FDR as per Format at Page no. 49)**
- b) Proof of Bid document fee. (RTGS/Online Payment proof/Invoice)
- c) Delete
- d) **Written Power of Attorney of the signatory (whose digital signature certificate is used during e-tender submission) of the bidder to commit the bid**
- e) Affidavit duly notarized (as per the format provided in section-3)
- f) Notarized copy of experience certificate duly signed by the authorized signatory.

12.3 The following documents, which are not submitted with the bid, will be deemed to be part of the bid.

Section	Particulars
1.	Notice Inviting Tender
2.	Instruction to the bidders
3.	Conditions of Contract
4.	Contract Data
5.	Scope of work
6.	Technical Specifications
7	Additional Conditions
8.	Implementation Manual

13. Bid Prices

- 13.1 The Contract shall be for the whole Works, as described in Clause 1.1 based on the priced Bill of Quantities submitted by the Bidder.
- 13.2 The bidder shall quote bid prices on appropriate format enclosed as part of bidding document on e-tender portal i.e. www.eprocure.gov.in. Bidders will be required to quote rate for each item in the BoQ.
- 13.3 All duties, taxes (**excluding Goods and Service Tax**), royalties and other levies payable by the Contractor under the Contract, or for any other cause, shall be included in the rates, prices, and total Bid price submitted by the Bidder.
- 13.4 The rates and prices quoted by the Bidder shall be fixed for the duration of the Contract and shall not be subject to adjustment.

14. Currencies of Bid and Payment

- 14.1 The unit rates are given in the BOQ is in Indian Rupees. All payments shall be made in Indian Rupees.

15. Bid Validity

- 15.1 **Bids shall remain valid for a period of 120 days** after the deadline date for bid submission specified in Clause 20. A bid valid for a shorter period shall be rejected by the Employer as non-responsive.
- 15.2 In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the bidders may extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his bid security for a period of the extension, and in compliance with Clause 16 in all respects.

16. Earnest Money / Bid Security/ Forfeiture/ Debarment

- 16.1 A bidder is The Bidder shall furnish, as part of the Bid, Earnest Money/Bid Security, in the amount as specified in the NIT in the form of **e-Bank Guarantee/Demand Draft/ Fixed Deposit Receipt/Demand Draft**) must be in favour of Executive Director (P), Regional Office, Sikkim, National Highways & Infrastructure Development Corporation Ltd.

- 16.2 The Earnest Money shall at the Bidder's option, be in the form of E-Bank Guarantee/Demand Draft/FDR only (the other form will not be acceptable) of any scheduled commercial bank approved by RBI having a net worth of not less than Rs. 500 crore as per the latest annual report of the bank must be in the name of Employer. It shall be valid for 45 days beyond the validity of the bid. Any bid having bid security for lesser value and shorter validity period shall be treated as non-responsive.**
- A. **E-bank Guarantee or Demand Draft or FDR receipts** in the name of the Employer, from following banks would be accepted:
- State Bank of India or its subsidiaries,
 - Any Indian Nationalized Bank
 - IDBI/ICICI Bank/Canara Bank/IndusInd Bank/Axis Bank/Yes Bank
 - Any Scheduled Commercial Bank approved by RBI having a net worth of not less than Rs. 500 crore as per the latest Annual Report of the Bank. In the case of a Foreign Bank (issued by a branch in India), the net worth in respect of the Indian operations shall only be taken into account.
- B. The acceptance of the guarantees shall also be subject to the following conditions: -
- The capital adequacy of the Bank shall not be less than the norms prescribed by RBI (presently 9, with effect from 31st March, 2003).
 - The bank guarantee issued by a Cooperative Bank shall not be accepted.
- C. Earnest Money in the form of Fixed Deposit Receipts shall be duly pledged in the favour of Executive Director, NHIDCL, RO Gangtok subject to the following terms and conditions:
- The FDR should be in joint name of the Executive Director, NHIDCL RO Gangtok and Contractor (*e.g. Executive Director, NHIDCL RO Gangtok and 'Name of the Contractor'*) and should be duly pledged in favour of Executive Director, NHIDCL, RO Gangtok by endorsement on the FDR and discharging by the contractor by signing and stamping in the undertaking. (*as per Format at Page No. 49*)
 - The FDR should be en-cashable in Gangtok (Sikkim). The Bank should give an undertaking that ***'the bank do hereby unconditionally undertake to pay the amounts due and payable under this FDR without any demur, reservation, recourse, contest or protest and without any reference to the Contractor or any other person and irrespective of whether the claim of the Authority is disputed by the Contractor or not, merely, on the first demand from the Authority stating that the amount claimed is due to the Authority by reason of failure of the Contractor to fulfil and comply with the terms and conditions contained in the Bidding/ contract documents'***.
 - The tenure of the FDR shall be equivalent to validity of the bid as specified in the RFP.
 - Fixed Deposit Receipt should be issued from the Bank already approved for

the purpose of bank guarantees.

e) The FDR should be encashable by NHIDCL without any recourse to the contractor and the interest shall accrue to the contractor. Such FDR(s) cannot be en-cashed by the contractor without being discharged on the lien/pledge.

16.3 Any bid not accompanied by an acceptable Earnest Money, shall be rejected by the Employer as non-responsive.

16.4 The Earnest Money of unsuccessful bidders will be returned within 28 days of the end of the Bid validity period specified in Sub-clause 15.1.

16.5 The Earnest Money of the successful Bidder will be discharged when the Bidder has signed the Agreement and furnished the required Performance Security.

16.6 The Bid Security will be forfeited:

a) if the Bidder withdraws the Bid after its submission during the period of Bid validity;

b) Deleted

c) in the case of a successful Bidder, if the Bidder fails within the specified time limit to

i. Sign the Agreement; and/or

ii. Furnish the required Performance Security.

16.7 In case of forfeiture of Bid Security/Earnest Money, the bidder shall also be debarred from participation in NHIDCL works for a period as decided by the NHIDCL.

17. Alternative Proposals by Bidders

17.1 Bidder shall submit offers that fully comply with the requirement of the bidding documents. Conditional offer or alternate offer will not be considered further in the process of evaluation and the bid will be declared non-responsive.

18. Format and Signing of Bid

18.1 The Bidder shall submit e-bid comprising of the documents as described in Clause 12 of the ITB.

18.2 Deleted

18.3 Deleted

18.4 The documents to be submitted in the physical form shall be typed or written in ink and shall be signed by person duly authorized to sign on behalf of the bidder. All the pages shall be signed by a person/person signing the bid. Documents as mentioned here shall contain no overwriting, alterations or additions, except those to comply with instructions issued by employer or as

necessary to correct error made by scoring out the cancelled portion, writing the correction and signing and dating it along with stamp by the person or persons signing the bid.

Section II

Instructions to Bidders (ITB)

D. Submission of Bids

19. Sealing and Marking of Bids

- 19.1** The documents to be submitted in physical form as per Clause 12.2 of ITB shall be submitted in a sealed Envelope super scribed as “Documents in Physical Form” at the top left corner.
- 19.2** In case of any discrepancy between documents submitted online and documents submitted in the physical form, the documents submitted in physical form shall prevail over the documents submitted through online process.

20. Deadline for Submission of Bids

- 20.1** Complete e-Bid to be uploaded on CPP portal before due date & time. The Envelope containing “Documents in Physical Form” must also be received by the Employer at the address **Executive Director (P), R.O. Gangtok (Sikkim), National Highway & Infrastructure Development Corporation Ltd, Amdo Golai, Opp. State Veterinary Polyclinic, Gangtok, Sikkim-737102** from the bidders. In the event of the specified date for the submission of documents in Physical form being declared a holiday for the Employer, the same will be received up to the specified time on the next working day.
- 20.2** NHIDCL assumes no responsibility for inability of a bidder to submit bids through CPP e-tendering portal on account of delay in submission at bidder's end. Bidder shall ensure that they submit the bid well before the "Due Date & Time of Bid-Submission". NHIDCL shall not be responsible if bidder is not able to submit the bid on account of failure in network/internet connection or any other technical reason.
- 20.3** The Employer may, at its discretion, extend the deadline for submission of bids by issuing an amendment in accordance with Clause 10, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will then be subject to the new deadline.

21. Late Submission of Documents in Physical Form:

- 21.1** Any document in physical form if received by the Employer after the deadline prescribed in Clause 20 will be returned unopened to the Bidder and also the e-bid submitted by such Bidder shall not be considered.

22. Modification and Withdrawal of Bids

- 22.1** Bidders may modify or withdraw their e-bids as directed on the e-tendering portal, before the Bid Due Date and time as prescribed in Clause 20.
- 22.2** Deleted.
- 22.3** No bid may be modified after the deadline for online submission of bids.
- 22.4** Withdrawal or modification of a Bid between the deadline for submission of bids and the expiration of the original period of bid validity specified in Clause 15.1 above or as extended pursuant to Clause 15.2 shall result in the forfeiture of the Bid

security pursuant to Clause 16.

- 22.5** Bidders may modify the prices of their bids before deadline of online submission of bid.
- 22.6** No Late and delayed bids after Bid Due date/time shall be permitted in e tendering portal System. Time being displayed on our e-Tendering Portal shall be final and binding on bidder and bids have to be submitted by bidders considering this time only and not the time as per their location/country.

Section II

Instructions to Bidders (ITB)

E. Bid Opening and Evaluation

23. Bid Opening

Bid opening shall be carried out in two stages. Firstly, 'Technical Bid' of all the bids received online shall be opened on the date and time mentioned in Notice Inviting Tender (NIT). Online 'Financial Bid' of those bidders whose technical bid has been determined to be substantially responsive shall be opened on a subsequent date through online process of e-tendering, which will be notified to such bidders.

- 23.1** The Employer will open the "Technical Bid" online of all the bids received, in the presence of the bidders/bidder's representatives who choose to attend at the time, date and place specified in the NIT. In the event of the specified date for the submission of bids being declared a holiday for the Employer, the Bids will be opened at the appointed time and location on the next working day.

23.1.1. Deleted.

23.1.2 Deleted.

- 23.2** In all cases, the amount of Bid Security, forms and validity shall be announced. Thereafter, the Employer at the opening as the Employer may consider appropriate, will announce the bidders' names and such other details.

- 23.3** The Employer will prepare minutes of the Bid opening, including the information disclosed to those present in accordance with Clause 23.1.

- 23.4** (i) The bids accompanied with valid bid security, bid document fee will be taken up for evaluation with respect to the Qualification Information and other information furnished in Part I of the bid pursuant to Clause 12.1.
(ii) Evaluation Committee will finalize the list of responsive bidders whose financial bids are eligible for consideration. However, to assist in the examination, evaluation of technical bids, the Employer may at his discretion, ask any bidder for clarification of his bid, however, no additional documents in support of clarification will be entertained.

- 23.5** The Employer shall inform the bidders, on the website whose technical bids are found responsive, of the date, time and place of opening of the financial bids. The bidders so informed, or their representative, may attend the meeting of opening of financial bids.

- 23.6** At the time of the opening of the "Financial Bid", the names of the bidders whose bids were found responsive in accordance with clause 23.5 will be announced. The financial bids of only these bidders will be opened. The responsive bidder's names, the Bid prices, the total amount of each bid, pursuant to clause 22 and such other details as the Employer may consider appropriate will be announced by the

Employer at the time of bid opening. Any Bid price, which is not read out and recorded, will not be taken into account in Bid Evaluation.

23.7 The Employer shall prepare the minutes of the opening of the Financial Bids.

24. Process to be Confidential

24.1 Information relating to the examination, clarification, evaluation, and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other person not officially concerned with such process until the award to the successful Bidder has been announced. Any attempt by a Bidder to influence the Employer's processing of bids or award decisions may result in the rejection of his Bid.

25. Clarification of Bids and Contacting the Employer

25.1 To assist in the examination, evaluation, and comparison of Bids, the Employer may, at his discretion, ask any Bidder for clarification of his Bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by cable, but no change in the price or substance of the Bid shall be sought, offered, or permitted.

25.2 Subject to sub-clause 25.1, no Bidder shall contact the Employer on any matter relating to his bid from the time of the bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Employer, it should do so in writing.

25.3 Any effort by the Bidder to influence the Employer in the Employer's bid evaluation, bid comparison or contract award decisions may result in the rejection of the Bidders' bid.

26. Examination of Bids and Determination of Responsiveness

26.1 During the detailed evaluation of "Technical Bids", the Employer will determine whether each Bid.

- (a) meets the eligibility criteria defined in Clauses 3 and 4 of ITB;
- (b) the required documents in physical form submitted by the bidder as per Clause 12.2 of ITB as well as the documents uploaded by the bidder are in order; and
- (c) is substantially responsive to the requirements of the Bidding Documents. During the detailed evaluation of the "Financial Bids", the responsiveness of the bids will be further determined with respect to the remaining bid conditions, i.e., priced bill of quantities, technical specifications and drawings etc.

26.2 DELETED.

26.3 DELETED.

27. DELETED

28. Evaluation and Comparison of Financial Bids

28.1 The Employer will evaluate and compare only the bids determined to be substantially responsive in accordance with Clause 26.

28.2 **DELETED**

28.3 If the Bid of the successful Bidder is seriously unbalanced in relation to the Employer's estimate of the cost of work to be performed under the contract, the Employer may require the bidder to produce detailed price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, the Employer may require that the amount of the Performance Security set forth in Clause 33 be increased and an additional Performance Security may be obtained at the expense of the successful Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract. The amount of the additional increased Performance Security shall be as hereunder-

(i) If the Bid price offered by the selected bidder is lower than 20% of the estimated project cost/cost put to tender, the additional performance security shall be calculated @ 20% of the difference in the *(i) Estimated Project Cost (as mentioned in RFP) - 20% of the Estimated Project Cost and (ii) the Bid Price offered by the selected Bidder.*

(ii) Maximum limit of additional performance security shall be limited to 3% of the Bid price offered by the selected bidder.

(iii) The additional performance security shall be treated as part of the performance security.

28.4 A bid, which contains several items in the Bill of Quantities which are unrealistically priced low and which cannot be substantiated satisfactorily by the bidder, may be rejected as non-responsive.

29. Price Preference

29.1 **DELETED.**

F. Award of Contract

30. Award Criteria

- 30.1** Subject to Clause 32, the Employer will award the Contract to the Bidder whose Bid has been determined to be substantially responsive to the bidding documents and who has offered the lowest evaluated Bid price.

31. Employer's Right to accept any Bid and to Reject any or all Bids

- 31.1** Notwithstanding Clause 30, the Employer reserves the right to accept or reject any Bid, and to cancel the bidding process and reject all bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Employer's action.

32. Notification of Award and Signing of Agreement.

- 32.1** The bidder whose Bid has been accepted will be notified of the award by the Employer prior to expiration of the Bid validity period by cable, telex or facsimile confirmed by registered letter. This letter (hereinafter and in the Part I *General Conditions of Contract* called the "Letter of Acceptance") will state the sum that the Employer will pay to the Contractor in consideration of the execution, completion and maintenance of works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").
- 32.2.** The notification of award (LoA) will constitute the formation of the Contract, subject only to the furnishing of a performance security in accordance with the provisions of Clause 33.
- 32.3. The Agreement will incorporate all agreements between the Employer and the successful Bidder. It will be signed by the Employer and the successful Bidder after the performance security is furnished.**
- 32.4** Upon furnishing by the successful Bidder of the Performance Security, the Employer will promptly notify the other Bidders that their Bids have been unsuccessful.

33. Performance Security

- 33.1** Within 10 (Ten) days after receipt of the Letter of Acceptance, the successful Bidder shall deliver to the Employer an irrevocable and unconditional Performance Security of Five (5) percent of the Contract Price plus any additional security for unbalanced Bids in accordance with ITB 28.3, valid for the period of 60 days after the expiry of defect liability period of work and sign the contract. **The validity shall account for additional 6 months' time to account for BG verification, signing of contract.**

- 33.1.2. The Performance Security and Additional Performance Security (if applicable) shall be in the form of e-Bank Guarantee, in the name of the Employer, from a Bank specified in case of Earnest Money/Bid Security.
- 33.1.3. Failure of the successful bidder to comply with the requirement of sub-clause 33.1 shall constitute sufficient ground for cancellation of the award and debarment for a period as specified in clause 16.7.
- 33.1.4. The e-bank guarantee issued by a Cooperative Bank shall not be accepted.
- 33.2. The Performance Security shall be valid until 28 (Twenty-Eight) days after the notified Defects Liability Period.
- 33.3 For avoidance of any doubt, in case of failure of submission of Performance Security and Additional Performance Security within the stipulated time period, the award shall be deemed to be cancelled/ withdrawn. Thereupon all rights, privileges, claims and entitlements of the Contractor under or arising out of the Award shall be deemed to have been waived by, and to have ceased with the concurrence of the Contractor, and the Award shall be deemed to have been withdrawn by the Employer.
- 33.4 The agreement will be executed within 10 days of receipt of Performance Security.

34. Advances

- 34.1 The Employer will not provide any Mobilization Advance.

35. Corrupt or Fraudulent Practices

- 35.1 The bidder and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the bidding process. Notwithstanding anything to the contrary contained herein, the Employer may reject any bid without being liable in any manner whatsoever to the bidder if it determines that the bidder has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in the bidding process.
- 35.2 Without prejudice to the rights of the Employer under Clause 35 hereinabove, if an bidder is found by the Employer to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the bidding process, such bidder shall not be eligible to participate in any tender issued by the Employer during a period of 2 (two) years from the date such bidder is found by the Employer to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as the case may be.
- 35.3 For the purposes of this Clause 35, the following terms shall have the meaning hereinafter respectively assigned to them:

- (a) “corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the actions of any person connected with the bidding process (for avoidance of doubt, offering of employment to, or employing, or engaging in any manner whatsoever, directly or indirectly, any official of the Employer who is or has been associated in any manner, directly or indirectly, with the bidding process or has dealt with matters concerning the Contract or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the Employer, shall be deemed to constitute influencing the actions of a person connected with the bidding process); engaging in any manner whatsoever, whether during the bidding process or after the award or after the execution of the Contract, as the case may be, any person in respect of any matter relating to the Works, who at any time has been or is a legal, financial or technical adviser of the Employer in relation to any matter concerning the Works;
- (b) “fraudulent practice” means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the bidding process;
- (c) “coercive practice” means impairing or harming or threatening to impair or harm, directly or indirectly, any person or property to influence any person's participation or action in the bidding process;
- (d) “undesirable practice” means establishing contact with any person connected with or employed or engaged by the Employer with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the bidding process; and
- (e) “restrictive practice” means forming a cartel or arriving at any understanding or arrangement among bidder with the objective of restricting or manipulating a full and fair competition in the bidding process.

The Employer will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question and will declare the firm ineligible, either indefinitely or for a stated period of time, to bid for any work with NHIDCL, if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for the contract, or in its execution.

The Employer requires the bidders/Contractors to strictly observe the laws against fraud and corruption enforced in India, namely, Prevention of Corruption Act, 1988.

36. Labour Laws and Regulations

36.1 The Bidders shall be aware of the provisions of various Labour Laws, Regulations and Welfare Measures applicable for Construction Workers in India, and other obligations stated in the Conditions of Contract.

36.2 Fundamental Breach and other obligations 36.1 The Bidders shall be aware of the provisions of Fundamental Breach and other obligations stated in the Conditions of Contract.

Appendix to ITB

Appendix to ITB		
Instructions to Bidders Clause Reference		
(1.1)	The Employer is National Highways & Infrastructure Development Corporation Limited, through Executive Director (P), Regional Office-Gangtok, Amdo Golai, Opp. State veterinary clinic, Gangtok Sikkim -737102	
(1.1)	Emergent slope protection works on valley side for maintenance & upkeep of existing NH-717A between Km 61+180 to 61+266 (Lava-Algarah section) on item rate basis in the State of West Bengal	
(4.4) B) (b) (i)	Name of the Equipment	Quantity
	Tipper/Trucks (10 Ton capacity)	1 working + 1 standby (Standby to be deployed as per instruction of Engineer)
	Hydraulic Excavator / Backhoe loader and rock breaker attachment	1 + 1 standby (Standby to be deployed as per instruction of Engineer)
	Chain Drifter	3
	Compressor (min. 450 CFM)	1
	Grouting machine/pump	1
	Jack Hammer/Breaker	1
	Generator set (min 100 KVA)	1
	Any other equipment required for carrying out work as per Ministry's or other relevant specification.	
	Note: i) The bidder must upload scanned copy of the documentary evidence in support of his owning/leased/rented of the above equipment. In case the bidder proposes to hire or take the above equipment on lease, he should, along with the lease/rent agreement, attach the proof of ownership of these equipment with the company/ entity from whom the equipment are proposed to be hired on lease/ rent. ii) <u>Default of Contractor on account of mobilization of Equipment: A penalty of 0.05% of the Contract Price per day shall be levied on the Contractor if the Contractor fails to mobilize the above – said equipment within 14 days of the letter of commencement, or thereafter from the date of issuance of letter by Engineer/Employer in this regard.</u>	

4.4 B (b) (ii) The Number of Technical Personnel, Qualifications and Experience will be as follows:

Sl. No	Personnel	Qualification	Particular Experience (minimum requirement)	No. of Persons
1.	Project Manager	B.E. Civil + 5 Years Exp.	5 years on slope protection and structure work	1
2.	Site Engineer cum Survey Engineer cum Material Engineer	B.E. Civil + 3 Years Exp.	2 years on slope protection works or structure work.	1
			Total	2

Note: 1. The detailed signed and scanned CV's of the Key Technical Personnel at S. No. 1, signed by the key personnel himself, must be uploaded along with the bid. The name and educational qualification of other personnel should be given. Non-compliance of the above or non-furnishing of the CV as above or conditional deployment of any of the above personnel or proposal to employ lesser number of personnel than above shall make the bid non responsive and financial bid shall not be opened.

2. Declaration/willingness along with qualification certificate by personnel proposed above to be deployed for this work/RFP is to be submitted. The bidder shall submit a Declaration/willingness as per Performa Appendix 1.8(Qualification Information, Section -III) of the bid document.

SECTION III

QUALIFICATION INFORMATION

(To be Filled by Bidder)

SECTION III

QUALIFICATION INFORMATION

The information to be filled in by the Bidder in the following pages will be used for purposes of post qualification as provided for in Clause 4 of the Instructions to Bidders. This information will not be incorporated in the Contract.

Qualification Information

1. For Individual Bidders

1.1. (a) Year of Constitution

(b) legal status of Bidder

[Upload scanned copy of original]

(c) Place of registration:

(d) Principal place of business:

1.2. Power of attorney of signatory of Bid *[upload scanned copy & also supply either original or **duly notarized** copy in physical form of bid]*

1.3. Total value of Civil Engineering construction work performed in the last five years including current year (in Rs. Lakhs) refer ITB Clause 4.4 A (a)

*[upload scanned copies of certificate from Chartered Accountant & also supply either original or **duly notarized copy** in physical form of bid]*

2023-2024 _____
2022-2023 _____
2021-2022 _____
2020-2021 _____
2019-2020 _____

Total -----

Average per year _____

- 1.4. (a) Work performed as prime contractor, work performed in the past as a nominated sub- contractor will also be considered, provided further that all other qualification criteria are satisfied (in the same name) of a similar nature during the last Five years to qualify as per ITB Clause 4.4A(b).

Project Name	Name of the Employer*	Description of work	Contract No.	Value of Contract (Rs. Crore)	Date of issue of work order	Stipulated period of completion	Actual date of completion*	Remarks explaining reasons for delay & work Completed

** Upload certificate(s) from the Employer (to be given by an officer at the rank of Executive Engineer or equivalent & also supply original or certified/notarized copy in physical form envelope)*

Note: In case of nominated sub-contractor – a certificate from the Executive Engineer or equivalent of the Prime Employer should be obtained from whom an approval for subcontractor has been obtained.

- 1.4 (b) Information on Bid Capacity (works for which bids have been submitted and accepted and works which are yet to be completed) as on the date 7 days before the last date for bid submission (as per Clause 4.4 of the ITB).

(i) Existing commitments and on-going works (B)

Description of works	Place & State	Contract No.	Name & Address of Employer	Value of Contract (Rs Cr)	Stipulated Period of Completion	Value of works remaining to be completed (Rs. Cr)	Escalation factor	Anticipated date of completion factor	Escalated value of remaining work during completion on period of work of which bids are invited
1	2	3	4	5	6	7	8	9	10

** Upload certificate (s) from the Engineer(s)-in-Charge of the rank of Executive Engineer or equivalent & also supply original or certified copy of certificate in physical form envelope.*

(ii) Details of works for which bid submitted and accepted (i.e. where contract signing is pending)

Description of works	Place & State	Name & Address of Employer	Date of issue of Letter of Acceptance (LOA) *	Value Given in LOA	Stipulated period for completion	Value of Work During Completion period of work for which bids are invited
1	2	3	4	5	6	7

* Upload copy of LOA

(iii) Bid Capacity (Bidder shall calculate, mention his bid capacity and enclose the supporting calculation)

A = Rs Lakh (enclose the details)

N = years

B = Rs Lakh (enclose the details)

Assessed available bid capacity = $A \times N \times 2 - B$
= Rs Lakhs

Availability of Key Equipment essential for carrying out the Works [Ref. Clause 4.4(B) (b) (i)]. The Bidder should list all the information requested below.

Item of Equipment	Requirement	Availability Proposals			Page no. of the proof attached
		Owned/Leased/rented	Nos./Capacity	Age/Condition	
Tipper/Trucks (10 Ton capacity)	1 working + 1 standby (Standby to be deployed as per instruction of Engineer)				
Hydraulic Excavator / Backhoe loader and rock breaker attachment	1 + 1 standby (Standby to be deployed as per instruction of Engineer)				
Chain Drifter	3				
Compressor (min. 450 CFM)	1				
Grouting machine/pump	1				
Jack Hammer/Breaker	1				

Jack Hammer/Breaker	1				
Generator set (min 100 KVA)	1				

Note: The bidder must upload the documentary evidence in support of his owning/leased/ rented of the above equipment. In case the bidder proposes to hire or take the above equipment on lease, he should, along with the lease/rent agreement, attach the proof of ownership of these equipment with the company/ entity from whom the equipment are proposed to be hired on lease/ rent. The bidder shall submit an undertaking as per Performa Appendix 1.7 (ITB, Section -2) of the bid document.

1.6 Qualification and Experience of Key Personnel required for administration and execution of the Contract [Ref. Clause 4.4 (B) (b) (ii)]. **Upload biographical data for technical personnel (Refer also to Cl. 4.2 (e) of Instruction to Bidders).**

(Refer also to Sub Clause 9.1 of the Conditions of Contract).

Sl. No.	Position	Name	Qualification	Total Professional Experience (Years)	Experience in the proposed position (Years)
1.	Project Manager				
2.	Site Engineer cum Survey Engineer cum Material Engineer				

Note: The detailed and signed CV"s of the Key Technical Personnel at S. No. 1 signed by the key personnel himself must be uploaded along with the bid. The name and educational qualification of other personnel should be given. Non compliance of the above or non furnishing of the CV as above or conditional deployment of any of the above personnel or proposal to employ lesser number of personnel than above shall make the bid non responsive and financial bid shall not be opened.

1.7 Information on litigation history in which the Bidder is involved.

Other Party (ies)	Employer	Cause of Dispute	Amount Involved	Remarks showing Present Status

2. Bidders should upload the scanned copy of the following affidavits/ undertakings as per formats enclosed hereinafter & also send original copy of Affidavit/Undertakings:

- (i) Affidavit (it should be on stamp paper attested by Notary Public)
- (ii) Undertaking regarding minimum investment of cash towards working capital.
- (iii) Undertaking that the Bids shall remain valid for the period specified in Clause 15.

**SAMPLE FORMAT FOR EVIDENCE OF ACCESS TO OR AVAILIBLTY OF CREDIT
FACILITIES**

(CLAUSE 4.2 (g) OF ITB)

BANK CERTIFICATE

This is to certify that M/s_____ is a reputed company with a good financial standing.

If the contractor for the work, namely_____is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs._____to meet their working capital requirements for executing the above contract during the contract period.

Date:

(Signature)

Name of Bank Senior Bank Manager

Address of the Bank

(To be notarized by Notary)

AFFIDAVIT

FORMAT- 2(i)

1. I, the undersigned, do hereby certify that all the statements made in the enclosed attachments are true and correct.
2. The undersigned also hereby certifies that neither our firm M/s_____ have abandoned any works in India nor any contract awarded to us for such works have been rescinded, during last five years prior to the date of this bid.
3. The undersigned hereby authorize(s) and request(s) any bank, person, firm or corporation to furnish pertinent information deemed necessary and requested by MoRTH/NHIDCL/PWD/NHAI to verify this statement or regarding my (our) competence and general reputation.
4. The undersigned understands and agrees that further qualifying information may be requested and agrees to furnish any such information at the request of the NHIDCL and within the prescribed time.

(Signed by an Authorized Representative of the Firm)

Name of the Representative

Name of Firm

DATE

(To be notarized by Notary)

UNDERTAKING
(Regarding Minimum Investment)

FORMAT- 2(ii)

I, the undersigned do hereby undertake that our firm M/s _____ would invest a minimum cash up to 25% of the value of the work during implementation of the Contract towards the working capital.

(Signed by an Authorized Representative of the Firm)

Name of the Representative

Name of Firm

DATE

(To be notarized by Notary)
UNDERTAKING
(Bid Validity)

FORMAT – 2 (iii)

I, the undersigned do hereby undertake that our firm M/s _____ agree to abide by this bid for a period of _____ days after the date fixed for receiving the same and it shall be binding on us and may be accepted at any time before the expiration of that period.

(Signed by an Authorized Representative of the Firm)

Name of the Representative

Name of Firm

DATE

Appendix 1.7 [Ref. clause 4.4 B (b) (i)]

UNDERTAKING*

(Availability of Key Equipments along with ownership details)

I, the undersigned do hereby undertake that our firm M/s.....
..... agree to provide and will deploy required equipment as mentioned in the Appendix to ITB of the work **“Emergent slope protection works on valley side for maintenance & upkeep of existing NH-717A between Km 61+180 to 61+266 (Lava-Algarah section) on item rate basis in the State of West Bengal”**. Further it is certified that the documents submitted as evidence of availability of the key equipments for this work as stated in the Appendix to ITB, are genuine and correct. If anything, contrary to the details as submitted is found at any stage NHIDCL would be at liberty to debar/blacklist my firm for an appropriate period as decided by NHIDCL. **I hereby understand that a penalty of 0.05% of the Contract Price per day shall be levied on the Contractor if the Contractor fails to mobilize/deploy the required equipment & manpower as mention in the Appendix to ITB within 14 days of the letter of commencement, or thereafter form the date of issuance of letter by Engineer/Employer in this regard.**

(Signed by an Authorized Representative of the Firm)

Name of the Representative

Name of Firm

(Seal of the company)

DATE

Appendix 1.8 [Ref. clause 4.4 B (b) (ii)]

Declaration/ Willingness

I (Name of Proposed Personnel), the undersigned do hereby declare that I have accepted the offer of M/s... (Name of Bidder) to be employed as (Project Manager/ Site Engineer/ Quantity Surveyor) (Tick the relevant position) for the work, **“Emergent slope protection works on valley side for maintenance & upkeep of existing NH-717A between Km 61+180 to 61+266 (Lava-Algarah section) on item rate basis in the State of West Bengal”** and will join the project site and available for the entire project duration willingly.

Name of Proposed Personnel

Mobile No.

Email id :

Aadhaar No. :

Date :

Signature of Proposed Personnel :

“

Undertaking

It is to submit that I have furnished a Fixed Deposit receipt for Rs.....(Rupees only) no., dated, as a Bid Security/Performance Security/Additional Performance Security for the project “.....” before entering into its agreement, being 3% of the project Cost, in the joint name of the “NHIDCL, RO-Kohima (Authority) &, (Bidder/Contractor) on unconditional and irrevocable basis. The Said FDR is prepared in terms of the RFP terms & conditions.

In case of non-performance/default in compliances of terms of the RFP/Contract Agreement on my part, the Authority has right / freedom to withdrawal /encash the Fixed Deposit receipt no., dated at any point of time, without demur, reservation, recourse, contest or protest and without any intimation to me. As there is NO such joint account is either opened or being operated at this point, thereby, in the event of withdrawal of FDR by Authority, the amount may be transferred to NHIDCL, RO-Kohima account is as detailed below:

Sl. No	Particulars	Details
1	Name of the Beneficiary	Executive Director, Sikkim, NHIDCL
2	Beneficiary Bank Account No.	94113210000020
3	Beneficiary Bank Branch	IFSC code - CNRB0019411
4	Beneficiary Bank Branch Name	Gangtok, Sikkim
2	Beneficiary Bank Address	M G Marg, Gangtok

The above undertaking is submitted to the authority without any condition.

For

Authorised Signatory

(SECTION-IV)

FORMS OF BANK GUARANTEES LOA & AGREEMENT

(On the letter head of the bidder)

Bid Securing Declaration

I hereby submit a declaration that the bid submitted by the undersigned, on behalf of the bidder, [Name of the bidder], shall not be withdrawn or modified during the period of validity, i.e. not less than 120(One Hundred Twenty) days from the bid due date.

I, on behalf of the bidder, [Name of the bidder], also accept the fact that in case the bid is withdrawn or modified during the period of its validity or if we fail to sign the contract in case the work is awarded to us or we fail to submit a performance security before the deadline defined in clause 33.1 of the Request for Proposal (RFP), then [Name of the bidder] will be suspended for participation in the tendering process for the works of MoRTH/NHAI/NHIDCL and works under other Centrally Sponsored Schemes, for a period of one year from the bid due date of this work.

(Signature of the Authorized Signatory)

(Official-Seal)

APPENDIX - II
BE- Bank Guarantee for BID Security
(Refer Clauses 16)

B.G. No.

Dated:

WHEREAS _____ (Name of Tenderer) (hereinafter called the Tenderer) wishes to submit his tender for **“Emergent slope protection works on valley side for maintenance & upkeep of existing NH-717A between Km 61+180 to 61+266 (Lava-Algarah section) on item rate basis in the State of West Bengal”** herein after called “the Tender” KNOW ALL MEN by these present that we _____ (Name of Bank) of India having our registered office at (_____) (hereinafter called the ‘Bank’) are bound unto the National Highways & Infrastructure Development Corporation Limited (NHIDCL), having its office at National Highway & Infrastructure Development Corporation Ltd., RO-Gangtok, Amdo Golai, Opp. State Veterinary Clinic, Gangtok, Sikkim- 737102, (hereinafter called “the Employer”) in the sum of Rs. _____ (Rupees _____) *for which payment can truly be made to the said Employer. The Bank bind themselves, their successors and assigns by these present with the common seal of the Bank this day _____ of _____ and undertake to pay the amount of _____ Rs. _____ (Rs.in words _____) to the Employer upon receipt of his first written demand without the Employer having to substantiate his demand.

The conditions of this obligation are:

i) If the tenderer withdraws his tender during the period of Tender validity specified in the Form of Tender.

Or

ii) If the Tenderer having been notified of the acceptance of his Tender by the Employer during the period of tender validity. a) fails or refuses to execute the Form of Agreement in accordance with the Instructions to Bidders, if required; or b) fails or refuses to furnish the Performance Security, in accordance with the Instructions to Bidders.

We undertake to pay to the Employer upto the above amount upon receipt of his first written demand, without the employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of any one of the above conditions, specifying the occurred condition or conditions.

This guarantee will remain in force upto and including the date 60 days beyond the validity of the bid as stated in the Instructions to Bidders or as it may be extended by the Employer, at any time prior to the closing date for submission of the Tenders Notice of which extension to the Bank is hereby waived. Any demand in respect of this guarantee should be made on the Bank on or before the date of expiry of this guarantee. Notwithstanding anything contained herein before, our liability under this guarantee is restricted to Rs. _____ (Rs. _____ in words) and the guarantee shall remain valid till _____. Unless a claim or a demand in writing is served upon us on or before _____ all our liability under this guarantee shall cease.

For the avoidance of doubt, the Bank's liability under this Guarantee shall be restricted to Rs..... lakh (Rs.only). The Bank shall be liable to pay the said amount or any part thereof only if the Authority serves a written claim (A letter from the Authority shall be not below the rank of General Manager in the NHIDCL) on the Bank in accordance with paragraph 9 hereof, on or before [*** (indicate date falling 180 days after the BID Due Date)].

This guarantee shall also be operatable at our..... Branch at Gangtok, from whom, confirmation regarding the issue of this guarantee or extension / renewal thereof shall be made available on demand. In the contingency of this guarantee being invoked and payment thereunder claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.

Signed and Delivered by.....Bank

By the hand of Mr./Ms, its and authorised official.

(Signature of the Authorised Signatory)
(Official-Seal)

NOTES:

- The e- bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.
- The address, telephone number and other details of the head office of the Bank as well as of issuing branch should be mentioned on the covering letter of issuing branch.
- The issuance of the Bank Guarantee shall be intimated by the banker of the Bidder through SFMS Gateway to NHIDCL's Bank Account (Account details provided Section-I (Introduction), Cl. 1.2.4) and BG confirmation shall be obtained from Canara Bank before acceptance of the Bank Guarantee.

Sl. No	Particulars	Details
1	Name of the Beneficiary	Executive Director, Sikkim, NHIDCL
2	Beneficiary Bank Account No.	94113210000020
3	Beneficiary Bank Branch	IFSC code - CNRB0019411
4	Beneficiary Bank Branch Name	Gangtok, Sikkim
2	Beneficiary Bank Address	M G Marg, Gangtok

Format for Power of Attorney for signing of BID

Know all men by these presents, We..... (name of the firm and address of the registered office) do hereby irrevocably constitute, nominate, appoint and authorize Mr./ Ms (name), son/daughter/wife of and presently residing at, who is presently employed with us and holding the position of, as our true and lawful attorney (hereinafter referred to as the "Attorney") to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to submission of our BID for the Project proposed or being developed by the National Highways & Infrastructure Development Corporation Ltd (the "Authority") including but not limited to signing and submission of all applications, BIDs and other documents and writings, participate in Pre-BID and other conferences and providing information/ responses to the Authority, representing us in all matters before the Authority, signing and execution of all contracts including the agreement and undertakings consequent to acceptance of our BID, and generally dealing with the Authority in all matters in connection with or relating to or arising out of our BID for the said Project and/ or upon award thereof to us and/or until the entering into of the EPC Contract with the Authority.

AND we hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

IN WITNESS WHEREOF WE,, THE ABOVE NAMED PRINCIPAL HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS DAY OF 2....

For

(Signature, name, designation and address)

of person authorized by Board Resolution

(in case of Firm/ Company)/ partner in case of Partnership firm

Witnesses:

1.

2.

Accepted

.....

(Signature)

(Name, Title and Address of the Attorney)

(Notarised)

Person identified by me/ personally appeared before me/

Attested/ Authenticated*

(*Notary to specify as applicable)

(Signature Name and Address of the Notary)

Seal of the Notary

Registration No. of the Notary

Date:.....

Notes:

- *The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.*
- *Wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as a board or shareholders' resolution/ power of attorney in favour of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder.*
- *For a Power of Attorney executed and issued overseas, the document will also have to be legalised by the Indian Embassy and notarised in the jurisdiction where the Power of Attorney is being issued. However, the Power of Attorney provided by Bidders from countries that have signed the Hague Legislation Convention 1961 are not required to be legalised by the Indian Embassy if it carries a conforming Apostille certificate.*

FORM OF Bank Guarantee / E- BANK GUARANTEE
[Performance Security/Additional Performance Security]

To,

The Executive Director (P)

National Highways & Infrastructure Development Corporation Limited.

**Regional Office, National Highways &
Infrastructure Development Corporation Limited.**

**Regional Office, Amdo Golai, Opp. State Veterinary
Polyclinic, Gangtok, Sikkim- 737102.**

Email: ro.sikkim@nhidcl.com

WHEREAS _____ [name and address of Contractor] (herein after called the "Contractor") has undertaken, in pursuance of Letter of Acceptance (LOA) No. _____ Dated _____ to execute "Emergent slope protection works on valley side for maintenance & upkeep of existing NH-717A between Km 61+180 to 61+266 (Lava-Algarah section) on item rate basis in the State of West Bengal" (hereinafter called the "Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee:

NOW THEREOF we hereby affirm that we are the guarantor and responsible to you on behalf of the Contractor, up to a total amount of Rs. (amount of guarantee) (Rupees (in words) and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of (amount of guarantee) as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the works to be performed there under or of any of the contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until 60 days from the date of expiry of the Defects Liability Period.

This guarantee shall also be operatable at our Branch at Gangtok, from whom, confirmation regarding the issue of this guarantee or extension/ renewal thereof shall be made available on demand. In the contingency of this guarantee being invoked and payment there under claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.

E-Bank Guarantee has been sent to authority's bank through SFMS gateway as per the details below:-

Particulars	Details
Name of the Beneficiary	Executive Director-NHIDCL
Beneficiary Bank Account No.	94113210000020
Beneficiary Bank Branch	IFSC CNRB0019411
Beneficiary Bank Branch Name	Canara Bank,
Beneficiary Bank Address	M G Marg, Gangtok

Signature and seal of the Guarantor with Name, Designation, Employee Code Number & Telephone Number.....

Name of the Issuing Bank/ Branch _____ Name of the Controlling Branch/Bank _____.

Address & Telephone Number _____ Address & Telephone Number _____.

Date _____

In the presence of (if this is to be witnessed as per bank's policy) _____

1 _____
(Name, Address & Occupation)

2 _____
(Name, Address & Occupation)

An amount shall be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract including additional security for unbalance bids, if any and denominated in Indian Rupees.

FORM OF LETTER OF APPLICATION

To,

**Executive Director (P) ,
National Highways & Infrastructure Development Corporation Limited.
Regional Office, Amdo Golai, Opp. State Veterinary Polyclinic,
Gangtok, Sikkim-737102.
Email: ro.sikkim@nhidcl.com.**

Sub:- Bid for “Emergent slope protection works on valley side for maintenance & upkeep of existing NH-717A between Km 61+180 to 61+266 (Lava-Algarah section) on item rate basis in the State of West Bengal”

Contract Package No.: NHIDCL/PMU-Kalimpong/NH-717A/VA(i)/Emergent M&R/2022

Dear Sir,

Having examined the Bid Document, Instructions to Bidders, Qualification Information, Scope of works, etc. for the subject work we hereby submit our bid for the subject work.

It is certified that the information furnished in this document is true and correct. The proposal is unconditional and unqualified. We undersigned accept that the Employer reserves the right to reject any or all applications without assigning any reason.

Thanking you,

Date:

(Signature, name and designation

Place:

of the Authorised signatory)

Name & seal of Bidder

TENDER ACCEPTANCE LETTER

(To be given on Company Letter Head)

Date:

To,

Executive Director (P)

National Highways & Infrastructure Development Corporation Limited.

Regional Office, Amdo Golai, Opp. State Veterinary Polyclinic,

Gangtok, Sikkim-737102.

Email: ro.sikkim@nhidcl.com.

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: NHIDCL/PMU-Kalimpong/NH-717A/VA(i)/Emergent M&R/2022

Name of Tender / Work:- “Emergent slope protection works on valley side for maintenance & upkeep of existing NH-717A between Km 61+180 to 61+266 (Lava-Algarah section) on item rate basis in the State of West Bengal”

Dear Sir,

1. I/We have downloaded / obtained the tender document(s) for the above mentioned ‘Tender Works’ “Emergent slope protection works on valley side for maintenance & upkeep of existing NH-717A between Km 61+180 to 61+266 (Lava-Algarah section) on item rate basis in the State of West Bengal” as per your advertisement, given in the above mentioned website(s).
2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc.), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
3. The corrigendum(s) issued from time to time by your department/ organization too has also been taken into consideration, while submitting this acceptance letter.
4. I / We hereby unconditionally accept the tender conditions of above-mentioned tender document(s) / corrigendum(s) in its totality / entirety.
5. I / We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt. Department/Public sector undertaking.
6. I / We certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organization shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including debarment.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

FORM OF LETTER OF ACCEPTANCE

No.

Dated

To

M/s..... {Name of Selected Bidder}

Sub.: Name of Work

Ref : Your bid No. _____ for the subject work dated _____

Sir,

Based on your bid submitted on in compliance of bidding document of NHIDCL for execution of the work of **"Emergent slope protection works on valley side for maintenance & upkeep of existing NH-717A between Km 61+180 to 61+266 (Lava-Algarah section) on item rate basis in the State of West Bengal"** it is hereby notified that your bid for a contract price of **Rs.....(Rupees in words...)** (excluding GST) has been accepted for and on behalf of NHIDCL.

2. You are hereby requested to furnish Performance Security/Additional Performance Security in the form detailed in para. 33 of ITB for an amount equivalent to **Rs... ..(Rupees in words...)** within 10 days as per provisions of clause 33.1 of ITB of the bid document and sign the contract agreement failing which the actions as stipulated in ITB shall be taken.

Thanking you,

Yours faithfully,

(.....)
Executive Director (P)

FORM OF AGREEMENT

AGREEMENT

This agreement made the _____ day of _____ 2024 _____ between the National Highways & Infrastructure Development Corporation Ltd. through it's Regional Office-Gangtok (hereinafter called "the Employer" of the one part and _____ (here in after called "the Contractor") of the other part.

AND WHEREAS the Employer invited bids from eligible bidders for the execution of certain works, viz "Emergent slope protection works on valley side for maintenance & upkeep of existing NH-717A between Km 61+180 to 61+266 (Lava-Algarah section) on item rate basis in the State of West Bengal"

AND WHEREAS pursuant to the bid submitted by the Contractor, vide (here in after referred to as the "BID" or "ÖFFER") for the execution of works, the Employer by his letter of acceptance dated _____ accepted the offer submitted by the Contractor for the execution and completion of such works and remedying of any defects thereon, on terms and conditions in accordance with the documents listed in para 2 below.

AND WHEREAS the Contractor by a deed of undertaking dated _____ has agreed to abide by all the terms of the bid, including but not limited to the amount quoted for the execution of Contract, as stated in the bid, and also to comply with such terms and conditions as may be required from time to time.

AND WHEREAS the contractor has agreed to undertake such works and has furnished a performance security pursuant to clause 33 of the instructions to bidders (Section-I).

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this agreement words and expressions shall have the same meaning as are respectively assigned to them in the conditions of contract hereinafter referred to;
2. the following documents shall be deemed to form and be read and construed as part of this agreement viz.
 - (a) Contract Agreement,
 - (b) Letter of Acceptance
 - (c) Notice to proceed with the works
 - (d) Contractor's Bid,
 - (e) Contract Data,
 - (f) Conditions of Contract including Special Conditions of Contract,
 - (g) Technical Specifications,
 - (h) Drawings, if any
 - (i) Scope of Work
 - (j) Bill of Quantities, and
 - (k) Any other document listed in the Contract Data.
3. The foregoing documents shall be construed as complementary and mutually explanatory one with another. Should any ambiguity or discrepancy be noted then the order of precedence of these documents shall be subject to the order as listed above and interpreted

in the above order of priority.

4. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the works and remedy any defects therein in conformity in all respects with the provisions of the contract.
5. the employer hereby covenants to pay the contractor in consideration of the execution and completion of the works and remedying of defects therein, the contract price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the contract.

IN WITNESS WHEREOF the parties here to have caused this agreement to be executed the day and year above written. Signed, sealed and delivered by the said Employer through his Authorized Representative and the said Contractor through his Power of Attorney holder.

Binding Signature of Employer _____

For and on behalf of National Highways & Infrastructure Development Corporation

Binding Signature of Contractor _____

For and on behalf of M/s. _____

In the presence of

1. Name :

Address:

2. Name :

Address:

In the Presence of

1. Name:

Address:

2. Name:

Address:

(SECTION-V)
CONDITIONS OF CONTRACT
AND CONTRACT DATA

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Section V

Conditions of Contract

A. General

1. Definitions

1.1 Terms which are defined in the Contract Data but not defined in the Conditions of Contract keep their defined meanings. Capital initials are used to identify defined terms.

Bill of Quantities means the priced and completed Bill of Quantities forming part of the Bid.

Compensation Events are those defined in Clause 41 hereunder.

The Completion Date (Date of Completion) is the date of completion of the Works as certified by the Engineer, in accordance with Clause 49.1.

The Contract is the Contract between the Employer and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in Clause 2.3.

The Contract Data defines the documents and other information which comprise the Contract.

The Contractor is a person or corporate body whose Bid to carry out the Works has been accepted by the Employer.

The Contractor's Bid is the completed upon the online submission of the Bid and subsequent submission of documents to be submitted in the physical form as required under the ITB.

The Contract Price is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

Days are calendar days; months are calendar months.

A **Defect** is any part of the Works not completed in accordance with the Contract.

The Defects Liability Certificate is the certificate issued by Engineer, after the Defect Liability Period has ended and upon correction of Defects by the Contractor.

The Defects Liability Period is the period named in contract data and calculated from the Completion Date.

Drawings include calculations and other information provided or approved by the Engineer for the execution of the Contract.

The Employer is the party as defined in the Contract Data, who employs the Contractor to carry out the Works. The Employer may delegate any or all of its functions to a person or body nominated by him for specified functions.

The Engineer/Authority's Engineer is the person named in the Contract Data (or any other competent person appointed by the Employer and notified to the Contractor, to act in replacement of the Engineer) who is responsible for supervising the execution of the Works and administering the Contract.

Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

The Initial Contract Price is the Contract Price listed in the Employer's Letter of Acceptance.

The Intended Completion Date is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the Contract Data. The Intended Completion Date may be revised only by the Engineer by issuing an extension of time after the approval from Employer.

Materials are all supplies, including consumables, used by the Contractor for incorporation in the Works.

Plant is any integral part of the Works that shall have a mechanical, electrical, electronic, chemical, or biological function.

The **Site** is the area defined as such in the Contract Data.

Site Investigation Reports are those that were included in the bidding documents and are factual interpretative reports about the surface and subsurface conditions at the Site.

Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Engineer.

The **Start Date** is given in the Contract Data. It is the date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.

A **Sub-Contractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.

Temporary Works are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.

A **Variation** is an instruction given by the Engineer after the approval from NHIDCL, which varies the Works.

The **Works** are what the Contract requires the Contractor to construct, install, maintain, and handover to the Employer, **as defined in the Contract Data**.

2. Interpretation

- 2.1** In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Engineer will provide instructions clarifying queries about these Conditions of Contract.
- 2.2** If sectional/part completion is specified in the Contract Data, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
- 2.3** The documents forming the Contract shall be interpreted in the following order of priority.
- (a) Contract Agreement,
 - (b) Letter of Acceptance
 - (c) Notice to proceed with the works
 - (d) Contractor's Bid,
 - (e) Contract Data,
 - (f) Conditions of Contract including Special Conditions of Contract,
 - (g) Technical Specifications,
 - (h) Drawings, if any
 - (i) Scope of Work
 - (j) Bill of Quantities, and
 - (k) Any other document listed in the Contract Data.

3. Language and Law

- 3.1** The language of the Contract and the law governing the Contract are stated in the Contract Data.

4. Engineer's Decisions

- 4.1** Except where otherwise specifically stated, the Engineer will decide contractual matters between the Employer and the Contractor in the role representing the Employer. The Engineer shall have no authority to relieve the Contractor of any of his obligations under the Contract.

5. Delegation

- 5.1** The Engineer, duly informing the Employer, may delegate any of his duties and responsibilities to other people except to the Adjudicator, after notifying the Contractor, and may cancel any delegation under intimation to the Contractor.

6. Communications

- 6.1** Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.

7. Subcontracting

- 7.1** DELETED

7.2 DELETED

7.3 DELETED

7.4 DELETED

8. Other Contractors

8.1 The Contractor shall cooperate and share the Site with other Contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Contractors, as referred to in the Contract Data. The Contractor shall also provide facilities and services for them as described in the Schedule. The Employer may modify the Schedule of Other Contractors, and shall notify the Contractor of any such modification.

8.2 The Contractor should take up the works in convenient reaches as decided by the Engineer to ensure there is least hindrance to the smooth flow of traffic including movement of vehicles and equipment of other Contractors till the completion of the Works.

9. Personnel and Equipment

9.1 The Contractor shall employ the technical personnel named in the Contract Data or other technical persons approved by the Engineer. The Engineer will approve any proposed replacement of technical personnel only if their relevant qualifications and experience are substantially equal to or better than those of the personnel stated in the Contract Data. If the personnel stated in the Contract Data are not deployed on site by the Contractor within 15 days of issue of notice to proceed with the work, a penalty of 5000/- per day per person shall be levied for next 30 days, beyond which it shall be treated as a breach of Contract and action will be taken as per Clause 53.

9.2 The Contractor shall use the equipment identified in the bid along with competent operators and adequate stock of spares for smooth operations.

9.3 If the Engineer asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the Works in the Contract.

10. Employer's and Contractor's Risks

10.1 The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

11. Employer's Risks

11.1 The Employer is responsible for the excepted risks which are (a) in so far as they directly affect the execution of the Works in the Employer's country, the risks of war, hostilities, invasion, act of foreign enemies, rebellion, revolution, insurrection or military or usurped power, civil war, riot commotion or disorder (unless restricted to the Contractor's employees), natural calamities and

contamination from any nuclear fuel or nuclear waste or radioactive toxic explosive, or (b) a cause due solely to the design of the Works, other than the Contractor's design.

12. Contractor's Risks

12.1 All risks of loss of or damage to physical property and of personal injury and death, which arise during and in consequence of the performance of the Contract other than the excepted risks, referred to in clause 11.1, are the responsibility of the Contractor.

13. Insurance

13.1 The Contractor at his cost shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of defect liability period for events (a) to (d), in the amounts and deductibles stated in the Contract Data for the following events which are due to the Contractor's risks:

- a) loss of or damage to the Works, Plant and Materials;
- b) loss of or damage to Equipment;
- c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and
- d) Personal injury or death.

13.2 Insurance policies and certificates for insurance shall be delivered by the Contractor to the Engineer for the Engineer's approval before the Start Date. All such insurance shall provide for compensation to be payable in Indian Rupees to rectify the loss or damage incurred.

13.3 If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be debt due.

13.4 Alterations to the terms of insurance shall not be made without the approval of the Engineer.

13.4 Both parties shall comply with any conditions of the insurance policies.

14. Site Investigation Reports

14.1 The Contractor, in preparing the Bid, may rely on any Site Investigation Reports referred to in the Contract Data, supplemented by any other information available to him, before submitting the bid.

15. Queries about the Contract Data

15.1 Executive Director (NHIDCL), RO-Gangtok will clarify queries on the Contract Data.

16. Contractor to Construct the Works & do maintenance

- 16.1** The Contractor shall construct, install and maintain the Works in accordance with the documents forming part of the contract. The work may be required to be partially executed or may not be executed at all by NHIDCL. No claim whatsoever from any of the selected bidders on this account shall be entertained in this regard.

17. The Works to Be Completed by the Intended Completion Date

- 17.1** The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Programme submitted by the Contractor, as updated with the approval of the Engineer, and complete them by the Intended Completion Date.

18. Approval by the Engineer

- 18.1** The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Engineer, who is to approve them if they comply with specifications and drawings.
- 18.2** The Contractor shall be responsible for design of Temporary Works.
- 18.3** The Engineer's approval shall not alter the Contractor's responsibility for design of the Temporary Works.
- 18.4** The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.
- 18.5** All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Engineer before their use.

19. Safety

- 19.1** The Contractor shall be responsible for the safety of all activities on the Site as per the prevailing standards and norms.

20. Discoveries

- 20.1** Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Engineer of such discoveries and carry out the Engineer's instructions for dealing with them.

21. Possession of the Site

- 21.1** The Employer shall give complete possession of the Site to the Contractor on the date of signing of the agreement.

22. Access to the Site

22.1 The Contractor shall allow access to the Site and to any place where work in connection with the Contract is being carried out, or is intended to be carried out to the engineer and any person/persons/agency authorized by:

- a. The Engineer
- b. The Employer

23. Instructions

23.1 The Contractor shall carry out all instructions of the Engineer, which comply with the applicable laws where the Site is located.

23.2 The Contractor shall permit the Employer to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by Auditors appointed by the Employer if so required by the Employer.

24. Deleted

25. ARBITRATION

The procedure for arbitration will be as follows:

- (a) In case of Dispute or difference arising between the Employer and a domestic contractor relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Arbitration and Conciliation Act, 1996. The arbitral tribunal shall consist of 3 arbitrators one each to be appointed by the Employer and the Contractor. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties and shall act as presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the Secretary General of Indian Road Congress.
- (b) If one of the parties fails to appoint its arbitrator in pursuance of sub-clause (a) and (b) above within 30 days after receipt of the notice of the appointment of its arbitrator by the other party, then the Secretary General of Indian Road Congress shall appoint the arbitrator. A certified copy of the order of the Secretary General of Indian Road Congress making such an appointment shall be furnished to each of the parties.
- (c) Arbitration proceedings shall be held at New Delhi, India, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English.
- (d) The decision of the majority of arbitrators shall be final and binding upon both parties.

- (e) The cost and expenses of Arbitration proceedings will be borne equally by both parties in accordance with the following fee structure (the signing of the contract shall be the acceptance of the fee structure given below by both the parties):

Sl. No.	Particulars of fee and other charges	Schedule Amount payable per Arbitrator/ per case
1.	Arbitrator fee	Rs.15,000/- per day subject to a publishing the Award within 12 months. 12 months will be reckoned from the date of first meeting.
2.	Reading Charges	Rs.15,000/-
3.	Secretarial Assistance and Incidental Charges (telephone, fax, postage etc.)	Rs.20,000/-
4.	Charges for Publishing/ declaration of the Award	Maximum of Rs.20,000/-
5.	Other expenses (As per actual Against bills subject to maximum of the prescribed ceiling given below) Traveling Expenses, Lodging and Boarding	Economy class by air, first class AC by train, AC car by road. (i) Up to Rs.15,000/- per day (metro cities) (ii) Up to Rs.7,000/- per day (other cities) (iii) Rs.3,000/- per day own arrangement)
6.	Local Travel	Rs.1,500/- per day
7.	Extra charges for days other than hearing / meeting days (maximum for 2 days	Rs.3,500/- per day
Note :	Lodging, boarding and traveling expenses shall be allowed only for those members who are residing 100kms. Away from place of meeting. Delhi, Mumbai, Chennai, Kolkata, Bangalore and Hyderabad shall be considered as Metro Cities.	

However, the expenses incurred by each party in connection with the preparation, presentation, etc. of its proceedings shall be borne by each party itself.

- (f) Performance under the contract shall continue during the arbitration proceedings and payments due to the contractor by the employer shall not be withheld, unless they are the subject matter of the arbitration proceedings.

26 Deleted

B. Time Control

27. Programme

- 27.1** The Engineer shall issue the indent of work “Work Order”, in stages specifying the time limit for the same as and when required. The Contractor shall submit to the Engineer for approval a programme within the time stipulated in the Contract Data showing the general methods, arrangements, order, and timing for all the activities in the Works, along with monthly cash flow forecasts.
- 27.2** An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining Works, including any changes to the sequence of the activities.
- 27.3** The Contractor shall submit to the Engineer for approval an updated Programme at intervals. If the Contractor does not submit an updated Programme within this period, the Engineer may withhold the amount stated in the Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Programme has been submitted.
- 27.4** The Engineer's approval of the Programme shall not alter the Contractor's obligations. The Contractor may revise the Programme and submit it to the Engineer again at any time. A revised Programme shall show the effect of Variations and Compensation Events.

28. Extension of the Intended Completion Date

- 28.1** The Engineer shall extend the Intended Completion Date only after the approval of NHIDCL if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining Works, which would cause the Contractor to incur additional cost.
- 28.2** The Engineer shall decide whether and by how much time to extend the Intended Completion Date within 21 days of the Contractor asking the Engineer for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Indented Completion Date.

29. Delays Ordered by the Engineer

- 29.1** The Engineer may instruct the Contractor to delay the start or progress of any activity within the Works. Delay/delays totalling more than 30 days will require prior written approval of the Employer.

30. Management Meetings

- 30.1** The Engineer may require the Contractor to attend a management meeting. The business of a management meeting shall be to review the plans for the Works.
- 30.2** The Engineer shall record the business of management meetings and provide copies of the record to those attending the meeting. The responsibility of the parties for actions to be taken shall be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all those who attended the meeting.

C. Quality Control

31. Identifying Defects

- 31.1** The Engineer shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Engineer may instruct the Contractor to search for a Defect and to uncover and test any work that the Engineer considers may have a Defect.

32. Tests

- 32.1** The contractor shall be solely responsible for:
- a. Carrying out the mandatory tests prescribed in the documents forming part of contract.
 - b. For the correctness of the test results, whether preformed in his laboratory or elsewhere.
- 32.2** If the Engineer instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples.

33. Correction of Defects noticed during the Defect Liability Period.

- 33.1** It is the terms of contract that Short Term Improvement and Maintenance of road shall be of very high standard, requiring no major repairs for at least, during the defect liability period (specified in Appendix-A), after the date of completion of works.
- 33.2** If any defects including shrinkage, cracks, other faults appear in the work within defect liability period of works of respective sections after issue of Completion certificate, the Engineer shall give notice to the Contractor of any defects before the end of the Defects Liability Period. The Defects Liability shall be extended for as long as defects remain to be corrected.
- 33.3** Every time notice of a defect is given, the Contractor shall correct the notified defect at his own cost within the length of time specified by the Engineer's notice. If the contractor is in default the Engineer shall cause the same to be made good by other workmen and deduct the expenses from any sums that may be due to the contractor.
- 33.4** The Defects Liability Period shall be as given in the Contract Data, counted from the Date of Completion stated in the Certificate of Completion issued in pursuance of Clause 49.

34. Uncorrected Defects

- 34.1** If the Contractor has not corrected a Defect/completed the work, to the satisfaction of the Engineer, within the time specified in the Engineer's notice, the Engineer will assess the cost of having the Defect corrected/completed, and the Contractor will pay this amount.

34.2 If the Contractor has not completed the work to the satisfaction of the engineer, within the time specified in the Engineer's notice/indent, in no case exceeding one month, the engineer will assess the cost of having the work completed through some agency and the contractor will pay this amount in addition to the damages specified as per clause 45.

D Cost Control

35. Bill of Quantities

35.1 The Bill of Quantities shall contain items for the construction, installation, testing, and commissioning and maintaining works to be done by the Contractor.

35.2 The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rates in the Bill of Quantities for each item for the work executed.

35.3 Change in Quantities

35.3.1 If the final quantity of the work-done differs from the quantity in the Bill of Quantities for the particular item, the Engineer shall adjust the quantity of other items as deems fit to allow for the change.

35.3.2 The Engineer shall only adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15 percent, restricted to maximum 20 percent, after taking Prior approval of the Employer. If requested by the Engineer, the Contractor shall provide the Engineer with a detailed cost breakdown of any rate in the Bill of Quantities.

35.4 Change of scope

~~Quantities submitted in the BOQ are tentative which may or may not be fully executed. Hence, on partial execution or non-execution of the quantities of BOQ, the contractor shall not claim anything from NHIDCL on account of earlier termination of the Contract i.e. before the expiration of the scheduled contract period.~~

~~Work order will be issued based on as and when required basis. The work may be required to be partially executed or may not be executed at all by NHIDCL. No claim whatsoever from any of the selected bidders on this account shall be entertained in this regard.~~

36. Variations

36.1 The Engineer may order Variations, with the prior approval of the Employer, he considers necessary or advisable during the progress of the Works. Such Variations shall form part of the Contract and the Contractor shall execute the varied works. Oral orders of the Engineer for Variations, unless followed by written confirmation, shall not be taken into account. All variations shall be included in the updated programme produced by the Contractor.

~~**36.2** The Engineer shall, having regard to the scope of the Works and the sanctioned estimated cost, if considers necessary or advisable during the progress of the work, have power to order maximum +/- 20% of original BOQ quantity of single BOQ item subject to maximum of +/- 5% of original Contract value that too only after approval from NHIDCL/as per NHIDCL guidelines, in writing.~~

37. Payments for Variations

- 37.1** If rates for Variation items are specified in the Bill of Quantities, the Contractor shall carry out such work at the same rate. This shall apply for Variations only up to the limit prescribed in the Clause 35. If the Variation exceeds this limit, the rate shall be derived under the provisions of clause 37.2 and 37.3 for quantities (higher) exceeding the deviation limit.
- 37.2** If the rates for Variation are not specified in the Bill of Quantities, the Engineer shall derive the rate from Schedule of Rates (SOR) of concerned circle of State Public Works Department as applicable for determination of cost. If the variations items are not specified in SOR, the Engineer shall derive the rate from similar items of the Bill of Quantities.
- 37.3** If the rate for Variation item cannot be determined in the manner specified in Clause 37.1 or 37.2, the Contractor shall, within 14 days of the issue of order of Variation work, inform the Engineer the rate which he proposes to claim, supported by analysis of the rates. The Engineer shall assess the quotation and determine the rate based on prevailing market rates within one month of the submission of the claim by the Contractor and approval from NHIDCL will be taken. As far as possible, the rate analysis shall be based on the standard data book and the current schedule of rates of the district public works division. The decision of the Employer on the rate so determined shall be final and binding on the Contractor.

38. Cash Flow Forecasts

- 38.1** When the Programme is updated, the Contractor shall provide the Engineer with an updated cash flow forecast.

39. Payment Certificates

- 39.1** The Contractor shall submit to the Engineer/Authority's Engineer/Nominated technical representative monthly statements of the value of the work executed less the cumulative amount certified previously supported with detailed measurement of the items of work executed.
- 39.2** The Engineer /Authority's Engineer/Nominated technical representative shall check the Contractor's monthly statement within 14 days and certify the amount to be paid to the Contractor after taking into account any credit or debit for the month in question.
- 39.3** The value of work executed shall be determined, based on measurements by the Engineer/Authority's Engineer/Nominated technical representative.
- 39.4** The value of work executed shall comprise the value of the quantities of the

items in the Bill of Quantities completed.

39.5 The value of work executed shall also include the valuation of Variations and Compensation Events.

39.6 The Engineer / Employer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

39.7 The final bill shall be submitted by the contractor within one month of the actual date of completion of the work; otherwise the Engineer's certificate of the measurement and of the total amount payable for work accordingly shall be final and payment made accordingly within a period of sixty days as far as possible.

40. Payments

40.1 Payments shall be adjusted for deductions for, security deposit, other recoveries in terms of the Contract and taxes at source, as applicable under the law. The Employer shall pay the Contractor the amounts the Engineer / Authority's Engineer / Nominated technical representative had certified within 28 days of the date of each certificate.

40.2 The Authorized Representative of the Employer shall make the payment certified by the Engineer / Authority's Engineer / Nominated technical representative.

40.3 Items of the Works for which no rate or price has been entered in the Bill of Quantities, will not be paid for by the Employer and shall be deemed to be covered by other rates and prices in the Contract.

41. Compensation Events

41.1 The following shall be Compensation Events unless they are caused by the Contractor:

- a) The Engineer orders a delay or delays exceeding a total of 30 days.
- b) The effects on the Contractor of any of the Employer's Risks.

41.2 If a Compensation Event would prevent the Works being completed before the Intended Completion Date, the Intended Completion Date shall be extended. The Engineer shall decide whether and by how much the Intended Completion Date shall be extended after the approval of the employer.

41.3 The contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor not having given

early warning or not having cooperated with the Engineer/Employer.

42. Taxes & Currencies for payments

42.1 The rates quoted by the Contractor shall be deemed to be inclusive of the sales and other levies, duties, royalties, cess, toll, taxes (Excluding Goods and Service Tax) of Central and State Governments, local bodies and authorities that the Contractor will have to pay for the performance of this Contract. The Employer will perform such duties in regard to the deduction of such taxes at source as per applicable law.

42.2 All payments will be made in Indian Rupees.

43. Price Adjustment- Deleted

44. Security Deposit / Retention Money

44.1 The Employer shall retain security deposit of 6% (six percent) of the amount from each payment due to the Contractor until Completion of the whole of the Works.

44.2 The security deposit/retention money deducted as per clause 44.1, will be released to the Contractor when the **Defect Liability period is over**, and the Engineer has certified that the Defects, if any, notified by the Engineer to the Contractor before the end of this period have been corrected.

44.3 If the contractor so desires then the Security Deposit/retention money can be released on submission of unconditional Bank Guarantee at the following two stages:-

- (a) At a point after the progress of work in financial term (gross value of work done) has reached 50% of the contract amount
- (b) After the retention money has been deducted to the full value (5% of the Contract Amount).

45. Liquidated Damages

45.1 The Contractor shall pay liquidated damages to the Employer at the rate or part thereof stated in the Contract Data for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the Contract Data. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's other liabilities.

Default of Contractor on account of mobilization of Equipment: A penalty of 0.05% of the contract price per day shall be levied on the Contractor if the Contractor fails to mobilize equipment and manpower as per Appendix to be ITB within 14 days of letter of commencement, or therefore from the date of issuance of letter by Engineer/Employer in this regards.

Both the parties expressly agree that the liquidated damages payable by the Contractor are mutually agreed genuine pre-estimated loss and without any proof of actual damages likely to be suffered and incurred by the Employer and the Employer is entitled to receive the same and are not by way of penalty.

- 45.2** If the Intended Completion Date is extended after liquidated damages have been paid, the Engineer shall correct any overpayment of liquidated damages by the Contractor by adjusting in the next payment certificate. The contractor shall not be paid interest on the over payment of liquidated damages.

46. Advance Payment: Deleted

47. Securities

- 47.1** Subject to further condition in contract data, the Performance Security equal to five percent of the contract price and additional security for unbalanced bids shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in the form given in the Contract Data and by a prescribed bank. The Performance Security shall be valid until a date 60 days after the expiry of Defect Liability Period and the additional performance security for unbalanced bids shall be valid until a date 60 days from the date of issue of the certificate of completion.

48. Cost of Repairs

- 48.1** Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Liability Period shall be remedied/ rectified by the Contractor at their cost if the loss or damage arises from the Contractor's acts or omissions.

E. Finishing the Contract

49. Completion

- 49.1** The Contractor shall request the Engineer to issue a certificate of Completion of the Works and the Engineer will do so upon deciding that the Works is completed.

50. Taking Over

- 50.1** The Employer shall take over the Site and the Works within seven days of the Engineer's issuing a certificate of Completion

51. Final Account

- 51.1** The Contractor shall supply to the Engineer with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Engineer shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Engineer shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Engineer shall decide on the amount payable to the Contractor and issue a payment certificate within 56 days of receiving the Contractor's revised account.

52. Operating and Maintenance Manual

- 52.1** If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them within 28 days from date of issue of certificate of completion.
- 52.2** If the Contractor does not supply the Drawings and/or manuals by the stipulated date or they do not receive the Engineer's approval, the Engineer shall withhold the amount equal to **Rs. 5 lakhs** from payments due to the Contractor.

53. Termination

- 53.1** The Employer may terminate the Contract if the Contractor causes a fundamental breach of the Contract.
- 53.2** Fundamental breaches of Contract include, but shall not be limited to, the following:
- a) the Contractor stops work for 28 days when no stoppage of work is shown on the current Programme and the stoppage has not been authorized by the Engineer;

- b) the Contractor is declared as bankrupt or goes into liquidation other than for approved reconstitution or amalgamation;
- c) the Engineer/Employer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer;
- d) the Contractor does not maintain a Security, which is required;
- e) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in clause 45;
- f) the Contractor fails to provide insurance cover as required under clause 13;
- g) if the Contractor, in the judgement of the Employer, has engaged in the corrupt or fraudulent practice in competing for or in executing the Contract. For the purpose of this clause, "corrupt practice" means offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in Contract execution. "Fraudulent Practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Employer and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid process at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.
- h) if the Contractor has not completed at least thirty percent of the value of Work required to be completed after half of the completion period has elapsed;
- i) if the Contractor fails to set up a field laboratory with the prescribed equipment, within the period specified if applicable; and
- j) if the Contractor does not deploy any of the personnel stated in Contract Data within 45 days of issue of notice to proceed;
- k) The Contractor violates the provisions of Child Labour (Prohibition & Regulation) Act, 1986;
- l) any other fundamental breach as specified in the Contract Data.

53.3 Without prejudice to any other right or remedies which the Employer may have under this contract upon occurrence of a Contractor's fundamental breach of contract, the Employer shall be entitled to terminate this contract by issuing a Termination Notice to the Contractor provided that before issuing the Termination Notice, the Employer shall by a Notice inform the Contractor of its intention to issue such Termination Notice and grant 15 days to the Contractor to make a representation and may after the expiry of such 15 days, whether or not it is in receipt of such representation issue the Termination Notice.

53.4 Notwithstanding the above, the Employer may terminate the Contract for convenience/ upgradation of NH.

53.5 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible but in no case later than 7 days.

54. Payment upon Termination

54.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for the value of the work done and less the percentage to apply to the value of the work not completed, as indicated in the Contract Data. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable to the Employer.

54.2 Save and except Cl. 35.4, if the Contract is terminated at the Employer's convenience, the Engineer shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments outstanding on the date of the certificate, less other recoveries due in terms of the Contract, and less taxes due to be deducted at source as per applicable law.

In case of foreclosure/termination of work as stated in Cl 35.4, the Engineer shall issue a certificate for the value of work done till termination, less advance payments outstanding, less other recoveries due in terms of contract and less taxes due to be deducted at source as per applicable law.

55. Property

55.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer for use for completing balance work if the Contract is terminated because of the Contractor's default.

56. Release from Performance

56.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of the Employer or the Contractor, the Engineer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.

F. Other Conditions of Contract

57. Labour

57.1 The Contractor shall, make arrangements of his own cost and expenses for the engagement of all staff and labour, local or others; for their payment, housing, feeding and transport; and for compliance with various labour laws/ regulations.

57.2 The Contractor shall, as asked by the Engineer, deliver to the Engineer a return in detail, in such form and at such intervals as the Engineer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Engineer may require.

58. COMPLIANCE WITH LABOUR REGULATIONS

58.1 During the currency of the Contract, the Contractor and his sub-Contractors shall abide at all times by all existing labour enactments and rules made thereunder, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be notified already or that may be notified under any labour law in future either by the State or the Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given below. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made thereunder, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications / bye laws / Acts / Rules / regulations including amendments, if any, on the part of the Contractor, the Engineer / Employer shall have the right to deduct any money due to the Contractor including, from his performance security / retention money. The Employer/Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer. The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.

58.2 SALIENT FEATURES OF SOME MAJOR LABOUR LAWS APPLICABLE TO ESTABLISHMENTS ENGAGED IN BUILDING AND OTHER CONSTRUCTION WORK.

- a) **Workmen Compensation Act 1923:-** The Act provides for compensation in case of injury by accident arising out of and during the course of employment.
- b) **Payment of Gratuity Act 1972:-** Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed the prescribed minimum years (say, five years) of service or more or

on death the rate of prescribed minimum days" (say, 15 days) wages for every completed year of service. The Act is applicable to all establishments employing the prescribed minimum number (say, 10) or more employees.

c) **Employees P.F. and Miscellaneous Provision Act 1952:** The Act Provides for monthly contributions by the Employer plus workers at the rate prescribed (say, 10% or 8.33%). The benefits payable under the Act are:

- i. Pension or family pension on retirement or death as the case may be.
- ii. Deposit linked insurance on the death in harness of the worker.
- iii. Payment of P.F. accumulation on retirement/death etc.

d) **Maternity Benefit Act 1951:** - The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.

e) **Contract Labour (Regulation & Abolition) Act 1970:-** The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by Law. The principal Employer is required to take Certificate of Registration and the Contractor is required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ prescribed minimum (say 20) or more contract labour.

f) **Minimum Wages Act 1948:** - The Employer is to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of buildings, roads, runways are scheduled employment.

g) **Payment of Wages Act 1936:** - It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.

h) **Equal Remuneration Act 1979:** - The Act provides for payment of equal wages for work of equal nature to male and female workers and for not making discrimination against female employees in the matters of transfers, training and promotions etc.

i) **Payment of Bonus Act 1965:** - The Act is applicable to all establishments employing prescribed minimum (say, 20) or more workmen. The Act provides for payments of annual bonus within the prescribed range of percentage of wages to employees drawing up to the prescribed amount of wages, calculated in the prescribed manner. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. States may have different number of employment size.

j) **Industrial Disputes Act 1947:** - The Act lays down the machinery and procedure for resolution of industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.

k) **Industrial Employment (Standing Orders) Act 1946:** - It is applicable to all establishments employing prescribed minimum (say, 100, or 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get these certified by the designated Authority.

l) **Trade Unions Act 1926:** - The Act lays down the procedure for registration of trade unions of workmen and Employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.

m) **Child Labour (Prohibition & Regulation) Act 1986:** - The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulations of employment of children in all other occupations and processes. Employment of child labour is prohibited in building and construction industry.

n) **Inter-State Migrant Workmen's (Regulation of Employment & Conditions of Service) Act 1979:-** The Act is applicable to an establishment which employs prescribed minimum (say, five) or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as Housing, Medical-Aid, Travelling expenses from home up to the establishment and back etc.

o) **The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996:-** All the establishments who carry on any building or other construction work and employs the prescribed minimum (say, 10) or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the building or construction work and other welfare measures, such as canteens, first- aid facilities, ambulance, housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.

p) **Factories Act 1948:-** The Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing the prescribed minimum (say, 10) persons or more without the aid of power or another prescribed minimum (say, 20) or more persons without the aid of power engaged in manufacturing process.

59. Drawings and Photographs of the Works

59.1 The contractor shall do photography/videography of the site firstly before the start of the work, secondly mid-way in the execution of different stages of work and lastly after the completion of the work. No separate payment will be made to the contractor for this.

59.2 The Contractor shall not disclose details of Drawings furnished to him and works on which he is engaged without the prior approval of the Engineer in writing. No photograph of the works or any part thereof or plant employed thereon, except those permitted under clause 59.1, shall be taken or permitted to be taken by the Contractor or by any of his employees or any employees of his sub-Contractors without the prior approval of the Engineer in writing. No photographs/ Videography shall be published or otherwise circulated without the approval of the Engineer in writing.

60. The Apprenticeship Act 1961

60.1 The Contractor shall duly comply with the provisions of the Apprenticeship Act 1961 (III of 1961), the rules made thereunder and the orders that may be issued from time to time under the said Act and the said Rules and on his failure or neglect to do so he shall be subject to all liabilities and penalties provided by the said Act and said Rules.

Contract Data

Items marked “N/A” do not apply in this Contract.

S. No.	Description	Clause Reference
1.	<p>The Employer is</p> <p>Managing Director, NHIDCL Address: 3rd Floor, PTI Building, 4-Parliament Street, New Delhi-110001</p> <p>Name of authorized Representative of Employer: Executive Director (P), R.O. Gangtok (Sikkim), National Highway & Infrastructure Development Corporation Ltd., Amdo Golai, Opp. State Veterinary Clinic, Gangtok, Sikkim-737102</p>	[Cl.1.1]
2.	<p>The Engineer is</p> <p>General Manager (Projects) Project Monitoring Unit-Kalimpong, West Bengal</p>	[Cl.1.1]
3.	The Intended Completion Date for whole of the work in: 03 months from start date	[Cl.1.1, 17 & 28]
4.	The Site is located at NH-717A (given in bid notice (SECTION-I))	[Cl.1.1]
5.	The Start Date shall be within 15 days after the date of issue of the Notice to proceed	[Cl.1.1]
6.	(a) The name and identification number of the Contract is given in the table of bid notice (SECTION-I)	[Cl.1.1]
7.	<p>(a) The law which applies to the Contract is the law of Union of India.</p> <p>(b) The language of the Contract documents is English</p>	[Cl.3.1]
8.	The limit of subcontracting is Nil of initial contract price. Subcontracting not allowed.	[Cl.7.1]
9.	Schedule of Other Contractor - NIL	[Cl.8.1]

10.	Technical personnel are as						[CI 9.1]
	4.4 B (b)(ii)	Personnel	Minimum Qualification & Experience	Particular Experience (minimum requirement)	No. of Persons		
	1	Project Manager	B.E. Civil + 5 Years Exp.	5 years on slope protection works and structure work.	1		
	2	Site Engineer Cum Survey Engineer cum Material Engineer	B.E. Civil + 3 Years Exp.	2 years on slope protection works or structure work.	1		
11.	Amount for insurance are: a) Rupees equivalent to Contract Price. b) Rupees equivalent to 5% of Contract price. c) Rupees 20 lakhs for multiple incidents and deductible as per premium rate						[CI.13.1]
12.	Site Investigation Report - NIL						[CI 14.1]
13.	(A) The period for submission of the programme for approval of Engineer shall be 7 days from the issue of Letter of Commencement/Notice to start the work. (B) (a) Identified indented work - Weekly Indent, Monthly Indent, Quarterly Indent and Bi-annual/annual Indent – 3 days before start of week; 7 days before start of month; 15 days before start of quarter and 28 days before bi-annual /annual period concerned (2) Emergent Indent - Within 24 hours.						[CI.27.1]
14.	Amount to be withheld for delays in submission of updated programme: 1% of value of work corresponding to the updated programme						[CI.27.3]
15.	The period for setting up a field laboratory with the prescribed equipment relevant to items of work in BOQ is 30 days from the days from the date of notice to start work.						[CI.32]
16.	(a) Amount of liquidated damages for delay in completion of works- For whole of work (1/2000) th of the Initial Contract Price, rounded off to the nearest Thousand, per day. (b) Maximum limit of liquidated damages for delay in completion of work @10% (Ten per cent) of the Initial Contract Price rounded off to the nearest thousand.						[CI.45.1]
17.	The standard form of Performance Security acceptable to the Employer Shall be an unconditional E-Bank Guarantee of the type as presented in the Bidding Documents						[CI. 47.1]
18.	Other fundamental breach is that the contractor has failed to complete 75% of value of indented work in any 3 indents issued by the Engineer.						[CI. 53.2 (j)]
19.	The percentage to apply to the value of work not completed representing the Employer's additional cost for completing the work shall be 20%.						[CI. 54.1]

(SECTION-VI)
TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

7.1 PREAMBLE:

The Technical Specifications contained herein shall be read in conjunction with the other Bidding Documents as specified.

7.2 GENERAL REQUIREMENTS

The Technical Specifications in accordance with which the entire work described hereinafter shall be executed and completed by the Contractor shall comprise of the following: British, Indian & other relevant standards and specifications for the subject works.

~~7.2.1 PART – I – GENERAL TECHNICAL SPECIFICATIONS~~

~~The General Technical Specifications shall be the “SPECIFICATIONS FOR ROAD AND BRIDGE WORKS” (FIFTH REVISION 2013) issued by the Ministry of Road Transport & Highways, Government of India and latest codes published by the Indian Roads Congress, hereinafter referred to as MORT&H Specifications.~~

~~PART – II – SUPPLEMENTARY TECHNICAL SPECIFICATIONS~~

~~The Supplementary Technical Specifications shall comprise of various Amendments/Modifications/Additions to the „SPECIFICATIONS FOR ROAD AND BRIDGE WORKS” referred to in PART I above and Additional Specifications for particular item of works not already covered in Part – I.~~

~~A particular clause or a part thereof in “SPECIFICATIONS FOR ROAD AND BRIDGE WORKS” (FIFTH REVISION), referred in Part I above, where Amended/Modified/Added upon and incorporated in Part II, referred to above, the Amendment/ Modification/ Addition supersedes the relevant clause or part of the clause.~~

~~When an Amended/Modified/Added Clause supersedes a Clause or part thereof in the said Specifications, then any reference to the superseded clause shall be deemed to refer to the Amended/Modified/Added Clause or part thereof.~~

~~In so far Amended/Modified/Added Clause may come in conflict or be inconsistent with any of the provisions of the MOST Specifications under reference, the Amended/Modified/Added clause and the additional specifications shall always prevail.~~

~~In the absence of any definite provisions on any particular issue in the aforesaid Specifications, reference may be made to the latest codes and specifications of IRC and BIS in that order, Where even these are silent, the construction and completion of the works shall conform to sound engineering practice as approved by the Engineer and, in case of any dispute arising out of the interpretation of the above, the decision of the Engineer shall be final and binding on the Contractor.~~

PART-II

7.3 ~~AMENDMENTS/MODIFICATIONS/ADDITIONS TO EXISTING CLAUSES OF GENERAL TECHNICAL SPECIFICATIONS (PART-I).~~

SECTION 100 – GENERAL

~~Clause 102~~ ——— Definitions:

~~The following abbreviation shall be added in this Clause:
“MOST” — Ministry of Surface Transport, Govt. of India
(Now “MoRT&H” — Ministry of Road Transport and Highways)~~

~~Clause 106~~ ——— Construction Equipment:

~~Clause 106 (a)~~ ——— Add the following sentence. “The trial run is to be carried out laying the relevant pavement material and it is not to be part of the permanent works. The trial is to be carried out on prior approval of equipment by Engineer-in-Charge.”

~~Add Sr. No. (g)~~

~~“The Contractor shall furnish to the engineer the detailed technical literature and other relevant documents regarding the performance of plant/equipment for approval prior to its purchase or mobilization on site.”~~

~~Clause 107~~ ——— Contract Drawings:

~~Clause 107.3~~ ——— Deleted this Sub-Clause entirely.

~~Clause 108.4~~ ——— Add New Sub-Clause:

~~“Identification of quarry sites and borrow areas shall be the responsibility of the Contractor. Materials procured from quarry sites and borrow areas identified by the Contractor and to be used in Works must comply with the requirements of quality as stipulated in the Technical Specifications for particular item of work”.~~

~~Clause 109~~ ——— Setting Out:

~~Clause 109.10~~ ——— Add new sub-clause

~~“Before carrying out any survey work the Contractor shall submit to the Engineer for the approval a programme and methodology for the calibration of all optical and electronic survey equipment to be used on site during construction of the works. The Contractor will maintain calibration records for all such equipment in his site office, available at all times for inspection by the Engineer.~~

~~Clause 110 — Public Utilities:~~

~~Clause 110.1 — Revise the clause as under:~~

~~Existing services like water pipes, sewers, oil pipelines, cables, gas ducts etc. owned by various authorities including Public Undertaking and Local Authorities shall be checked and located by the Contractor prior to commencement of work.~~

~~Clause 110.2 — Revise the clause as under:~~

~~The Contractor's programme must take into account the period of notice and duration of diversionary works of each body as existing at site. The Contractor must also allow for any effect of these services and alterations upon the Works and for arranging regular meetings with the various bodies at the commencement of the Contract and throughout the period of the Works in order to maintain the required co-ordination. During the period of the Works, the contractor shall have no objection if the public utility bodies and their decisions in the execution of their proposal in terms of programme and construction. Provided that, in the opinion of the Engineer, the Contractor has received reasonable notice thereof before the relevant alterations are put in hand.~~

~~Clause 111 — Precautions for Safeguarding the Environment:~~

~~Clause 111.1 — General~~

~~Add the following after the first paragraph:~~

~~The Contractor shall preserve existing trees, plants and other vegetation that are to remain within or adjacent to the works and shall use every precaution necessary to prevent damage or injury thereto.~~

~~On completion of the Works, all areas disturbed by the Contractor's construction activities shall be restored in their original condition, or as may be acceptable to the Engineer. The cost of this work shall be deemed to be included in the rates generally.~~

~~Clause 111.4 — Add the following sentence:~~

~~"The Contractor is to ensure that there is good drainage at all construction areas, to avoid creation of stagnant water bodies especially in urban/industrial areas, including water in old water bodies."~~

~~Clause 111.5 — Pollution from Hot Mix Plants and Batching Plants~~

~~Add the following paragraph at the end of this Sub-clause.~~

~~The H.M.P. should be sited at least 500m away from the nearest habitation. The H.M.P. shall be fitted with a dust extraction unit in order that the exhaust gases comply with the requirements of the relevant current emission control legislation. "All operations at plants shall be undertaken in accordance with all current rules and regulations protecting the environment."~~

~~Clause 111.6 — Substances Hazardous to Health~~

~~Add the following after the first paragraph as follows:~~

~~"The use of any herbicide or other toxic chemical shall be strictly in accordance with the manufacturer's instructions. The Engineer shall be given at least 6 working days' notice of the proposed use of any herbicide or toxic chemical."~~

~~A register of all herbicides and other toxic chemicals delivered to the site, shall be kept and maintained up to date by the contractor. The register shall include a name physical properties and characteristics, chemical ingredients, health and safety hazard information, safe handling and storage procedures, and emergency and first aid procedures for the product."~~

~~Clause 111.9 — Add the following sentence at the end of the para.~~

~~Vehicles delivering materials to the site shall be covered to avoid spillage of materials on public roads.~~

~~Clause 111.12 — After the last sentence adds the following:~~

~~"The costs of compliance with Clause 111 shall be deemed to be included in the rates for items included in the Bill of Quantities." Refer to Clause 114.2 (xv) of MOST Specification.~~

~~Clause 111.14 — Add new Sub-Clause:~~

~~"The Discharge Standards promulgated under the Environment Protection Act, 1986 shall be adhered to strictly. All waste arising from the project is to be disposed of in a manner which is acceptable to the State Pollution Control Board and the Engineer."~~

~~All vehicles and machinery employed in the execution of the works shall be regularly maintained to ensure that pollutant emission levels comply with the relevant requirements of current pollution control legislation. During routine servicing operations, the effectiveness of exhaust silencers must be checked and if found to be defective must be replaced. Notwithstanding this requirement, noise levels from any item of plant must comply with the relevant legislation for levels of sound emission. Non-compliant plant is to be removed from site.~~

~~Vehicle maintenance and refueling shall be carried out in such a fashion that spillage of fuels and lubricants do not contaminate the ground or nearby watercourse. An "oil interceptor" shall be provided for wash down and refueling areas. Fuel storage shall in proper bounded areas. All spilt and collected petroleum products shall be disposed of in accordance with the relevant legislation.~~

~~Clause 111.15~~ — ~~Add the following New Sub-Clause:~~

~~All temporary accommodation must be constructed and maintained in such a fashion that uncontaminated water is available for drinking, cooking and washing. The sewage system for the camp must be properly designed, built and operated so that no health hazard occurs and no pollution to the air, ground or adjacent watercourses take place compliance with relevant legislation must be strictly adhered to Garbage bins must be provided in the camp and regularly emptied and the garbage disposed of in a hygienic manner.~~

~~Construction camps are to be sited away from vulnerable people and adequate health care is to be provided for the work force.~~

~~Clause 111.16~~ — ~~Add the following New Sub-Clause:~~

~~All works are to be carried out in such a fashion that the damage or disruption to the flora and fauna is reduced to a minimum wherever possible. Trees or shrubs will only be felled or removed that impinge directly on the permanent works or necessary temporary works, after seeking approval of the Engineer.~~

~~Clause 112~~ — ~~Arrangement for Traffic during Construction:~~

~~Clause 112.1~~ — ~~General~~

~~Delete the last sentence and add the following:~~

~~“The Contractor shall submit, for the Engineer's approval, a Traffic Control Plan 5 days prior to commencement of the temporary / permanent works.”~~

~~The plan shall include:~~

- ~~i. Typical drawings for temporary diversions in accordance with Clause 112.3~~
- ~~ii. Typical details of arrangements for construction under traffic including details of traffic arrangement after the cessation of work each day.~~

~~Special consideration shall be given in the preparation of the Traffic Control Plan to the safety of pedestrians and workers at night.~~

~~Temporary diversions will be constructed only with the approval of the Engineer.~~

Clause 112.2

~~Passage of Traffic along a part of the Existing Carriage way under improvement:~~

~~Delete this clause replace as follows:~~

~~“For strengthening of existing carriage way, where part of the existing carriage way is proposed to be used for passage of traffic & hard shoulder are not available then, treated shoulders shall be provided on the side on which work is not in progress. If the existing shoulder width less than 1.5m the same shall be extended up to 1.5m for earth work duly compacted. The top 15.0cm or as directed by the engineer including extended shoulder of 1.5m width shall be filled up by granular sub base material duly bounded with binding material and compacted. The sub base material shall conform to MOST specification Clause 401, the work of excavation and filling of granular sub base material so carried out shall be paid under relevant items of bill of quantities. The contractor shall maintain the bypass/diversion during the period of construction by way of watering, compacting, and making good loss of sub base material after filling up of the rutting/depression etc. by additional quantity of granular sub base material. The items operations like maintenance, making good the loss of material, watering, compacting, leveling and dressing along with additional quantity of sub base material shall be considered as incidental to the work and no extra payment will be made for these operations. The continuous length in which such works shall be carried out would be within a range of 200 to 500m at a place.~~

~~Clause 112.6 — Measurements for Payments and Rate~~

~~Add “and no extra payment will be made except the treatment of shoulders for earth work and granular sub-base as per Clause 112.2 above.” At the end of first paragraph.~~

~~Clause 112.7 — Side Roads and Property Accesses~~

~~Add new sub-Clause:~~

~~“At all times, the Contractor shall provide safe and convenient passage for vehicles pedestrians and livestock to and from side roads and property accesses connecting to the roadway. Work which affects the use of side roads and existing accesses shall not be undertaken without providing adequate prior provisions to the satisfaction of the Engineer.”~~

~~Clause 112.8 — Plant and Equipment~~

~~Add new sub-Clause:~~

~~“During the day, plant and equipment working in a position adjacent to traffic and having a projection beyond the normal width of the item, for example, a grader blade shall have a fluorescent red marker attached to the outer end of the projection. During poor light conditions an additional traffic controller with an illuminated red marker shall direct traffic around such plant and equipment.~~

~~At night, all plant items and similar obstructions shall be removed from the normal path of vehicles, to provide a lateral clearance of at least 6m where practicable, with a minimum clearance of 1.2m.~~

~~Plant and equipment, within 6m of the normal path of vehicles, shall be lit by not less than two yellow steady lamps suspended vertically from the point of the obstruction nearest to a traffic lane, and one yellow steady lamps at each end of the obstruction on the side farthest away from the traffic lane.”~~

~~Clause 113 — General Rules For the Measurement of Works for Payment:~~

~~Clause 113.2 — Measurements for Lead of Materials~~

~~Delete this Clause and replace with:~~

~~“The rates in the Bill of Quantities are deemed to include the costs of haulage from source of supply to the site for all materials required for the Works.”~~

Clause 114 — Scope of rates for different items of work:

~~Add to Clause 114.2 (xix). Cost of all provisions for executing the work safely including all protective clothing, barriers, earplugs etc.~~

Clause 115 — Methodology and Sequence of Work:

~~Substitute “28 days” for “30 days” in the 2nd line.~~

Clause 121 — Field Laboratory:

Clause 121.1 — Scope

~~Delete this Clause and replace with:~~

~~“The work under this Clause covers the provision and maintenance works for a fully equipped laboratory.” The equipment in the laboratory shall be as decided by Engineer, keeping in view of item of works prescribed in BOQ.~~

Clause 121.2 — Description

~~Delete this Clause and replace with:~~

~~“The Contractor shall construct a fully furnished and equipped field laboratory to the satisfaction of the Engineer. The laboratory will be located at a site approved by the Engineer and must be of adequate size to perform all the tests required under the contract including sufficient light, electric and water supply. The Contractor shall provide working drawings incorporating all the services based on the information given in the changes for the approval of the Engineer prior to commencement of construction. An office must be provided in the laboratory for the exclusive use of the Engineer's, Materials Engineer, adequate toilet and washing facilities must be provided.~~

~~The contractor shall provide the field laboratory within one month from the date of the commencement of the work. Prior to this, the contractor must make suitable alternative arrangements for the testing of materials, which are acceptable to the Engineer.~~

Clause 121.3 — Laboratory Equipment shall be provided as prescribed by the Engineer relevant to items of work in BOQ.

Clause 121.3.2 — for soils and aggregates

~~Delete item no. (xi) and (xii)~~

~~Clause 121.3.5~~ — ~~Add New Sub-Clause:~~

~~For Control of Profile and Surface~~

~~Evenness~~

- ~~i) Theodolite 2 sets~~
- ~~ii) Precision automatic level 2 sets~~
- ~~iii) Precision staff 4 sets~~
- ~~iv) Camber templates 2 lane~~
 - ~~a) Crown type cross section 4 sets~~
 - ~~b) Straight run cross section 4 sets~~

~~Steel Tape~~

- ~~a) 3 m long 4 sets~~
- ~~b) 5 m long 4 sets~~
- ~~c) 10 m long 4 sets~~
- ~~d) 20 m long 4 sets~~
- ~~e) 30 m long 4 sets~~

~~Clause 121.3.6~~ — ~~Add New Sub-Clause:~~

~~In addition clause 121.3 any equipment which is not mentioned in this clause but which is necessary for the work for complying with the provisions of the contract and Section 900 of MORTH specifications or as required by the engineer shall be provided by the contractor. No extra payment shall be made to the contractor and it will be considered as incidental to the work.~~

~~Clause 121.6~~ — ~~Delete this Sub-Clause.~~

~~Clause 121.7~~ — ~~Substitute this Sub-Clause by the following:~~

~~“There is no separate item in the Bill of Quantities for establishing and maintenance of the laboratory and supply, erection maintenance of equipment and also running cost of testing. The rates quoted by the Contractor shall be deemed to cover the cost of all these items.”~~

~~Clause 120.6: Supply of Video Cassettes~~

~~The work consists of taking video films of important activities of the work as directed by the Engineer during the currency of the project and editing them and converting them to a CD (master CD+ 4 copies) film of playing time not less than 60 minutes and up to 180 minutes as directed by the Engineer. It shall contain narration of the activities in English by competent narrator. The editing of the film and the script for narration shall be as approved by the Engineer. The CD shall be acceptable quality and the film shall be capable of producing colour pictures. No separate payment shall be made and the work shall be treated as incidental.~~

~~SECTION 300 – EARTHWORK EROSION CONTROL AND DRAINAGE~~

~~Clause 301 – Excavation for Roadway and Drains~~

~~Clause 301.3.3 – Excavation – General~~

~~Clause 301.3.12 – Back-filling~~

~~Clause 301.9 – Rates~~

~~Clause 301.9.2 – This Clause is replaced as follows:~~

~~“The contract unit rate for loosening and re-compacting at sub-grade level shall include full compensation for loosening to the specified depth, removing the loosened soil outside the roadway wherever considered necessary, rolling the surface below, breaking the clods, spreading the excavated soil layers, watering where necessary and compacting to the requirements.”~~

~~Clause 304 – Excavation for Structures:~~

~~Clause 304.3.7 – Back filling~~

~~Add second paragraph as under:~~

~~“The working space between the structure and the excavation shall be cleared out completely of all construction materials and loose earth that fallen into the excavation during construction. The excavation shall be pumped dry and all saturated and soft earth removed prior to being inspected by the Engineer who will give his permission for the placement of any fill material, provided the space has been properly prepared. Compaction will only be carried out with mechanical compactors of sufficient capacity to ensure correct compaction of the back fill material. The fill is to be brought up in layers not greater than 150 mm. Mass filling of structures with machines will not be permitted and contractors should make allowance in their rates for the methodology described above.”~~

~~Clause 305 – Embankment Construction:~~

~~Clause 305.2 – Material and General Requirements~~

~~Clause 305.2.1 – Physical Requirements~~

~~Clause 305.2.1.2 – Amend the first sentence of this Clause as under:~~

~~“Highly expansive soils such as Ch, MH or OH exhibiting marked~~

swell and shrinkage properties („free swelling index” exceeding 50 per cent when tested as per IS 2720 — Part 40) shall not be used in construction of sub-grade and embankment.”

~~Clause 305.2.1.4 Delete the second and third sentence of Clause 305.2.1.4, i.e., “However, the Engineer may.....Compacted layer thickness.”~~

~~Clause 305.2.2.2 — Borrow Materials~~

Paragraph 1 of this clause shall read as under:

~~“No borrow area shall be made available by the Employer for this work. The arrangement for the source of supply of the material for embankment and sub grade as well as compliance to the different environmental requirements in respect of excavation and borrow areas as stipulated, from time to time, by the Ministry of Environment and Forest, Government of India and the local bodies, as applicable shall be the sole responsibility of the Contractor.”~~

Paragraph 8 of this Clause given below Table 300-2 shall read as under:

~~“The contractor shall at least 7 working days before commencement of compaction submit the following to the Engineer for approval:~~

- ~~i) The Values of maximum dry density and optimum moisture content obtained in accordance with IS 2720 (Part 8) for each fill material he intends to use.~~
- ~~ii) The graphs showing values of density against moisture content from which each of the values in (i) above of the maximum dry density and optimum moisture content were determined.~~
- ~~iii) The dry density moisture content CBR relationship for each of the fill materials he intends to use in the sub-grade.”~~

~~Clause 305.3 — Construction Operations~~

~~Clause 305.3.4 — Compacting ground supporting embankment/sub grade~~

~~Delete “where necessary” in the first sentence of the first paragraph.~~

~~Clause 305.3.5.2 — In Paragraph 3, delete “IS: 2720 (Part 7) or “and “as the case may be”.~~

~~Clause 305.3.6 — Compaction~~

~~The second paragraph of this Clause shall read as under:~~

~~“Only vibratory rollers of not less than 8 — 10 ton static weight with plain or pad foot drum shall be used for compaction.”~~

~~Clause 305.4 — Construction of Embankment and sub-grade under special condition.~~

~~Clause 305.4.1 — Add new para after para 1 as under:
“The earthwork for widening the existing road embankment and shoulders shall be carried out in layers duly compacted. On completion of earth work to the required height the triangular portion on the sloping face of the layers shall be cut in such a manner that the specified slope is achieved. This operation is incidental to work and no extra payment shall be made for this.”~~

~~Clause 305.4.7 — Earthwork for high Embankment~~

~~Substitute the first paragraph of this clause as under:~~

~~“In the case of high embankments, the Contractor shall use the material from the approved borrow area.”~~

~~Soil Erosion and Sedimentation Control~~

~~Clause 306.4 — Measurement for Payment~~

~~Substitute the Clause 306.4 as follows:~~

~~“All temporary sedimentation and pollution control works shall be deemed as incidental to the earthwork and other items of work and as such no separate payment shall be made for the same.”~~

~~Clause 306.5 — Rate~~

~~This Clause is deleted.~~

~~Clause 307 — Turfing with sods.~~

~~Clause 307.5 — Add “(iii) application of top soil” after (ii). Delete “the contract unit rate for application of top soil shall be as per clause 301.9.5”.~~

~~Clause 309 — Surface/Sub-Surface Drains~~

~~Clause 309.2 — Surface Drains~~

~~Add at the end of third paragraph:~~

~~Metal grates for sumps on concrete lined surface drains shall be heavy duty (trafficable by commercial vehicle) proprietary products with gaps between bars no greater than 26mm. The Contractor shall submit proposals for grating to the Engineer for approval before commencing construction of the sumps.”~~

~~Clause 309.4 — Measurement for Payment~~

Delete the first sentence and replace with:

~~“Surface drains not lined shall be included in the items for excavation for the roadway in accordance with Clause 301.8.”~~

~~Clause 309.5~~ — ~~Rates~~

Add at the end of this clause as under:

~~“The rate for concrete lined drains shall include bedding concrete and jointing. The rate for lined surface drains shall include inlet sumps and metal grates where specified.”~~

Add Clause 314 as under:

~~Clause 314~~ — ~~Leveling and Dressing over area:~~

~~Clause 314.1~~ — ~~Scope~~

~~The work shall consist of excavation, removal, filling and satisfactory disposal of all materials necessary for the area to be leveled and dressed in line, grades as directed by the Engineer. It shall include cutting and filling the ground in all type of soil where variation of existing ground level is + 30 cm or less. It will also include the grubbing of the existing rank vegetation and clearance of undergrowth completely.~~

~~Clause 314.2~~ — ~~Construction Operation~~

~~The engineer shall identify the area where leveling and dressing is to be carried out. The clearing and grubbing of rank vegetation and undergrowth shall be carried out as per clause 201.1. If the stagnant water is existing on the side, the same shall be pumped / bailed out. The area shall be kept dry throughout the operation of leveling and dressing. The leveling and dressing shall be carried out by excavating the high area and filling the low area with the excavated material in proper slope. This operation will be carried out manually/mechanically as per site conditions.~~

~~Clause 314.3~~ — ~~Measurements~~

~~The measurement shall be made for the area to be leveled and dressed in Sq.m.~~

~~Clause 314.4~~ — ~~Rates~~

~~The contract unit rates for the items for leveling and dressing shall be payment in full for carrying out the required operations including full compensation for:~~

1. ~~Cost of all labour, materials, tool, equipment and incidentals to complete the work.~~
2. ~~Clearing and grubbing the rank vegetation and undergrowth and their disposal within 1000m.~~
3. ~~Pumping and bailing out of water and keeping the area dry during construction.~~
4. ~~In all type of soils and saturated earth.~~

~~SECTION 400 – SUB-BASES, BASES (NON-BITUMINOUS) AND SHOULDERS:~~

~~Clause 401.4.1 ——— Substitute “Smooth wheeled roller” by “Vibratory Roller” or as approved by Engineer In-charge.~~

~~Clause 401.4.2 ——— Spreading and Compacting~~

~~The following shall be added to Paragraph 1:~~

~~“The thickness of the loose layers shall be so regulated that the maximum thickness of the layer after compaction does not exceed 150 mm.”~~

~~The fifth paragraph of this Clause shall be as under:~~

~~“Immediately thereafter, rolling shall start with the help of a vibratory roller of minimum 80 to 100 KN static weight with plain drum or pad foot drum of heavy pneumatic tyre roller of minimum 200 to 300 KN weight having a minimum tyre pressure of 0.7 kN/m² or adequate capacity capable of achieving the required compaction. Rolling shall commence at the lower edge and proceed towards the upper edge longitudinally for portions having unidirectional cross fall and super elevation and shall commence at the edges and proceed towards the crown for portions having cross falls on both sides.”~~

~~Clause 401.7 ——— Measurement for payment:~~

~~Add paragraph 3 as under:~~

~~For carrying out full depth repair and/or reconstruction of road pavement, if the granular sub-base materials laid on the shoulders for diversion of traffic (as per clause 112) is required to be scarified/removed and re-laid after compensating the loss during handling and by movement of traffic on completion of Full depth repair/reconstruction of road pavement, this operation shall be considered incidental to the work of providing granular sub-base and no extra payment shall be made for the same.~~

~~Clause 404.2.1 ——— Coarse aggregate:~~

~~Amend this clause as under:~~

~~Coarse aggregate shall be either crushed or broken stone. The aggregates shall conform to the physical requirements set forth in Table 400-6. The type and size range of the aggregate shall be specified in the contract or shall be as specified by the Engineer. If the water absorption value of the coarse aggregates is greater than 2 percent, the soundness test shall be carried out on the material delivered to site as per IS: 2386 (part 5).~~

~~Clause 404.2.3 — Crushed Slag:~~

~~Delete this Clause~~

~~Clause 404.2.4 — Over burnt (Jhama) brick aggregates:~~

~~Delete this Clause.~~

~~Clause 404.3.4 — Rolling:~~

~~Delete in first para “three wheeled ————— rollers 80 to 100 kN capacity or tandem or”~~

~~SECTION 500 — BASE AND SURFACE COURSES (BITUMINOUS):~~

~~Clause 501.8.2.4 — Profile Corrective Course and its application:~~

~~Replace (iii) with~~

~~“The material for bituminous profile corrective course shall be laid independently of all other courses, adopting such construction procedures and using such equipment as may be appropriate to the specified type of material and thickness of the course manually/machine laid as approved by the engineer in charge. The method of providing profile corrective course shall be approved by the engineer in charge.~~

~~Clause 501.8.3.1 — Preparing Existing Granular Surface~~

~~Amend the Clause as under:~~

~~“The surface on which bituminous profile corrective course is to be laid shall be thoroughly swept clean of dust and any other extraneous material using mechanical broom and dust collected removed or blown off using compressed air except in places where mechanical means cannot reach. A prime coat conforming to Clause 502 shall be applied prior to laying profile corrective course.”~~

~~Clause 501.8.3.4 Laying the Profile Corrective Course.~~

~~Clause 501.8.3.4.1 This clause shall read as under:~~

~~“The surface on which profile corrective course is to be laid shall be thoroughly swept clean of dust and any other extraneous material using mechanical broom and dust collected removed or blown off using compressed air except in places where mechanical means cannot reach.”~~

~~“After preparing the granular surface as in Clauses 501.8.3.1 and 501.8.3.2, the profile corrective course with materials as per Clause 501.8.2.3/501.8.2.4 shall be laid and compacted to the requirement of particular Specification Clause.”~~

~~Clause 501.8.8.2(viii) The clause shall be replaced with “the rate shall include the provision of bitumen in the mix as per job mix formula approved by Engineer. No variation in the rate for this item will be admissible on account of quantity of bitumen used.~~

~~Clause 502 Prime Coat Over Granular Base:~~

~~Clause 502.2.3 The type of bitumen emulsion shall be CSS 1 confirming to IS 8887.~~

~~Clause 503 Tack Coat~~

~~Clause 503.2.1 The type of bitumen emulsion shall be RSS 1 confirming to IS 8887.~~

~~Clause 504 Bituminous Macadam:~~

~~Clause 504.2 Materials~~

~~Clause 504.2.1 Bitumen:~~

~~The penetration grade of bitumen shall be 60/70 or the bitumen shall be of Viscosity Grade VG 30~~

~~Clause 507 & 509 Bitumen~~

~~The penetration grade of bitumen shall be 60/70 or the bitumen shall be of Viscosity Grade VG 30~~

~~Clause 507.9 For DBM~~

~~The last sentence of first para and the second para stands deleted.~~

~~Clause 508.9 For SDBC~~

~~The para is replaced with “The contract unit rate shall be all as specified in clause 507.9.~~

~~Clause 509.9 For BG~~

~~The para is replaced with “The contract unit rate shall be all as specified in clause 507.9.~~

~~Clause 801.5 Amend the clause as under: The measurement of all types of sign boards shall be measured in sq. m.~~

SECTION 900—QUALITY CONTROL FOR ROAD WORKS

Clause 901—General

Amend the clause 901.10 as under:

~~Clause 901.10—For bitumen, cutback, emulsion, mild steel, cement and other similar material where essential tests are to be carried out at the manufacture's plant or at laboratories other than the site laboratory, the cost of samples, sampling, testing, and furnishing of the test certificates shall be borne by the Contractor. The frequency of tests regarding bitumen, cutback and emulsion in respect of its quality shall be as per the Table 900.4 of MOST Specification.~~

SECTION 1000—MATERIALS FOR STRUCTURES:

Clause 1014—Storage of Materials:

Clause 1014.3—Aggregates

~~The following shall be added at the end of the Clause:-
“Aggregates shall be stockpiled in a manner that will avoid segregation, contamination by foreign materials and intermixing of various sizes of aggregates.”~~

SECTION 3002- RESTORATION OF RAIN CUTS:

~~Clause 3002.4—Amend this as under:~~

~~“The earth works for restoration of rain cuts shall be measured incum.”~~

Traffic Signs having Retro-Reflective Sheeting

General requirements: ~~The retro-reflective sheeting used on the sign shall consist of the white or coloured sheeting having a smooth outer surface which has the property of retro-reflection over its entire surface. It shall be weather-resistant and show colour fastness. It shall be new and unused and shall show no evidence of cracking, scaling, pitting, blistering, edge lifting or curling and shall have negligible shrinkage or expansion. A certificate of having tested the sheeting for co-efficient of retro-reflection, day/night time colour luminous, shrinkage, flexibility, linear removal, adhesion, impact resistance, specular gloss and fungus resistance 3 years outdoor weathering and its having passed these tests shall be obtained from a Government Laboratory, by the manufacturer of the sheeting. The retro-reflective sheeting shall be either of Engineering Grade material with enclosed lens, High Intensity Grade with encapsulated lens or Micro-prismatic Grade retro-reflective element material as given in Clause below~~

Micro Prismatic Grade Sheeting (Type XI): ~~Retro-reflective sheeting typically manufactured as a cube corner. The reflective sheeting shall be retro-reflective sheeting made of micro-prismatic retro-reflective material. The retro-reflective surface, after cleaning with soap and water and in dry condition shall have the minimum co-efficient of retro-reflection (determined in accordance with ASTM D 4956-09) as indicated in Table 800~~

Table 800 Acceptable Minimum Coefficient of Retro-reflection for Type XI Prismatic Grade Sheeting^A (Candelas per Lux per Square Metre)

Observation Angle	Entrance Angle	white	Yellow	Orange	Green	Red	Blue	Brown	Florescent yellow	Green	Florescent yellow	Florescent Orange
0.1° ^B	-4°	830	620	290	83	125	37	25	660	500	250	
0.1° ^B	+30°	325	245	115	33	50	15	10	260	200	100	
0.2°	-4°	580	435	200	58	87	26	17	460	350	175	
0.2°	+30°	220	165	77	22	33	10	7	180	130	66	
0.5°	-4°	420	315	150	42	63	19	13	340	250	125	
0.5°	+30°	150	110	53	15	23	7	5	120	90	45	
1.0°	-4°	120	90	42	12	18	5	4	96	72	36	
1.0°	+30°	45	34	16	5	7	2	1	36	27	14	

^A Minimum Coefficient of Retro reflection (R_A) ($\text{cd.lx}^{-1}.\text{m}^{-2}$).

^B Values for 0.1° observation angles are supplementary requirements that shall apply only when specified by the purchaser in the contract or order.

When totally wet, the sheeting shall show not less than 90 percent of the values, of retro-reflection indicated in above Table. At the end of 10 years, the sheeting shall retain at least 80 percent of its original retro-reflectance.

Messages/borders: The messages (legends, letters, numerals etc.) and borders shall either be screen-printed or of cut-outs from durable transparent overlay or cut-out from same type of reflective sheeting (excluding for black colour) for the cautionary/ mandatory signs. Screen-printing shall be processed and finished with materials and in a manner specified by the sheeting manufacturer. For the information and other signs, the messages (legends, letters, numerals etc.) and borders shall be cut-out from durable transparent overlay film or cut out from same reflective sheeting only. Cut-outs shall be bonded with the sheeting in the manner specified by the manufacturer. Both the screen-printed areas and cut-out messages sheetings and cut-out durable transparent overlay film shall be covered under the warranty period of the sheeting type, issued by the sheeting manufacturer.

For screen-printed transparent coloured areas on white sheeting, the co-efficient of retro-reflection shall not be less than 50 per cent of the values of corresponding colour in Tables 800 as applicable.

Cut-out messages and borders, wherever used, shall be made out of retro-reflective sheeting (as per Clauses 801.3.2 as applicable), except those in black which shall be of non-reflective sheeting.

Colour : Unless otherwise specified, the general colour scheme and properties shall be as stipulated in ASTM 4956-09. The colours shall be durable and uniform in acceptable hue when viewed in day light or under normal headlights at night and in inclement weather conditions.

Adhesives: The sheeting shall have either a pressure sensitive adhesive of the aggressive tack type requiring no heat, solvent or other preparation for adhesion to a smooth clean surface, or a tack free adhesive activated by heat, applied in a heat-vacuum applicator, in a manner recommended by the sheeting manufacturer. The adhesive shall be protected by an easily removable liner (removable by peeling without soaking in water or other solvent) and shall be suitable for the type of material of the base plate used for the sign. The adhesive shall form a durable bond to smooth, corrosion and weather resistant surface of the base plate such that it shall not be possible to remove the sheeting from the sign "base in one piece by use of sharp instrument. In case of pressure sensitive adhesive sheeting, the sheeting shall be applied in accordance with the manufacturer's Specifications. Sheetting with adhesives requiring use of solvents or other preparation for adhesive shall be applied strictly in accordance with the manufacturer's instructions.

Refurbishment: Where existing signs are specified for refurbishment, the sheeting shall have a semi-rigid aluminium backing or materials as per Clause 801.2.5, pre-coated with aggressive tack type pressure sensitive adhesive. The adhesive shall be suitable for the type of material used for the sign and should thoroughly bond with that material.

801. 3.8 — Fabrication

Surface to be reflectorised shall be effectively prepared to receive the retro-reflective sheeting. The sheeting of the material as per IRC:67:2010, shall be de-greased either by acid or hot alkaline etching and all scale/dust/ coating of any type removed/ scrubbed to obtain a smooth plain surface before the application of retro-reflective sheeting. If the surface is rough, approved surface primer may be used. After cleaning, metal shall not be handled, except by suitable device or clean canvas gloves, between all cleaning and preparation operation and application of reflective sheeting/primer. There shall be no opportunity for the substrate to come in contact with grease, oil or other contaminants prior to the application of retro-reflective sheeting.

Complete sheets of the material shall be used on the signs except where it is unavoidable; at splices, sheeting with pressure sensitive adhesives shall be overlapped not less than 5 mm. Where screen printing with transparent colours is proposed, only butt jointing shall be used. The material shall cover the sign surface evenly and shall be free from twists, cracks and folds. Cut-outs to produce legends and borders shall be bonded with the sheeting in the manner specified by the manufacturer.

801.3.9 Warranty and durability: The Contractor shall obtain from the manufacture a ten year warranty for satisfactory field performance including stipulated retro-reflectance of the retro-reflective sheeting of micro-prismatic sheeting, a seven-year warranty for high intensity grade and a five year warranty for the sheeting of engineering grade and submit the same to the Engineer. In addition, a ten year, seven year and a five year warranty for satisfactory In-field performance of the finished sign with retro-reflective sheeting of micro-prismatic, high intensity grade and engineering grade respectively, inclusive of the screen printed or cut out letters/legends and their bonding to the retro-reflective sheeting shall be obtained from the contractor/supplier and submitted to the Engineer. The Contractor/ supplier shall also furnish the LOT numbers and certification that the signs and materials supplied against the assigned work meets all the stipulated requirements and carry the

~~stipulated warranty and that the contractor/supplier is the authorized converter of the particular sheeting:~~

~~All signs shall be dated during fabrication with indelible markings to indicate the start of warranty. The warranty shall also cover the replacement obligation by the sheeting manufacturer as well as contractor for replacement/repair/restoration of the retro-reflective efficiency.~~

~~A certificate in original shall be given by the sheeting manufacturer that its offered retro-reflective sheeting has been tested for various parameters such as co-efficient of retro-reflection, day/night time colour and luminance, shrinkage, flexibility, linear removal, adhesion, impact resistance, specular gloss and fungus resistance and 3 year outdoor weathering; the tests shall be carried out by a Government Laboratory in accordance with various ASTM procedures and the results must show that the sheeting have passed the requirements for all the above mentioned parameters. A copy of the test reports shall be attached with the certificate.~~

Installation

~~The traffic signs shall be mounted on support posts, which may be of GI pipes conforming to IS: 1239, Rectangular Hollow Section conforming to IS :4923 or Square Hollow Section conforming to IS:3589. Sign posts, their foundations and sign mounting shall be so constructed as to hold these in a proper and permanent position against the normal storm wind loads or displacement by vandalism. Normally, signs with an area up to 0.9 sq.m shall be mounted on a single post, and for greater area two or more supports shall be provided. Post end(s) shall be firmly fixed to the ground by means of properly designed foundation. The work of foundation shall conform to relevant Specifications as specified.~~

~~All components of signs (including its back side) and supports, other than the reflective portion and G.I. posts shall be thoroughly de-scaled, cleaned, primed and painted with two coats of epoxy/ fibre glass/ powder coated paint, Any part of support post below ground shall be painted with protective paint.~~

~~The signs shall be fixed to the posts by welding in the case of steel posts and by bolts and washers of suitable size. After the nuts have been tightened, the tails of the bolts shall be furred over with a hammer to prevent removal.~~

Measurements for Payment

~~The measurement of standard cautionary, mandatory and information signs shall be in numbers of different types of signs supplied and fixed, while for direction and place-identification signs, these shall be measured by area in square, metres.~~

801.6. Rate

~~The Contract unit rate shall be payment in full for the cost of making the road sign, including all materials, installing it at the site furnishing of necessary test certificates, warranty and incidentals to complete the work in accordance with these Specifications.~~

Note: The warranty as specified in clause- 801.3.9 should be in the name of NHIDCL and it must be deposited to the GM.

802 OVERHEAD SIGNS

General

Overhead signs may be used in lieu of, or as an adjunct to, kerb mounted signs where the situation so warrants for proper information and guidance of the road users. The following conditions may be considered while deciding about the provision of overhead signs:

- ☐ Traffic volume at or near capacity
- ☐ Complex interchange design
- ☐ Three or more lanes in each direction
- ☐ Restricted sight distance
- ☐ Closely spaced interchanges
- ☐ Multi-lane exits
- ☐ Large percentage of commercial
- ☐ vehicles High speed traffic

804 Reflective Pavement Markers (Road Studs/Cat eyes)

General

The work cover the providing and mixing of reflective pavement marker (RPM) or road stud, a device which is bonded to or anchored within the road surface for lane marking and delineation for nighttime visibility. It reflects incident light in directions close to the direction from which it came.

Material

Plastic body of RPM/road stud shall be moulded from ASA (Acrylic Styrene Acrylonitrile) or HIPS (Hi-impact Polystyrene) or Acrylonitrile Butadiene Styrene (ABS) or any other suitable material approved by the Engineer. The markers shall support a load of 13635 kg tested in accordance with ASTM D 4280.

Reflective panels shall consist of number of lenses containing single or dual prismatic cubes capable of providing total internal reflection of the light entering the lens face. Lenses shall be molded of methyl methacrylate conforming to ASTM D 788 or equivalent.

Design

The slope or retro-reflecting surface shall preferably be 35+5 degree to base and the area of each retro-reflecting surface shall not be less than 13.0 sqcm.

Optical Performance 804.4.1 Unidirectional

and bi-directional studs

Each reflector or combination of reflectors on each face of the stud shall have a Coefficient of Luminous Intensity (C.I.L.) not less than that given in Table 800-12 or Table 800-13 as appropriate.

804.4.2 Omni-directional studs

Each Omni-directional stud shall have a minimum (C.I.L.) of not less than 2 mcd/lx

Table 800-12 Minimum C.I.L. Values for Category „A“ studs

Entrance angle	Observation angle	White	Amber	Red
0°U 5° L&R	0.3°	220	110	44
0°U 10° L&R	0.5°	120	60	24
Table 800-13 Minimum C.I.L. Values for Category „B“ studs				
Entrance angle	Observation angle	White	Amber	Red
0°U 6° L&R	0.3°	20	10	4
0°U 10° L&R	0.5°	15	7.5	3

Note: 1) The entrance angle or 0°U corresponds to the normal aspect of the reflectors when the reflecting road stud is installed in horizontal road surface.

2) A stud that incorporates one or more corner cube reflectors shall be considered to be included in category „A“. A stud that incorporates one or more bi-convex reflectors shall be considered to be included in category „B“.

— Tests

Coefficient of luminance intensity can be measured by procedure described in ASTM E 809 “Practice for Measuring Photometric Characteristics” or as recommended in BS: 873—Part 4:1973.

Under test conditions, a stud shall not be considered to fail the photometric requirements if the measured C.I.L. at any one position of measurement is less than the values specified in Table 800-12 or 800-13 provided that

- (i) the value is not less than 80% of the specified minimum, and
- (ii) the average of the left and right measurements for the specific angle is greater than the specified minimum.

— Solar Powered Road Markers (Solar Studs)

The solar studs shall be made of Aluminum alloy and poly carbonate material which shall be absolutely weather resistance and strong enough to support a load of 13635 kg tested in accordance with ASTM D4280. Its colour may be white, red, yellow, green or blue or combination as directed by the Engineer. Its water resistance shall meet the requirements of IP 65 in accordance with IS:12063:1987 Category 2 for protection against water ingress. The dimensions of solar studs shall not be less than 100 mm x 100 mm x 10 mm. It shall have super bright LEDs so as to provide long visibility from a distance of more than 800m. Its flashing rate shall not be less than 1 Hz. Its should be able to give the prescribed performance in the temperature range of -40°C to +55°C. Its life shall be not less than 3 years.

~~Fixing of Reflective Markers~~

~~Requirements~~

~~The enveloping profile of the head shall be smooth and the studs shall not present any sharp edges in traffic. The reflective portions of the studs shall be free from crevice or ledges where dirt might accumulate. All road studs shall be legibly marked with the name, trademark or other means of identification of the manufacturer. Marker height shall not exceed 20 mm. Marker width shall not exceed 130 mm. The base of the marker shall be flat within 1.3 mm. If the bottom of the marker is configured, the outermost faces of the configurations shall not deviate more than 1.3 mm from a flat surface. All road studs shall be legibly marked with the name, trade mark or other means of identification of the manufacturer.~~

~~Placement~~

~~The reflective marker shall be fixed to the road surface using the adhesives and the procedure recommended by the manufacturer. No nails shall be used to affix the marker, as nails are hazardous for the roads. Regardless of the type of adhesive used, the markers shall not be fixed if the pavement is not surface dry and on new asphalt concrete surfacing until the surfacing has been opened to traffic for a period of not less than 14 hours. The portions of the highway surface, to which the marker is to be bonded by the adhesive, shall be free of dirt, curing compound, grease, oil, moisture, loose or unsound layers, paint and any other material which would adversely affect the bond of the adhesive. The adhesive shall be placed uniformly on the cleaned pavement surface or on the bottom of the marker in a quantity sufficient to result in complete coverage of the area of contact of the marker with no voids present and with a slight excess after the marker has been lightly pressed in place. For epoxy installations, excess adhesive around the edge of the marker, excess adhesive on the pavement and adhesive on the exposed surfaces of the markers shall be immediately removed.~~

~~Warranty and durability~~

~~The contractor shall obtain from the manufacturer a two-year warranty for satisfactory field performance including stipulated retro-reflectance of the reflecting panel and submit the same to the Engineer. In addition, a two-year warranty for satisfactory infield performance of the finished road marker shall also be given by the contractor who carried out the work of fixing of reflective road markers. In case the markers are displaced, damages, get worn out or lose their reflectivity compared to stipulated standards, the contractor would be required to replace all such markers within 15 days of the intimation from the Engineer at his own cost.~~

~~Measurement for Payment~~

~~The measurement of reflective road markers shall be in numbers of different types of markers supplied and fixed.~~

~~Rate~~

~~The contract unit rate for reflective road markers shall be payment in full compensation for furnishing all labour, material, tools, equipment including incidental costs necessary for carrying out the work at site conforming to the specifications complete as per approved drawings or as directed by the Engineer.~~

Note : The warranty as specified in clause 804.7.3 should be in the name of NHIDCL and

~~it must be deposited to the BO.~~

~~SECTION 900 – QUALITY CONTROL FOR ROAD WORKS~~

~~Clause 901 – General~~

~~Amend the clause 901.10 as under:~~

~~Clause 901.10 – For bitumen, cutback, emulsion, mild steel, cement and other similar material where essential tests are to be carried out at the manufacture's plant or at laboratories other than the sitelaboratory, the cost of samples, sampling, testing, and furnishing of the test certificates shall be borne by the Contractor. The frequency of tests regarding bitumen, cutback and emulsion in respect of its quality shall be as per the Table 900-4 of MOST Specification.~~

~~SECTION 1000 – MATERIALS FOR STRUCTURES:~~

~~Clause 1014 – Storage of Materials:~~

~~Clause 1014.3 – Aggregates~~

~~The following shall be added at the end of the Clause: "Aggregates shall be stockpiled in a manner that will avoid segregation, contamination by foreign materials and intermixing of various sizes of aggregates."~~

~~SECTION 3002- RESTORATION OF RAIN CUTS:~~

~~Clause 3002.4 – Amend this as under:~~

~~"The earth works for restoration of rain cuts shall be measured in cum~~

APPENDIX-A

APPENDIX-A

DETAILS OF DEFECT LIABILITY PERIOD

Defect Liability period shall be 12 months from date of completion of Construction Work.