

MODEL CONTRACT FOR MAINTENANCE OF ROADS

(Based on Single Percentage Rate)



INDIAN ROADS CONGRESS
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MODEL CONTRACT FOR MAINTENANCE OF ROADS

(Based on Single Percentage Rate)

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**PERSONNEL OF THE HIGHWAYS SPECIFICATIONS
AND STANDARDS COMMITTEE
(As on 20.07.2019)**

1	Pandey, I.K. (Convenor)	Director General (Road Development) & Special Secretary to Govt. of India, Ministry of Road Transport and Highways, New Delhi
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3	Kumar, Sanjeev (Member Secretary)	Chief Engineer (R) S, R & T, Ministry of Road Transport and Highways, New Delhi

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2	Justo, Prof. (Dr.) C.E.G.	Professor (Retd.), Emeritus (<i>Expired in June, 2019</i>)
3	Veeraragavan, Prof. (Dr.) A.	Professor, Indian Institute of Technology, Madras

Ex-Officio Members

1	President, Indian Roads Congress	(Basar, Toli), Chief Engineer, PWD Arunachal Pradesh
2	Director General (Road Development) & Special Secretary to Govt. of India	(Pandey, I.K.), Ministry of Road Transport and Highways, New Delhi
3	Secretary General, Indian Roads Congress	Nirmal, Sanjay Kumar

MODEL CONTRACT FOR MAINTENANCE OF ROADS

(Based on Single Percentage Rate)

INTRODUCTION

The task of preparation of this draft on the subject was taken up by the H-6 Committee during the tenure 2012-14. Thereafter, the H-6 Committee was reconstituted for the tenure 2015- 17, however, not much progress could be achieved on the draft document. Then, the H-6 Committee was re-constituted for the tenure 2018-20 and a new subgroup was formed comprising Shri R.K. Pandey, Subgroup Convenor, Shri Nirmaljit Singh, Shri B.P. Kukreti, Shri Mahabir Singh and Shri M.N. Nagabhushana. The draft was deliberated in various meetings of H-6 Committee.

At last, the draft was finalized by the H-6 Committee in its meeting held on 08.06.2019 for placing in the HSS Committee. The HSS Committee in its meeting held on 20.07.2019 decided that Convenor, H-6 Committee will modify the document based on written comments and verbal comments offered during the meeting and submit final document to IRC for placing in the Mid-Term Council meeting. The Mid-Term Council in its meeting held on 9th and 10th August, 2019 at Goa approved the document for publishing.

The composition of H-6 Committee is given below:

Kumar, Dr. Mahesh	Convenor
Sitaramanjaneyulu, K.	Co-Convenor
Nagabhushana, M.N.	Member-Secretary

Members

Chadha, Neeraj	Sharma, S.C.
Gupta, D.P.	Singh, Mahabir
Kukrety, B.P.	Singh, Nirmaljit
Kumar, Atul	Swamy, Prof. (Dr.) A.K.
Kumar, Dr. Ashok	Vasava, Sandeep
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Pandey, R.K.	Rao, R.V.
Raju, D. Shiva	BRO (Sawhney, Col. J.S.)

Ransinchung R.N., Prof. (Dr.) G.D.	Director, HRS (Geetha, R.)
Rao, P.R.	Director (Tech.), NRIDA (Pradhan, B.C.)

Corresponding Members

Amarnath, Prof. (Dr.) M.S.	Singh, Prof. (Dr.) Dharamveer
Justo, Prof. (Dr.) C.E.G. (Expired in June, 2019)	Veeraragavan, Prof. (Dr.) A.
Pradhan, N.K.	

Ex-Officio Members

President, Indian Roads Congress	(Basar, Toli), Chief Engineer, PWD Arunachal Pradesh
Director General (Road Development) & Special Secretary to Govt. of India	(Pandey, I.K.), Ministry of Road Transport and Highways, New Delhi
Secretary General, Indian Roads Congress	Nirmal, Sanjay Kumar

SECTION – 1

NOTICE INVITING TENDER

SECTION – 1
NOTICE INVITING TENDER

Availability of bid documents from _____ to _____

Date of Pre-bid meeting _____

Deadline for submission of original documents and bid _____

Opening of technical bids _____

Opening of financial bids _____

Validity of bids _____

NOTICE INVITING TENDER

1. The [Name of the Organization] hereby invites Single Percentage Rate Bids through e-tendering from experienced firms/organizations for maintenance works and activities for the following sections of the National/State Highways/MDR/Rural roads

Sl. No.	Section	Length (km)	Estimated Cost (Rs. Lac)	Bid Security (Rs. Lac)	Contract Duration* (month)
1.	Maintenance works and activities on section from ----- to ----- (km. ----- to km. -----) of [name of NH/SH/MDR/Rural Road] in the State of -----	--	-----	-----	-----

*[Desirable contract duration – 24 to 36 months, to be decided by the Employer]

Cost of Bid Documents (Non-Refundable)
e-Tender Processing fee (Non-Refundable)

: Rs.....
: [Rs. ----](through e-payment gateway of ----- Bank using Credit Card/Debit Card- Master Card and Visa Card only)

2. The preliminary requirements (detailed requirements are given in the Bid Documents) of bidding firm/contractor for above work are mentioned as under: -

Average Annual Turn-over during last 3 years	Work of similar nature during last 5 years
Minimum Average Annual Turnover Rs. ----- lac (estimated cost of work)	Single work of Rs. ----- lac (minimum 50% of estimated cost of work) or Two similar works each of Rs. ----- lac (minimum 35% of estimated cost of work) or Three similar works each of Rs. ----- lac (minimum 25% of estimated cost of work)

3. The Scope of Work includes the routine maintenance of all the assets and facilities existing within Right of Way (ROW) on the above mentioned section including maintenance of carriageway, shoulders, median, bridges, culverts, drains, footpaths, road signage, plantation etc., and carrying out other works as specified in the bid documents.

4. To participate in the e-Bid submission, it is mandatory for the bidders to have user ID & password which has to be obtained by submitting an annual registration charges of Rs----- + GST @ ---- to M/s. ----- through e-payment gateway of ----- Bank using Credit Card/Debit

Card- Master Card and Visa Card only. The registration obtained, as mentioned above shall be valid for one year from date of its issuance and be subsequently renewed. The bidder shall be able to participate in e-tendering of any project of ----- . Bidder shall obtain such user ID and password in its own name.

The detailed bid documents can be viewed on the website----- from ----- to ----
----- (**uptoPM**).

5. The complete Bid Documents can be downloaded from the ----- e-tendering portal free of cost. To participate in bidding, bidders shall pay cost of Bid Document (Non-refundable) in the form of Demand Draft favouring “-----” payable at----- and Tender Processing fee (Non-refundable) in favor of M/s -----, through e-payment gateway of ----- Bank using Credit Card/Debit Card- Master Card and Visa Card only. The amendments/clarifications to the Bid Document, if any, will be hosted on the above website.

6. The Bid should be submitted online in the prescribed format given on the website. No other mode of submission is acceptable.

7. ***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.***

8. The last date for online submission of the Bid is ----- **upto** hrs (as mentioned on the e-portal only) (“**Bid Due Date**”). The bids would be opened on ----- at hrs. online at -----, representatives of the bidders (maximum of two) who choose to attend, may attend the online opening of the bids at ----- 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 letterhead of the bidder, at the time of opening of bids as mentioned above.

9. The amount of Bid Security is _____

10. The period of validity of bid is 90 days from the deadline of submission of bid.

For any clarification, the office of the undersigned may be contacted.

[Name, address, Tel no., Fax, e-mail]

SECTION-2

INSTRUCTIONS TO BIDDERS (ITB) AND APPENDIX TO ITB

SECTION - 2
INSTRUCTIONS TO BIDDERS (ITB)

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A. GENERAL

1. Scope of Bid

1.1 The Employer (as defined in the Appendix to ITB) invites Single Percentage Rate bids through the process of e-tendering for works as described in these documents and referred to as “the Works”. The name and identification number of the Works is as defined in the **Appendix** to ITB.

1.2 The successful Bidder will be expected to complete the Works by the intended Completion Date specified in the Contract Data.

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 under this contract will be met by [Name of Organization].

3. Eligible Bidders

3.1 This Invitation for Bids is open to all bidders meeting the qualification requirements prescribed in **Clause 4** of ITB.

3.2 Any entity which has been black listed or barred by the Central or any State Government or any public sector undertaking, autonomous body or any authority under the Central or State Government, from participating in any project, and the bar subsists as on the date of Application shall not be eligible to submit the bid.

4. Qualification of the Bidder

4.1 All bidders shall furnish the following information and documents with their Bids in **Section-3**, Qualification Information, unless otherwise stated in the **Appendix** to ITB.

- a) Scanned copies of original documents defining the constitution or legal status, place of registration, and principal place of business; scanned copy of 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 copy of total monetary value of civil engineering construction and maintenance works performed for each of the last three years;
- 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 and maintenance equipment named in **Clause 4.3 B(b) (i)**.
- e) Scanned copy of details of the technical personnel proposed to be employed for the Contract having the qualifications defined in **Clause 4.3 B (b) (ii)**.

- f) Scanned copy of reports on the financial standing of the Bidder, and a certificate from Chartered Accountant as a proof of turnover for the last three years;
- g) 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;
- h) Undertaking that the bidder is not affiliated to the firm or entity that has been hired or employed by the Employer for preparation of bid documents or to supervise the contract.

4.2 Bids from joint ventures/consortiums are not allowed.

4.3 A To qualify for award of the contract, each bidder in its name should have the following:-

- a) ***achieved a minimum average annual financial turnover (in all classes of civil engineering construction and maintenance works only) equal to the amount indicated in NIT during last three years ending 31st March of the previous financial year duly certified by Chartered Accountant.***
- b) satisfactorily completed (not less than 90% of contract value), as a prime contractor or as a partner of JV for similar works during last five years ending last day of month previous to the one in which bids are invited, either of the following:
 - i. three similar completed works costing not less than amount equal to Rs----- lac each.
 - ii. two similar completed works costing not less than amount equal to Rs. ----- lac each.
 - iii. one similar completed work costing not less than amount equal to Rs. ----- lac.
 - iv. (the similar work constitutes construction/maintenance of roads)

The following escalation factors shall be used to bring the value of such completed works to the level of current financial year:

Year Before	Multiplying Factor
One	1.1
Two	1.21
Three	1.33
Four	1.46
Five	1.61

4.3 B (a) Each bidder must upload the scanned copies of following documents along with the submission of online bid:

- 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-3**.

Failure to submit the certificates/documents as specified above shall make the bid non-responsive.

- b) Each bidder must demonstrate for this work:
- i) evidence of availability (either owned or leased or rented) of the key equipment for this work as stated in the **Appendix** to ITB.
 - ii) availability of personnel with qualification and experience as stated in the **Appendix** to ITB.

4.4 Bidders who 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 under:

$$\text{Available Bid capacity} = (A * N * 2.5 - B)$$

Where.

A = Maximum value of civil engineering works executed in any one year during the last three 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., _____) taking into account the completed as well as works in progress.

N = Number of years prescribed for completion of the works for which bid is invited.

B = Value (escalation factor as specified in this section shall be used to bring the value to the level of current financial year i.e., _____) of existing commitments and on-going works to be completed during the nextyears (period of completion of the works for which bid is invited)

4.5 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 work etc.

5. One Bid per Bidder

5.1 Each Bidder shall submit only one Bid for the Works. 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 familiarise himself with the Site of Works and its surroundings including source of earth, water, road aggregates, availability of labour etc. and obtain all information that may be necessary for preparing the Bid and entering into a contract for undertaking the maintenance Works. The costs

of visiting the site shall be at the Bidder's own expense. For this purpose, he may contact the person whose contact details are given in the **Appendix** to ITB.

B. BIDDING DOCUMENTS

8. Content of Bidding Documents

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

Section 1: Notice Inviting Tender

Section 2: Instructions to Bidders (ITB) and Appendix to ITB

Section 3: Qualification Information

Section 4: Forms of Bank Guarantee, Letter of Acceptance (LOA) and Agreement

Section 5: General Conditions of Contract and Contract Data

Section 6: Addendum to General Conditions of Contract

Section 7: Road Maintenance Standards and Specifications for Road Maintenance Work, Part-I and Part-II

Section 8: Drawings and Schedule of Drawings

Section 9: Financial Bid form and Bill of Quantities

8.2 The bidder is expected to examine carefully all instructions, conditions of contract, contract data, forms, scope, road maintenance Standards and Specifications, bill of quantities, etc. in the Bid Documents. 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 or through e-tender portal at the Employer's address indicated in the notice inviting Tender. The Employer will respond to any such request for clarification received earlier than 10 days prior to the deadline for submission of Bids. Copies of the Employer's response will be hosted on website including a description of the queries but without identifying its source.

9.2 Pre-Bid Meeting

9.2.1 The Bidder's authorised representative is invited to attend a pre-bid meeting, if it is indicated in the **Appendix** to ITB. The purpose of the pre-bid meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

9.2.2 The bidder is requested to submit any questions in writing 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 posted 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 shall be made by 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 e-tendering portal. Bidders are advised to keep themselves updated of all the addenda issued on e-tendering portal by daily checking the e-tendering portal and the Employer does not assume any responsibility in case the bidder fails to do so and does not take any action, if required, with respect to 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 20.3**.

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 e-bid submitted by the bidder shall be in two separate parts namely Part-I and Part-II. Part-I shall be named Technical Bid and shall comprise of information submitted in **Section-3**. Part-II shall be named Financial Bid and shall comprise of Bill of Quantities- Bill no.1 to 3.

12.2 Documents to be submitted in physical form must be delivered by [12.00 Hrs] on Bid Due Date [-----]

Though, the scanned copies of following documents is required to be uploaded during submission of e-bid on the e-tendering portal, 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 before the time of submission as specified in NIT at the address indicated in **Clause 20**, duly superscribed "Name of Work, Bid Due Date and time". Name and address of the bidder should also be indicated on the envelope.

- i) Copy of Acknowledgement for Tender Submission and EMD/Bid Security
- ii) Bid Document Fee
- iii) Tender Processing Fee
- iv) Written Power of Attorney of the signatory (whose digital signature certificate is used during e-tender submission) of the bidder to commit the Bid.

- v) Affidavit duly notarized (as per the format provided in **Section-3**)

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

- i) Notice Inviting Tender
- ii) Instructions to the Bidders and Appendix to ITB
- iii) General Conditions of Contract and Contract Data
- iv) Addendum to General Conditions of Contract
- v) Road Maintenance Standards and Specifications for Road Maintenance Works, Part-I and Part-II
- vi) Drawings and Schedule of Drawings

13. Bid Prices

13.1 The Contract shall be for the whole Works, as described in **Clause 1. 1** based on the Bill of Quantities- Bill no. 1 to 3 submitted by the Bidder.

13.2 The Bidder shall quote single percentage rate above/below the BoQ/scheduled rates on appropriate format enclosed as part of tender document on e-tender portal of [-----].

13.3 All duties, taxes, including GST, 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

All payments shall be made in Indian Rupees.

15. Bid Validity

15.1 Bids shall remain valid for a period of 90 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 The Bidder shall furnish, as part of the Bid, Earnest Money/Bid Security, in the amount as specified in the NIT. (Bank guarantee/demand draft must be in favour of the Employer.

16.2 The Earnest Money shall, at the Bidder's option, be in the form of Bank Guarantee/Demand Draft only (the other forms 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 and must be in the name of Employer. In case of foreign bank (issued by a branch in India), the net worth in respect of the Indian operations shall only be taken into account. 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. Bank Guarantee or Demand Draft receipts, in the name of the Employer, from following banks would be accepted: -
- i) State Bank of India or its subsidiaries,
 - ii) Any Indian Nationalised Bank
 - iii) IDBI/ICICI Bank
 - iv) A Foreign Bank (issued by a branch outside India) with a counter guarantee from SBI or its subsidiaries or any Indian Nationalised Bank.
 - v) 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 conditions that the capital adequacy of the Bank shall not be less than the latest norms prescribed by RBI.
- C. The bank guarantee issued by a Cooperative Bank shall not be accepted.

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/Earnest Money will be forfeited:*

- a) if the Bidder withdraws the Bid after its submission during the period of Bid validity;
- b) 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, the bidder shall also be debarred from participation in the works of [-----] for a period as decided by [-----].*

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 such a bid will be declared non-responsive.

18. Format and Signing of Bid

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

18.2 The documents to be submitted in the physical form along with the demand draft for fees/security shall be typed or written in ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. All the pages of the documents as mentioned here shall be signed by the person/persons signing the Bid. Documents as mentioned here shall contain no overwriting, alterations or additions, except those to comply with instructions, issued by the Employer or as necessary to correct errors made by the Bidder, in which case such corrections shall be made by scoring out the cancelled portion, writing the correction and signing and dating it along with the stamp by the person or persons signing the Bid

D. SUBMISSION OF BIDS

19. 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.

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 The Bidder shall ensure that the complete e-Bid is uploaded on the e-tender portal on or before the Bid Due Date and before the time specified in NIT/e-portal. The Bidder is further required to submit Documents in Physical Form on or before the Bid Due Date and before the time of submission as specified in NIT, at the following address:

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 The Employer assumes no responsibility for inability of a bidder to submit bids through the Employer’s e-tendering portal on account of delay in submission at bidder’s end. Bidders shall ensure that they submit the bid well before the “Bid Due Date and Time of Bid-Submission”. The Employer shall not be responsible if bidder is not able to submit the bid on account of failure in network/internet connection or any other reason whatsoever.

20.3 The Employer may 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 *No bid may be modified after the deadline for online submission of bids.*

22.3 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** or as extended pursuant to **Clause 15.2** shall result in the forfeiture of the Bid Security pursuant to **Clause 16**.

22.4 Bidders may modify the prices of their bids before deadline of online submission of bid.

22.5 No Late and delayed bids after Bid Due Date and time shall be permitted in e-tendering portal System. Time being displayed on e-Tendering Portal shall be final and binding on bidders and bids have to be submitted by bidders considering this time only and not the time as per their location/country.

E. BID OPENING, CLARIFICATION OF BIDS AND EVALUATION

23. Bid Opening, Clarification of Bids and Evaluation

23.1 Bid opening shall be carried out in two stages. Firstly, Part-I 'Technical Bid' of all the Bidders received (except those received late) shall be opened on the date and time mentioned in Notice Inviting Tender (NIT). Part-II' 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.

The Employer will open the "Technical Bid" of all the Bids received (except those received late), in the presence of the Bidders/Bidders' 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.

23.2 In all cases, the amount of Earnest Money, 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 this **Clause 23**.

23.4 The bids accompanied with valid bid security, bid document fee, Tender processing 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**.

As soon as possible, the 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 about the result of technical evaluation by uploading on the web portal giving 7 days time for objections, if any, from the bidders. The Employer shall finalise the evaluation of technical bids after due consideration of objections received and intimate the bidders, 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 event 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 bidders' 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.

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. Contacting the Employer

25.1 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**; (b) contains the required documents in physical form and 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., bill of quantities, Specifications and drawings etc.

27. Correction of Errors

27.1 Financial Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:

- a) Where there is a discrepancy between the rates in figures and words, the rates in words will govern; and

27.2 The amount stated in the Financial Bid will be corrected as per **Clause 27.1** and shall be binding upon the Bidder. If the Bidder does not accept the corrected amount, the Bid shall be rejected and the Bid Security shall be forfeited in accordance with **Clause 16.6 (b)**.

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 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 as decided by the Employer shall be final, binding and conclusive on the bidder.

F. AWARD OF CONTRACT

29. Award Criteria

29.1 Subject to **Clause 31**, the Employer will award the Contract to the Bidder whose Bid has been determined to be substantially responsive according to the bidding documents and who has offered the lowest evaluated Bid price.

30. Employer's Right to Accept any Bid and to Reject any or all Bids

30.1 Notwithstanding **Clause 29**, 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.

31. Notification of Award and Signing of Agreement.

31.1 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 e-mail 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 the Works, and of routine maintenance of roads

by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").

31.2 The notification of award will constitute the formation of the Contract, subject only to the furnishing of a performance security in accordance with the provisions of **Clause 32**.

31.3 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.

31.4 Upon furnishing of the Performance Security by the successful Bidder, the Employer will promptly notify the other Bidders that their Bids have been unsuccessful.

32. Performance Security

32.1 Within 10 (ten) days after receipt of the Letter of Acceptance, the successful Bidder shall deliver to the Employer, a Performance Security of Five percent of the Contract Price plus any additional security for unbalanced Bids in accordance with ITB **Clause 28.2**, valid for the period of 28 days after the expiry of defect liability period and sign the contract. The validity shall account for additional 3 months time for Bank Guarantee verification, signing of contract and start date.

32.2 The performance security shall be either in the form of a Bank Guarantee or fixed deposit Receipts, in the name of the Employer, from a Bank as specified in case of Earnest Money/Bid Security.

32.3 Failure of the successful bidder to comply with the requirement of ITB **Clause 32.1** shall constitute sufficient ground for cancellation of the award and forfeiture of the Bid Security and debarment for a period as specified in ITB **Clause 16.7**.

33. Advances

33.1 The Employer will provide Mobilization Advance as provided in Part I General Conditions of Contract.

G. CORRUPT OR FRAUDULENT PRACTICES

34. Corrupt or Fraudulent Practices

34.1 The bidders 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.

34.2 Without prejudice to the rights of the Employer under **Clause 34.1** hereinabove, if any 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.

34.3 For the purposes of this **Clause 34**, 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 therefrom, 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 bidders with the objective of restricting or manipulating a full and fair competition in the bidding process.

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

H. LABOUR LAWS AND FUNDAMENTAL BREACH

35. Labour Laws and Regulations

35.1 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. 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.

**[THE EMPLOYER SHOULD COMPLETE THIS APPENDIX
BEFORE ISSUING THE BID DOCUMENTS]**

ITB Clause Reference

1.1) The Employer is [-----]

1.1) Name and identification number of Works is [-----]

[(4.3. B(b) (i).] The key equipment to be deployed on contract work.

Name of the Equipment

Quantity

(For bituminous pavement and earthwork)

1. Mobile Maintenance Unit with necessary equipment –

S. No.	Project Length for maintenance	No. of Mobile Units*
1	Up to 50 km	1
2	More than 50 km and up to 150 km	2
3	More than 150 km and up to 300 km	3

(*)- Project length specified in Table above is indicative. The Employer while inviting bids may review for making appropriate provision about number of mobile units required.

2.	** Sensor Paver	1
3.	* *Vibratory Roller (8/10 T)	1
4.	Static Roller (8/10 T)	1
5.	Small Roller/Compactor	1
6.	Bitumen/emulsion sprayer	1
7.	Mechanical Broom (1250 sqm per hour)	1
8.	Air compressor	2
9.	Grader/Backhoe loader	1

10.	Water Tanker	2
11.	Dewatering Pumps	2
12.	Tipper/dumper Truck	2
13.	Mini hot mix plant (6/10 T/Hr capacity) with indirect heating arrangements	1
14.	* *Hot Mix Plant	1
15.	**String line set	1

Note: (**)- Equipment to be included if periodic renewal is also included in the contract.

(For Concrete pavement)

(For culverts, bridges and structures)

Other equipment

Note: The bidder must upload scanned copy of the documentary evidence in support of his owning/ leased/rented of the above equipments. 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 this equipment with the company/entity from whom the equipment are proposed to be hired on lease/rent. Any conditional evidence of deployment of above equipment or inadequate proof as required for any of the equipment shall make the bid non-responsive and financial bid shall not be opened.

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

S. No.	Personnel	Qualification	Particular Experience (minimum requirement)	No. of Persons
1	Project Manager	Degree in Civil Engineering	5 years as Project Manager on Highway, Bridge construction/Maintenance works	1
2	Site Engineer-cum-Surveyor Engineer cum Material Engineer	Degree in Civil Engineering	4 years on Highway Construction/Maintenance works	1
3	Incident cum Road Property Manager cum Route Operation Manager	Graduate from a recognized University	3 years on Highway Property Management and Maintenance	1
4	Road Safety Auditor	Road Safety Audit Certificate from appropriate approved Govt. agency	5 years experience	3 days in every 3 months

Note: The signed CVs must be uploaded along with the bid.. 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.

[9.2.1] - Pre-bid meeting shall be held on _____

SECTION -3

QUALIFICATION INFORMATION

SECTION -3
QUALIFICATION INFORMATION

The information to be filled in by the Bidder in this section and documents submitted in physical form will be used for the 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 (Proprietorship/Partnership or Pvt. Ltd. firm)
[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 and also supply Original copy in envelope of physical form]]*
- 1.3** Total value of Civil Engineering construction and/or maintenance works performed in the last three years (in Rs. Lakh).

Refer ITB **Clause 4.4 A (a)**

(Upload scanned copies of certificate from Chartered Accountant and also supply original certificate from Chartered Accountant)

Year	Total value of work performed (Rs. Lac)
------	---

1.4 (a) Work performed as prime contractor/JV partner provided further that all other qualification criteria are satisfied (in the same name) of a similar nature during the last five years as per ITB **Clause 4.3A(b)**.

Project Name	Name of the Employer*	Description of work	Value of Contract (Rs. in Lac)	Date of issue of work order	Stipulated period of completion	Actual date of completion*	Remarks explaining reasons for delay in work Completed

** Upload certificate(s) from the Employer (to be given by an officer not below the rank of Executive Engineer or equivalent or higher and also supply original or certified copy in physical form envelope)*

Note: In case of 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 work	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	Escalated value of remaining work during completion period of work for 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)

available bid capacity = $A \times N \times 2.5 - B$

= Rs. lakhs

1.5 Availability of Key Equipment essential for carrying out the Works [Ref. **Clause 4.3(B) (b) (i)**]. The Bidder should list all the information requested below.

Item of Equipment	Requirement		Availability Proposals		Page No of the proof attached
	No.	Capacity	Owned/Leased rented	Age/ Condition	

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 equipments with the company/entity from whom the equipment are proposed to be hired on lease/rent. Any conditional evidence of deployment of above equipment or inadequate proof as required for any of the equipment shall make the bid non-responsive and financial bid shall not be opened.

1.6 Qualification and Experience of Key Personnel required for administration and execution of the Contract [Ref. **Clause 4.3 (B) (b) (ii)**]. **Upload biographical data for technical personnel (Refer also to Clause. 4.1 (e) of Instructions to Bidders).**

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

Position	Name	Qualification	Total Professional Experience (Years)	Experience in the proposed position (Years)

Note : The signed CVs of the Technical Personnel must be uploaded along with the bid. 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	Employer	Cause of Dispute	Amount involved (Rs lakh)	Remarks showing Present Status

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

- i) Affidavit (it should be on stamp paper attested by Notary Public)
- ii) Undertaking regarding availability of minimum cash amounting to 25% of the value of work during implementation of the Contract towards working capital.
- iii) Undertaking that the Bids shall remain valid for the period specified in **Clause 15.1**.

AFFIDAVIT

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 work 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 Authorise(s) and request(s) any bank, person, firm or corporation to furnish pertinent information deemed necessary and requested by the Employer to verify this statement or regarding 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 Employer and within the prescribed time.

(Signed by an Authorised Representative of the Firm)

Name of the Representative

Name of Firm

Date

To be notarized by Notary

UNDERTAKING

I, the undersigned do hereby undertake that our firm M/s _____
_____ shall maintain availability of minimum cash amounting to
25% of the value of the work during implementation of the Contract towards the working capital.

(Signed by an Authorised Representative of the Firm)

Name of the Representative

Name of Firm

Date

UNDERTAKING

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 Authorised Representative of the Firm)

Name of the Representative

Name of Firm

Date

SECTION-4

FORMS OF BANK GUARANTEES LETTER OF ACCEPTANCE (LOA) AND AGREEMENT

SECTION-4**FORMS OF BANK GUARANTEES
LETTER OF ACCEPTANCE (LOA) AND AGREEMENT****FORM OF BANK GUARANTEE FOR BID SECURITY**

WHEREAS _____ (Name of Tenderer) (hereinafter called the Tenderer) wishes to submit his tender for maintenance work of _____ (from km. _____ to km. _____) in the state/s of _____ herein after called “the Tender” KNOW ALL MEN by these present that we _____ (Name of Bank) of _____ (Name of country) having our registered office at (_____) (hereinafter called the ‘Bank’) are bound unto the ----- (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 45 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.

SIGNATURE OF AUTHORISED REPRESENTATIVE OF THE BANK _____

NAME AND DESIGNATION _____ EMPLOYEE CODE NUMBER _____

SEAL OF THE BANK _____

SIGNATURE OF THE WITNESS (IF THIS IS TO BE WITNESSED AS PER BANK'S POLICY) ____

NAME OF THE WITNESS _____

ADDRESS OF THE WITNESS _____

FORM OF BANK GUARANTEE FOR PERFORMANCE SECURITY

To

[Address of Employer]

WHEREAS..... (name and address of contractor) hereinafter called “the Contractor” has undertaken, in pursuance of Letter of Acceptance No. Dated to execute..... (name of Contract and brief description of Works) (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 28 days from the date of expiry of the Defects Liability Period.

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.

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

IRC:SP:124-2019

Name of the Issuing

Name of the Controlling

Bank/Branch-----

Branch/Bank-----

Address and Telephone Number

Address and Telephone Number.....

Date.....

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

1.....

(Name, Address and Occupation)

2.....

(Name, Address and Occupation)

An amount shall be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract and denominated in Indian Rupees.

FORM OF LETTER OF APPLICATION

To,

[Address of Employer]

DESCRIPTION OF WORKS: BID FOR [Name of Work]

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,

Yours faithfully,

(Authorized Signatory)

For and on behalf of M/s _____

FORM OF LETTER OF ACCEPTANCE

No.

Dated

To

M/s.....

Sub.: **Name of Work**

Sir,

Based on your bid submitted on in compliance of bidding document of [the Employer] for execution of the works of, it is hereby notified that your bid for a Contract Price of **Rs**..... (**Rupees in words**.....) has been accepted for and on behalf of [the Employer]

You are hereby requested to furnish Performance Security plus additional security in the form detailed in **Clause 32.2** of ITB for an amount equivalent to **Rs**..... (**Rupees in words**.....) within 10 days as per provisions of **Clause 32.1** of ITB of the bid document and sign the contract agreement failing which the actions as stipulated in **Clause-32.3** of ITB shall be taken.

Thanking you,

Yours faithfully,

(.....)

Employer

FORM OF AGREEMENT

AGREEMENT

This agreement made the _____ day of _____ between the _____ (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.....

AND WHEREAS pursuant to the bid submitted by the Contractor, vide _____ (here in after referred to as the "BID" or "OFFER") 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 32** of ITB (**Section-2**).

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) Agreement;
 - b) Letter of Acceptance;
 - c) Contractor's Bid;
 - d) Contract Data;
 - e) General Conditions of Contract;
 - f) Addendum to General Conditions of Contract;
 - g) Road Maintenance Standards and Specifications for Road Maintenance Works;
 - h) Drawings, if any;
 - i) Bill of Quantities; and
 - j) 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 _____ **Binding Signature of Contractor** _____

For and on behalf of _____ 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 -5

GENERAL CONDITIONS OF CONTRACT (GCC) AND CONTRACT DATA

SECTION 5**GENERAL CONDITIONS OF CONTRACT (GCC)****TABLE OF CLAUSES**

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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 Contractor's Bid.

Certificate of Completion is the Certificate issued by the Engineer upon completion of works or parts thereof as applicable in accordance with **Clause 47**.

Compensation Events are those defined in **Clause 40**.

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

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

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

Contractor's Bid is the completed Bidding Document submitted by the Contractor to the Employer.

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.

Defect is any part of the Maintenance Works and Activities not completed in accordance with the Contract Specifications.

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

Defects Liability Period means the period so stipulated in the Contract Data, calculated from the Completion Date, during which the Contractor remains responsible for the rectification of any defect in the Works he has undertaken.

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 functions to a person or body nominated by him for specified functions.

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 on behalf of the Employer.

Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to execute the Maintenance Works and Activities.

Intended Completion Date is the date, as given in contract data, on which it is intended that the Contractor shall complete the Works as per scope under the contract. The intended Completion Date may be revised only by the Engineer by issuing an Extension of Time after approval from the Employer.

Letter of Acceptance means the formal acceptance of the Bid by the Employer.

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

Maximum Response Time means the maximum permissible time within which remedial action must be completed prior to a defect exceeding the permissible tolerance. Maximum Response Time commences from the time of earliest detection of the defect by (i) observation of the defect by the Contractor, or (ii) notification of the defect by the Engineer, or (iii) intimation of the defect by a road user.

Notice to Proceed means the notice issued by the Employer to the Contractor to proceed with the work after signing of the contract pursuant to **Clause 32.1** of ITB.

Permissible Tolerance means the maximum permissible amount or quantity of a defect in road-asset condition that will not be exceeded at any time. If any defect exceeds the permissible tolerance, it shall be treated as “non-compliance” and the Contractor shall be paid in accordance with the relevant provisions in this contract.

Project Manager is a person appointed by the Contractor who is in charge of managing all activities of the Contractor under the Contract. He is also the Contractor’s Representative for the purpose of this Contract.

Road means the Road or package of roads in network or scattered for which the Maintenance Works and Activities are to be carried out under the Contract.

“Road Assets” include the following:

- i) Main carriageway with shoulders (paved and/or earthen), medians, slip roads, service roads;
- ii) Road embankment including slopes, protection works, kerbs and chute drains;
- iii) Roadway in cutting including slopes protection works, drains;
- iv) Culverts, Bridges, Over/Underpasses, retaining walls, Guide bunds, Floor protection works;
- v) Road signs, road markings, road delineators, guard rails, safety barriers, railings, fencings, parapets, kilometre stones, 200 m stones, road boundary stones;
- vi) All types of drains, trees, plantations and erosion control measures;
- vii) Road land;
- viii) Any other project facility or asset forming integral part of the road(s).

Road Maintenance Standards is the collective term for parameters which define the condition in which the road assets are required to be maintained and other requirements regarding safety and quality of works to be complied with by the Contractor.

Road Maintenance Works and Activities to be carried out by Contractor shall include:

Maintenance of the road assets and incident management specified in the BOQ and executing other items of road maintenance works as ordered by the Engineer.

Rectification Standard

The Contractor shall maintain the Road Assets in proper condition that comply with the Road Maintenance Standards and ensure road users safety and comfort. The maintenance activities shall be so planned that the defects are repaired well before they reach maximum condition as per the permissible tolerance

Site is the area defined as such in the Contract Data, where maintenance works are to be executed.

Specifications means the Specifications of the Maintenance Works including the Road Maintenance Standards as per the Contract.

Start Date is given in the Contract Data. It is the date when the Contractor shall commence execution of the Works.

Service Level means the defined condition in which the road assets are to be maintained by the Contractor.

Sub-Contractor is a person or corporate body who has a Contract with the Contractor to carry out a work under the Contract, which includes part of the agreed scope of works at the Site.

Temporary Works are works designed, constructed, installed and removed by the Contractor that are needed for Works and Activities.

Time for Completion means the duration for completing the execution of maintenance works and passing the tests on completion of the Works or any Section or part thereof as stated in the Contract Data or as extended by the Engineer by issuing an Extension of Time after the approval from the Employer.

Variation is an instruction given by the Engineer in writing which varies the scope of Maintenance Works.

Work Order is an order issued by the Engineer to the Contractor for execution of certain works, specifying the time limits which may be in variance with the approved programme or in variation to the scope of work depending upon the site requirement.

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 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 part of the Works (other than references to the Completion Date and Intended Completion Date for the whole of Works).

2.3 The following documents shall be deemed to form and be read and construed as part of the Contract. In case any ambiguity or discrepancy is noted, then the Contract shall be interpreted in the following order of priority:

- i) Agreement;
- ii) Notice to Proceed with the Work;
- iii) Letter of Acceptance;
- iv) Contractor's Bid;
- v) Contract Data;
- vi) General Conditions of Contract;
- vii) Road Maintenance Standards and Specifications for Road Maintenance Works, Part I and Part II;
- viii) Priced Bill of Quantities; and
- ix) Any other documents listed in the Contract Data.

3. Language and Law

3.1 The language of the Contract shall be in English and the law governing the Contract as given in Contract Data.

4. Engineer's Decisions

4.1 The Employer shall designate and notify to the Contractor in writing the name of the Engineer.

4.2 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, 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 as per Indian Law.

7. Subcontracting

7.1 The Contractor may subcontract any portion of work, up to a limit specified in Contract Data, with the approval of the Engineer but may not assign the Contract without the approval of the Employer in writing. Subcontracting shall neither alter the Contractor's obligations, nor relieve the Contractor from any liability or obligation under the Contract.

- 7.2** The Contractor shall not be required to obtain any consent from the Employer for:
- a) the sub-contracting of any part of the Works for which the Sub-Contractor is named in the Contract;
 - b) the provision for labour, or labour component;
 - c) the purchase of Materials which are in accordance with the standards specified in the Contract.

7.3 Beyond what has been stated in **Clauses 7.1** and **7.2**, if the Contractor proposes sub-contracting of any part of work during execution of the Works, because of some unforeseen circumstances to enable him to complete the Works as per terms of the Contract, the Employer will consider the following before according approval:

- a) The Contractor shall not sub-contract the whole of Works.
- b) The Contractor shall not sub-contract any part of the Work without prior consent of the Employer. Any such consent shall not relieve the Contractor from any liability or obligation under the Contract and he shall be fully responsible for the acts, defaults and neglects of any of his sub-Contractor, his agents or workmen as if they were the acts, defaults or neglects of the Contractor, his agents and workmen.

- 7.4** The Engineer should satisfy himself before recommending to the Employer whether
- a) the circumstances warrant such sub-contracting; and
 - b) the sub-Contractor so proposed for the Work possess the experience, qualifications and equipment necessary for the job proposed to be entrusted to him in proportion to the quantum of Works to be sub-contracted.

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. The Contractor shall cooperate in such situations as well.

8.2 The Contractor should take up the works in convenient reaches as decided by the Engineer to ensure that there is least hindrance to the smooth flow of traffic including movement of vehicles and equipment of other Contractors till the completion of 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 abilities 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 51**.

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 under the Contract.

9.4 The Contractor shall establish, within his own organizational structure, a planning unit, staffed with suitably qualified personnel. The team will be headed by a Project Manager who will be assisted by his representatives, i.e. Site Manager and Manager, Planning. The task of this unit will be:

9.4.1 To plan, and to verify continuously the degree of compliance by the Contractor with the specified Road Maintenance Standards and report the same to the Engineer in the format acceptable to the Engineer.

9.4.2 To maintain and update the road condition inventory regularly.

9.4.3 To assist the Engineer in verification of the compliance.

9.5 The Contractor's planning unit mentioned under **Sub-clause 9.4** shall report the level of compliance with the required Service Levels in the standard formats acceptable to the Engineer.

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 expected risks which are (a) in so far as they directly affect the execution of the Maintenance Works and Activities included in the Contract, 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.

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 risks 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 completion of defect liability period, in that 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 and Materials
- b) Loss of or damage to Equipment
- c) Loss of or damage to property (except the Works Materials and Equipment) in connection with the Contract
- d) Third Party Liability Insurance
- e) Automobile Liability Insurance
- f) Workers' Compensation
- g) Employer's Liability
- h) Other Insurances

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 had paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due from the Contractor.

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

13.5 Both parties shall comply with any conditions of the insurance policies. The Contractor shall ensure that wherever applicable, its Sub-Contractor(s) shall take out and maintain in effect adequate insurance policies for their personnel and vehicles and for works executed by them under the Contract unless such Sub-Contractor(s) is/are covered by the policies taken out by the Contractor.

14. Site Investigation Reports

14.1 The Contractor, in preparing the Bid, may rely at his own risks and liability on any Site Investigation Reports referred to in the Contract Data, supplemented by any other information available to him.

15. Queries about the Contract Data

15.1 The authorized representative of the Employer as stated in the Contract data will clarify queries on the Contract Data.

16. Contractor to Construct the Works

16.1 The Contractor's obligations cover the carrying out of all Maintenance Works and Activities as defined in the Contract for keeping the roads in accordance with the Road Maintenance Standards.

The Contractor shall construct, install and maintain the Works in accordance with the Specifications and Drawings.

17. The Works to be completed by the Intended Completion Date

17.1 The Contractor may commence execution of the Maintenance Works and Activities 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 prepare/propose the Maintenance Manuals as per relevant applicable Standards and Specifications and existing policies/guidelines/practices and get the same approved from the Engineer/Employer.

18.2 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.

18.3 The Contractor shall be responsible for design of Temporary Works.

18.4 The Engineer's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

18.5 The Contractor shall obtain approval of third parties to the design of Temporary Works by Engineer.

18.6 All Drawings prepared by the Contractor for the execution of temporary or permanent Works, are subject to prior approval by the Engineer before their use.

19. Site Regulations and Safety

19.1 The Contractor shall be responsible for the safety of all activities on the Site, including arrangements for smooth flow of traffic at his own cost as per guidelines of the IRC/Ministry of Road Transport & Highways. He shall provide proper barricading, diversion boards, etc. He shall be fully responsible for the safety of workers and staff at site and provide safety helmets, reflective jackets and other PPE to the workers, inspecting officers and supervisors.

20. Discoveries

20.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site is 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 possession of all parts of the Site to the Contractor on or before the start date of the Contract.

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 pertaining to the maintenance works which comply with the applicable laws where the Site is located.

23.2 The Contractor shall permit the Engineer/Employer to inspect the Contractor's contemporary records in respect of invoice of bitumen, cement, aggregates and steel, if so desired by the Engineer.

24. Procedure for Dispute Resolution

24.1 Arbitration

The procedure for arbitration will be as follows:

- i) In case of Dispute or difference arising between the Employer and the Contractor relating to any matter arising out of or connected with this contract, such disputes or differences shall be settled in accordance with the Arbitration and Conciliation Act, 1996 as amended vide Act of 2015. The Arbitral Tribunal shall consist of sole Arbitrator from the panel of three Arbitrators proposed by the Employer and choice of selecting one given to the Contractor. Contractor shall select one out of the three names of Arbitrators given to him within 30 days failing which the Employer shall nominate the Arbitrator out of the panel of three Arbitrators. In case the Contractor objects to the Arbitrator selected by the Employer, the Employer shall refer selection of Arbitrator to the Indian Roads Congress for nominating the Arbitrator for the dispute and both parties agree that the Arbitrator so selected by IRC shall decide the dispute. Indian Roads Congress shall try to appoint Arbitrator preferably from the state where the project is located or otherwise from adjoining States.
- ii) Arbitration proceedings shall be held at [Name of Place], India, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English.
- iii) The decision of the Arbitrator shall be final and binding upon both parties. The cost and expenses of Arbitration proceedings will be paid as determined by the Arbitral Tribunal. However, the expenses incurred by each party in connection with the preparation, presentation, etc. of its proceedings shall be borne by each party itself. The fees and expenses of the Arbitrator shall be shared equally by both the parties.
- iv) 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 arbitration proceedings.

B. TIME CONTROL

25. Programme

25.1 The Contractor shall submit to the Engineer for approval a programme within period specified in the contract data showing the general methods, arrangements, order, and timing for all the maintenance works and activities.

25.2 The Engineer may issue the work order in stages specifying the time limit for the same as and when required except the performance-based maintenance items.

25.3 An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of progress achieved on the timing of the remaining Works, including any changes to the sequence of activities.

25.4 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.

25.5 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.

26. Extension of the Intended Completion Date

26.1 The Engineer shall extend the Intended Completion Date only after approval of the Employer 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.

26.2 The Engineer, within 14 days of receiving full justification from the Contractor for extension of Intended Completion Date, will refer to the Employer his recommendation. The Employer shall, in not more than 21 days from the date of receipt of Engineer's recommendation, communicate to the Engineer the acceptance or otherwise. The Engineer shall convey the decision of the Employer to the Contractor.

27. Delays Ordered by the Engineer

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

28. Management Meetings

28.1 The Engineer may require the Contractor to attend a management meeting. The business of a management meeting shall be to review the plans and progress for the Maintenance Works.

28.2 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 during the management meeting or after the management meeting and to be intimated in writing to all those who attended the meeting.

C. QUALITY CONTROL

29. Identifying Defects

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

30. Tests

30.1 The Contractor shall set up a field laboratory within period stated in contract data and be solely responsible for:

- a) Carrying out the mandatory tests prescribed in Technical Specifications and
- b) For the correctness of test/procedures, whether preformed in his laboratory or elsewhere.

30.2 If the Engineer instructs the Contractor to carry out a test not specified in the Specifications to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the testing charges and for any number of samples. Otherwise, the Employer shall pay for the testing charges.

31. Correction of Defects noticed during the Defects Liability Period

31.1 The works carried out shall be of very high standard, requiring no major repairs on the road for at least, during defects liability period, after the date of completion of works.

31.2 If any defects including shrinkage, cracks, other faults appear in the works within the period specified hereunder after issue of "Taking over" certificate, the Engineer shall give notice to the Contractor of any defects before the end of the Defects Liability Period. The Defects Liability Period shall be extended for as long as the defects remain to be corrected.

31.3 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 in the Engineer's notice.

31.4 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 47**. The defect liability period is not applicable for works of routine maintenance such as pot holes/ patch repairs/ruts repairs under performance based BOQ item.

31.5 If during the Defects Liability Period any defect is found in the design, engineering, materials and workmanship of the Works and Services executed by the Contractor, then the Contractor shall promptly, in consultation and agreement with the Engineer, appropriately remedy

such defects at its cost, or repair, replace or otherwise make good (as the Contractor shall, at its discretion, determine) such defects as well as any damage to the Road caused by such defects.

31.6 The Contractor's obligations under this Clause 31 shall not apply to:

- a) any material that is supplied by the Employer, and normally consumed in maintenance, or have a normal life shorter than the Defects Liability Period stated herein;
- b) any design, Specification or other data, supplied or specified by or on behalf of the Employer or any matter for which the Contractor has disclaimed responsibility herein;

31.7 The Employer shall offer the Contractor all reasonable opportunity to inspect the defect(s) Noticed, as well as provide all necessary access to the Facilities and the Site to enable him to perform his obligations under this **Clause 31**.

The Contractor may remove from the Site any Plant and Equipment or any part of the Facilities that are defective, if the nature of the defect, and/or any damage to the Facilities caused by the defect, is such that repairs cannot be expeditiously carried out at the Site.

32. Uncorrected Defects

32.1 If the Contractor fails to correct a Defect, 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. The Contractor will pay to the Employer this amount or the Engineer may deduct such amount from any sums due to the Contractor, on correction of the Defect together with 20 percent additional costs as the damages.

32.2 In case of any non-compliance/delayed compliance of maintenance standards, the damages/reduction in payment shall be applicable as provided under road Maintenance Standards Part – I.

D. COST CONTROL

33. Bill of Quantities

33.1 The Bill of Quantities shall contain the description of items, units, rates and amount.

33.2 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 given in the Bill of Quantities with accepted/awarded tender premium for each item for the work executed.

The accepted/awarded tender premium above/below the grand total of Project cost as per BOQ shall be applicable for individual item of work to determine payable amount to Contractor subject to contractual provisions.

34. Changes in the Quantities

34.1 The final quantity of the work done may differ from the quantity given in the Bill of Quantities. The payment shall be made for the quantities executed. Provided that the items for which lump sum rates have been quoted shall not be measured and the payments for such items

not exceeding the quoted lump sum amount shall be made to the Contractor subject to meeting the specified maintenance requirements by the Contractor in accordance with the Agreement. It is agreed, beyond doubt, by the Contractor that no claims shall be entertained by the Engineer/Employer on account of reduction to any extent, due to budgetary constraints, in quantities of measurable items.

35. Variations

35.1 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.

36. Payments for Variations

36.1 If rates for Variation items are specified in the Bill of Quantities, the Contractor shall carry out such work at the same rate.

36.2 If the rates for Variation are not specified in the Bill of Quantities, the Engineer shall derive the rate from similar items in the Bill of Quantities.

36.3 If the rate for Variation item cannot be determined in the manner specified in **Clause 36.1** or **36.2**, 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 the Employer shall 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.

37. Cash Flow Forecasts

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

38. Payment Certificates

38.1 The Contractor shall submit to the Engineer 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.

38.2 The Engineer 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.

38.3 The value of work executed shall be determined, based on measurements by the Engineer.

38.4 The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.

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

38.6 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 latest information.

38.7 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.

39. Payments

39.1 Payments shall be adjusted for deductions for advance payments, 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 had certified, within 28 days of the date of each certificate.

39.2 The authorized representative of the Employer shall make the payment certified by the Engineer.

39.3 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.

40. Compensation Events

40.1 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.

40.2 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 approval of the Employer.

40.3 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.

41. Taxes and Currencies for Payments

41.1 The rates quoted by the Contractor shall be deemed to be inclusive of the GST and other levies, duties, royalties, cess, toll, and other taxes 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. The GST shall be reimbursed (if applicable) subject to production of proof of such payment by the contractor (proof should contain name of work).

41.2 All payments shall be made in Indian Rupees.

42. Security Deposit/Retention Money

42.1 The Employer shall retain security deposit of five percent of the amount from each payment due to the Contractor until Completion of the whole of the Works.

42.2 The security deposit/retention money and the performance security will be released to the Contractor when the Defects 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.

42.3 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).

43. Liquidated Damages

43.1 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.

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.

43.2 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.

44. Advance Payment

44.1 The Employer will make an interest bearing advance payment to the Contractor against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Employer in amounts equal to the advance payment up to 10% of Contract Price. The guarantee shall remain effective until the advance payment has been repaid, but the amount of the guarantee shall be progressively reduced by the amounts repaid by the Contractor. The Contractor shall take the above advance before 2nd running bill and if the contractor delays seeking the advance, the same is not payable.

44.2 The Contractor is to use the advance payment only to pay for Equipment, plant and Mobilization expenses required specifically for execution of the Works. The Contractor shall

demonstrate that the advance payment has been used in this way by supplying copies of invoices or other documents to the Engineer.

44.3 The advance payment shall be repaid with interest @ SBI PLR applicable on the date of release of mobilisation advance, by deducting from payments otherwise due to the Contractor. The mobilisation advance will be recovered from third running bill upto 8th running bill in six equal instalments and the interest will be recovered from 9th bill. In any case, the mobilisation advance with interest must be recovered within ten months from the date of agreement. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, Compensation Events, or Liquidated Damages.

45. Performance Security

45.1 Subject to further condition in Contract Data, the Performance Security equal to ten percent of the Contract Price 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 28 days after the expiry of Defects Liability Period. The validity shall account for additional 3 months time to account for BG verification, signing of contract and start date

46. Cost of Repairs

46.1 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 his cost if the loss or damage arises from the Contractor's acts or omissions.

E. FINISHING THE CONTRACT

47. Completion

47.1 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 are completed.

48. Taking Over

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

49. Final Account

49.1 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 28 days of receiving the Contractor's account if it is correct and complete. If it is not, the Engineer shall issue within 28 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 28 days of receiving the Contractor's revised account

50. Operation and Maintenance Manual

50.1 If “as built” Drawings and/or operation and maintenance manuals are required relating to construction work carried out, the Contractor shall supply them within 28 days from the date of issue of certificate of completion.

50.2 If the Contractor does not supply the Drawings and/or manuals by the stipulated date or they do not receive the Engineer approval, the Engineer shall withhold the amount equal to Rs. 5 lakh from payments due to the Contractor.

51. Termination

51.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

51.2 Fundamental breaches of Contract include, but shall not be limited to, the following:

A) Fundamental Breaches by the Contractor

- a) the Contractor stops work or grossly neglects Routine Maintenance Works and Services 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 reconstruction 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 remedy the defect and correct it within the period of time determined by the Engineer;
- d) the Contractor does not maintain a Security Deposit as per clause;
- e) the Contractor has delayed the completion of Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in **Clause 43**;
- f) the aggregate liability of the Contractor to the Employer, exceeds the total amount specified in the Contract Data, provided that this limitation shall not apply to the cost of repairing or replacing defective works and equipment;
- g) the Contractor fails to provide insurance cover as required under **Clause 13**;
- h) if the Contractor, in the judgement of the Employer, has engaged in the corrupt or fraudulent practices as defined in **Clause 34** of the Instructions to Bidders in competing for or in executing the Contract;
- i) if the Contractor fails to set up a field laboratory with the prescribed equipment, within the period specified in the Contract Data;
- 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 breaches as specified in the contract data.

51.3 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.

51.4 Notwithstanding the above, the Employer may terminate the Contract for convenience.

51.5 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.

52. Payment upon Termination

52.1 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 work done and Materials ordered less advance payments received up to the date of issue of the certificate and less the percentage to apply to the value of the work not completed, as indicated in the Contract Data. 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 and Employer may recover the same from Performance Bank Guarantee.

52.2 If the Contract is terminated at the Employer's convenience, the Engineer shall issue a certificate for the value of work done, and a pre-determined amount specified in the contract data to cover the reasonable cost of removal of Equipment and 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 received up to 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.

53. Property

53.1 All Materials on 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.

54. Release from Performance

54.1 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

55. Labour

55.1 The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport; and for compliance of various labour laws/regulations.

55.2 The Contractor shall, if required 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 Site and such other information as the Engineer may require.

55.3 The Contractor's personnel including equipment operators shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Engineer may require the Contractor to remove or cause to be removed any person employed on the site or the works, including the Contractor's representative, if applicable, who

- a) Persists in any misconduct or lack of care;
- b) Carries out duties incompetently or negligently;
- c) Falls to conform with any provision of the contract;
- d) Persists in any conduct which is prejudicial to safety, health or protection of the environment.

If appropriate, the contractor shall then appoint or cause to be appointed a suitable replacement person

56. Compliance with Labour Regulations

56.1 During continuance 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 passed or notification that may be issued 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 in Addendum to General Conditions of Contract.) 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 Employer shall have the right to deduct any money due to the Contractor including his amount of performance security. The Employer 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.

In no case shall the employees of the Contractor and the Sub-Contractor be treated as the employees of the Employer at any point of time.

57. Drawings and Photographs of the Works

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

57.2 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 57.1**, shall be taken or permitted by the Contractor to be taken by any of his employees or any employees of his sub-Contractors without the prior approval of the Engineer in writing. No photographs/video photography shall be published or otherwise circulated without the approval of the Engineer in writing.

58. The Apprentices Act, 1961

58.1 The Contractor shall duly comply with the provisions of the Apprentices Act, 1961 (Ill of 1961), the rules made there under 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.

1.1

1. The Employer is **[CI.1.1 of ITB]**
[Competent Authority, Designation and Address]
Name of authorized Representative:[-----])
2. The Engineer is: (Will be intimated later) **[Clause 1.1 of GCC]**
Designation:
Address: **[CI.1.1]**
3. The Intended Completion Date for the whole of the Works is [..... months from Start Date] **[CI.1.1, 17&26 of GCC]**
4. The Site is located at [Project Section, chainage, ----- No., State] [Sr no 1 of NIT]
5. The Start Date shall be within 15 days after the date of issue of the Notice to proceed **[CI.1.1 of GCC]**
6. (a) The name and identification number of the Contract is _____
The Works consist of _____ **[CI. 1.1 of ITB]**
7. (a) The law which applies to the Contract is the law of Union of India. [CI.3.1 of GCC]
(b)The language of the Contract documents is English **[CI.3.1 of GCC]**
8. The limit of subcontracting is 50% of initial contract price **[CI.7.1 of GCC]**
9. Schedule of other Contractor- NIL **[CI.8.1 of GCC]**
10. The Technical Personnel are **[CI. 9.1 of GCC]**

S. No.	Personnel	Qualification	Particular Experience (minimum requirement)	No. of Persons
1.	Project Manager	Degree in Civil Engineering	5 years as Project Manager on Highway, Bridge construction/ Maintenance works	1
2.	Site Engineer-cum-Surveyor Engineer-cum- Material Engineer	Degree in Civil Engineering	4 years on Highway Construction/ Maintenance works	1
3.	Incident cum Road Property Manager -cum-Route Operation Manager	Graduate from a recognized University	3 years on Highway Property Management and Maintenance	1

4	Road Safety Auditor	Road Safety Auditor Certificate from appropriate approved govt. agency	5 years experience	3 days in every 3 months
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11. Amount for insurance are: **[Cl.13.1 of GCC]**
- Rupees equivalent to Contract Price.
 - Rupees equivalent to 5% of Contract Price.
 - Rupees equivalent to 5% of Contract Price
 - Rupees 20 lakhs for multiple incidents.
- The said insurance shall include all liabilities as per **Clause 13.1** and shall be deductible as per premium rate.
12. Site Investigation Report - NIL **[Cl 14.1 of GCC]**
13. The period for submission of the programme for approval of Engineer shall be 30 days from the issue of Letter of Commencement. **[Cl.25.1 of GCC]**
14. Amount to be withheld for delays in submission of updated programme: 1% of value of work corresponding to the updated programme. **[Cl. 25.4 of GCC].**
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 date of notice to start work **[Cl. 30.1 of GCC]**
16. The Defect Liability Period will be 36 months for periodic renewal and other improvement works. **[Cl. 31 of GCC]**
- 17.
- | | |
|---|---|
| a. Amount of liquidated damages for delay in completion of works | 0.1 percent of the remaining value of contract to be executed, rounded off to the nearest thousand, per day with the minimum of Rs. 10000/- per day |
| b. Maximum limit of liquidated damages for delay in completion of work. | 10 per cent of the Initial Contract Price rounded off to the nearest thousand
[Clause.43 of GCC] |
18. The standard form of Performance Security acceptable to the Employer shall be an unconditional Bank Guarantee of the type as specified in the Bidding Documents. **[Cl. 45.1 of GCC]**
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 percent. The Performance Security shall also be forfeited if the Contract is terminated because of a fundamental breach of Contract by the Contractor. **[Cl.52.1 of GCC]**
20. The reasonable cost of removal of equipment and repatriation of the Contractor's personnel employed solely on the works in the event of termination of the contract at the Employer's convenience or because of a fundamental breach of contract by the Employer is to be treated as [-----] lac. **[Cl. 52.2 of GCC]**

SECTION 6

ADDENDUM TO GENERAL CONDITIONS OF CONTRACT

SECTION 6

ADDENDUM TO GENERAL CONDITIONS OF CONTRACT

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

- 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 if an employee has completed the prescribed minimum years (five years) of service or more or on death the rate of prescribed minimum days' (15 days) wages for every completed year of service. The Act is applicable to all establishments employing the prescribed minimum number (10) or more employees.
- c) **Employee's P.F. and Miscellaneous Provision Act 1952:** The Act provides for monthly contributions by the Employer plus workers at the prescribed rate (10 percent or 8.33 percent). 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, 1961:** 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 minimum prescribed (20 or more) numbers of 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 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 minimum prescribed (say, 20 or more) number of 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 minimum prescribed number of persons (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 employees. 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 minimum prescribed number of labour (say, five or more) inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in an 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 employ the minimum prescribed (say, 10 or more) number of workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2 percent of the cost of construction as may be notified by the Government. As per current notification, one percent of the cost of construction is payable by the Employer of the establishment. 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 to 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 minimum prescribed number of persons (say, 10 persons or more) with aid of power or another minimum prescribed number of persons (say, 20 or more persons) without the aid of power engaged in manufacturing process.

SECTION -7

ROAD MAINTENANCE STANDARDS AND SPECIFICATIONS FOR ROAD MAINTENANCE WORKS, PART-I AND PART-II

SECTION-7**ROAD MAINTENANCE STANDARDS AND SPECIFICATIONS FOR
ROAD MAINTENANCE WORKS, PART-I AND PART-II****PREAMBLE**

The Road Maintenance Standards and Specifications shall be read in conjunction with all other documents constituting the Contract viz. Notice Inviting Tender, Instructions to Bidders; Conditions of Contract, Bill of Quantities and other related documents mentioned in the Bid Documents.

General

The Standards and Specifications for the Road Maintenance Works and Activities as described hereinafter shall comprise of the following:

PART-I : Road Maintenance Standards

PART-II : Specifications for Road Maintenance Works

Carbon foot prints shall be evaluated during the execution of project. If approved by the Employer, the environment friendly machinery like Infrared Recycling Road Maintenance as approved by CRRI/IRC/MoRTH shall be got deployed.

PART-I**ROAD MAINTENANCE STANDARDS****1 Inspections**

1.1 The Contractor shall carry out weekly Inspection of project road and submit report to the Engineer on the maintenance works carried out during the week and also identify other items of works with location requiring attention for maintenance.

1.2 Any maintenance which involves works of emergent nature and/or replacement shall be immediately reported to the Engineer for joint assessment and issue of the work order. Such repairs shall be carried out on authorization by the Engineer except in emergency situations where it needs to be attended to urgently for safety reasons. In such situations, temporary arrangements shall be made immediately and further directions sought from the Engineer.

1.3 The Engineer will monitor road condition and shall carry out at least fortnightly Inspection of the project road to verify that the Contractor is maintaining maintenance standards as per Contract and to make note of non-compliances of Performance based items of BOQ, other items of work and work orders issued for other works. Non-compliance/delayed compliance of maintenance work shall be dealt with as per provisions of GCC **Clause 32.1** and maintenance standards hereinbelow.

2 Maintenance Standards for performance based items

2.1 The following maintenance standards shall be achieved by the Contractor to be eligible for full payment:

Item	Permissible Tolerance/Service Level	Measurement and Detection	Maximum Response Time	Rectification Standard
Item no. 3.1 of Bill no 3 (repair of pot holes/edge cuts/ruts/patches)	Not more than 5 isolated potholes/ edge cuts in a stretch of 1 km. Maximum size of pot hole/edge cut not more than 300 sq cm x 4 cm depth. Max rutting – 2.5% in the sub-section. Rutting not to exceed 20 mm. Patches not more than 5% of the surface area in a stretch of 1 km.	Visual inspection. Area of pot hole shall be measured by the area of rectangle enclosing the pothole. Rutting to be measured in isolated locations.	Within two days	As per Clause 3004 of MoRTH Specifications

Item	Permissible Tolerance/Service Level	Measurement and Detection	Maximum Response Time	Rectification Standard
(*) Item no. 3.2 of Bill no. 3 (Providing road patrols and surveillance, automobile assistance, tow away cranes and ambulance services as per maintenance standard Clause 2.2)	To reach the incident spot within 30 minutes of occurrence	Route Patrol Regular patrolling atleast once in four hours for entire length of the highway.	Removal of accidented vehicles within 4 hours after Police Inspection Removal of dead animals/ birds and burying at suitable location within two hour. Accident relief measures within 30 minutes of occurrence.	As per maintenance standard under Sub Clause 2.2

(*)**Note:** This is an optional item to be included by the Employer based on need and depending on category of road, traffic volume, accident history and trauma facilities required to be provided.

2.2 Providing road patrols and surveillance, automobile assistance, tow away cranes and ambulance services (Incident Management)

i) The Contractor shall set up and maintain an Incident Management System (IMS) and supply regular incident statistics to the Employer.

Incident Management entails a set of coordinated activities initiated by the Contractor when an incident (an extraordinary event resulting in the reduction of road capacity or creates a hazard for users) occurs, in order to minimize the effects of the incident and restore normal capacity and safety levels to all affected road facilities as efficiently as possible.

The Contractor has to identify relevant agencies (e.g. rescue, fire, hazardous materials, traffic, police, ambulance, hospitals, alternative routes, cleanups) and their representatives and to liaise with these representatives on behalf of the Employer.

The Incident Management Centre on the project highway (minimum 500 sqm.) shall be continuously staffed on a 24 hours basis. The Contractor shall maintain records of the details of all incidents (e.g. collision, hazardous material, breakdown, etc. After occurrence of any major incident, resulting in multiple loss of life, significant periods of road closure or major route rehabilitation work, an incident debriefing report shall be produced and forwarded to the Employer within 24 hours of occurrence. The Incident Management Centre shall monitor the location of route of incident management vehicles/rescue operation vehicles through Vehicle Tracking System (VTS) on continuous basis.

The Contractor will keep a record of the removed accident/damaged vehicles by taking a dated photograph of the same and will submit the report on weekly basis to the Employer/Engineer.

The Contractor will remove dead animals/birds from the carriageway and bury them at a suitable location as directed by the Engineer/Employer within two hours of the incident and accident vehicles/Debris within 4 hours after police inspection. If the Contractor fails to remove the dead animals/birds and accident vehicles/debris from the carriageway within specified time of the incident, he will be levied a penalty of Rs.10,000/- per such incident.

The Route Patrol Vehicle, Ambulance and Crane shall be equipped (for 24 x7 period and total duration of contract) with Vehicle Tracking System, equipment/medicines as mentioned in this Clause

ii) Route Patrols

The Contractor is required to provide 24 hours per day route patrols to assist the road users of the highway, to provide information, feedback and perform functions in relation to incident management. To achieve this, the Patrol vehicles fitted with VTS should be fully equipped as well as the patrol persons should be adequately trained in traffic management, road safety and primary first aid. The purpose of these patrols is to:

- * Provide the users of the highway with basic mechanical help for vehicles that breakdown on the road and also protect other users from such vehicles.
- * Immediately identify traffic hazards of whatever nature, such as unauthorized parking, public transport vehicles, obstructing traffic during passenger loading and unloading, debris, stray animals and the like. The operator shall take the necessary measures to remove such obstructions.
- * Provide emergency management at accident scenes until such time as the appropriate authorities arrive.
- * Assist with the removal of damaged or mechanically impaired vehicles from the highway.
- * Observe, record and report suspect aspects of the highway, hazards and incidental damage caused by vehicles, floods, storms or other random events, such that the highway maintenance records and database are continuously improved.

iii) Patrol Vehicles/Rescue Vehicles

Vehicles should be fully covered having sufficient space for the required equipment storage, fitted with rotating light and hooter, and painted with approved unique colour pattern for quick recognition, with the Employer name and emblem painted prominently on sides, back and front, together with the control centre and Helpline numbers. Vehicles should be in good condition and registration number not older than two years.

Each vehicle should also carry the following equipment.

- a) Fire extinguisher 1 no.
- b) Gas cutter with protective glass (2 Nos.)
- c) Liquid container 2 nos. Water container with fresh water 1 no Funnel

- d) Rubber Gloves, Leather Gloves (1 pair, each)
- e) Brooms on hard bristle, other soft-2 nos.
- f) Gum boot 4 pair, Rain coat 4 pairs, Blanket 1.
- g) Torch lights – 4nos. Spare Batteries, Flashing light 1 no.
- h) Hydraulic jack, towing chain, animal hook, rope
- i) Tool set (with standard set of spanners, pliers , hammer etc.) shovels.
- j) Battery charger, jumper cables
- k) Diamond cutter and chain saw (for cutting metal, reinforced concrete and wood) crow bar (16")
- l) Digital Camera, measuring tape
- m) Paper pad, Forms, pen/pencils, folders.
- n) First aid kit, Rain Coat, water proof sheets, stretchers (two numbers)
- o) List of hospitals.

Each vehicle should also carry the following traffic management equipment, (used/worn out items shall be replaced forthwith with new ones.)

- a) Signboards – “Accident ahead” – 3 nos. “Lane merging” – 3 nos “Direction Arrows” – 3 nos. “Speed Limit” (80/60/40)-3 nos.” keep left/right - 2 nos. (all signs 1200 mm size and of retro reflective type (high Intensity grade)
- b) Sign stand set (one for triangular and other for circular sign) 6 sets
- c) Flags, whistle, reflective hand signal.
- d) Traffic cones 500 mm size with solar bulb mounted on top-20 Nos.
- e) Barricades 4 Nos. reflective type 100 m, tape, stands, flags of 600 mm by 600 mm made of good read cloth secured to a staff at 1M length, Paddles of at least 600 mm wide and provided with rigid handle and marking SLOW, STOP.
- f) As a minimum, each patrol vehicle should carry sufficient communication equipment to render its staff capable of direct communication with the incident Management Control Center established.

Manpower

The team which is to be deployed with each patrol vehicle, shall be given adequate training for their tasks, especially in first aid, vehicle maintenance and minor repairs. The Contractor must employ sufficient manpower to work in shifts for each patrol vehicle. Typical staffing shall be:

- a) Route Patrol in-Charge
- b) Route Patrol Assistance
- c) Driver with knowledge of vehicle repairs

Typical duties of the Route Patrol in-Charge are:-

- a) Patrol the corridor to ensure obstruction free flow as per shift standards
- b) To report to police and assist injured at accident scene and remove all obstructions from road when the vehicles are cleared.

- c) To provide first aid to injured, contact control room and ambulance service if needed, assist police.
- d) Report all incidents on radio control, to control room
- e) To ensure safety of traffic with minimal delay at accidents.
- f) To assist motorists on broken down vehicles and to ensure that they do not obstruct free flow.
- g) Maintain relations with all emergency services, and local safety councils
- h) To report carriageway condition of drainage, ROW plantations, median plantation etc.
- i) Check on Encroachment irregularities taking place within ROW, and prevent unauthorized entry into the corridor.
- j) Prevent theft of assets and report
- k) Attend to urgent maintenance for safety requirements.

All times, the Route Patrol In-Charge should have with him a list of telephone numbers and address of all concerned in providing the road users services.

On duty, all staff shall wear distinctive standard jackets having company LOGO, with night visibility. They are to deal with public and hence should be well trained and advised to be courteous and helpful.

Number of Patrol Vehicles shall be as given in BoQ (Bill No.3)

iv) Ambulance

The vehicle shall be matador van/Swaraj Mazda/Tempo Travelers or equipment with approved colour pattern with the provision of two stretchers, fitted with rotating light for easy recognition with Road Authority name and emblem painted prominently on sides, back and front, together with control center help numbers. The ambulance is required to have the necessary medicines and equipment and also the paramedical staff. The vehicles fitted with VTS should be in good condition and registration number not older than two years. The vehicle shall run minimum 5 km daily (even for dry run), to be eligible for monthly payment.

a) General Ambulance:

Folding Doctor Seat with Belt with adequate height in relation to the stretcher, Antistatic, water proof ply board viny/flooring, Channel/locking system for rolling stretcher, High intensity blinkers, light bar/siren/beacon, Electronic siren with Public Addressing System, Internal lighting with three spot light embedded in ceiling, AC/DC connection and outlet points, wash basin with stainless steel Tank, SS Trash bin cabinet integrated with interiors, Head racks and cupboard, Attendant seat with seat belt to double as second stretcher for stable patients. Provision for communication system where the location of ambulance can be identified, Provision for fog light on sides, Cool/Warm boxes, Provision of Fire Extinguishers, Handled Spotlight, Inverter with facility re-charging from 220V AC and vehicle's alternative. Oxygen delivery system comprising of cylinder trolley, pressure tubing with regulators, roof mounted Air –Conditioner with appropriate cooling capacity with additional blower for patient cabin, Extrication equipment and good suspension to cater for smooth transportation

b) Basic Life Support System

Automatic loading stretcher, scoop stretcher, folding stretcher, spine board full vacuum splint kit/foldable splints, C-Collars, Oxygen Cylinder with accessories mounted/with manifold and pressure indicators, Oxygen Cylinder (aluminum portable), BP Instruments (Wall mounted-Aneroid), Stethoscope, Automatic defibrillator, Resuscitations bag (ambu bag, laryngoscope, airways and mask of different size including pediatric), manual foot operated suction pump. I.V. Fluid and I.V. Sets, Tourniquet, First-Aid Box (Dressing material/Antiseptic lotion/ Analgesic etc.) Linen/Blanket, Laryngeal mask airway of all sizes.

The following paramedical staff are required with proper uniform and name of the person written on the uniform:

Trained Paramedical staff	1
Nursing staff with knowledge of first aid	1
Driver for ambulance	1

Number of Ambulance shall be provided as given in BoQ (Bill No.3)

v) **Tow Away Vehicle**

The vehicle fitted with VTS shall be in good condition and registration number not older than 2 years. The vehicle shall be painted with approved colour pattern with road authority name and emblem painted sides, back and front. The Contractor must employ following manpower to work in shifts:

- a) Driver with knowledge of vehicle repair
- b) A helper

The vehicle shall run minimum 5 km daily (even for dry run), to be eligible for monthly payment.

Number of Tow Away Vehicles shall be provided as given in BoQ (Bill No.3)

vi) In case of absence/deficiencies in respect of vehicles/manpower/equipment, as mentioned herein, found during inspection by Engineer/Authority Representative, a penalty of Rs.5000/- per item per incidence shall be levied.

3 Maintenance Standards for Other BOQ Items

3.1 Maintenance standards for cleaning, clearing and repairing roadside open/unlined/lined/covered drains and cross drainage works

- i) The work shall consist of cleaning, clearing, deepening and reshaping of roadside drains and making shallow lateral drains on shoulders to drain out the rain water/ surface water effectively from bituminous surface as well as from roadside berms.
- ii) Disposal of sediments, extraneous debris or vegetation growth, blocking flow.
- iii) Safety devices and signs shall be placed as per MoRTH Specifications for Road and Bridge Works (5th Revision) **Clause No. 112.**
- iv) The excavated material shall be disposed off as directed by Engineer-in-charge with all leads and lifts.

- v) The drain slopes and sides shall be dressed up to original flow line and cross section.

3.2 Maintenance standards for “carrying out cleaning, removing of dust/silt/thrash from carriageway.

- i) However, width of carriageway to be kept clean as per BOQ provision is up to ROW, it includes;
 - a) Total width of carriageway (LHS + RHS) including median width.
 - b) Width of service roads (LHS + RHS) wherever service roads are in existence.
 - c) Width of all structures such as flyovers, major bridges, minor bridges, culverts, subways, etc.
- ii) For cleaning of carriageway, the Contractor shall deploy mechanical broomer with tractor. Contractor shall maintain log book of this mechanical broomer and submit the Xerox of this along with statement of work done.

3.3 Maintenance standards for “Removal of rank vegetation/weeds from shoulders and embankment slopes.

- i) The contractor shall keep the shoulders, embankment slopes upto right of way (RoW) on both sides complete in all respects.
- ii) The work shall include breaking of clods, rough dressing and disposal of waste and vegetation outside RoW as per directions of the Engineer.
- iii) The contractor shall maintain separate signed muster rolls of deployed labours & supervisors and log books of tractors. The muster rolls and log books shall be made available for inspection. Xerox copy of log books and muster rolls shall be submitted along with statement of work done by the contractor.
- iv) If a contractor fails to keep the specified area without weeds, unwanted vegetation, debris (as per provision of BOQ), a penalty of Rs. 500/km/incidence shall be imposed. The Engineer’s decision in this context is binding on the Contractor.

3.4 Maintenance standards for routine maintenance of road signs and delineators

- i) The work shall consist of washing of signs, delineators, removal of posters etc. and repair to supporting structures with repainting.
- ii) The road signs and delineators should be thoroughly washed using a detergent solution followed by a lean rinse and whole face of the sign shall be dried.
- iii) Defects in supporting structures like bullet holes, surface marks or bent posts shall be repaired with appropriate tools.
- iv) Damaged area shall be cleaned and loose/flaking paint shall be removed. Bullet holes shall be filled with filler and supporting structures shall be painted with first quality enamel paint in two or more coats.

PART-II

SPECIFICATIONS FOR ROAD MAINTENANCE WORKS

1. General

1.1 All materials, works and construction operations shall conform to the requirements laid down in the “Specifications for Road and Bridge Works” (5th Revision), Ministry of Road Transport and Highways, Published by Indian Roads Congress (IRC), New Delhi; IRC:82 “Code of Practice for Maintenance of Bituminous Surfaces on Highways” and IRC:SP:83 Guidelines for Maintenance, Repairs and Rehabilitation of Cement Concrete Pavements” wherever applicable. Where the Specification for a work is not given, sound engineering practice shall be adopted to the satisfaction of the Engineer.

“Specifications for Road and Bridge Works, Ministry of Road Transport and Highways” (5th Revision) is hereinafter referred to as MoRTH Specifications.

2 Arrangement for Traffic during Construction

2.1 The Contractor shall take all necessary measures and make arrangements for the safety during construction in accordance with the requirements of **Clause 112** of MoRTH Specifications. He shall provide, erect and maintain all such barricades, signs, markings, flags, lights as required or directed by the Engineer for safety of traffic passing through the section under repairs/improvement.

2.2 All maintenance works on the road shall be carried out in a manner which would cause least interference to the traffic. In stretches where resurfacing or riding quality improvement works are to be taken up, the Contractor during execution of work shall provide and maintain proper passage for traffic. Where it is not possible or safe to allow traffic on part width of the carriageway, a temporary diversion of proper Specifications shall be constructed by the Contractor at his cost. The Contractor shall take prior approval of the Engineer regarding traffic arrangements during construction.

2.3 All arrangements for traffic during construction shall be considered as incidental to the work and shall be Contractor’s responsibility. The Engineer shall determine the penalty to be imposed on the Contractor for deficiency in compliance to the requirement.

3 Quality Control

3.1 Quality control on materials and workmanship is the primary responsibility of the Contractor. Quality control shall be exercised in accordance with the Quality Plan approved by the Engineer. The Engineer may, during and after construction test the quality of materials and work in order to verify conformance with the prescribed Specifications.

3.2 An attempt shall be made to attend to defects like potholes, undulations, rutting, bleeding, linear and alligator cracks and eroded edges etc. at an initial stage itself. Thermal bonded patches of regular rectangular shapes without bump or sump shall preferably be adopted.

4 Specifications for Routine Maintenance

Before any work is started, signs, barriers, etc. shall be placed and necessary arrangements made for ensuring safety of traffic and workers in the work zone, as described in **Clause 2** of this Section

Preparation of the surface prior to application of any treatment, shall be carried out in accordance with the relevant Clauses of MoRTH Specifications.

After completion of the work, the site shall be left cleaned and tidy. No stockpiles of material shall be left on the road.

5 Repair and Maintenance works related to Rigid Pavements

All repair and maintenance works related to Rigid Pavements shall be carried out following IRC:SP:83 (Guidelines for Maintenance, Repairs & Rehabilitation of Cement Concrete Pavements).

SECTION 8
DRAWINGS AND SCHEDULE OF DRAWINGS

SECTION-9

FINANCIAL BID FORM AND BILL OF QUANTITIES

SECTION-9**FINANCIAL BID FORM AND BILL OF QUANTITIES****FINANCIAL BID FORM**

To

(Authorized Representative of Employer)

DESCRIPTION OF WORKS: BID FOR (Name of work)

Reference letter No.

Dear Sir,

Having examined the site of works and Bid Documents, comprising Instructions to Bidders, Scope of Works, Conditions of Contract, Technical Specifications, Bill of Quantities and schedules for the execution of the above named works, we, the undersigned offer to execute and complete such works and remedy any defects therein in conformity with the said bid documents at tender premium as quoted in the Financial Bid.

2. We undertake, if our Bid is accepted, to commence the work within fifteen (15) days of receipt of the order to commence, and to complete and deliver the sections and whole of the works comprised in the contract within the period stated in the bid hereto.
3. If our Bid is accepted, we will furnish Performance Security (ies) in the form of a Bank Guarantee to be jointly and severally bound on us, in accordance with the Conditions of Contract.
4. We agree to abide by this Bid for a period of Ninety (90) days from the last date fixed for Bid Submission and it shall remain binding upon us and may be accepted at any time before the expiry of that period.
5. We confirm our agreement to treat the Bid document and other records connected with the works as secret and confidential documents and shall not communicate information contained therein to any person other than the person authorized by the Employer or use such information in any manner prejudicial to the safety and integrity of the works.
6. Unless and until an agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us, but without prejudice to your right to withdraw such acceptance without assigning any reasons thereof.
7. We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this _____ day of _____ 20----

Signature _____ in the capacity of _____ duly authorized**

To Sign Bid for and on behalf of

(in block capital letters)

Address: _____

Signature of Witness _____

Name of witness _____

Address of witness _____

**DESCRIPTION OF WORKS:
FINANCIAL BID**

S. No.	Description	Amount
1	Grand Total of BOQ	Rs. ----- (In words)
	I/We agree to execute the above works on the tender premium -----% above/below the Grand Total of the project cost as given above.	(In words) ----- percent Above/Below

BILL OF QUANTITIES

1. Preamble

- i) The Bill of Quantities (BOQ) shall be read in conjunction with the Instructions to Bidders, Conditions of Contract, Road Maintenance Standards and Specifications for Road Maintenance Works.
- ii) The quantities given in the Bill of Quantities are estimated quantities. The basis of payment will be actual quantities of items of work carried out and valued at the rates tendered in the BOQ alongwith accepted/awarded tender premium. The accepted/awarded tender premium above/below the grand total of the project cost shall be applicable for individual items of work to determine payable amount to Contractor for work done subject to other contractual provisions. Any variation shall be dealt with as per contract provisions.
- iii) The rates and prices tendered in the BOQ shall include all equipment, tools, spares, labour, supervision, overheads, consumables, materials, erection, maintenance, testing of input material delivered, profit, taxes and duties together with general risks, liabilities and obligations set out and implied in the contract and other incidentals to comply with the requirements of Standards and Specifications.
- iv) Payment for performance based activities like maintenance of median and existing plants (Item no. 2.1), treatment and repair of pot holes/ruts (Item no. 3.1) and providing route patrol and surveillance, automobile assistance, tow away cranes and ambulance services (Item no. 3.2) shall be indexed on performance scale of 100 marks as given in Table below:

BOQ Item no.	Brief Description	Weightage for performance rating	Remarks
2.1	Maintenance of median and existing plants:	50%	
	i. Watering of plants including dressing of medians		
	ii. Application of FYM or sludge	10%	
	iii. Application of insecticides/pesticides/fungicide	5%	
	iv. Training and pruning of shrubs/plants	20%	
	v. Replacement of dead/damage plants	15%	
3.1	Providing treatment and repair to pot holes/ruts	To be assessed km wise during bi-monthly inspection as per road Maintenance Standards indicated in Clause 2.1	Performance measurement to be assessed based on road maintained as per standards as a proportion of total project length

3.2	Providing road patrols and surveillance, automobile assistance, tow away cranes and ambulance service	Each vehicle shall be assessed as under: i. vehicle fitness and availability of required equipment – 25% ii. GPS based log record of vehicle movement – 25% iii. availability of trained personal manning the vehicle – 20% iv. Average response time of ambulance and cranes as compared to stipulated Standards -30%	All the vehicles provided in the contract shall be fitted with VTS
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- v) Performance assessment for performance based items of work, shall be done through inspection by the Engineer at least two times during the month and overall rating can be done on the basis of average of assessments made during the inspection.
- vi) The Contractor shall submit at least once in two months video recording of condition of the Project Highway with special emphasis on performance based items.
- vii) For performance based items of work, the Contractor shall be entitled for receiving payment proportionate to the average percentage performance assessed for achievement between 80% to 100%.
- viii) The Contractor shall not be entitled for payment of performance based items of work if the average performance is rated less than 80%.
- ix) A rate or price shall be entered as a single rate as Tender Premium % above/below on the rate/amount in the BOQ.

NOTE FOR EMPLOYER:

- i) The items of work given in the BOQ are indicative. Employer may include new items or delete items depending on the requirements of the work.
- ii) The performance based items given in the BOQ are indicative and may be changed as per requirements.
- iii) The rates of items as per applicable Schedule of Rates are required to be worked out and included in the BOQ and accordingly amount is to be calculated and included in the BOQ/Summary.
- iv) Road maintenance standards given in Part-I for some items of work are indicative. These may be amended/supplemented as per specific requirement of work.

BILL OF QUANTITIES**SUMMARY**

BILL NO.	DESCRIPTION	AMOUNT (Rs.)
BILL NO. 1	ROAD MAINTENANCE	
BILL NO. 2	ROAD PROPERTY MAINTENANCE	
BILL NO. 3	PERFORMANCE BASED INCIDENT MANAGEMENT AND PAVEMENT REPAIRS	
	TOTAL	

BILL NO.1 : ROAD MAINTENANCE					
Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
1.1	Providing spot reconditioning, reconstruction and regravelling to repair specific erosion or other damages for restoring the eroded area to originally constructed cross section on cuts and fills slopes/shoulders conforming to Technical Specifications Clause no. 3002 . Fill material should be brought from borrow areas located outside ROW conforming to Technical Specification no. 305 . Watered and well compacted with plate compactor or power rammer with all leads and lifts as directed by the Engineer (Quantity of compacted Fill material to be measured on cross sectional area basis)	Cum			
1.2	Providing repair to stone pitching/apron over the filter media/drainage layer at scattered locations over the slopes of guide bunds, river training works , and road embankments as per Technical Specifications Clause no. 2504 complete in all respects as directed by Engineer involving the below given operations however as per its actual applicability at site.				
	i) Providing and laying 200 mm granular material filter conforming to MoRTH Specifications Clause no. 2504 complete in all respects as per direction of Engineer-In-Charge.	Cum			
	(ii) Providing repair to damaged stone pitching/apron over the prepared surface as per technical Specifications Clause no. 2504 complete in all respects as per directions of Engineer.				
	a) Using boulders available at site. (The job includes removal and stacking of boulders from damaged location.)	Cum			
	b) Using material procured by the agency.	Cum			
1.3	Providing and laying 300 mm thick stone pitching covering the slopes of guide bunds/road embankments or other location over a layer of 200 mm granular material filter conforming to MoRTH Specification Clause No. 2504 complete in all respects as directed by the Engineer.	Cum			
1.4	Providing repair to grouted stone pitching with 1:3 cement sand mortar over the already prepared surface/ slopes of guide bunds, river training works, and road embankments as per MoRTH Section 2500 complete in all respect as directed by the Engineer.				
	a) Using stone available at site (The job include removal, cleaning and stacking of stone from the damage locations)	Cum			
	b) Using material procured by the agency.	Cum			

BILL NO.1 : ROAD MAINTENANCE					
Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
1.5	Providing 250 mm thick grouted stone pitching/apron with 1:3 cement sand mortar over the already prepared surface/slopes of guide bunds, river training works, and road embankments as per MoRTH Section 2500 complete in all respects as directed by the Engineer.	Cum			
1.6	Clearing, cleaning, deepening and reshaping of roadside unlined/kaccha drains and making shallow kaccha lateral drains on shoulders wherever required, including removal and disposal of sediments, extraneous debris and vegetation growth blocking the free flow from site outside ROW with all leads and lifts complete in all respects as directed by the Engineer-in-Charge and as per Maintenance Standards Clause no. 3.1 (Frequency of cleaning in urban areas will be quarterly whereas in rural areas, it will be twice in a year i.e. before and after monsoon).				
	a) Drains having depth upto 0.6 meter	RM			
	b) Drains having depth more than 0.6 meter	RM			
1.7(A)	Clearing road side/Median open lined/pucca drains to bring them to original shape, drainage capacity including disposal of sediments, extraneous debris and vegetation growth blocking the free flow from site outside ROW with all leads and lifts complete in all respects as directed by the Engineer-in-Charge and as per Maintenance Standards Clause no. 3.1 (Frequency of cleaning in urban areas will be quarterly whereas in rural areas it will be twice in a year i.e. before and after monsoon).				
	a) Drains having cross-sectional area upto 0.3 Sqm	RM			
	b) Drains having cross-sectional area more than 0.3 Sqm	RM			
1.7(B)	Clearing longitudinal and transverse covered drains and pipe drains including manholes, gratings, channels and gullies etc. and bringing them to original drainage capacity, including disposal of sediments, extraneous debris and vegetation growth blocking the free flow from site outside ROW with all leads and lifts complete in all respects as directed by the Engineer and as per Maintenance Standards Clause no. 3.1. The job also includes removing and refixing of precast slab in original position, (Frequency of cleaning will be as per site requirement however limited to twice in a year).	RM			

BILL NO.1 : ROAD MAINTENANCE					
Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
1.8	Clearing slab/box type culverts and pipe culverts including clearing, cleaning and reshaping of upstream and down stream faces of these culverts within right of way. The job includes disposal of excess material recovered from site including vegetation outside ROW with all leads and lifts complete in all respects as per direction of Engineer-in-Charge. and as per Maintenance Standards Clause 3.1 (Frequency of cleaning will be one time in a year i.e. before start of monsoon).				
	a) Slab/Box Type Culverts	No.			
	b) Pipe Culverts	No.			
1.9	Carrying out proper cleaning, and removing of dust/silt/thrash/plastic/rubbish/garbage/waste from the carriageway, footpaths, verges (excluding the verges of central median) by mechanical means and from shoulders upto Toe line of the embankment including side slopes manually and disposing of the waste material at a suitable place outside ROW as directed by the Engineer and as per Maintenance Standards Clause 3.1 . The job includes cleaning of road studs and delineators also.				
	a) Urban area (Frequency of cleaning once in a month)	Km			
	b) Rural area (Frequency of cleaning will be quarterly).	Km			
1.10	Removal of rank vegetation/weeds and undesirable vegetation from shoulders, embankment slopes upto ROW (both sides) complete in all respects including breaking of clods, rough dressing and disposal of waste material and vegetation at a place outside ROW as per direction of Engineer-In-Charge and as per Maintenance Standards Clause 3.3 (Frequency will be once in a quarter).				
	a) Shoulders including side slopes of embankment up to toe line on both sides of the carriageway. (Frequency of cleaning will be four times in a year; however limited to only areas prone to growth of rank/undesirable vegetation and weeds).	Sqm			
	b) From Toe line of embankment slopes to ROW on both sides of the carriageway (Frequency of cleaning will be two times in a year; however limited to only areas prone to growth of rank/undesirable vegetation and weeds).	Sqm			

BILL NO.1 : ROAD MAINTENANCE					
Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
1.11(A)	Providing slurry seal for filling of hair cracks, surface cracks and preventive/renewal treatment as per MoRTH Specification Clause 512 .				
	a) Filling hair cracks	Sqm			
	b) Filling of surface cracks 1-3 mm and preventing/renewal treatment	Sqm			
	c) Filling of surface cracks 1-3 mm and preventing/renewal treatment	Sqm			
1.11(B)	Providing and applying low viscosity bitumen emulsion for sealing cracks less than 3 mm wide or incipient fretting or disintegration in an existing bituminous surfacing complete as per MoRTH Specifications Clause 3004.3.2 and as per direction of the Engineer-in-Charge (Fog seal)	Sqm			
1.11(C)	Providing sealing to cracks wider than 3 mm complete as per Technical Specifications Clause no. 3004.3.3 and as per satisfaction of the Engineer-In-Charge.	Sqm			
1.12	Providing treatment to bleeding bituminous surface by uniform spreading of crusher dust/other fine graded material as per Clause 3004.4 of Technical Specifications complete in all respects and as per direction of Engineer-in-Charge.	Sqm			
1.13	Repair of localized failed areas of PQC by marking the area, removing the failed area using jack hammer, saw cutting to full depth of PQC, replacing membrane, clearing the area from dust and debris. Placing M-40 grade PQC in a depth equivalent to the existing depth of PQC and installing existing expansion joint/other joint (if there was one).	Sqm			
1.14	Repair of transverse joints of cement concrete pavement involving removal of old joint sealant and sealing with fresh sealant (Poly sulphide) including repair of spalled/broken edges of joints with Epoxy mortar complete as per Clause no. 3005 of Technical Specifications.	RM			
1.15	Full depth repair of PQC slab by removing the entire slab and DLC and underneath layers if required. Placing separation membrane, dowel bars 32 mm dia X 500 mm long and tie bars 16 mm dia X 750 mm long, placing DLC if removed and PQC M-40 grade complete as per the provision of IRC:15 and as per directions of Engineer-in-Charge.	Sqm			
1.16	Sealing of crack/porous concrete with Epoxy grout by injection through nipples complete as per Clause 2803 of Technical Specifications and as per approval of the Engineer.	Sqm			

BILL NO.1 : ROAD MAINTENANCE					
Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
1.17	Applying Epoxy mortar over leached honey combed and spalled concrete surface and exposed steel reinforcement complete as per Technical Specifications Clause 2804 and as per approval of the Engineer.	Sqm			
1.18	Cement pointing of any design/repair to existing pointing, with cement mortar 1:3 on all types of masonry work in super structure/sub structure as per MoRTH Specifications Clause No. 1000 & 1300 .	Sqm			
1.19	Cement plaster/repair to cement plaster in thickness 12-20 mm in cement mortar 1:4 on all types of masonry works in superstructure/substructure at any height as per MoRTH Specifications Clause No. 1000, 1300 and 1400 .	Sqm			
1.20	Repair to all types of damaged stone/brick masonry work in superstructure and substructure of bridges/CD works including dismantling of damaged portion and reconstructing to match with existing pattern without causing any damage to the structure in cement work complete in all respects including testing etc. as directed by the Engineer conforming to MoRTH Specifications Clause no. 1000, 1300 and 1400 . The rate quoted should be after due consideration of the salvage value of the dismantled material.	Cum			
	a) Repair to brick masonry in 1:4 cement sand mortar.	Cum			
	b) Repair to stone masonry in 1:3 cement sand mortar				
1.21	Providing, Laying and compacting Granular Sub Base (GSB) with approved materials complete as per Technical Specifications Clause 401 conforming to Grade 1 Table 400.1/400.2 as per approval of Engineer-in-Charge.	Cum			
1.22	Providing, laying and compacting Wet Mix Macadam (WMM) base course with approved materials complete as per Technical Specifications Clause no. 406 of MoRTH	Cum			
1.23	Providing, laying and compacting Dense Graded Bituminous Macadam complete as per technical Specification Clause no. 505 including tack coat as per Technical Specifications Clause no.503 .	Cum			
1.24	Providing, laying and compacting Bituminous Concrete as per technical Specification Clause no. 507 including tack coat as per Technical Specifications Clause no. 503	Cum			

BILL NO 2 : ROAD PROPERTY MAINTENANCE					
Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
	Maintenance of existing plants.				
2.1	Maintenance of median and the existing plants in it (with a density of 666 plants per km) by basin making, weeding-hoeing, cleaning, levelling and dressing of median, uprooting and removal of weeds, cutting grass, disposal of all muck outside ROW regularly to keep the median clean and plantation in healthy and good condition. The job also includes the cleaning and removal of spilled over earth from median to main carriageway in the portion adjacent to the kerbs all along the median besides cleaning of longitudinal and cross drains in the median. The operation of maintenance in addition to above will also cover and include the following activities:-				
	a) Watering of each plant as and when required depending upon the climatic conditions of the locality/region/season/strictly as per direction of Engineer-in-Charge. The main requirement is to keep the plants/shrubs in healthy, good and surviving condition. The casualty/damage to any plant/shrubs during the maintenance period will be the entire responsibility of the contractor and the contractor shall replace the dead and damaged plants/shrubs at his own cost with new plants of the same species, varieties, age and size etc	Km/month			
	b) Application of FYM or Sludge @ 1/2 cuft or 10 Kg/Plant two times a year during February/March and October/November plus 20 grams of NPK (12:32:16) or bone meal per plant two times a year as detailed above.	Km/month			
	c) Application of insecticide/pesticide/fungicide etc. for control of insects pests and diseases as and when required as per direction of the Engineer.	Km/month			
	d) Training and pruning of all shrubs/plants as and when required to give them required shape, size and spread.	Km/month			
	e) Replacement of dead, damaged plants from the median by healthy & well developed plant of similar species, varieties, age and size etc. within 10 days of occurrence of casualty as noticed/reported or as directed by the Engineer.	Km/month			
	Note: The quoted rates shall be adjusted as per actual density of plants per km at site or alternatively the maintenance of newly planted plants shall be accounted for under this item.				

BILL NO 2 : ROAD PROPERTY MAINTENANCE					
Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
2.2	Maintenance of existing perinnial turf forming grass on embankment slopes, verges, medians and other locations conforming to Technical Specification Clause 307 including watering and maintaining for entire contract period with periodical mowing complete in all respects as directed by the Engineer-in-Charge.	Sqm			
2.3	White wash/cement paint/snowcem in two or more coats to give an even shade and smooth surface for protection of exposed concrete/masonry portion of Bridges/CD works, kerb and wheel guard including scrapping of damage paint from old surface and repairing of the existing surface wherever necessary complete as directed by the Engineer-in-Charge.				
	a) White washing two coats on existing surface	Sqm			
	b) White washing three coats on new surface after carrying out repair to the new surface so as to make it smooth, free from honey combing and other defects.	Sqm			
2.4	Painting with high gloss synthetic enamel paint two coats to give an even and smooth surface for protection of exposed concrete/masonry portion of Bridges/CD works/parapet, kerb painting and repairing wherever necessary, complete as per approval of the Engineer.				
	a) Old existing surface	Sqm			
	b) New surface after applying priming coat with cement primer (two coats) of approved quality.	Sqm			
2.5	Painting all types of M.S/GI railing as and when required with two coats of synthetic enamel paint of approved brand after cleaning the surface complete in all respects as directed by the Engineer.				
	a) On existing Railing	Per RM of full height of railing			
	b) On new surface after applying two coat of metallic primer of approved quality and make.	Per RM of full height of railing			

BILL NO 2 : ROAD PROPERTY MAINTENANCE					
Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
2.6	Painting two coats on steel structure to give an even shade and smooth surface as per direction of the Engineer-in-Charge				
	a) Old existing surface	Sqm			
	b) New surface after applying two coat metallic primer of approved quality and make.	Sqm			
2.7	Cleaning, removing, clearing of dust and dirt from the existing metal crash barrier and pedestrian guard rail by washing with water and detergent etc. complete as directed by the Engineer.	RM			
2.8	Carrying out routine maintenance to all types of road signs complete as directed by the Engineer and Maintenance Standards Clause 3.4 of the bid document.				
	a) Road sign Boards mounted on single post.	No.			
	b) Road sign Boards mounted on double post.	No.			
	c) Overhead gantry road sign boards	No.			
	d) Cantilever sign board	No.			
2.9	Carrying out repair to road signs including strengthening, resetting or otherwise repairing signs made out of Retro-Reflective sheets. Job includes patch repair to aluminium sheet, RR Sheet, posts, signs/script and repainting of posts at damaged location/positions with approved quality of enamel paint complete in all respect conforming to respective IRC/MoRTH Specifications and Maintenance Standards Clause 3.4				
	a) Road sign Boards mounted on single post.	No.			
	b) Road sign Boards mounted on double post.	No.			
	c) Overhead gantry road sign boards	No.			
	d) Cantilever Gantry	No.			
2.10	Carrying out repair to road signs including strengthening resetting or otherwise repairing signs made out of M.S. Sheet. Job also include patch repair to M.S. Sheet, posts, signs/script and repainting of damaged portions of boards, posts with approved quality enamel paint complete in all respect conforming to respective IRC/MoRTH Specifications and Maintenance Standards Clause 3.4				
	a) Road sign Boards mounted on single post.	No.			
	b) Road sign Boards mounted on double post.	No.			
	c) Overhead gantry road sign boards	No.			
	d) Cantilever Gantry	No.			

BILL NO 2 : ROAD PROPERTY MAINTENANCE					
Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
2.11	Painting two coats on old surface after minor repairs to give an even and smooth surface and printing letters and figures with 1 st quality synthetic enamel paint of approved brand and manufacture complete in all respects conforming to respective IRC Specifications.				
	a) Hectometer stones	No.			
	b) Kilometer stones	No.			
	c) 5 th Kilometer stones	No.			
	d) Boundary stones	No.			
2.12	Providing and fixing reinforced cement concrete M-15 grade 5 th kilometer stones, kilometer stones and hectometer stones of Standard Design as per IRC:8-1980 and MoRTH Specification Clause 804 including two coat painting with synthetic enamel paint after applying approved quality cement primer and printing letters with approved quality synthetic enamel paint on both sides as per MoRTH Specification Clause 804 and as per drawing and direction of the Engineer-in-Charge. The job includes fixing of these distance-measuring stones at places after dismantling of existing damaged stones, and further disposing of dismantled material outside ROW. Rates quoted to be inclusive of the salvage value of the useful material obtained during the course of dismantling. The fixing of these stones shall be done with M-10 cement concrete as per drawing and approval of the Engineer-in-Charge.				
	a) Hectometer stones	No.			
	b) Kilometer stones	No.			
	c) 5 th Kilometer stones	No.			
2.13	Painting two coats with first quality enamel paint of approved make and quality to give an even shade including writing, letter and figure etc. complete in all respects as per IRC standard.				
	a) Printing letters of CD no.	No.			
	b) Marking flood gauge and HFL	Sqm			
2.14	Strengthening and repairing of partially damaged M.S. pedestrian Railing/pipe railing complete including welding, repairing/replacement of damaged parts/ portions (salvage material will be Contractor's property) as per existing pattern complete in all respects including painting of the damaged portions to match with the existing railing and as per direction of the Engineer in-charge.	Per RM of full height of railing			

BILL NO 2 : ROAD PROPERTY MAINTENANCE					
Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
2.15	Repair of damaged single faced W-Beam metal crash barrier made out of members. Job includes repair of old damaged members by straightening the members and removing and repairing all the existing dents as well as other defects and neatly refixing the repaired members as directed by the Engineer-in-Charge including fasteners and fixing etc. complete in all respects.	Per RM of crash barrier			
2.16	Repair of damaged double faced W-Beam metal crash barrier made out of members. Job includes repair of old damaged members by straightening the members and removing and repairing all the existing dents as well as other defects and neatly refixing the repaired members as directed by the Engineer-in-Charge including fasteners and fixing etc complete in all respects.	Per RM of crash barrier			
2.17	Replacement of damaged single faced W-Beam metal crash barrier made out of the following members. Job includes taking out old damaged member and neatly refixing the new member (with cement concrete foundation in M-20 for Post) complete in all respects as per MoRTH Specifications Clause 810 and as directed by Engineer-in-Charge including Fasteners and fixing etc complete in all respects. The rates quoted shall account for the rebate for cost of salvage value for old member to be replaced.				
	a) Beam made out of cold rolled steel strip W profile of 3 mm thick having a minimum yield strength of 2400 kg/sqcm having width of 313 mm and depth of corrugation as 83 mm hot dip galvanised of zinc coating @ 550 gm/sqm	RM			
	b) Post consisting of cold rolled channel 150 mm x 75 mm x 5 mm having minimum yield strength of 2400 kg/sqcm. The total length of post shall be 1900 mm and minimum height of post above concrete foundation shall be 800 mm or as per existing post at site to match with the existing posts, hot dip galvanized of zinc coating @ 550 gm/Sqm. The post shall be fixed in M-20 grade of cement concrete in a pit of size 350 mm X 350 mm X 1200 mm as per drawing and instructions of the Engineer. No separate payment would be made for concreting.	No.			

BILL NO 2 : ROAD PROPERTY MAINTENANCE					
Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
2.17	c) Spacer channels or brackets made out of CRP steel channel section 150 mm x 75 mm x 5 mm having minimum yield strength of 2400 kg/sqcm. The length of spacer channel shall be 330 mm and hot dip galvanised having zinc coating @ 550 gm/Sqm.	No.			
	d) Fasteners, Button head bolts 16 mm X 40 mm long and 20X40 Hex Bolt, with nut and washer, hot dipped galvanized including tack welding to the bolt.	No.			
2.18	Replacement of damaged double faced W-Beam metal crash barrier made out of the following members. Job includes taking out old damaged member and neatly refixing the new member (with cement concrete foundation in M-20 for Post) complete in all respects as per MoRTH Specifications Clause 810 and as directed by Engineer-in-Charge including Fasteners and fixing etc. complete in all respects. The rates quoted shall account for the rebate for cost of salvage value for old member to be replaced.				
	a) Beam made out of cold rolled steel strip W profile double of 3 mm thick having a minimum yield strength of 2400 kg/sqcm having width of 313 mm and depth of corrugation as 83 mm hot dip galvanized of zinc coating @ 550 gm/sqm	RM on each face of beam			
2.18	b) Post consisting of cold rolled channel 150 mm x 75 mm x 5 mm having minimum yield strength of 2400 kg/sqcm. The total length of post shall be 1900 mm and minimum height of post above concrete foundation shall be 800 mm or as per the height of the existing post at site to match with the existing crash barrier, hot dip galvanised of zinc coating @ 550 gm/Sqm. The post shall be fixed in M-20 grade of cement concrete in a pit of size 350 mm X 350 mm X 1200 mm or as per drawing and instructions of the Engineer. No separate payment would be made for concreting. The rate quoted shall be inclusive of the salvage value of the old dismantled materials.	No.			
	c) Spacer channels or brackets made out of CRP steel channel section 150 mm x 75 mm x 5 mm having minimum yield strength of 2400 kg/sqcm. The length of spacer channel shall be 330 mm and hot dip galvanised having zinc coating @ 550 gm/Sqm.	No.			
	d) Fasteners, Button head bolts 16 mm X 40 mm long and 20X40 Hex Bolt, with nut and washer, hot dipped galvanised including tack welding to the bolt.	No.			

BILL NO 2 : ROAD PROPERTY MAINTENANCE					
Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
2.19	Providing and laying thick Mastic asphalt wearing course with paving grade bitumen meeting the requirement given in Table 500-29, all complete as per Clause 515 of Technical Specifications.				
	a) 25 mm thick	Sqm			
	b) 40 mm thick	Sqm			
2.20	Providing and laying Stone Mastic Asphalt (SMA) complete as per technical Specification Clause No. 4.3.11 and 8.4.15 of the Manual for Construction and Supervision of Bituminous work published by IRC on behalf of MoRTH and as directed by the Engineer-in-Charge	Cum			
2.21	Replacement of stolen/missing retro-reflectorised traffic sign boards by providing and fixing new retro-reflectorised cautionary, mandatory and informatory sign as per ASTM D 4956-04 made of High intensity grade Microprismatic sheeting Type-IV, fixed over aluminium sheeting 2.0 mm thick supported on a MS Angle Iron Frame comprising of 40 mm X 40 mm X 4 mm. This frame is further welded to MS Angle 75 mm X 75 mm X 6 mm size, 3.5 meter high vertical post complete as per drawing. This vertical post shall be embedded in M-15 grade cement concrete in a pit of size 450 mm X 450 mm X 600 mm, 600 mm below ground level complete in all respects as per direction of the Engineer.				
	a) Informatory Sign				
	i) Parking Sign 900 mm X 600 mm	No.			
	ii) Advance Direction, Destination, Reassurance and place identification sign (size 2100 mm X 1700 mm) as per drawing with two vertical posts embeded in M-15 cement concrete details as per description given above and as per drawing.	Sqm			
	iii) Facility information Sign 800 mm x 600 mm	No.			
	b) Cautionary/Warning sign	No.			
	i) Triangular 900 mm side	No.			
	c) Mandatory/Regulatory sign				
	i) Octagonal "STOP" sign	No.			
	ii) 600 mm dia Circular sign	No.			
	iii) Give Way sign 900 mm triangular side.	No.			

BILL NO 2 : ROAD PROPERTY MAINTENANCE					
Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
2.22	Supplying and installation of delineators (Roadway indicators) 95 cm high above ground level of total length 135 cm painted black and white in 15 cm wide strips fitted with 3 nos. rectangular microprismatic reflective sheeting fixed on 2 mm thick aluminum sheet of size 80 mm X 100 mm one in each black strip duly riveted in the rectangular tubular section facing direction of traffic. Rectangular Tubular section of size 100 mm X 50 mm X 3 mm (thickness). The Tubular section of the delineator is encased all around with steel welded wire mesh of thickness 2.5 mm, in size 120 mm X 70 mm X 760 mm as shown in the drawing. The welded wire mesh is painted with two coats synthetic enamel white paint after applying two coat red oxide primer. The delineator is embedded in M-15 cement concrete in pit size 300 mm X 300 mm X 450 mm. The rate quoted is for the complete job as per Drawing and direction of Engineer.	No.			
2.23	Cats Eye/Pavement Marker (NMC nail Less):- Made out of Acrylic-strene-Acrylonitril or Hi-Impact polysterene fitted with Moulded of Methacrylate (NMC) reflector cube corner reflector design; Filled with tightly adhering potting compound as per ASTM D788 size 11.5 cm X 7cm X 1.6 cm or 10 cm X 10 cm X 1.75 cm provided with bituminous adhesive in sufficient quantity with each unit for fixing. No nail should be allowed for fixing.	No.			
2.24	Providing and fixing retro-reflective stickers (Engineering grade) of size 10 cm X 5 cm on MBCBs and other structures as per MoRTH Specifications Clause no. 801 and as per approval of the Engineer-in-Charge,	No.			
2.25	Providing and marking of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 gms/sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished Surface to be level, uniform and free from streaks and holes complete in all respects. The job includes marking of centre line, shoulder line, edge line, zebra crossing marking, arrows and dashes marking at the junctions as per Technical Specifications Clause 803.4 complete in all respect and as per approval of the Engineer-in-Charge.	Sqm			

BILL NO 2 : ROAD PROPERTY MAINTENANCE					
Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
2.26	Providing Random Rubble masonry in cement mortar 1:3 for drains, protection walls, boundary wall etc complete in all respect as per Technical Specifications Clause 309 and 1400 and as per directions of Engineer-in-Charge.	Cum			
2.27	Providing and laying 40 mm thick M-15 grade cement concrete coping on the top of parapet walls, boundary walls and other places as per direction of the Engineer-in-Charge.	Sqm			
2.28	Providing and laying of filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in Clause 2504.2.2. of Technical Specifications to a thickness not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete in all respects and meeting with the requirement of Clause 710.1.4 of IRC:78	Cum			
2.29(A)	Providing and fixing New MS railing/pipe railing in medians/horizontal curves including foundation concrete (45 cm x 45 cm x 75 cm in M-15) and two coat painting after applying two coat metallic primer of approved quality. The job includes dismantling of existing damaged railing and the rate quoted should be inclusive of the salvage value of dismantled material if any, complete as per Technical Specification Section 300, 1500, 1700 and 1900, drawing and direction of the Engineer.	MT			
2.29(B)	Providing and fixing New MS railing/pipe railing for medians/horizontal curves including foundation concrete (45 cm x 45 cm x 75 cm in M-15) and two coat painting with first quality synthetic enamel paint after applying two coat metallic primer of approved quality, complete as per Technical Specification Section 300, 1500, 1700 and 1900, drawing and direction of the Engineer.	MT			
2.30(A)	Providing and fixing chain link/welded mesh fencing as per design shown in the drawings matching with the existing fencing. Fixing is to be done with M-15 grade cement concrete in pit of size (45 cm x 45 cm x 75 cm) complete in all respects. The job includes two coat painting with 1 st quality synthetic enamel paint, after applying one coat approved quality metallic primer.	MT			

BILL NO 2 : ROAD PROPERTY MAINTENANCE					
Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
2.30(B)	Dismantling the old damaged chain link/welded mesh fencing and replacing it with new chain link/welded mesh fencing as per design shown in the drawings matching with the existing fencing in the section. Fixing is to be done with M-15 grade cement concrete in pit size of 45 cm X 45 cm X 75 cm complete in all respects. The fencing is to be painted with two coat enamel paint of first quality after applying one coat approved quality metallic primer. The rate quoted should be with due credit for salvage value of old damaged fencing material.	MT			
2.31	Construction and laying Cast in situ cement concrete kerbs in M-20 grade and matching with the existing kerb section complete including dismantling and disposal of existing damaged broken kerbs as per Technical Specifications Clause no. 408 for kerbs (M-20 grade) The job includes jointing of adjacent kerbs and carrying out pointing as per existing pattern.	Cum			
2.32	Repairing of damaged kerbs after dismantling of the kerbs upto minimum of 100 mm and making good the section with M-20 concrete to match with the existing section including form work, curing, painting with two coats of first quality synthetic enamel paint etc. complete in all respects conforming to relevant MoRTH Specifications Clauses and as per direction of Engineer.	Cum			
2.33	Providing and fixing 1.8 metre high GI barbed wire fencing with 2.4 m angle iron posts 50 mm X 50 mm X 6 mm placed every 3 metre centre to centre founded in M 15 grade cement concrete in pit size of 225 mm X 225 mm X 600 mm below ground level, every 15 th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and provided with 12 horizontal lines and 2 diagonals interwoven with horizontal wires, fixed with GI staples, turn buckles etc. complete as per drawing and Technical Specifications Clause no. 807 .	RM			

BILL NO 2 : ROAD PROPERTY MAINTENANCE					
Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
2.34	<p>Providing and fixing single faced W-Beam metal crash barrier (W-profile safety guard rails) made out of the following members. Job includes erection complete in all respects as per MoRTH Specifications clause no. 810 and using M-20 grade cement concrete wherever required as directed by the Engineer.</p> <p>Beam made out of cold rolled steel strip W profile double of 3 mm thick having a minimum yield strength of 2400 kg/sqcm having width of 313 mm and depth of corrugation as 83 mm hot dip galvanized of zinc coating @ 550 gm/sqm.</p> <p>Post consisting of cold rolled channel 150 mm x 75 mm x 5 mm and spaced 2 mtr. centre to centre having minimum yield strength of 2400 kg/sqcm. The length of post shall be 1900 mm and minimum height of post above concrete foundation shall be 800 mm, hot dip galvanised of zinc coating @ 550 gm/Sqm, the post shall be fixed as required</p>	RM			
2.35	<p>Providing and fixing double faced W-Beam metal crash barrier made out of the following members. Job includes erection complete in all respects as per MoRTH Specifications Clause no. 810 and using M-20 grade concrete wherever required as directed by Engineer.</p> <p>Beam made out of cold rolled steel strip W profile double of 3 mm thick having a minimum yield strength of 2400 kg/sqcm having width of 313 mm and depth of corrugation as 83 mm hot dip galvanised of zinc coating @ 550 gm/sqm.</p>				

BILL NO 2 : ROAD PROPERTY MAINTENANCE					
Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
2.35	<p>Post consisting of cold rolled channel 150 mm x 75 mm x 5 mm having minimum yield strength of 2400 kg/sqcm. The length of post shall be 1900 mm and minimum height of the Post above concrete foundation shall be 800 mm, hot dip galvanized of zinc coating @ 550 gm/sqm. The post shall be fixed by embedding it in a pit of size 350 mm X 350 mm X 600 mm filled with M-20 cement concrete.</p> <p>Spacer channels or brackets made out of CRP steel channel section 150 mm x 75 mm x 5 mm having minimum yield strength of 2400 kg/sqcm. The length of spacer channel shall be 330 mm and hot dip galvanized having zinc coating @ 550 gm/Sqm.</p> <p>Fasteners, Button head bolts 16 mm X 40 mm long and 20X40 Hex Bolt, with nut and washer, hot dipped galvanized including tack welding to the bolt.</p>	RM			
2.36	Providing and fixing M.S. grating (heavy duty) of various sizes over open drains as per details, design or as directed to suit and match the existing grating including cutting, fabricating, hoisting, erecting, fixing in position making riveted/welded connection, if required and one coat of anti-corrosive paint and over it two coats synthetic enamel paint etc. complete as directed by the Engineer.	MT			
2.37	Removal of unauthorized boards within ROW and stacking etc. complete in all respects including transportation from site to the nearest store/suitable location as per direction of Engineer-in-Charge.	No.			
2.38	Supplying and Fixing LED Solar Blinker mounted on a steel pole to guide and warn various vehicle drivers of forthcoming flyovers, crossover, underpass and other intersections and accident-prone region. Manufactured using superior grade battery, solar panel and other components, clearly visible for enhancing road safety during fog, rain and other adverse weather conditions including maintenance and replacement of the same and as directed by the the Engineer-in-Charge.	No.			
	Maintenance of existing LED Solar Blinker including replacement of battery, LEDs and other accessories	No.			

BILL NO 2 : ROAD PROPERTY MAINTENANCE					
Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
2.39(A)	Maintenance of existing High Solar High Mast Light/ Street Light/Tunnel Light/Led Light/Canopy Light/Toll Plaza Lighting etc. including replacement of battery, Bulbs and other accessories	No.			
2.39(B)	Providing and marking of hot applied thermoplastic compound 3 mm thick including reflectorising glass beads @ 250gms/sqm area, thickness of 3 mm is exclusive of surface applied glass beads as per IRC:35. The finished Surface to be level, uniform and free from streaks and holes complete in all respects. The job includes marking of center line, shoulder line, edge line, zebra crossing marking, arrows and dashes marking at the junctions as per Technical Specifications Clause no. 803.4 complete in all respects and as per approval of the Engineer-in-Charge.	Sqm			
2.40	Replacement of damaged cement concrete chequered tiles with new 25 mm thick M-20 precast cement chequered tiles on the already prepared/existing base with 1:3 cement sand mortar. The joint of the tiles to be bonded and finished with neat cement slurry complete in all respects as per direction and approval of Engineer. The job includes removal of damaged tile and the mortar on the existing base, cleaning the surface, curing it, applying neat slurry etc. complete in all respects.	Sqm			
2.41	Providing and fixing of Manhole/Drain/Cement Concrete Precast slab M-20 grade excluding the cost of HYSD reinforcement complete as per drawing and Technical Specifications Section 1700.	Cum			
2.42	Providing and laying reinforced cement concrete pipe NP4/prestressed concrete pipe of 1200 mm dia for culverts on first class bedding of granular material including fixing collar with cement mortar 1:2, excavation, protection works, backfilling, concrete and masonry works in head walls and parapets all complete:				
	a) In single row	M			
	b) In two rows	M			

BILL NO.3 - PERFORMANCE BASED INCIDENT MANAGEMENT AND PAVEMENT REPAIRS

Item No.	Description of Items	Unit	Quantity	Rate (in Rs.)	Amount in Rs
3.1	Providing treatment and repair to pot holes/ruts of any depth/patch repair of all types of bitumen pavement complete as per Technical Specification Clause 3004.2 , and as per direction of Engineer by using paving grade bitumen/emulsion/cold ready mix material. The job includes removal of all failed material, trimming of completed excavation to provide firm vertical faces, cleaning of surface, painting of tack coat on the sides and base of excavation as per Clause no. 503 , back filling the patch with bituminous material as per Clause no. 509 . Compacting trimming and finishing the surface to form a smooth continuous surface all as per Clause no. 3004.2 of Technical Specifications.	Per month			
3.2	Providing road patrols and surveillance, automobile assistance, tow away cranes and ambulance services as per maintenance standard Clause 2.2 with: a) Patrol vehicles:no. b) Ambulances:no. c) Tow away vehiclesno.	Per Month			
TOTAL FOR BILL NO. 3					

Note: In case of any error of Clause of MoRTH Specifications, the appropriate correct clause of the MoRTH Specifications shall prevail, as per the decision of Engineer-in-Charge/Employer.

(The Official amendments to this document would be published by the IRC in its periodical, 'Indian Highways' which shall be considered as effective and as part of the Code/Guidelines/Manual, etc. from the date specified therein)