



Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212+800) to Bhiwadi (Km 221+350) in the state of Rajasthan

**BIDDING DOCUMENT FOR
OPEN COMPETITIVE BIDDING**

**Road Infrastructure Development Company
of Rajasthan Ltd. (RIDCOR)**

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October, 2023

**Road Infrastructure Development Company
of Rajasthan Ltd. (RIDCOR)**

OPEN COMPETITIVE BIDDING

(CIVIL WORKS)

NAME OF WORK : Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212+800) to Bhiwadi (Km 221+350) in the state of Rajasthan

PERIOD OF DOWNLOADING OF : FROM 03.10.2023 to
BIDDING DOCUMENT FROM NET TO : 25.10.2023 upto 6.00 PM
TIME AND DATE OF : DATE 16.10.2023 TIME 11.30 AM PRE-
BID CONFERENCE
LAST DATE AND TIME : DATE 25.10.2023 TIME 6.00 PM FOR
DEPOSIT ONLINE
* TIME AND DATE OF OPENING : DATE 26.10.2023 TIME 11.30 AM
TECHNICAL BIDS
* TIME AND DATE OF FINANCIAL : TO BE ANNOUNCED BIDS
PLACE OF OPENING OF BIDS : RIDCOR OFFICE, Jaipur
OFFICER INVITING BIDS : RIDCOR OFFICE, Jaipur

* Should be the same as for the deadline for receipt of bids or promptly thereafter.

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As per Annexure `A`

INVITATIONS FOR BIDS (IFB)
NATIONAL COMPETITIVE BIDDING

Bid No.: NIT No 387 of 2023-24 Date: 27.09.2023

1. M/s Road Infrastructure Development Company of Rajasthan (RIDCOR) hereby invites on-line bids for e-tendering process & invites bids for the construction of works detailed in the table. The bidders may submit bids for any or all of the following works.

Pkg. No.	Name of Work	Approx. value of work (Lacs)	Bid Security (Rs.)	Cost of Document (Rs.)	Period of Completion
1	2	3	4	5	6
1	Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212+800) to Bhiwadi (Km 221+350) in the state of Rajasthan	4658	50,00,000/-	Rs.5000/- (incl. GST) as tender fee (non-refundable) and Rs. 2,500/- as processing fee	09 Months

2. Bidding documents may be download from the website “<https://eproc.rajasthan.gov.in>” from 03.10.2023 to 25.10.2023 for a non- refundable fee as indicated above in column 5.
3. The Bid Security, Tender Fee and Processing Fee of RISL shall only be accepted through electronic mode of payment like RTGS/NEFT/Inter Bank Transfer/Bank Guarantee. The details of unit bank account for payment of Bid Security, Tender Fee and Processing Fee through Electronic mode of payment are as under:
- a) Beneficiary Name : RIDCOR Ltd.
b) Account No. : 50058007643
c) Beneficiary Bank : Indian Bank
d) Beneficiary Branch : M.I. Road, Jaipur-302003
e) Branch IFSC Code : IDIB000M353
4. Bids must be delivered in electronic format on “<https://eproc.rajasthan.gov.in>” on or before 6.00 PM on 25.10.2023 and will be opened on 26.10.2023 at 11.30 AM. If the office happens to be closed on the date of receipt of the bids as specified, the bids will be received and opened on the next working day at the same time and venue.
5. A prebid meeting will be held on 16.10.2023 at 11:30 AM. at the office of RIDCOR-Jaipur to clarify the issues and to answer questions on any matter that may be raised at that stage as stated in Clause 9.2 of „Instructions to Bidders“ of the Bidding documents.
6. Other details can be seen in the bidding documents.
7. Certificate of bid document shall be submitted on a Non-Judicial Stamp of Rs. 1000/-. If bidder does not upload the certificate of correctness as mentioned above, he shall be considered on Non-Responsive in Technical Bid evaluation as per Section-2 Qualification Information.

Signature of Authorized Officer

* (Approximate value of work) Earnest Money for Your Calculation Only.

I₁ – Upto Rs. 20 Crores @2% (Subject to maximum of Rs. 30.00 lacs) I₂
– Upto Rs. 20 – 50 Crores @1.5% (Subject to maximum of Rs. 50.00 lacs)
I₃ – Above Rs. 50 Crore @1%

Bid Document- Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212+800) to Bhiwadi (Km 221+350) in the state of Rajasthan

SECTION 1
INSTRUCTIONS TO BIDDERS
(ITB)

Section 1: Instructions to Bidders

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A. GENERAL

1. Scope of Bid

- 1.1. The Employer (named in Appendix to ITB) invites bids for the construction of works (as defined in these documents and referred to as "the works") detailed in the table given in IFB. The bidders may submit bids for any or all of the works detailed in the table given in IFB.
- 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/tender, bid/tender, bidding/ tendering, etc.) are synonymous.

2. Source of Funds

- 2.1. The expenditure on this project will be met through the state resources in accordance to A&F sanction issued by CE&AS, PWD wide letter no क्रमांक एफ. 7(221)/(A&F) अजु-2/2023-24/डी-1998 dated 11/09/2023.

3. Eligible Bidders

- 3.1. This *Invitation for Bids* is open to all bidders.
- 3.2. All bidders shall provide in Section 2, Forms of Bid and Qualification Information, a statement that the Bidder is neither associated, nor has been associated, directly or indirectly, with the Consultant or any other entity that has prepared the design, specifications, and other documents for the Project or being proposed as Project Manager for the Contract. A firm that has been engaged by the Employer to provide consulting services for the preparation or supervision of the works, and any of its affiliates, shall not be eligible to bid.

4. Qualification of the Bidder

- 4.1. All bidders shall provide in Section 2, Forms of Bid and Qualification Information, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary. The proposed methodology should include programme of construction backed with equipment planning and deployment duly supported with broad calculations and quality assurance procedures proposed to be adopted justifying their capability of execution and completion of work as per technical specifications, within stipulated period of completion.
- 4.2. Deleted
- 4.3. A bidders shall include the following information and documents with their bids in Section 2:
 - (a) copies of original documents defining the constitution or legal status, place of registration, and principal place of business; written power of attorney of the signatory of the Bid to commit the Bidder;

- (b) total monetary value of construction work performed for each of the last five years;
- (c) experience in works of a similar nature and size for each of the last five years, and details of works underway or contractually committed; and clients who may be contacted for further information on those contracts;
- (d) major items of construction equipment proposed to carry out the Contract;
- (e) qualifications and experience of key site management and technical personnel proposed for Contract;
- (f) reports on the financial standing of the Bidder, such as profit and loss statements and auditor's reports for the past five years;
- (g) evidence of access to line (s) of credit and availability of other financial resources facilities (10% of contract value), certified by the Bankers (Not more than 3 months old)
- (h) undertaking that the bidder will be able to invest a minimum cash upto 25% of contract value of work, during implementation of work.
- (i) authority to seek references from the Bidder's bankers;
- (j) information regarding any litigation, current or during the last five years, in which the Bidder is involved, the parties concerned, and disputed amount;
- (k) the proposed methodology and programme of construction, backed with equipment planning and deployment, duly supported with broad calculations and quality control procedures proposed to be adopted, justifying their capability of execution and completion of the work as per technical specifications within the stipulated period of completion as per milestones (for all contracts over Rs.5 Crore).

4.4 **QUALIFICATION CRITERIA**

4.4.1 Qualification will be based on Applicant's meeting all the following minimum pass/fail criteria regarding the Applicant's general and particular experience, personnel and equipment capabilities, and financial position, as demonstrated by the Applicant's responses in the forms attached to the letter of Application.

4.4.2 **Base Year and Escalation**

The base year shall be taken as (Year 2023-24) following enhancement factor will be used for the costs of works executed and the financial figures to a common base value for works completed in India

Year before	Multiply factor
One (2022-23)	1.10
Two (2021-22)	1.21
Three (2020-21)	1.33
Four (2019-20)	1.46
Five (2018-19)	1.61

Applicant should indicate actual figures of costs and amount for the works executed by them without accounting for the above mentioned factors.

In case the financial figures and value of completed works are in foreign currency, the above enhanced **multiplying factors will not be applied**. Instead, current market exchange rate (State Bank of India BC Selling rate as on the last date of submission of the bid) will be applied for the purpose of conversion of amount in foreign currency into Indian rupees.

4.4.3 General Experience

The Applicant shall meet the following minimum criteria:

- (a) Average annual turnover (defined as billing for works in progress and completed in all classes of civil engineering construction works only) over the last five years of **40 per cent (%)** of the value of contract/contracts applied for.
- (b) Experience in successfully completing or substantially completing at least one contract of Road work/ highway (road)/airport runway of at least **40 per cent (%)** of the value of proposed contract within the last five years.

The works may have been executed by the applicant as prime contractor or as a member of joint venture or sub contractor. As sub contractor, he should have acquired the experience of execution of all major items of works under the proposed contract. In case a project has been executed by a joint venture, weightage towards experience of the project would be given to each joint venture in proportion to their participation in the joint venture.

Substantially completed works means those works which are at least 90% completed as on the date of submission (i.e. gross value of work done up to the last date of submission is 90% or more of the original contract price) and continuing satisfactorily. For these, a Certificate from the employer shall be submitted along with the application incorporating clearly name of work, Contract value, billing amount, date of commencement of works, satisfactory performance of the Contactor and any other relevant information.

4.4.4 Personnel Capabilities

The Applicant must have suitably qualified personnel to fill the following positions. The applicant will supply information on a prime candidate and an alternate for each position, both of whom should meet the experience requirements specified below:-

S. No.	Position	Total experience (Years)	In Similar works (Years)	As Manager of Similar works (Years)
(i)	Project Manager			
(ii)	Other positions			
(Suggested lists is given in Annexure-I)				

4.4.5 Equipment Capabilities

The Applicant should own or should have assured ownership to the following key items of equipment, in full working order, and must demonstrate that, based on known commitments; they will be available for use in the proposed contract.

S. No.	Equipment type and characteristic	Minimum number required
(1)		
(2)		
(3)		

(Suggested lists is given in Annexure-II)

4.4.6 Financial Position

The Applicant should demonstrate that he has access to, or has available, liquid assets (aggregate of working capital, cash in hand and uncommitted bank guarantees) and/or credit facilities of not less than 10 percent of the value of the contract/contracts applied for (construction cash-flow may be taken as 10 percent of the estimated value of contract/contract).

4.4.7 The audited balance sheets for the last five years should be submitted, which must demonstrate the soundness of the applicant's financial position, showing long-term profitability including an estimated financial projection for the next two years. If necessary, the employer will make inquiries with the applicant's bankers,

4.4.8 Litigation History

The Applicant should provide accurate information on any litigation or arbitration resulting from contracts completed or under execution by him over the last five years. A consistent history of awards against the applicant may result in failure of the applicant.

4.4.9 Bid Capacity

Applicants who meet the minimum qualification criteria will be qualified only if their available bid capacity at the expected time of bidding is more than the total estimated cost of the works. The available bid capacity will be calculated as under:

Assessed Available Bid Capacity= (A*N*2-B), where

A= Maximum value of works executed in any one year during the last five years (updated to the current price level) rate of inflation may be taken as 10 per cent per year which will take into account the completed as well as works in progress;

B= Value at current price level of the existing commitments and ongoing works to be completed during the next one years (period of completion of works for which bids are invited); and

N= Number of years prescribed for completion of the works for which the bids are invited.

4.4.10 **Disqualification**

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

- Made misleading or false representation in the form, statements submitted; and /or Records of poor performance such as abandoning the work, rescinding of contract for which the reasons are attributable to the non-performance of the contractor; consistent history of litigation awarded against the Applicant or financial failure due to bankruptcy. The rescinding of contract of a joint venture on account of reasons other than non-performance, such as Most Experienced partner of joint venture pulling out, court directions leading to breaking up of a joint venture before the start of work, which are not attributable to the poor performance of the contractor will, however not affect the qualification of the individual partners.

4.5 **Joint Venture**

4.5.1 Joint ventures are not allowed to bid

5. **One Bid per Bidder**

5.1. Each bidder shall submit only one bid for one package. A bidder who submits or participates in more than one Bid (other than as a subcontractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the Bidder's participation 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 and liable for those costs.

7. **Site Visit**

7.1. The Bidder, at the Bidder's own responsibility and risk is encouraged to visit and examine the Site of Works and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.

B. BIDDING DOCUMENTS

8. Content of Bidding Documents

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

S.No	Particulars	Section No
	Invitation for Bids	Annexure-A
1	Instructions to Bidders	1
2	Qualification Information, and other forms	2
3	Conditions of Contract	3
4	Contract Data	4
5	Technical Specifications	5
6	Form of bid	6
7	Bill of Quantities	7
8	Securities and other forms	8
9	Drawings	9
10	Documents to be furnished by bidder	10

- 8.2 The Bid Document can be downloaded from the GoR web portal 'www.eproc.rajasthan.gov.in'. Documents to be furnished by the bidder should be in format prescribed in the Bid Document and addendum issued pursuant to Clause 10.
- 8.3 The bidder is expected to examine carefully all instructions, conditions of contract, contract data, forms, terms, technical specifications, bill of quantities, forms, Annexes and drawings in the Bid Document. Failure to comply with the requirements of Bid Documents shall be at the bidder's own risk. Pursuant to clause 26 hereof, bids which are not substantially responsive to the requirements of the Bid Documents shall be rejected.

9. Clarification of Bidding Documents

- 9.1 A prospective bidder requiring any clarification of the bidding documents may notify the Employer in writing or by cable (hereinafter "cable" includes telex and facsimile) at the Employer's address indicated in the invitation to bid. The Employer will respond to any request for clarification which he received earlier than 10 days prior to the deadline for submission of bids. Copies of the Employer's response will be forwarded to all purchasers of the bidding documents, including a description of the enquiry but without identifying its source.

9.2 Pre-bid meeting

- 9.1.1. The bidder or his official representative is invited to attend a pre-bid meeting which will take place at the address, venue, time and date as indicated in appendix.
- 9.1.2. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 9.1.3. The bidder is requested to submit any questions in writing or by cable to reach the Employer not later than one week before the meeting.
- 9.1.4. Minutes of the meeting, including the text of the questions raised (without identifying the source of enquiry) and the responses given will be transmitted without delay to all purchasers of the bidding documents. Any modification of the bidding documents listed in Sub-Clause 8.1 which may become necessary as a result of the pre-bid meeting 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.
- 9.1.5. 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 on GoR web portal "www.eproc.rajasthan.gov.in."
- 10.2. Any addendum if issued by the Director/Manager/Authorized Representative shall be part of the Bid Document. All such addenda shall become an integral part of the Bidding Document and it shall be incorporated in Bid prices and duly signed, stamped and submitted along with the Bid documents on GoR web portal 'www.eproc.rajasthan.gov.in'. Bid shall be deemed to be incomplete if the addendum (addenda) is (are) not enclosed duly signed by the Bidder along with the Bid documents

C. PREPARATION OF BIDS

11. Language of the Bid

11.1. All documents relating to the bid shall be in the English language.

12. Documents Comprising the Bid

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

Cover-1 shall be named "Technical Bid" and shall comprise

- (i) Bid Security in the form specified in Section 8
- (ii) Qualification Information and supporting documents as specified in Section 2
- (iii) Certificates, undertakings, affidavits as specified in Section 2
- (iv) Any other information pursuant to Clause 4.2 of these instructions
- (v) Undertaking that the bid shall remain valid for the period specified in Clause 15.1

Cover-2 shall be named " Financial Bid" and shall comprise

- (i) Financial Proposal

The bidder shall quote its financial proposal in Cover-2 on the e-Portal.

The Bidder shall submit the Bid on-line through e-portal 'www.eproc.rajasthan.gov.in' which shall comprise scanned copies of above documents by the stipulated date and time.

12.2. Deleted

12.3. Deleted.

13. Bid Prices

- 13.1. The contract shall be for the whole works as described in Sub-Clause 1.1, based on the priced Bill of Quantities submitted by the Bidder.
- 13.2. The Bidder shall fill in percentage rate above or below the total amount of the Works described in the Bill of Quantities at Section-7. Any incidental item shall be deemed to be covered by the other rates and prices in the Bill of Quantities.
- 13.3. All duties, taxes, 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 percentage rate above or below the total amount of the Works quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account (for contracts upto **09 months** period) except for variation in price of bitumen, as described in the bid document.

14. Currencies of Bid and Payment

- 14.1. The unit rates and the prices shall be quoted by the bidder entirely in Indian Rupees. All payments shall be made in Indian Rupees.

15. Bid Validity

- 15.1. Bids shall remain valid for a period not less than **150** days after the deadline date for bid submission i.e 25.10.2023. A bid valid for a shorter period shall be rejected by the Employer as non-responsive. In case of discrepancy in bid validity period between that given in the undertaking pursuant to Clause 12.1 (v) and the Form of Bid submitted by the bidder, the latter shall be deemed to stand corrected in accordance with the former and the bidder has to provide for any additional security that is required.
- 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 or by cable. 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
- 15.3. Deleted
- 15.4. Bid evaluation will be based on the bid prices without taking into consideration the above correction.

16. Bid Security

- 16.1. The Bidder shall furnish, as part of his Bid, a Bid security in the amount as shown in column 4 of the table of IFB for this particular work.

The Bidder shall furnish, as part of his Bid, a Bid Security through NEFT/RTGS/IMPS/Bank Guarantee in the designated account of RIDCOR and may be in one of the following forms:

- A Bank Guarantee, in the prescribed format is acceptable from the following institutions located in India:
 - (a) State Bank of India or its subsidiaries;

- (b) Any Indian Nationalized / Scheduled Bank;
- (c) IDBI Bank or Axis Bank or ICICI Bank or HDFC Bank or Yes Bank or AU Small Finance Bank or IDFC First Bank; or
- (d) Foreign Bank with operations in India provided the net worth in respect of the Indian operations shall not be less than Rs 500 crores as per the latest Annual Report of the Bank and that Bank Guarantee is issued by a branch in India.

The bid security in the form of Bank Guarantee shall be submitted by the bidder at least one day before the date of opening of the tenders at RIDCOR Head Office, Jaipur

- 16.2. Bank guarantees (and other instruments having fixed validity) issued as surety for the bid shall be valid for 45 days beyond the validity of the bid.
- 16.3. Any bid not accompanied by an acceptable Bid Security and not secured as indicated in Sub-Clauses 16.1 above shall be rejected by the Employer as non-responsive.
- 16.4. The Bid Security 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 Bid Security 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 may be forfeited
 - (a) if the Bidder withdraws the Bid after Bid opening during the period of Bid validity;
 - (b) if the Bidder does not accept the correction of the Bid Price, pursuant to Clause 27; or
 - (c) in the case of a successful Bidder, if the Bidder fails within the specified time limit to
 - (i) sign the Agreement; or
 - (ii) furnish the required Performance Security.

17. Alternative Proposals by Bidders

- 17.1. Bidders shall submit offers that fully comply with the requirements of the bidding documents, including the conditions of contract (including mobilization advance or time for completion), basic technical design as indicated in the drawing and specifications. Conditional offer or alternative offers will not be considered further in the process of tender evaluation.

18. Deleted

D. DELETED

19. Deleted

20. Deleted

21. Deleted

22. Deleted

E. BID OPENING AND EVALUATION

23. Bid Opening

- 23.1. Opening and evaluation of Bids will be done for the bids only through online process. The Employer shall open online bids received as per schedule mentioned hereinabove on the Bid Due Date. The Employer will examine and evaluate the online Bids in accordance with the provisions set out in this Bid Document. In the event of the specified date of Bid opening 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. To facilitate evaluation of Bids, the Employer may, at its sole discretion, seek clarifications in writing from any Bidder regarding its Bid. The bid evaluation committee may ask for the pending documents for technical qualification in order to have more competitive bids in a prescribed time frame and such documents have to be submitted by the bidder through online mode

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 persons not officially concerned with such process until the award to the successful Bidder has been announced. Any effort by a Bidder to influence the Employer's processing of Bids or award decisions may result in the rejection of his Bid.

25. Clarification of Financial Bids

- 25.1. To assist in the examination, evaluation, and comparison of Bids, the Employer may, at his discretion, ask any Bidder for clarification of his Bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing or by cable, but no change in the price or substance of the Bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids in accordance with Clause 27. In case any Bidder refuses to furnish any clarification sought by the Employer, which may affect his Bid Price, then his bid shall be liable to be treated as non-responsive
- 25.2. Subject to sub-clause 25.1, no Bidder shall contact the Employer on any matter relating to his bid from the time of the bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Employer, it should do so in writing.
- 25.3. Any effort by the Bidder to influence the Employer in the Employer's bid evaluation, bid comparison or contract award decisions may result in the rejection of the Bidders' bid.

26. Examination of Bids and Determination of Responsiveness

- 26.1. During the detailed evaluation of "Technical Bids", the Employer will determine whether each Bid (a) meets the eligibility criteria defined in Clause 3 and 4; (b) has been properly signed; (c) is accompanied by the required securities and; (d) is substantially responsive to the requirements of the Bidding documents. During the detailed evaluation of the "Financial Bid", the responsiveness of the bids will be further determined with respect to the remaining bid conditions, i.e., priced bill of quantities, technical specifications, and drawings.
- 26.2. A substantially responsive "Financial Bid" is one which conforms to all the terms, conditions, and specifications of the Bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works; (b) which limits in any substantial way, inconsistent with the Bidding documents, the Employer's rights or the Bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids.
- 26.3. If a "Financial Bid" is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

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 in words, the rate in words will govern; and
 - (b) where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern.
- 27.2. The amount stated in the "Financial Bid" will be corrected by the Employer in accordance with the above procedure for the correction of Errors and with the concurrence of the Bidder such adjusted bid price shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount the Bid will be rejected, and the Bid security may be forfeited in accordance with Sub-Clause 16.6 (b).

28. Deleted

29. Evaluation and Comparison of Financial Bids

- 29.1. The Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Sub-Clause 26.2. For avoidance of doubt, the Employer shall compare the Bid and the lowest bidder shall be considered for evaluation. However, preference shall be given to the lowest cost to the Employer.

- 29.2. In evaluating the Bids, the Employer will determine for each Bid the evaluated Bid Price by adjusting the Bid Price as follows:
- (a) making any correction for errors pursuant to Clause 27; or
 - (b) making an appropriate adjustments for any other acceptable variations, deviations; and
 - (c) making appropriate adjustments to reflect discounts or other price modifications offered in accordance with Sub-Clause 23.6.
- 29.3. The Employer reserves the right to accept or reject any variation or deviation. Variations and deviations and other factors, which are in excess of the requirements of the Bidding documents or otherwise result in unsolicited benefits for the Employer, shall not be taken into account in Bid evaluation.
- 29.4. The estimated effect of the price adjustment conditions under Clause 47 of the *Conditions of Contract*, during the period of implementation of the Contract, will not be taken into account in Bid evaluation.

30. Deleted

F. AWARD OF CONTRACT

31. Award Criteria

- 31.1. Subject to Clause 32, the Employer will award the Contract to the Bidder whose Bid has been determined
- (i) to be substantially responsive to the Bidding documents and who has offered the lowest evaluated Bid Price; and

In no case, the contract shall be awarded to any bidder whose available bid capacity is less than the evaluated bid price, even if the said bid is the lowest evaluated bid. The contract will in such cases be awarded to the next lowest bidder at his evaluated bid price.

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

- 32.1. Notwithstanding Clause 31, 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.

33. Notification of Award and Signing of Agreement

- 33.1. The Bidder whose Bid has been accepted will be notified of the award by the Employer prior to expiration of the Bid validity period by cable, telex or facsimile confirmed by registered letter. This letter (hereinafter and in the *Conditions of Contract* called the "Letter of Acceptance") will state the sum that the Employer will pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").
- 33.2. 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 34.
- 33.3. The Agreement will incorporate all agreements between the Employer and the successful Bidder. It will be signed by the Employer and sent to the successful Bidder, within 28 days following the notification of award along with the Letter of Acceptance. Within 10 days of receipt, the successful Bidder will sign the Agreement and deliver it to the Employer.
- 33.4. Upon the furnishing by the successful Bidder of the Performance Security, the Employer will promptly notify the other Bidders that their Bids have been unsuccessful.

34. Performance Security

- 34.1. Within 10 days of receipt of the Letter of Acceptance, the successful Bidder shall deliver to the Employer a Performance Security in any of the forms given below for an amount equivalent to 3% of the Contract price.

- 34.2. If the performance security is provided by the successful Bidder in the form of a Bank Guarantee, it shall be issued either (a) at the Bidder's option, by a Nationalized Scheduled Indian bank or (b) by a foreign bank located in India and acceptable to the Employer.
- 34.3. Failure of the successful Bidder to comply with the requirements of Sub-Clause 34.1 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Bid Security.

35 Advance Payment and Security

- 35.1. The Employer will provide an Advance Payment on the Contract Price as stipulated in the Conditions of Contract, subject to maximum amount, as stated in the Contract Data.

36. Deleted

37. Corrupt or Fraudulent Practices

- 37.1. The Employer will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question and will declare the firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract with National Highways Authority of India / State" PWD/RIDCOR and any other agencies, if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for the contractor, or in execution.
- 37.2. Furthermore, Bidders shall be aware of the provision stated in Sub- Clause 23.2 and Sub-Clause 60.2 of the Conditions of Contract.

APPENDIX to ITB

Original/Copy Clause Reference With respect to section I

- 1- Name of the Employer is Director, **RIDCOR, Jaipur** [Cl.1.1]
- 2- The Last five years
2018-2019
2019-2020
2020-2021
2021-2022
2022-2023
- 3- Average annual financial turn over amount is [Cl.4.5A(a)]
Rs. 18.7 Cr
Rs. Eighteen Cr Seventy Lac Only) (in words)
- 4- Value of work is **Rs. 46.58 Cr** [Cl.4.5A(b)]
Rs. Forty Six Cr Fifty Eight Lac Only (in words)
- 5- Deleted [Cl.4.5A(c)]
- 6- The cost of electric work is Rs: **N/A** [Cl.4.5A(d)]
- 7- The cost of water supply/ sanitary work is Rs: **N/A** [Cl.4.5A(e)]
- 8- Liquid assets and/or availability of credit facilities is [Cl.4.5B(c)]
Rs.4.7 Cr
- 9- Price level of the financial year – **Current Year** [Cl.4.7]
- 10- The pre-bid meeting will take place at office of the [Cl.9.2.1]
RIDCOR HO 16.10.2023 at 11:30 AM.
11. The Technical bid will be opening at office of the [CL.4.5.(a)]
RIDCOR -HO on 26.10.2023 11.30 AM.
12. Address of the Employer Director, **RIDCOR.** [CL.19.2.(b)]
701-706, 7th Floor, ARG Corporate Park, Gopalbari,
Ajmer Road, Jaipur -302001

13 Identification:

Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212+800) to Bhiwadi (Km 221+350) in the state of Rajasthan [Cl.19.2(b)]

Bid reference No. 387 /2023-24 Dated 27.10.2023

Do not open before 25/10/2023

14 The bid should be submitted latest by 24.10.2023 upto 6:00 PM [Cl.20.1.(a)]

15 The Financial bid will be opened at **RIDCOR HO, Date & Time to be informed afterward to the qualified bidders.** [Cl.23.1.]

16 Deleted [Cl.34.1.]

17 Deleted [Cl.36.1.]

18 Escalation factors (for the cost of works executed and financial figures to a common base value for works completed)

Year Before Multiplying Factor

One	1.10
Two	1.21
Three	1.33
Four	1.46
Five	1.61

Details of Minimum Key Personnel required to be mobilized by Contractor

Ref: Clause 4.4.4

S No	Position	Minimum Qualification & Experience	Nos.
1	Project Manager/Highway Engineer	B.E. (Civil) with 5 years or Diploma civil with 7 years' experience	1
2	Planning Engineer/Quantity Surveyor	B.E. (Civil) with 3 years' experience or Diploma in Civil with 5 years' experience	1
3	Quality Control Engineer	B.E. (Civil) with 5 years or Diploma civil with 7 years' experience	1
4	Safety Engineer	B.E. (Civil/ Mechanical) with 5 years or Diploma civil with 7 years' experience	1

**Schedule of Minimum Key Construction Plant and Equipment required
to be mobilized by Contractor**

Ref: Clause 4.4.5

S. No.	Type of Equipment	Plant & Equipment Nos.
1	Batch Type Hot Mix plant (120-160 ton per Hr) with all electronic controls	1
2	Sensor Paver finisher (7Mtr Width) (not older than year 2019)	1

Note: The bidder must produce the documentary evidence in support of his owning/leased/rented of the above equipment. In case the bidder proposes to hire or take the above equipment on lease, he should, along with the lease/rent agreement, attach the proof of ownership of these equipment with the company/ entity from whom the equipment are proposed to be hired on lease/ rent

SECTION 2
QUALIFICATION INFORMATION

QUALIFICATION INFORMATION

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

1. For Individual Bidders

- 1.1 Constitution or legal status of Bidder
[Attach copy]
 Place of registration: _____
 Principal place of business: _____
 Power of attorney of signatory of Bid
[Attach]

- 1.2 Total value of Civil Engineering construction work performed in the last five years** (in Rs. Million)
- | |
|-----------|
| 2018-2019 |
| 2019-2020 |
| 2020-2021 |
| 2021-2022 |
| 2022-2023 |

- 1.3.1. Work performed as prime contractor, work performed in the past as a nominated subcontractor will also be considered provided the sub-contract involved execution of all main items of work described in the bid document, provided further that all other qualification criteria are satisfied (in the same name) on works of a similar nature over the last five years. **

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

* Attach certificate(s) from the Engineer (s) -in-Charge

** immediately preceding the financial year in which bids are received.

B Attach certificate from Chartered Accountant.

#1.3.2. Quantities of work executed as prime contractor, work performed in the past as a nominated sub-contractor, will also be considered provided the sub-contract involved execution of all main items of work described in the bid document, provided further that all other qualification criteria are satisfied (in the same name and style) in the last five years: **

Year	Name	Name	Quantity of work performed (cum)@					Remarks	Remarks* (indicate contract Ref)
	of the work	of the Employer*	Cement Concrete (including RCC& PCC)	Ma son ry	Earth Works	W M M	Bitumin ous	PQC	
								Work	
2018-19									
2019-20									
2020-21									
2021-22									
2022-23									

1.4. Information on Bid Capacity (works for which bids have been submitted and works which are yet to be completed) as on the date of this bid.

(A) Existing commitments and on-going works:

Description of works	Place & State	Contract No.	Name & Address of Employer	Value of Contract (Rs Cr)	Stipulated Period of Completion	Value of works* remaining to be completed (Rs Cr)	Anticipated date of completion
1	2	3	4	5	6	7	8

*Attach certificate(s) from the Engineer(s)-in-Charge

@The item of work for which data is requested should tally with that specified in ITB clause 4.4.3.

** immediately preceding the financial year in which bids are received.

Delete, if prequalification has been carried out

Original

(B) Works for which bids already submitted:

Description of works	Place & State	Name & Address of Employer	Estimated value of works (Rs Cr)	Stipulated period of completion	Date when decision is expected	Remarks, if any
1	2	3	4	6	6	7

1.5. Availability of key items of Contractor's Equipment essential for carrying out the Works [Ref. Clause 4.4.5]. The Bidder should list all the information requested below. Refer also to Sub Clause 4.3 (d) of the Instructions to Bidders.

Item of Equipment	Requirement		Availability proposals			Remarks (from whom to be purchased)
	Age	No.	Owned/assured ownership	Nos./Capacity	Age/Condition	
Batch Type Hot Mix plant (120-160 ton per Hr) with all electronic controls						
Sensor Paver finisher (7Mtr Width) (not older than year 2019)						
Total						

Note :-

1. Submit the detail of machinery which is within the age limit as required.
2. If any machinery required to be hired by the contractor, then full detail of hired machines with owner agreement required to be submitted.

- 1.6. Qualifications and experience of key personnel required for administration and execution of the Contract [Ref. Clause 4.4.4]. Attach biographical data. Refer also to Sub Clause 4.3 (e) of instructions to Bidders and Sub Clause 9.1 of the Conditions of Contract.

Position	Name	Qualification	Year of Experience	Years of experience in the
			(General)	proposed position
Project Manager/High way Engineer				
Planning Engineer/Quantity Surveyor				
Quality Control Engineer				
Safety Engineer				

Note :-

1. Provide required information with name & degree/Diploma certificate as per above format.

1.7. Deleted

- 1.8. Financial reports for the last five years: balance sheets, profit and loss statements, auditors' reports (in case of companies/corporation), etc. List them below and attach copies.

- 1.9. Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List them below and attach copies of support documents.

- 1.10. Name, address, and telephone, telex, and fax numbers of the Bidders' bankers who may provide references if contacted by the Employer.

- 1.11. Information on litigation history in which the Bidder is involved.

Other Party(ies)	Employer	Cause of Dispute	Amount involved	Remarks showing present Status

-
- 1.12. Statement of compliance under the requirements of Sub Clause 3.2 of the instructions to Bidders. (Name of Consultant engaged for project preparation is**M/s Parisha Engineers LLP
 - 1.13. Proposed work method and schedule. The Bidder should attach descriptions, drawings and charts as necessary to comply with the requirements of the Bidding documents. (refer ITB Clause 4.1 & 4.3(k))
 - 1.14. Programme
 - 1.15. Quality Assurance Programme

2. Deleted

3. Additional Requirements

- 3.1 Bidders should provide any additional information required to fulfill the requirements of Clause 4 of Instructions to Bidders, if applicable.
 - (i) Affidavit
 - (ii) Undertaking

* Delete if prequalification has been carried out.

** Fill the Name of Consultant.

*** Delete, if prequalification has not been carried out.

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

**(CLAUSE 4.3 (g) OF ITB)
BANK CRETIFICATE**

This is to certify that M/s. _____ is a repute Company with a good financial standing.

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

(Signature)
Name of Bank
Senior Bank Manager
Address of the Bank

Note :-

1. Certificate to be submitted should be unconditional.
2. The certificate should be Nationalized scheduled Bank as per clause 34.2.

**(To be given on Non Judicial Stamp Paper of Rs. 1000/- duly attested by Oath
Commissioner Notary / Public)**

AFFIDAVIT

1. I the undersigned do hereby certify that all the statements made in the required attachments are true and correct.
2. The undersigned also hereby certifies that neither our firm M/s. _____ have abandoned any work on National Highways in India nor any contract awarded to us for such work have been rescinded, during last years prior to the date of this bid.
3. The undersigned hereby authorize(s) and request(s) any bank, person, firm or corporation to furnish pertinent information deemed necessary and requested by the Department to verify this statement or regarding my (our) competence and general reputation.
4. The undersigned understand and agrees that further qualifying information may be requested, and agrees to furnish any such information at the request of the Department/Project implementing agency.

(Signed by an Authorised Office of the Firm

Title of Officer

Name of Firm

DATE

UNDERTAKING

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

(Signed by an Authorised Officer of the Firm)

Title of Officer

Name of Firm

DATE

SECTION 3
CONDITIONS OF CONTRACT

Conditions of Contract

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CONDITIONS OF CONTRACT

A. GENERAL

1. Definitions

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

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

The **Completion Date** is the date of completion of the Works as certified by the Engineer in accordance with Sub Clause 56.1.

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

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

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

The **Contractor's Bid** is the completed Bidding document submitted by the Contractor to the Employer and includes Technical and Financial bids.

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

Days are calendar days; months are calendar months.

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

The **Defects Liability Period** is the period named in the Contract Data and calculated from the Completion Date.

The **Employer** is the party who will employ the Contractor to carry out the Works.

The **Engineer** is the person named in the Contract Data (or any other competent person appointed and notified to the contractor to act in replacement of the Engineer) who is responsible for supervising the Contractor, administering the Contract, certifying payments due to the Contractor, issuing and valuing Variations to the Contract, awarding extensions of time, and valuing the Compensation Events. Project Manager/Supervision Consultant will act as the Engineer.

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

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

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

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

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

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

Specification means the latest MORTH Specifications of the Works included in the Contract and any modification or addition made or approved by the Employer/Engineer, in writing.

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

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

A **Variation** is an instruction given by the Engineer, which varies the Works. The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as defined in the Contract Data.

2. Interpretation

- 2.1. In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Engineer will provide instructions clarifying queries about the Conditions of Contract.
- 2.2. Deleted.
- 2.3. The documents forming the Contract shall be interpreted in the following order of priority:
 - (1) Agreement
 - (2) Letter of Acceptance, notice to proceed with the works
 - (3) Contractor's Bid
 - (4) Contract Data
 - (5) Conditions of Contract including Special Conditions of Contract
 - (6) Specifications
 - (7) Drawings
 - (8) Bill of Quantities and
 - (9) any other document listed in the Contract Data as forming part of the Contract.

3. Language and Law

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

4. Engineer's Decisions

- 4.1. Except where otherwise specifically stated, the Engineer will decide contractual matters between the Employer and the Contractor in the role representing the Employer.

5. Delegation

- 5.1. The Engineer may delegate any of his duties and responsibilities to other people except to the Adjudicator after notifying the Contractor and may cancel any delegation after notifying the Contractor.

6. Communications

- 6.1. Communications between parties which are referred to in the conditions are effective only when in writing. A notice shall be effective only when it is delivered (in terms of Indian Contract Act).

7. Procurement of Bitumen

- 7.1. Bitumen shall be procured in bulk by the successful bidder from the nearest refinery i.e. from IOCL, BPCL or HPCL or any other source as approved by NHAI/MoRTH/PWD, GoR, Rajasthan subject to fulfillment of quality parameters as per approval of the Engineer. Use of imported bitumen can be permitted subject to compliance of MoRTH stipulation as detailed in Circular issued on 23th Aug 2023. Engineer's prior approval is mandatory if bitumen is procured from refineries other than IOCL/BPCL/HPCL

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. The Contractor shall as referred to in the Contract Data, 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.

9. Personnel

- 9.1. The Contractor shall employ the key personnel named in the Schedule of Key Personnel as referred to in the Contract Data to carry out the functions stated in the Schedule or other personnel approved by the Engineer. The Engineer will approve any proposed replacement of key personnel only if their qualifications, abilities, and relevant experience are substantially equal to or better than those of the personnel listed in the Schedule.
- 9.2. If the Engineer asks the Contractor to remove a person who is a member of the Contractor's staff or his 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 work in the Contract.

10. Employer's and Contractor's Risks

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

11. Employer's Risks

- 11.1. The Employer is responsible for the excepted risks which are (a) in so far as they directly affect the execution of the Works in India, 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), and contamination from any nuclear fuel or nuclear waste or radioactive toxic explosive, or (b) a cause due solely to the design of the Works, other than the Contractor's design.

12. Contractor's Risks

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

13. Insurance

- 13.1. The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the Contract Data for the following events which are due to the Contractor's risks:

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

- 13.2. 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 the types and proportions of currencies required to rectify the loss or damage incurred.

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

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

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

14. Deleted

15. Queries about the Contract Data

- 15.1. The Engineer will clarify queries on the Contract Data

16. Contractor to Construct the Works

16.1. The Contractor shall construct and install the Works in accordance with the Specification and Drawings.

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

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

18. Approval by the Engineer

18.1. The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Engineer, who is to approve them if they comply with the Specifications and Drawings.

18.2. The Contractor shall be responsible for design of Temporally Works.

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

18.4. The Contractor shall obtain approval of third parties to the design of the Temporary Works where required.

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

19. Safety

19.1. The Contractor shall be responsible for the safety of all activities on the Site.

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 is to 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. If possession of a part is not given by the date stated in the Contract Data the Employer is deemed to have delayed the start of the relevant activities and this will be Compensation Event.

22. Access to the Site

22.1. The Contractor shall allow the Engineer and any person authorized by the Engineer access to the Site, to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where materials or plant are being manufactured / fabricated / assembled for the works.

23. Instructions

- 23.1. The Contractor shall carry out all instructions of the Engineer pertaining to works which comply with the applicable laws where the Site is located.
- 23.2. The Contractor shall permit the Employer to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the Employer, if so required by the Employer.

24. Disputes

- 24.1. If either party believes that a decision taken by the Employer/Engineer /Contractor was either outside the Contract or that the decision was wrongly taken, the objecting party may file notice of dispute to the other party stating that it is giving the notice pursuant to this Clause while stating clearly the basis for the dispute within 21 days of the notification of the decision.
- 24.2. The party receiving the dispute notice will consider it and reply in writing within 28 days of the receipt of the notice. If no reply is received or the reply is not acceptable to the other party, the affected party may refer the dispute for conciliation. Independent Engineer of RIDCOR will be the Dispute Review Expert (DRE) for conciliation. The decision for conciliation is to be given in 60 days by DRE. In case, conciliation is not successful then the dispute may be referred to Arbitration.

25. Procedure for Disputes-Arbitration

The procedure for arbitration shall be as follows:

- (a) In case of Dispute or difference arising between the Employer and the Contractor relating to any matter arising out of or connected with this agreement referred for arbitration, shall first be settled mutually, otherwise in accordance with the Arbitration and Conciliation Act, 1996 and amendment thereof.
- (b) The Arbitral Tribunal shall consist of three Arbitrators, one each to be appointed by the Employer and the Contractor. The third Arbitrator shall be chosen by consensus by the two Arbitrators so appointed by the Parties and shall act as the Presiding Arbitrator. In case of failure of the two Arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the Arbitrators, then the Presiding Arbitrator shall be appointed by the Indian Roads Congress on the request of the Employer.
- (c) If one of the parties fails to appoint its Arbitrator in pursuance of Sub Clauses (a) and (b) within 30 days after receipt of the notice of the appointment of its Arbitrator by the other party, then the Indian Roads Congress shall appoint the Arbitrator on the request of the Employer. In case the Employer fails to do so within 30 days, the Contractor will approach the Indian Roads Congress for appointment of Arbitrator. A certified copy of the order of the Indian Roads Congress, making such an appointment shall be furnished to each of the parties.

- (d) Arbitration proceedings shall be held at Jaipur at RIDCOR office and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English.
- (e) The decision of the majority of Arbitrators shall be final and binding upon both parties. The cost and expenses of Arbitration proceedings will be paid as determined by the Arbitral Tribunal and shared equally by both the parties.
- (f) Performance under the Contract shall continue during the arbitration proceedings and payments due to the Contractor by the Employer shall not be withheld, unless they are the subject matter of the arbitration proceedings

26. Jurisdiction of court

- 26.1 In the event of any dispute arising between the parties hereto, in respect of any of the matters comprised in this agreement, the same shall be settled by a competent court having jurisdiction at Jaipur

27. Deleted

B. TIME CONTROL

28. Programme

- 28.1. Within the time stated in the Contract Data the Contractor shall submit to the Engineer for approval a Programme showing the general methods, arrangements, order, and timing for all the activities in the Works along with monthly cash flow forecast.
- 28.2. An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work including any changes to the sequence of the activities.
- 28.3. The Contractor shall submit to the Engineer, for approval, an updated Programme at intervals no longer than the period stated in the Contract Data. 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.
- 28.4. The Engineer's approval of the Programme shall not alter the Contractor's obligations. The Contractor may revise the Programme and submit it to the Engineer again at any time. A revised Programme is to show the effect of Variations and Compensation Events.

29. Extension of the Intended Completion Date

- 29.1. The Engineer shall extend the Intended Completion Date 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 work and which would cause the Contractor to incur additional cost.
- 29.2. The Engineer shall. decide whether and by how much to extend the Intended Completion Date within 35 days of the Contractor asking the Engineer for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.
- 29.3. Deleted
- 29.4. Employer is fully empowered to grant extension to the Work Completion Date.

30. Deleted

31. Delays Ordered by the Engineer

- 31.1. The Engineer may instruct the Contractor to delay the start or progress of any activity within the Works.

32. Management Meetings

- 32.1. Either the Engineer or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
- 32.2. The Engineer shall record the business of management meetings and is to provide copies of his record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken is to be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

33. Early Warning

- 33.1. The Contractor is to warn the Engineer at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price or delay the execution of works. The Engineer may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate is to be provided by the Contractor as soon as reasonably possible.
- 33.2. The Contractor shall cooperate with the Engineer in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Engineer.

C. QUALITY CONTROL

34. Identifying Defects

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

35. Tests

- 35.1. If the Engineer instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect the test shall be a Compensation Event.

36. Correction of Defects

- 36.1. The Engineer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion and is defined in the Contract Data. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

- 36.2. Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Engineer's notice.

37. Uncorrected Defects

- 37.1. If the Contractor has not corrected a Defect within the time specified in the Engineer's notice, the Engineer will assess the cost of having the Defect corrected, and the Contractor will pay this amount.

D. COST CONTROL

38. Bill of Quantities

- 38.1 The Bill of Quantities shall contain items for the construction, installation, testing , and commissioning work to be done by the Contractor.
- 38.2 The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item.

39. Changes in the Quantities

- 39.1 The change in quantities/amounts due to increase/decrease in the scope of work, that is, Variation in Bill, shall be considered for additional payment as per rates defined in Bill of Quantities and the percentage rate quoted,
- 39.2 Director/Manager, RIDCOR is fully empowered to approve the variation of quantity upto 25% of the contract price mentioned in Letter of Acceptance for Works and rates for extra item on the merit of the case.
- 39.3 If requested by the Engineer, the Contractor shall provide the Engineer with a detailed cost breakdown of any rate in the Bill of Quantities.

40. Variations

- 40.1 All Variation shall be included in updated Programmes produced by the Contractor.

41. Payments for Variations

- 41.1 The Contractor shall provide the Engineer with a quotation (with breakdown of unit rates) for carrying out the Variation when requested to do so by the Engineer, The Engineer shall assess the quotation, which shall be given within seven days of the request or within any longer period stated by the Engineer and before the Variation is ordered.
- 41.2 If the work in the Variation corresponds with an item description in the Bill of Quantities and if in the opinion of the Engineer, the quantity of work above the limit stated in Sub Clause 38.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work.
- 41.3 If the Contractor's quotation is unreasonable, the Engineer may order the Variation and make a change to the Contract Price which shall be based on Engineer's own forecast of the effects of the Variation on the Contractor's costs.
- 41.4 If the Engineer decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.
- 41.5 The Contractor shall not be entitled to additional payment for costs which could have been avoided by giving early warning.

42. Cash Flow Forecasts

- 42.1. When the Programme is updated, the contractor is to provide the Engineer with an updated cash flow forecast.

43. Payment Certificates

- 43.1. The Contractor is required to measure the work executed as per specifications under the observation and control of the Engineer. The Contractor shall submit to the Engineer monthly statements of the estimated value of the work executed, less the cumulative amount certified previously and, applicable statutory deductions, outstanding advances supported with detailed measurements of the items of work executed, approved request for inspections (RFI) for the work done during the month, applicable rates and other relevant details, both in hard and soft form along with an abstract statement, in accordance with the provisions of this Contract.
- 43.2. 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 in respect of materials for the works in the relevant amounts and under conditions set forth in sub-clause 52 (3).
- 43.3. The value of work executed shall be determined by the Engineer.
- 43.4. The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.
- 43.5. The value of work executed shall include the valuation of Variations and Compensation Events.
- 43.6. The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

44. Payments

- 44.1. Payments shall be adjusted for deductions for advance payments, retention, other recoveries in terms of the contract and taxes at source, as applicable under the law. The Employer shall pay the Contractor the amounts certified by the Engineer within 28 days of the date of each certificate. If the Employer makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made upto the date when the late payment is made at rate of interest as per SBI
- 44.2. If an amount certified is increased in a later certificate as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.

45. Items of the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract. ~~Deleted~~

46. Tax

46.1. The rates quoted by the Contractor shall be deemed to be inclusive of the sales and other taxes 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.

47. Currencies

47.1. All payments shall be made in Indian Rupees.

48. Price Adjustment for Bitumen

48.1. The price adjustment for increase or decrease in the cost of bitumen consumed in the Improvement Works shall be paid in accordance with the following formula:

$$\text{Positive Variation } V = Qc \times (Pp - Pb \times 1.05)$$

$$\text{Negative variation } V = Qc \times (Pp - Pb \times 0.95)$$

Where

V = **increase or decrease** in the cost of bitumen consumed in the Construction Works due to change in the rate of the bitumen;

Qc = **quantity of bitumen** in tonnes consumed in the Construction Maintenance Works during the period under consideration;

Pp = **current price** of bitumen per tonne prevailing on 16th day of every month, which shall be the ex-factory price of the IOCL Mathura Refinery of bitumen plus GST, as applicable;

Pb = **basic price** of bitumen as on 16.09.2023 i.e Rs. 51816 per tonne for VG-30 inclusive of GST and Rs.49102 per tonne for VG-10 inclusive of GST at IOCL Mathura Refinery.

Note: For Emulsion, basic rates of VG-10 grade bitumen of nearest IOCL refinery i.e Mathura will be considered. To avoid any doubt, the % of Bitumen content in emulsion @ 60% will be considered for calculation of price adjustment and for use of PMB-40 in bituminous works basic rates of VG-30 grade will be considered for calculation of price adjustment. To avoid any doubt total quantity of PMB-40 used in the work will be considered in price adjustment formula of bitumen.

48.2. Limit of Price Adjustment

Price adjustment is applicable only in case Bitumen price increase or decrease beyond 5% of Base Rate of Bitumen specified in the Contract. The Price Variation payable to the contractor shall be worked out based on the Price Adjustment formula mentioned in the Clause 48.1

Price Variation shall apply only for the work carried out within the stipulated time or

extension granted and shall not apply to the work carried out beyond stipulated time or Price Variation for extension for reasons attributable to the Contractor.

The Price Variation shall be payable for the actual work done/ quantities executed for a particular month. However, if there is any deficit in the executed quantities w.r.t. planned quantities, the Price Variation on the difference of quantity (i.e. planned – achieved quantity) shall be paid only after actual execution of work but at a rate which is lower of the following:

- At the rates applicable during the month of execution.
- At the rates applicable during the month in which the quantities were actually planned

49. Retention

- 49.1. The Employer shall retain from each payment due to the Contractor the proportion stated in the Contract Data until Completion of the whole of the Works.
- 49.2. On Completion of the whole of the Works half the total amount retained is repaid to the Contractor and half when the Defects Liability Period has passed and the Engineer has certified that all Defects notified by the Engineer to the Contractor before the end of this period have been corrected.
- 49.3. On completion of the whole works, the contractor may substitute retention money with an "on demand" Bank guarantee.

50. Liquidated Damages

- 50.1. The Contractor shall pay liquidated damages to the Employer at the rate per day stated in the Contract Data for each day that the Completion Date is later than the Intended Completion Date (for the whole of the works or the milestone as stated in the contract data). 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 does not affect the Contractor's liabilities.
- 50.2. If the Intended Completion Date is extended after liquidated damages have been paid, the Engineer shall correct any over payment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the over payment calculated from the date of payment to the date of repayment at the rates specified in Sub Clause 44.1.
- 50.3. If the contractor fails to comply with the time for completion as stipulated in the tender, then the contractor shall pay to the employer the relevant sum stated in the Contract Data as Liquidated damages for such default and not as penalty for everyday or part of day which shall elapse between relevant time for completion and the date stated in the taking over certificate of the whole of the works on the relevant section, subject to the limit stated in the contract data.

The employer may, without prejudice to any other method of recovery deduct

the amount of such damages from any monies due or to become due to the contractor. The payment or deduction of such damages shall not relieve the contractor from his obligation to complete the works on from any other of his obligations and liabilities under the contract.

50.4. Deleted

51. Deleted

52. Advance Payment

52.1. The Employer shall make advance payment to the Contractor of the amounts stated in the Contract Data by the date stated in the Contract Data, against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Employer in amounts and currencies equal to the advance payment. 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. Interest will not be charged on the advance payment.

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

52.3. The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, or Liquidated Damages.

52.4. Deleted

53. Securities

53.1. The Performance Security (including additional security for unbalanced bids) shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form indicated in Contract Data as acceptable to the Employer, and denominated in Indian Rupees, from:

- (a) State Bank of India or its subsidiaries;
- (b) Any Indian Nationalized Bank;
- (c) IDBI Bank or Axis Bank or ICICI Bank or HDFC Bank or Yes Bank or AU Small Finance Bank or IDFC First Bank; or Foreign Bank with operations in India provided the net worth in respect of the Indian operations shall not be less than Rs 500 crores as per the latest Annual Report of the Bank and that Bank Guarantee is issued by a branch in India

The Performance Security shall be valid until a date 28 days from the date of expiry of Defects Liability Period and the additional security for unbalanced bids shall be valid until a date 28 days from the date of issue of the certificate of completion.

54. Deleted

55. Cost of Repairs

55.1. Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. FINISHING THE CONTRACT

56. Completion

- 56.1. 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 Work is completed.

57. Taking Over

- 57.1. The Employer shall take over the Site and the Works within seven days of the Engineer issuing a certificate of Completion.

58. Final Account

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

59. Operating and Maintenance Manuals

- 59.1. If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the Contract Data.
- 59.2. If the Contractor does not supply the Drawings and/or manuals by the dates stated in the Contract Data, or they do not receive the Engineer's approval, the Engineer shall withhold the amount stated in the Contract Data from payments due to the Contractor.

60. Termination

- 60.1. The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.
- 60.2. Fundamental breaches of Contract include, but shall not be limited to the following:
- (a) the Contractor stops work for 28 days when no stoppage of work is shown on the current Programme and the stoppage has not been authorized by the Engineer;
 - (b) the Engineer instructs the Contractor to delay the progress of the Works and the instruction is not withdrawn within 28 days
 - (c) the Employer or the Contractor is made bankrupt or goes into

- liquidation other than for a reconstruction or amalgamation
- (d) a payment certified by the Engineer is not paid by the Employer to the Contractor within 56 days of the date of the Engineer's certificate;
 - (e) the Engineer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer;
 - (f) the Contractor does not maintain a security which is required;
 - (g) 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 the Contract data; and
 - (h) if the Contractor, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For the purpose of this paragraph: "corrupt practice" means the offering, giving, receiving or soliciting of any thing of value to influence the action of a public official in the procurement process or in contract execution. "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition."

- 60.3. When either party to the Contract gives notice of a breach of contract to the Engineer for a cause other than those listed under Sub Clause 60.2 above, the Engineer shall decide whether the breach is fundamental or not.
- 60.4. Notwithstanding the above, the Employer may terminate the Contract for convenience.
- 60.5. 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.

61. Payment upon Termination

- 61.1. If the-Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for the value of the work done less advance payments received up to the date of the issue of the certificate, less other recoveries due in terms of the contract, less taxes due to be deducted at source as *per* applicable law and less the percentage to apply to the work not completed as indicated in the Contract Data. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor the difference shall be a debt payable to the Employer.
- 61.2. If the Contract is terminated at the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Engineer shall issue a certificate for the value of the work done, the cost of balance material brought by the contractor and available at site, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments 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.

62. Property

62.1. All materials on the-Site, Plant, Equipment, Temporary Works and Works are deemed to be the property of the Employer, if the Contract is terminated because of a Contractor's default.

63. Release from Performance

63.1. If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either 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 commitment was made.

F. SPECIAL CONDITIONS OF CONTRACT

1. LABOUR:

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.

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 the Site and such other information as the Engineer may require.

2. COMPLIANCE WITH LABOUR REGULATIONS:

During continuance of the contract, the Contractor and his sub-contractors shall abide at all times by all existing labour enactments and rules made there under, 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 below. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, 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 nonobservance of the provisions stipulated in the notifications bye laws/ Acts/Rules/regulations including amendments, if any, on the part of the Contractor, the Engineer/Employer shall have the right to deduct any money due to the Contractor including his amount of performance security. The Employer/Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

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

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

- a) Workmen Compensation Act 1923 :- The Act provides for compensation in case of injury by accident arising out of and during the course of employment.
- (a) Payment of Gratuity Act 1972 :- Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years service or more on death, the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.
- (b) Employees P.F. and Miscellaneous Provision Act 1952 : The Act Provides for monthly contributions by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are :
- (i) Pension or family pension on retirement or death, as the case may be.
 - (ii) Deposit linked insurance on the death in harness of the worker.
 - (iii) Payment of P.P. accumulation on retirement/death etc
- d) Maternity Benefit Act 1951 :- The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- e) Contract Labour (Regulation & Abolition) Act 1970 :- The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by Law. The Principal Employer is required to take Certificate of Registration and the Contractor is required to take licence from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer, if they employ 20 or more contract labour.
- f) Minimum Wages Act 1948 :- The Employer is supposed 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 employments.
- g) Payment of Wages Act 1936:- It lays down as to by what date the wages are to be paid, when 'it will be paid and what deductions can be made from the wages of the workers.
- h) Equal Remuneration Act 1979 :- The Act provides for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.

- 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 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.
- l) Trade Unions Act 1926 :- The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.
- m) Child Labour (Prohibition & Regulation) Act 1986 :- The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation 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 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment at the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, traveling expenses from home upto the establishment and back, etc.
- o) The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996 :- All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the Building or construction work and other welfare measures, such as Canteens, First-Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.
- p) Factories Act 1948:- The Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.

3. MONITORING OF WORK

3.1 Monitoring of Improvement Works

The road which has been completed under the Improvement Work has to be kept defect free and monitored by the Contractor, at all times till the end of defect liability period. The road shall be maintained above the Service Quality level indicated in Enclosure-1 of the Section-3. In case of any deficiency being found, the Contractor shall rectify the same within the Rectification Standards and Periods, indicated therein.

3.2 Site Visits, recording, rectification measures for Construction Works

- (i) The Project Manager, RIDCOR or its authorized representative shall make a detailed monthly joint inspection on the seventh day of every month. The Contractor shall accompany the Project Manager during the inspection. The Project Manager shall proceed ahead with the monthly inspection, if the Contractor fails to attend the inspection at the appointed time. However, the Contractor shall be bound by the assessment of the Project Manager.
- (ii) The Project Manager and the Contractor shall drive on the road and both shall record various items under each of the item as per Enclosure-1 of the Section-3 needing rectification. The Contractor shall make all necessary arrangements for it.
- (iii) On the eighth day of every month, the Project Manager shall notify the Contractor, the details of the deficiencies/ defects/ damages etc. noticed on the road and assets. The Contractor shall rectify/repair/reinstate the deficiencies/ defects/ damages within the Rectification Standards indicated in Enclosure-1.
- (iv) The Project Manager and Contractor shall undertake a joint inspection on or before the twenty fifth day of every month to assess the status of remedial work on items identified in the earlier visit. The Project Manager shall proceed with the inspection, if the Contractor fails to attend the inspection at the appointed time. The assessment of the Project Manager shall be binding on the Contractor.
- (v) In the case contractor does not rectify the defect within the specified time lines, then it will be rectified at his risk and cost by any other agency and funds expanded from the available security deposit amount

ROAD DEFECT RECTIFICATION STANDARDS

S. No.	Item	Service Quality	Measurement/ Detection	Intervention Standard	Rectification Standard / Period
1	Pavement Edge	No broken or uneven edges allowed	Visual inspection	Upon noticing	Repairs must be completed within seven (7) days
2	Potholes/ Patches	No potholes and patches allowed	Visual inspection	Upon noticing	Potholes must be repaired within two (2) days. Patches (i) shall be square or rectangular, (ii) shall be level with surrounding pavement, (iii) shall be made using materials similar to those used for the surrounding pavement
3	Cracking in pavement	There shall not be cracks/fissures more than 3 mm wide	Crack widths measured with small transparent ruler	Cracks more than 3 mm to be rectified	Cracks more than 3 mm wide must be sealed within fifteen (15) days after their detection. If deterioration continue even after sealing, then pavement surface in vicinity to be scoured and re-laid
4	Rutting	There shall not be ruts deeper than 15 mm on a 2m straight edge	Measured with rulers	Rutting above threshold value to be rectified	Rutting above threshold value must be rectified within fifteen (15) days
5	Minor Repair Surface	No bleeding, skidding, stripping, elimination and raveling allowed	Area to be measured enclosing the affected area plus 0.25 m away from the end of bleeding	Affected area more than 0.25 Sq.m	Rectify within seven (7) days
6	Centre-line, edge-line, markings and other markings/paintings including those on median	To be present and firmly adhere to pavement. Micro spheres must be firm and visible. Reflection index to be within the limits according to the Specification for the works	Visual inspection (for measuring reflection inspection to be done in night) Reflective index measured with Reflectometre	Upon noticing	Absent or defective stretches to be rectified within fifteen (15) days

S. No.	Item	Service Quality	Measurement/ Detection	Intervention Standard	Rectification Standard / Period
7	Height of shoulders vs. height of pavement	Difference in height at edge of pavement shall not be more than 30 mm	Measured with ruler, with scale in mm.	Upon noticing	Repairs must be completed within seven (7) days
8	Unsealed shoulders-roughness, scouring or potholes (holding of water), cross slopes	No potholes, rough surfaces or water stagnation	Visual and with ruler	When pothole/depression scouring or roughness > 20 mm	Rectify within seven (7) days
9	Any item that may be damaged/removed for whatever reason including but not limited to vandalism, accidents/ floods or any incident etc.	Immediate repair and rectification. Restoration and replacement as per original specification	Visual inspection	Upon noticing	Rectify within fifteen (15) days
10	Average pavement roughness for carriage way of entire Project Road under this contract	Average value of Surface Roughness for 1 Km shall be less than the value given below (a) Immediately after completion of the Works : 1800 mm/ Km (b) For subsequent years, as prescribed by MoRTH publication "Guidelines for Maintenance Management of Primary, Secondary and Urban Roads", Para 3.2: Serviceability Indicator Level 2	Measured with calibrated 5th wheel bump-integrator	To be measured after completion of the Works and thereafter every year till end of DLP	Upon detection of the roughness value more than prescribed herein under Service Quality, the Contractor shall undertake suitable rectification measures with bituminous material to restore the surface quality within the specified values, or as may be directed by Project Manager/Employer

SECTION 4

CONTRACT DATA

Original

**Clause Refe with
respect to
Section 3**

Items marked "N/A" do not apply in this contract.

- | | | |
|----|---|----------------|
| 1- | The Employer is :
Name : Director, RIDCOR
Address : 701-706, 7 th Floor, ARG Corporate Park, Gopalbari,
Ajmer Road, Jaipur-302001 (Rajasthan)Tel. (0141) 2747001/2,
Fax : 0141 – 2747010 E-Mail : office@ridcor.in | [Cl.1.1] |
| 2- | The Engineer : Project Manager, RIDCOR, Alwar or any
authorized representative nominated by Manager, RIDCOR
Name of authorized representative | |
| 3- | Deleted | [Cl.1.1] |
| 4- | The Defects Liability Period is Five Years from the date of
completion | [Cl.1.1 & 35] |
| 5- | The Start date shall be 10 days from the date of issue of the
Notice to proceed with the work. | [Cl.1.1] |
| 6- | The Intended Completion period for the whole of the works is 09
(Nine) months. | [Cl.1.1,17&28] |

Milestone Dates: Financial Progress to be completed Period from
the start date

Milestone 1 i.e. 1/8 of entire contract of work months	9/3	
Milestone 2 i.e. 3/8 of entire contract of work months	9/2	[Cl.2.2&50.1]
Milestone 3 i.e. 3/4 of entire contract of work months	9x3/4	

- | | Clause
Reference with
respect to
Section 3 |
|--|---|
| 7- The site is located at Bhiwadi -Tapukra | [Cl.1.1] |
| 8- The name and identification number of the contract is: Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212+800) to Bhiwadi (Km 221+350) in the state of Rajasthan | [Cl.1.1] |
| 9- The works consist Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212+800) to Bhiwadi (Km 221+350) in the state of Rajasthan. The works shall, inter alias, include the following, as specified or as directed. | [Cl.1.1] |

(A) Road Works

Site clearance; setting-out and layout; widening of existing carriageway and strengthening including camber corrections; construction of new road; bituminous pavements remodeling/construction of junctions, intersections,; supplying and placing of drainage channels, flumes, guard posts and guard other related items; construction /extension of cross drainage works, bridges, approaches and other related stones; construction of rigid pavement, road markings, road signs and kilometer/ hectometer stones; protective works for roads/ bridges; all aspects of quality assurance of various components of the works; rectification of the defects in the completed works during the Defects Liability Period; submission of "As built" drawings and any other related documents; and other item of work as may be required to be carried out for completing the works in accordance with the drawings and provisions of the contract to ensure safety.

(B) Bridge Works

Site clearance; setting out, provision of foundations, piers abutments and bearings; pre stressed/reinforced cement concrete superstructure; wearing coat, hand railings, expansion joints, approach slabs, drainage spouts/ down take pipes, arrangements for fixing light posts, water mains, utilities etc; provision of suitably designed protective works; providing wing/return walls; provision of road markings, road signs etc.; all aspects of quality assurance; clearing the site and handing over the works on completion; rectification of the defects during the Defects Liability Period and submission of "As-built" drawings and other related documents; and other items of work as may be required to be carried out for completing the works in accordance with the drawings and the provisions of the contract and to Insure safety.

(C) Other Items

Any other items as required to fulfill all contractual obligations as per the Bid documents. [Cl. 1.1]

10. The bid documents also form part of the contract and any other documents uploaded for this tender. [Cl.2.3.(9)]
11. The law which applies to the contract is the law of **Union of India** [Cl.3.1]
12. The language of the Contract documents is **English** [Cl.3.1]
13. Deleted [Cl.7.1]
14. The Schedule of other contractors [Cl.8]
15. The Schedule of Key personnel As per Annexure-I to Section-I [Cl.9]
16. The minimum insurance cover for physical property, injury and death is Rs: 5.00 Lakhs per occurrence with the number of occurrence limited to four. After each occurrence contractor, will pay addition premium necessary to make insurance valid for four occurrences always. [Cl.13]
17. Deleted [Cl.14]
18. The Site possession dates shall be **the date of Start of work as per Item No.5 of contract data.** [Cl.21]
19. Deleted [Cl. 25]
20. Deleted [Cl. 26]
21. The period for submission of the programme for approval of Engineer shall be 10 days from the issue of Letter of Acceptance. [Cl. 27.1]
22. The period between programme updates shall be 30 days. [Cl. 27.2]
23. The amount to be withheld for late submission of an updated programme shall be Rs. 5.00lakhs. [Cl. 27.3]
24. Deleted [Cl. 45]
25. The currency of the Contract is Indian Rupees. [Cl.47]
26. **The formula for adjustment of Bitumen prices** [Cl. 48]
27. The proportion of payments retained (retention money) shall be 6% from each bill subject to a maximum of 5% of final contract price. [Cl. 49]
28. Amount of liquidated damages for delay in completion of works For Whole of work (1/2000)th of the Initial Contract Price, rounded off to the nearest Thousand, per day. [Cl. 50]

29. Maximum limit of 10 per cent of the Initial Contract liquidated damages for delay in completion of work. Price rounded off to the nearest thousand. [Cl.50}

30. **Deleted**

31. **Deleted**

32. The amounts of the advance payment are: [Cl. 52 & 53]

Nature of Advance

Amount (Rs.) Conditions to be fulfilled

- | | | | |
|-----|--------------|---|--|
| 1. | Mobilization | 10% of the Contract price | On submission of unconditional Bank Guarantee, (to of Contract period). The contractor may furnish four bank guarantees of 2.5% each, valid for full period. Guarantee. (To be drawn before the end of 20% of Contract period).to a maximum of 5% of the Contract price. |
| ii. | Equipment | 90% for new and 50% of depreciated value for old equipment. Total amount will be subject to maximum of 5% of the Contract Price | After equipment is brought to site (provided the Engineer is satisfied that the equipment is required for performance of the contract) and on submission of unconditional Bank Guarantee for amount of advance. |

(The advance payment will be paid to the Contractor no later than 28 days after fulfillment of the above conditions).

3. Repayment of advance payment for mobilization and equipment: [Cl.52.3] The advance loan shall be repaid with percentage deductions from the interim payments certified by the Engineer under the Contract. Deductions shall commence in the next Interim Payment Certificate following that in which the total of all such payments to the Contractor has reached not less than 20 per cent of the Contract Price or 3 (Three) months from the date of payment of first installment of advance, whichever period concludes earlier, and shall be made at the rate of 20 per cent of the amounts of all Interim Payment Certificates until such time as the loan has been repaid, always provided that the loan shall be completely repaid prior to the expiry of the original time for completion pursuant to Clauses 17 and 28.

- | | | |
|-----|--|--|
| | | Clause Reference
with respect
to section 3
[Cl. 52.4] |
| 34. | Deleted: | |
| 35. | The Securities shall be for the following minimum amounts equivalent as a percentage of the Contract Price: | [Cl. 53] |
| | Performance Security for 3 per cent of contract price plus additional security as 40% of the amount 10% lower than the estimated amount for unbalanced bids. | |
| | The standard form of Performance Security acceptable to the Employer shall be an <u>unconditional Bank Guarantee</u> of the type as presented in Section 8 of the Bidding Documents. | |
| 36. | The Schedule of Operating and Maintenance Manuals_____ | [Cl. 59] |
| 37. | The date by which "as-built" drawings (in scale as directed) in 2 sets are required is within 28 days of issue of certificate of completion of whole or section of the work, as the case may be. | [Cl. 59] |
| 38. | The amount to be withheld for failing to supply "as built" drawings by the date required is <u>Rs 20.00</u> Lakhs. | [Cl. 59] |
| 39. | The following events shall also be fundamental breach of contract: "The Contractor has contravened Sub-clause 7.1 and Clause 9 of GCC." | [Cl. 60.2] |
| 40. | The percentage to apply to the value of the work not completed representing the Employer's additional cost for completing the Works shall be <u>20</u> per cent. | [Cl. 61] |

SECTION 5 TECHNICAL SPECIFICATIONS

SPECIFICATIONS

1. Preamble

- 1.1 The Specifications contained herein shall be read in conjunction with the MORTH other Bid Document as specified in Section 1.
- 1.2 Wherever reference is made in the Contract to specific standards/codes to be met by the materials, plant, and other supplies to be furnished, and work performed or tested, the provisions of the latest current edition or revision of the relevant MORTH, IRC standards and codes shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are national, or relate to a particular country of region, other internationally recognized standards and codes specified will be accepted subject to the Employer's prior review and written approval.

2. General Requirement

The Specifications in accordance with which the entire work shall be constructed and maintained by the Contractor are as described hereunder:

2.1 Part I – General Technical Specifications

The General Specifications for the Works shall be the “Specifications for Road & Bridge Works” (5th Revision 2013, published by IRC) issued by the Ministry of Road Transport & Highways (MORTH), henceforth called MORTH Specification.

2.2 Part II – Supplementary Technical Specifications

The Supplementary Technical Specifications shall comprise of various Amendments/Modifications/Additions to the MORTH referred to in Part – I for particular item of works not already covered in Part – I and Specifications for Building, Sanitary, Electrical and Miscellaneous Works.

- 2.2.1 Where a particular Clause or a part thereof in the “MORTH SPECIFICATIONS” referred in Part-I, has been Amended/Modified/Added upon, and incorporated in Part-II, such Amendment/Modification/Addition supersedes the relevant Clause or part of the Clause.
- 2.2.2 The following Clauses in the “MORTH SPECIFICATIONS” have been amended/modified/ added upon:

102, 106, 108, 109, 111, 112, 115, 120, 501, 502, 503, 507, 803, 900, 901, 1007, 1014,.
- 2.2.3 The Additional Specifications shall comprise of specifications of particular item of work not covered in Part-I. These are given new Clause numbers.

The following Clauses A-1 to A-2 have been added to the “MORTH SPECIFICATIONS

Clause A-1 Test Procedure for Measuring Roughness Index of the Riding Surface of a Flexible Pavement

Clause A-2 Traffic Safety and Control

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

Amendments/Modifications/Additions to Existing Clauses of General Specifications Referred in the Part – I

Clause 102 : Definitions

The following abbreviations shall be added at the end of Clause 102.

“BIS” : Bureau of Indian Standards

“MORTH” : Ministry of Road Transport & Highways, Govt. of India.

“RIDCOR” : **Road Infrastructure Development Company of Rajasthan Ltd.**

Add a paragraph at the end of this Clause as under

Wherever in the Specification, the phrase “Condition of Contract” is mentioned, it shall mean General Conditions of Contract and Special Conditions of Contract contained in Section 3 of the Bid Document.

Clause 106 : Construction Equipment

Add the following after Sub Clause 106 (k).

- l) Adequate standby equipment including spare parts shall be available as required, and as may be advised by the Employer.
- m) All measuring devices and gauges shall be in good working condition. Measuring devices that can affect product quality shall be calibrated prior to use and at prescribed intervals against certified equipment. Calibration procedures shall be established, maintained and documented and corrective actions taken when results are unsatisfactory. Accuracy and fitness of measuring devices shall be ensured at all times by proper maintenance.

Clause 108 : Site Information

Add the following at the end of Sub-clause 108.3

“Identification of quarry sites and borrow areas is the responsibility of the

Contractor. Material to be procured from quarry sites and borrow areas identified by the Contractor and to be used in the works shall be as per Specifications for particular items of work.”

Clause 109 : Setting Out

The second sentence in Para 1 of Sub Clause 109.3 shall be inserted and read as under:

“The Reference Bench Mark for the areas shall be GTS Benchmark established by Survey of India and the values of the same shall be obtained by the Contractor from Survey of India.”

Clause 111 : Precautions for Safeguarding the Environment

Add new Sub Clause:

Clause 112 : Arrangement for Traffic During Construction

Sub Clause 112.6 : “Measurements for Payment and Rate” is deleted

Clause 115 : Methodology and Sequence of Work

Sub Clause 120.2 : Description

Add the words “including uninterrupted power supply” to the second sentence of first paragraph.

Add the following at the end of this Sub-Clause:

“Within 14 (fourteen) days of the Commencement Date, the Contractor shall prepare and submit a layout plan and details of the laboratory building and make/supplier of the equipment to the Employer for his approval.

The field laboratory shall be provided in finished and fully equipped condition to the entire satisfaction of the Employer not later than 45 (forty-five) days after execution of the Contract Agreement. During the period till the laboratory is completed the laboratory tests shall be performed in another laboratory proposed by the Contractor and approved by the Employer at the cost of the former.”

Sub Clause 120.4 : Laboratory Equipment

The following items of laboratory equipment may also be ensured in the field laboratory:

S. No.	Sub No.	Item, Specifications	Nos. Required
A : General			
(i)		Balance	
	(a)	7 kg to 10 kg capacity semi-self indicating Electronic Type-Accuracy 1 gm	2
	(b)	500 gm capacity semi-self indicating Electronic Type-Accuracy 0.01 gm	2
	(c)	Chemical balance 100 gm capacity – Accuracy 0.0001 gm	1
	(d)	Pan balance 5 kg capacity – Accuracy 0.5 gm	2
	(e)	Platform Scale – 300 kg capacity	1
(ii)		Ovens – Electrically operated, thermostatically controlled	
	(a)	From 100°C to 220°C – Sensitivity	2
(iii)		Sieves, as per IS 460-1962	
	(a)	IS Sieves 450 mm internal dia of sieve sets as per ISI of required sieve sizes complete with lid and pan	2 sets
	(b)	IS sieve 200 mm internal dia. (brass frame and steel or brass wire cloth mesh) consisting of sieve sets of required sieve sizes complete with lid and pan	2 sets
(iv)		Sieve shaker capable of taking 200 mm and 450 mm dia. Sieves electrically operated with time switch assembly (As per IS)	1
(v)		200 tonnes compression testing machine	1
(vi)		Stop watches 1/5 sec. Accuracy	2
(vii)		Glassware comprising of Beakers, Pipettes, dishes, measuring cylinders (100 to 1000 cc capacity) glass rods and funnels, glass thermometers range 0°C to 100°C and metallic thermometers range 300°C	6 each
(viii)		Hot plates 200 mm dia (1500 watt)	2
(ix)		Enamel trays	
	(a)	600 mm x 450 mm x 50 mm	10
	(b)	450 mm x 300 mm x 40 mm	10
	(c)	300 mm x 250 mm x 40 mm	6
	(d)	Circular plates of 250 mm dia	6
(x)		Water Testing Kit	1

B : For Soils

Deleted

C : For Bitumen and Bituminous Mixes

(i)	Constant temperature bath for accommodating bitumen test specimen, electrically operated and thermostatically controlled	1
(ii)	Penetrometer automatic type, adjustable weight arrangement and needles as per IS : 1203-1978	1
(iii)	Centrifuge type bitumen extraction apparatus complete with extraction thimbles with solvent and filter paper	1
(iv)	Laboratory mixer including required accessories about 0.02 cum capacity electrically operated fitted with heating jacket	1
(v)	Marshall compaction apparatus automatically operated as per ASTM 1559-62 T and complete with electrically operated loading unit, compaction pedestal heating head assembly, dial micrometer and bracket for flow measurement, load transfer bar, specimen mould 100 mm dia (4 in) with base plate, collars, specimen extractor, compaction hammer 4.53 kg (10 lb.) x 457 mm (18 in) fall	1 set
(vi)	Distant Reading Digital Thermometer	1
(vii)	Automatic Asphalt Content Gauge (Nuclear or equivalent)	1
(viii)	1.5 tonne capacity Air Conditioner	1
(ix)	Apparatus for the testing of theoretical Maximum Specific Gravity (GMM)	1
(x)	Viscosity Meter for testing of Bitumen	1

D : For Cement, Cement Concrete and Materials

(i)	Vicat needle apparatus for setting time with plungers, as per IS : 269-1967	1
(ii)	Moulds	
(a)	150 mm x 300 mm ht cylindrical moulds with capping component	As required
(b)	Cubical moulds 150 mm, 100 mm (each size)	As required
(iii)	High frequency mortar cube vibrator for cement testing	1
(iv)	Concrete mixer power driven, 1 cu ft capacity	1
(v)	Variable frequency and amplitude vibrating table size 1 metre x 1 metre, as per the relevant British Standard	1
(vi)	Flakiness & Elongation index test apparatus	1
(vii)	Aggregate impact test apparatus as per IS : 2386 (Part 4) 1963	1
(viii)	10% fines test equipment	1
(ix)	Flow table as per IS : 712-1973	1
(x)	Equipment for slump test	2

(xi)	Equipment for determination of specific gravity for fine and coarse aggregate as per IS : 2386 (Part 3) 1963	1
(xii)	Flexural attachment to compression testing machine	1
(xiii)	Core cutting machine with 150 mm dia. Diamond cutting edge	1
(xiv)	Needle vibrator	1
(xv)	Vibrating hammer as per BS specification	1
(xvi)	Air entrainment meter	1
(xvii)	0.5 Cft cylinder for checking bulk density of aggregate with tamping rod	As required
xviii)	Soundness testing apparatus for cement	1

E : For Checking Alignment, Control of Profile and Surface Evenness

(i)	Precision automatic level with micrometer attachment	2
(ii)	Precision staff	1 set
(iii)	3 metre straight edge and measuring wedge	1 set
(iv)	Camber templates 2 lane, straight run cross-section	2 sets

F : Steel Tape

(a)	5 m long	As required
(b)	10 m long	As required
(c)	20 m long	As required
(d)	30 m long	As required
(e)	50 m long	As required

Note: The laboratory set-up must be complete including a set of reference standards for all tests, adequately staffed and operational to the satisfaction of the Employer before commencement of the works.

Clause 501 : General Requirements for Bituminous Pavement Layers

Sub Clause 501.8.8.2 : Rate for Premixed Bituminous Material

Item (ii) shall read as:

'Preparation of surface to receive the materials except rates for prime / tack coats'

Item (viii) shall be deleted from "with the provision that the variation in actual percentage of bitumen used will be assessed and the payment adjusted accordingly".

Clause 502 : Prime Coat over Granular Base

Sub Clause 502.8 : Rate

Delete last sentence and read it as “Payment shall be made on the basis of the provision of prime coat at an application rate specified in relevant item of BOQ as approval by Employer. No variation is permitted.”

Clause 503 : Tack Coat

Sub Clause 503.8 : Rate

Delete last sentence and read it as “Payment shall be made on the basis of the provision of Tack Coat at an application rate specified in relevant item of BOQ as approval by Employer. No variation is permitted.”

Clause 505 : Dense Bituminous Macadam

Sub Clause 505.2.2 :

Add the following:

“The coarse aggregate shall consist of crushed rock be made from **black/ blue basaltic rock**”

Sub Clause 505.2.3 :

Add the following:

“The fine aggregate shall consist of crushed rock be made **from black/ blue basaltic rock**”

Clause 507 : Bituminous Concrete

Sub Clause 507.1 : Scope

Add the following at the end of this Clause

“A site trial shall be performed in accordance with Sub Clause 901.6.”

Sub Clause 507.2.2 :

The coarse aggregates shall be generally as specified in clause 504.2.2.

Add the following:

“The coarse aggregate shall consist of crushed rock be made from **black/ blue basaltic rock**”

Sub Clause 507.2.3 :

The coarse aggregates shall be generally as specified in clause 504.2.3.

Add the following:

“The fine aggregate shall consist of crushed rock be made from **black/ blue basaltic rock**”

Sub Clause 507.3.1 : Requirement for the Mixture

In table 500-12 giving the requirement of Bituminous Concrete mix, add the following:

“Air voids in mix (VIM) determined on Specimens compacted 3% (minimum) to refusal density by 300 blows of Marshal Hammer on each end”

Sub Clause 507.9 : Rate

The contract unit rate shall be all as specified in Clause 504.8, except that the rate shall include the provision of bitumen at minimum 5.2 percent & 5.4 percent for grading 1 and grading 2 by weight of total mix respectively. No additional payment for increased percentage of bitumen based on job mix formula shall be paid.

Clause 803 : Road Markings

Sub Clause 803.3.2

This Sub Clause is substituted to read as under:

“The road marking shall be laid with appropriate road marking machinery as approved by the Employer.”

Add at the end of Sub-clause 803.6.6:

Faulty Workmanship or Materials

If any material not complying with the requirements is delivered at the Site or used in the Works, or if any sub-standard work is carried out, such material or work shall be removed, replaced or repaired as required by the Employer, at the Contractor’s own cost. Rejected traffic markings and paint that has been splashed or has dripped onto the surfacing, kerbs, structures or other such surfaces shall be removed by the Contractor at his own cost, in such a way that the markings of split paint will not show up again later.

Clause 900 : Quality Control for Road Works

Sub Clause 901.1

This Sub Clause is substituted to read as under

“All materials to be used, all methods adopted and all works performed shall be strictly in accordance with the requirements of these Specifications. The Contractor shall set up a field laboratory at location approved by the Employer and equip the same with adequate equipment and personnel in order to carry out all required tests and Quality Control work as per Specifications and/ or as per Clause 121 and/ or as directed by the Employer. The list of laboratory equipments and the facilities to be provided shall be as per Clause 121 or as directed by Employer and shall be approved by the Employer in advance.”

Add new Sub Clause as under:

Sub Clause 901.15 : Site Trial

The following data shall be ordered at each site trial:

- The composition and grading of the material, including the bitumen content and properties, if appropriate;
- If appropriate, the moisture content at the time of laying;
- If appropriate, the temperature at the time of laying and rolling;
- The type and size of compaction equipment and the number of passes;
- The maximum density or target density as appropriate and the density achieved in the trial;
- The maximum compacted thickness of layer;
- Calibration of machinery for best and efficient results;
- Any other relevant information.

If, during execution of the Works, the construction control tests indicate that the requirements for a material are not consistently being achieved, then work on that layer shall stop until the cause is investigated. Such investigation may include further laboratory and site trials on the material to determine a revised set of data, as above which, when agreed, shall be the basis on which all subsequent material will be provided and processed to achieve the specified requirements.

Approval by the Employer to a set of data recorded, as above in a site trial shall not relieve the Contractor of responsibility to comply with the requirements of Technical Specifications.

Clause 1007 : Coarse Aggregates

- (i) Delete from the first sentence “crushed gravel..... inert material” appearing in 4th and 5th Line.
- (ii) Add the following at the end of this clause:
 “Except where it can be shown to the satisfaction of the Employer that a supply of properly graded aggregate of uniform quality can be maintained over the period of the Works, the grading of aggregate shall be controlled by obtaining the coarse aggregate in different size and blending them in correct proportions as or when required.”

Clause 1014 : Storage of Materials

Sub Clause 1014.3: Storage of Materials : Aggregates

The following shall be added to this clause

“Aggregates shall be stored or stockpiled in such a manner that segregation and coarse size will be avoided and also that the various sizes will not become intermixed before proportioning. They shall be stored, stockpiled and handled in such a manner that will prevent contamination by foreign materials.”

ADDITIONAL SPECIFICATIONS FOR PARTICULAR ITEMS
OF WORKS NOT COVERED IN PART – I

**Clause A-1 TEST PROCEDURE FOR MEASURING SURFACE ROUGHNESS INDEX
OF THE RIDING SURFACE OF A FLEXIBLE PAVEMENT**

EQUIPMENT – British Towed Fifth Wheel Bump Integrator

Test Procedure:

The following test procedure shall be adopted for the test:

- (1) Check the installation and operation of the equipment is in order and meets the requirements prescribed in its operational manual. For example the towing hitch maintains the frame in a upright position but provides freedom of movement in longitudinal and transverse directions. The tyre pressure of wheels is as prescribed.
- (2) The instrument shall be calibrated prior to its use for measurement as prescribed in its operational manual.
- (3) The operators shall familiarize themselves with the Fifth Wheel Bump Integrator, operation using its Test Mode before commencing a survey.
- (4) A uniform speed of 30 km/hour, which is the specified operating speed of the British Towed Fifth Wheel Bump Integrator, shall be maintained during measurements. The readings shall be taken for each carriageway independently.
- (5) The equipment shall run on a lane in both the direction once and the average of two values taken for its roughness index.
- (6) Pavement unevenness/roughness of 3 lane carriageway shall be obtained from the average of the values of the 3 lanes recorded.
- (7) The surface roughness index value is obtained by using the following formula.

$$\text{Roughness Index Value} = \frac{\mathbf{B \times R \times 1 \text{ cm/km}}}{\mathbf{W}}$$

Where

B = Number of Bumps in a section

W = Number of Wheel Revolution Counter

R = is a constant, 1000 nos. of wheel revolution counter per km

Length count of B = 1 cm

- (8) All data shall be properly recorded with appropriate referencing and stored in a prescribed manner as in the operational manual.
- (9) The roughness measurements shall be properly calibrated using the procedure recommended in the World Bank Technical Publication No. 46.

TRAFFIC SAFETY AND CONTROL

(IRC-SP-55, 2014 to be adopted)

1. Description

These specifications describe the traffic management and safety measures to be taken by the Contractor throughout the construction period for ensuring the safe and convenient passage of public traffic through the project road on one hand and safety of the project workers on the other. It shall be understood that the Contractor is solely responsible for all the traffic management and safety measures which should be got approved by the Employer prior to taking up any construction work on the project. All relevant latest IRC specifications shall be followed by the contractor and he will be solely responsible for any lapses/accidents etc. due to non-compliance of safety measures etc. throughout the construction period.

Any construction work on or near a public traveled way will pose a set of new situations, which may include diversion of road users on to unfamiliar paths, exposure of road users to moving construction equipment and workers, stacking of construction materials to cause reduction in the space available for public traffic, inadequate space for maneuvering, etc. which may pose several surprises. These may cause to develop hazardous situations in case adequate advance precautions in the form of notification, traffic etc. is not taken. Within the construction area itself, the workers may be handling materials like hot bitumen and moving road construction equipment which may prove to be a cause of serious accident if adequate precaution and safety measures are not taken. Thus, the guiding principles on which the Contractor shall base the traffic management and safety measures will include:

- i) advance warning of road users about the road situation including diversion ahead.
- ii) providing clear and safe demarcated channels for guiding the public traffic.
- iii) providing necessary traffic warning/ guiding devices such as signs, safety cones, pavement markings, red lights, reflecting studs/tapes, etc.
- iv) barricading construction area with CGI sheets so that public traffic steer clear of these and do not come into conflict with construction activities.
- v) providing the project workers with necessary safety gears such as gum boots, luminous yellow jackets, crash helmets etc. as appropriate.
- vi) taking all other necessary measures so that safety is ensured during all hours of day and night.

2. Traffic Management and Safety

Any construction activity on the project will pose a hazardous situation to the road users. For least disturbance to safe passage of public traffic appropriate traffic management and safety measures should be adopted throughout the construction period. In this regard, the construction zone in which conflict from safety angle may arise between the road users on one hand and the construction activities on the other shall be divided into 4 sub zones, and safety measures to be adopted therefore shall be as described hereunder:

a) Advance Warning Zone

This warning sub-zone is meant to inform, alert and prepare the approaching driver well in advance by providing information regarding the distance and extent/type of hazard ahead so that he is able to reduce the speed and be in readiness to carry out the necessary manoeuvres as he meets with the changed situation. For the operating speeds on the project road, length of this sub-zone shall be 100 mtr. and 500 m, in plain and hilly terrain respectively. Information in this sub-zone will be conveyed through a series of traffic signs, which will include “Men at Work” and the speed reduction signs at the start and middle of this sub-zone.

b) Transition Sub-Zone

This sub-zone is the area in which the traffic is steered and guided into and out of the diverted path around the work sub-zone. This is the most crucial sub-zone from safety angle as vehicles have to be guided on to the diverted path, and most of the movements will be of turning type. The elements for designing this sub-zone are speed of the vehicles, extent of lateral shift and elevation difference between the normal and the diverted paths. The essential safety measures shall include delineation of the travel path and prevention of wayward movements of vehicles by means of barricades, channelizers, red cones, and red lamps during hours of darkness etc., as appropriate.

In the design of this sub-zone adequate attention shall be paid for providing necessary turning radius of the curves, grade to permit for safe passage of animal driven vehicles, drainage and dust-proofing. Where necessary traffic control shall be effected through manual flagging and by battery operated traffic lights during hours of darkness. Where vehicles have to wait, the waiting area shall be demarcated by stop lines.

Length of the sub-zone will generally be between 50 and 100 m.

c) Work Sub-Zone

This is to the area where construction activity takes place, and the main concern relates to safety of workers are also prevention of public traffic from entering the work area. In this sub-zone, path of traffic shall be clearly delineated to avoid intrusion of public traffic moving on to the work area or construction equipment moving on to the public traffic. It shall be ensured that adequate distance is available between 2 consecutive work zones (2 Km. on urban section and 5-10 km. in rural sections) so that vehicles get sufficient breather space for overtaking slow vehicles, lane adjustment etc. Traffic across this sub-zone shall be guided through with the help of various traffic control devices, such as signs, delineation of travel path by cones/drums, barricades, luminous tapes etc. as appropriate.

d) Termination Sub-Zone

The sub-zone is intended to inform the road users of the end of the construction zone. This shall be effected through suitable informatory sign boards.

The standard on “Safety During Construction” may be referred for compliance.

3. **Traffic Control Devices**

Traffic control devices in the construction zones perform the crucial task of warning, informing and alerting drivers apart from guiding the vehicle movements so that the drivers of the vehicles as well as the workers on site are not faced with situations posing surprise/hazard, and safe passage to traffic is affected.

The primary traffic control devices used in work sub-zone are signs, delineators, barricades, cones, pylons, pavement marking, flashing lights etc. They shall be such that they are easily understood without any confusion, are clearly visible during day and night, conform to the prevailing speed in immediate vicinity, stable against sudden adverse weather conditions and are easy in installation, renewal and maintenance. Broad details of the different devices are hereunder:

a) Signs

The construction signs fall into 3 major categories namely, regulatory signs, warning signs and guide or informatory sign as defined and detailed in IRC:67-1977, Code of Practice for Road Signs. These signs shall be placed on the left hand side of the travel path.

The common Regulatory signs used in the construction zones are “No Entry”, “Road Closed”, “Speed Limit” etc. These shall be used in consultation with the local police and / or authorities.

The warning signs to alert the drivers of the possible danger ahead in the construction zones are “Lane Closed”, “Diversion to other carriageway”, “Divided carriageway Starts”, “Divided carriageway End”, “Two way Traffic” etc. It will be advisable to explain the signs with the help of a rectangular definition plate of size of appropriate to the size of warning triangle and placed 0.15 m below, from the bottom of the triangle.

Guide signs in construction zones shall different background colour than the normal informatory signs of IRC : 67-1977, These signs shall have black messages and arrows on yellow (Traffic Yellow of IS : 5-1978) background. The guide signs to e commonly used are “Diversion “Road Ahead Closed”, “Sharp Deviation of Rout” etc.

The commonly used temporary signs during construction are depicted in the drawings. These should preferably be of reflectorised type to be visible during hours of darkness.

b) Delineators

Delineators are channelising devices such as cones, traffic cylinders, tapes, drums etc. which are placed in or adjacent to the roadway to guide the driver along a safe path and to control the flow of traffic. These shall normally be retro-reflectorised for night visibility. IRC: 79-1981 (Recommended Practice for Road Delineators) gives details of some of the delineators. The types of delineators commonly used are traffic cones, drums and barricades.

c) Traffic Cones

Traffic cones shall normally be 0.5 m to 0.75 m high and 0.3 m to 0.4 m diameter or in square shape at the base. These shall be made of plastic or rubber with retro reflectorised red and white band and have suitable anchoring so that they are not easily blown over or displaced. The cones shall be placed close enough together (spacing 3-9m) to give an impression of the continuity. Larger sized cones shall be used for high speeds or where more conspicuous guidance is required.

d) Empty Bitumen Drums

Empty bitumen drums can be used as channelising device since they are highly visible, give the appearance of being formidable objects, thereby commanding the respect of the drivers. These drums can also be of plastic which are lighter, easy to transport and store. As delineators, these drums shall be painted in circumferential strips 0.10 m to 0.15 wide, alternatively in black and white colours.

e) Barricades

Whenever the traffic has to be restricted from entering the work areas such as excavations or material storage sites so that hazardous locations are barred for public and protection to workers is provided, or there is need for separation the two way traffic, barricades shall be used. The barricades may be of portable or fixed type and can be made of wooden planks, metal or other suitable material. The horizontal component facing the traffic shall be made of 0.30 m wide wooden planks joined together and painted in alternate yellow and white strips of 0.15 m width and sloping down at an angle of 45° in the direction of traffic. Suitable support or ballasting shall be provided so that they do not over turn or are not blown away in strong winds. In case of fixed type barricades, a gate or moveable section shall be separately provided to allow the movement of the construction/supervision vehicles.

f) Flagmen

In large construction sites, flagmen with flags and sign paddles shall be effectively used to guide the safe movements. The flags for signaling shall be 0.60m x 0.60m size made of good red cloth and securely fastened to a staff of approximately 1 meter in length. The sign paddles shall conform to IRC:67-1977 and provided with a rigid handle.

For one-way operation at a time hours of darkness, battery operated red/green lights shall be used at either end of the affected section.

4. Safety and Management Practices

Measures for providing safe movement of traffic in some of the most commonly occurring work-zones on highways shall be as follows:

a) Detour on Temporary Diversion

In certain situations during the project construction period it may become necessary to pass the traffic on temporary diversion constructed parallel to highway.

A temporary diversion road shall basically satisfy the following requirements

- ❖ It shall have smooth horizontal and vertical profile for easy negotiation by vehicles.

- ❖ It shall not get overtopped by flood or drainage discharge under any circumstances.
- ❖ It shall have adequate capacity to cater for the diverted traffic
- ❖ It shall be dust free and shall ensure clear visibility at all times of the day and night. Pavement and riding surface for the diversion will depend on the duration over which the diversion will be used, and shall be as directed by the Employer. The commonly used specifications are mix seal surfacing over 150-200 mm thick WMM constructed on completed sub-grade.
- ❖ It shall be provided with the required safety standards and

The warning for the construction ahead shall be provided by the sign “Men at Work” about 1 Km. in advance of the work zone. In addition a supplementary plate indication “Diversion 1Km. Ahead “and a sign “Road closed Ahead” shall be placed. It shall be followed by “Compulsory Turn right/left sign”. The “Detour” and sharp deviation” sign shall be used to guide the traffic on to the diversion. Hazard markers shall be placed where the railings for the cross drainage structures on the diversion start.

b) Switch over of traffic from widened section and vice-versa

In the course of construction widening of the carriageway will have to be taken up in stretches with intervening space between two such stretches. This will bring about the situations in which the traffic passing through the widened road would have to pass on and merge with the unwidened section and vice-versa. For such cases, apart from “Men At Work” signs with distance plate in the advance warning zone, the signs indicating “Road Narrowing” or “Road widening” as appropriate shall be installed.

5. Precautions for Safety

The following general precautions shall apply to all the work sites.

a) General Measures

- i) All the sign and delineators shall be maintained in clean and brightly painted conditions at all times.
- ii) Adequate lighting arrangements shall be made for proper visibility during night travel through the work area.
- iii) Adequate arrangements for frequent sprinkling of water shall be made to keep the area dust free.

b) For Safety of Workmen

- i) Workmen shall be trained in use of tools and plant.
- ii) Bitumen handling labour shall be given gum boots, spectacles etc.
- iii) First –aids kits shall be provided
- iv) Workers required on site during night hours shall be provided with fluorescent jackets with reflective tapes.

c) For Safety of Road User

- i) As far as possible, the material, equipment and machinery shall be installed/parked in places sufficient away from the berms in the available

road land. Only in avoidable cases the same is allowed near the edge of berms.

- ii) Machinery shall be parked at appropriate places away from the path of public traffic, and shall be provided with red flags and red lights.
- iii) Only minimum quantity of material required for the construction operations shall be collected at site near the public traveled way.

6. Safety Audit

Safety audit shall be conducted periodically on the safety measures adopted during the constructions operations. The main aspects to be covered shall include:

- a) Manpower and their safety
- b) Machinery
- c) Temporary works
- d) Equipment & Vehicles
- e) Material storage and handling
- f) Construction procedures
- g) Environment
- h) Site safety guidelines
- i) Miscellaneous services

The contractor shall constitute special teams from his staff for the above audit, and shall take appropriate corrective

SECTION 6
FORM OF BID

FORM OF BID

Description of the Works:

To : Director, RIDCOR,Jaipur.

1. We offer to execute the Works described above and remedy any defects therein in conformity with the conditions of Contract, specification, drawings, Bill of Quantities and Addenda for the sum(s) of -----

2. We undertake, if our Bid is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Engineer's notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the document.
3. We agree to abide by this Bid for the period of **150** days from the date fixed for receiving the same, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
4. Unless and until a formal Agreement is prepared and executed this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.
5. We understand that you are not bound to accept the lowest or any tender you may receive.

Dated this _____ day of _____ 20.....

Signature _____ in the capacity of _____
duly authorized to sign bids for and on behalf of _____

(in block capitals or typed)

Address

Witness

Address

Occupation

SECTION 7
BILL OF QUANTITIES

BILL OF QUANTITIES

Preamble

1. The Bill of Quantities shall be read in conjunction with the Instructions to Bidders, Conditions of Contract, Technical Specifications and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional, and the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and prices tendered in the priced Bill of Quantities, where applicable, and otherwise at such rates and price as the Engineer may fix the term of the contract.
3. The rates and price tendered in the priced Bill of Quantities shall, except insofar as it is otherwise provided under the Contract, include all constructional plant, labors, supervision, materials, erection, maintenance, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the Contract.
4. The Bidder shall fill in percentage rate above or below the total amount of the Works described in the Bill of Quantities at Section-7. Any incidental item shall be deemed to be covered by the other rates and prices in the Bill of Quantities.
5. The whole cost of complying with the provision of the Contract shall be included in the items provided in the prices Bill OF Quantities, and where no Items are provided the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.
6. General directions and descriptions of work and materials are not necessarily repeated or summarized in the Bill of Quantities. References to the relevant sections of the contract documentation shall be made before entering rates or prices against each items in the Bill of Quantities.
7. The method of measurements of completed work for payment shall be in accordance with the specification for Road and Bridge Works published by the Ministry of Surface Transport(edition).
8. Errors will be corrected by the Employer for any arithmetic errors pursuant to Clause 29 of the Instructions to Bidders.
9. Rock is defined as all material which, in the opinion of the Engineer, require blasting or the use of metal wedges and sledgehammers, or the use of compressed air drilling for its removal, and which cannot be extracted by ripping with a tractor of at least 150 km with a single rear mounted heavy duty ripper.

Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212+800) to Bhiwadi (Km 221+350) in the state of Rajasthan

Abstract of Bill of Quantities

S. No.	Bills		Amount (Rs.)	Amount In Words
	Bill No.	Description		
1	Bill 1	Site Clearance and Dismantling	60,64,628	Rs. Sixty Lakhs Sixty Four Thousands Six Hundred Twenty Eight Only
2	Bill 2	Earth Work	1,66,31,997	Rs. One Crore Sixty Six Lakhs Thirty One Thousands Nine Hundred Ninety Seven Only
3	Bill 3	Sub Base/ Base	3,99,56,880	Rs. Three Crores Ninety Nine Lakhs Fifty Six Thousands Eight Hundred Eighty Only
4	Bill 4	Bituminous Course (Flexible Pavement)	10,58,18,362	Rs. Ten Crores Fifty Eight Lakhs Eighteen Thousands Three Hundred Sixty Two Only
5	Bill 5	Cement Concrete Pavement (Rigid Pavement)	12,58,96,100	Rs. Twelve Crores Fifty Eight Lakhs Ninety Six Thousands One Hundred Only
6	Bill 6	Cross Drainage Structure (Culverts, Minor Bridge)	3,84,53,004	Rs. Three Crores Eighty Four Lakhs Fifty Three Thousands Four Only
7	Bill 7	Drainage works	7,50,18,610	Rs. Seven Crores Fifty Lakhs Eighteen Thousands Six Hundred Ten Only
8	Bill 8	Junctions	3,40,65,332	Rs. Three Crores Forty Lakhs Sixty Five Thousands Three Hundred Thirty Two Only
9	Bill 9	Traffic Signs, marking and Appurtenances	2,37,96,652	Rs. Two Crores Seventy Five Lakhs Thirty Seven Thousands Seven Hundred Forty Only
Civil Construction Cost			46,57,01,565	Rs. Forty Six Crores Ninety Four Lakhs Forty Two Thousands Six Hundred Fifty Three Only

Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212+800) to Bhiwadi (Km 221+350) in the state of Rajasthan

Bill of Quantities (BILL No. - 1: SITE CLEARANCE AND DISMANTLING)

Item No.	Descriptions	Unit	Quantity	Rate (Rs)	Amount (Rs)	Amount in words
1.01	Clearing and Grubbing Road Land (Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) By Mechanical Means					
(i)	In area of light jungle	Ha.	5.03	16669.0	83,762	Rs. Eighty Three Thousands Seven Hundred Sixty Two Only
1.02	Dismantling of Flexible Pavements (Dismantling of flexible pavements and disposal of dismantled materials up to a lead of 1000 metres, stacking serviceable and unserviceable materials separately) By Mechanical Means					
(i)	Bituminous courses	Cum	1626	140	2,27,640	Rs. Two Lakhs Twenty Seven Thousands Six Hundred Forty Only
(ii)	Granular courses	Cum	16390	327	53,59,530	Rs. Fifty Three Lakhs Fifty Nine Thousands Five Hundred Thirty Only
1.03	Dismantling Kerb Stone (Dismantling kerb stone by manual means and disposal of dismantled material with all lifts and up to a lead of 1000 metre)	Metre	4306	6.00	25,836	Rs. Twenty Five Thousands Eight Hundred Thirty Six Only
1.04	Scarifying existing bituminous surface to a depth of 50 mm by mechanical means (Scarifying the existing bituminous road surface to a depth of 50 mm and disposal of scarified material with in all lifts and lead upto 1000 metres.)	Sqm	91965	4.00	3,67,860	Rs. Three Lakhs Sixty Seven Thousands Eight Hundred Sixty Only
	Total of Site Clearance & Dismantling			Rs.	60,64,628	Rs. Sixty Lakhs Sixty Four Thousands Six Hundred Twenty Eight Only

Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212+800) to Bhiwadi (Km 221+350) in the state of Rajasthan

BILL of Quantities (BILL No. - 2: EARTH WORK)

Item No.	Descriptions	Unit	Quantity	Rate (Rs)	Amount (Rs)	Amount in words
2.01	Earth work in excavation, including stacking/disposal of surplus material with all lifts and lead up to 50 meters, exclusive of compensation of earth [MoRTH specification : Clause 301 to 305]	cum	68358	87	59,47,146	Rs. Fifty Nine Lakhs Forty Seven Thousands One Hundred Forty Six Only
2.02	Excavation for Structures (Earth work in excavation of foundation of structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom, backfilling the excavation earth to the extent required and utilising the remaining earth locally for road work.)					
(i)	Ordinary soil	cum	20003	131	26,20,393	Rs. Twenty Six Lakhs Twenty Thousands Three Hundred Ninety Three Only
2.03	Embankment Construction with Material Obtained from Borrow Pits (Construction of embankment with approved material obtained from borrow pits with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement of table 300-2)	cum	908	125	1,13,500	Rs. One Lakh Thirteen Thousands Five Hundred Only
2.04	Construction of Embankment with Material Deposited from Roadway Cutting (Construction of embankment with approved materials deposited at site from roadway cutting and excavation from drain and foundation of other structures graded and compacted to meet requirement of table 300-2)	cum	9592	120	11,51,040	Rs. Eleven Lakhs Fifty One Thousands Forty Only
2.05	Construction of Subgrade and Earthen Shoulders (Construction of subgrade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2)	cum	42860	150	64,29,000	Rs. Sixty Four Lakhs Twenty Nine Thousands Only
2.06	Compacting original ground supporting subgrade (Loosening of the ground upto a level of 500 mm below the subgrade level, watered, graded and compacted in layers to meet requirement of table 300-2 for subgrade construction.)	Sqm	8626	43	3,70,918	Rs. Three Lakhs Seventy Thousands Nine Hundred Eighteen Only
	Total of Earth work			Rs.	1,66,31,997	Rs. One Crore Sixty Six Lakhs Thirty One Thousands Nine Hundred Ninety Seven Only

Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212+800) to Bhiwadi (Km 221+350) in the state of Rajasthan

Bill of Quantities (BILL No. - 3: GRANULAR SUB-BASES, BASES COURSES)

Item No.	Descriptions	Unit	Quantity	Rate (Rs)	Amount (Rs)	Amount in words
3.01	Granular Sub Base (Providing laying spreading and compacting specified graded sand, gravel as per Table 400-1,400-2 or any other course material as per design mix, as per CBR in sub base course including premixing the material at OMC in wet mix plant, carriage of mixed material spreading in uniform layers with motee grader F.E loader on a prepared base and compacting with vibratory roller to achieve desired density (as per I.S.2720) including all material, labour, machinery, lighting guarding, barricading and maintenance of diversion complete.[MoRTH specification : Clause 401]. with all lead.)	cum	17307	1240	2,14,60,680	Rs. Two Crores Fourteen Lakhs Sixty Thousands Six Hundred Eighty Only
3.02	Wet Mix Macadam (Providing, laying, spreading and compacting stone aggregate for Wet Mix Macadam (as per table 400-12 and 400-13) specification including premixing the material with water to OMC in wet mix plant as per approved design mix, carriage of mixed material by Tipper to site, laying in uniform layers with motor grader/Front end Loader/paver finisher, in sub base/ base course on a well prepared under base and compacting with vibratory roller to achieve the desired density including lighting, guarding, barricading and maintenance of diversion etc. (MoRTH specification : Clause 406 & Clause 112) by mechanical means with all lead.)	cum	12756	1450	1,84,96,200	Rs. One Crore Eighty Four Lakhs Ninety Six Thousands Two Hundred Only
3.03	Footpaths and Separators (Construction of footpath/separator by providing a 150 mm compacted granular sub base as per clause 401 and 25 mm thick cement concrete grade M15, over laid with precast concrete tiles in cement mortar 1:3 including provision of all drainage arrangements but excluding kerb channel..)				-	
	Total of Granular Sub-Bases & Base Courses			Rs.	3,99,56,880	Rs. Three Crores Ninety Nine Lakhs Fifty Six Thousands Eight Hundred Eighty Only

Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212-800) to Bhiwadi (Km 221+350) in the state of Rajasthan

Bill of Quantities (BILL No. - 4: BITUMINOUS COURSES (FLEXIBLE PAVEMENT))

Item No.	Descriptions	Unit	Quantity	Rate (Rs)	Amount (Rs)	Amount in words
4.01	Providing and applying primer coat over prepared surface or granular base with bitumen emulsion(SS-1) as per IS: 8887 & manufacturer's specifications @ 7.5 kg /10 sqm with a self propelled of towed bitumen pressure sprayer equipped for spraying the material uniformly at specified rates and temperatures as per MORTH specification CI 502,112 (Including cleaning of road surface)	sqm	47958	37.50	17,98,425	Rs. Seventeen Lakhs Ninety Eight Thousands Four Hundred Twenty Five Only
4.02	Providing and applying tack coat on the prepared surface ,with bitumen emulsion (RS-1) as per IS : 8887 & manufacturer's specifications @ 2.50 kg /10sqm. With a self propelled or towed bitumen pressure sprayer equipped for spraying the material uniformly at specified rates and temperatures as per MORTH specification CI.503,112 (Including cleaning of Road Surface)	sqm	139923	11.80	16,51,091	Rs. Sixteen Lakhs Fifty One Thousands Ninety One Only
4.03	Dense Bituminous Macadam (Providing and laying Dense Bituminous Macadam on prepared surface with specified graded crushed aggregates as per table 510 and design mix for base/binder course including loading of material with F.E loader heating of binder aggregate and filler in approved hot mix plant as per clause 6.5 of manual transporting the mixed material by tippers and laying with sensor paver finisher as per clause 507.3.5 to the required level and grade rolling by self propelled power rollers and vibratory rollers or pneumatic tyred roller 150-250KN. TP=0.7MPa to achieve the desired density (approved by the department) but excluding cost of primer/tack coat. [MORTH Specification : Clause 507,112] including antistripping agent with all lead.)					
(i)	Grading I (40 mm nominal size) - Bitumen @ minimum 4.0 % of mix (VG-30 grade) & thickness 80 - 100 mm	cum	4610	7015.00	3,23,39,150	Rs. Three Crores Twenty Three Lakhs Thirty Nine Thousands One Hundred Fifty Only
4.04	Bituminous Concrete (Providing and laying bituminous concrete as per design mix on prepared surface with specified graded stone as per table 500-18 for wearing course including loading of aggregate with F.E loader and hot mixing of binder and 2% cement filler with aggregates in approved hot mix plant as per clause 6.5 of manual Transporting the mix material with tipper to paver and laying with sensor paver finisher (as per clause 507.3.5) to the required level , grades and rolling with vibratory compactor and pneumatic tyred roller 150-250 KN,TP=0.7 Mpa, to achieve the desired density (approved by the department) excluding cost of primer/tack coat (MORTH Specification : Clause -509,112) including Antistripping Agent with all lead.)					
(i)	PMB-40 grade	cum	6744	10384.00	7,00,29,696	Rs. Seven Crores Twenty Nine Thousands Six Hundred Ninety Six Only
	Total of Bituminous Course			Rs.	10,58,18,362	Rs. Ten Crores Fifty Eight Lakhs Eighteen Thousands Three Hundred Sixty Two Only

Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212+800) to Bhiwadi (Km 221+350) in the state of Rajasthan

Bill of Quantities (BILL No. - 5: CC PAVEMENT (RIGID PAVEMENT))

Item No.	Descriptions	Unit	Quantity	Rate (Rs)	Amount (Rs)	Amount in words
5.01	Construction of dry lean cement concrete sub-base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm , aggregate cement ratio not to exceed 15:1 , aggregate gradation after blening to be as per Table 600-1, cement content not to be less than 150 Kg/Cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant as per mix design, transported to site, laid with a hydrostatic paver with electronic sensor, compacting with 8-10 tonne vibratory roller, finishing and curing complete as per MoRTH specification clause 601.	Cum	7900	2878	2,27,36,200	Rs. Two Crores Twenty Seven Lakhs Thirty Six Thousands Two Hundred Only
5.02	Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub-base with 43 grade cement @ 400 Kg per cum , coarse and fine aggregate conforming to IS: 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete as per MoRTH specification clause 602.	Cum	15397	6700	10,31,59,900	Rs. Ten Crores Thirty One Lakhs Fifty Nine Thousands Nine Hundred Only
	Total of Rigid Pavement			Rs.	12,58,96,100	Rs. Twelve Crores Fifty Eight Lakhs Ninety Six Thousands One Hundred Only

Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212+800) to Bhiwadi (Km 221+350) in the state of Rajasthan
BIL NO. - 6 (BILL OF QUANTITIES)

S. No.	Description	Unit	Qty.	Rate (Rs.)	Amount (Rs.)	Amount in words
6.01	Excavation for Structures (Earth work in excavation of foundation of structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material.)	cum	4,913	147	7,22,211	Rs. Seven Lakhs Twenty Two Thousands Two Hundred Eleven Only
6.02	Plain/Reinforced cement concrete in open foundation complete as per drawing and technical specifications.					
(i)	PCC M-15	cum	408	4,244	17,31,552	Rs. Seventeen Lakhs Thirty One Thousands Five Hundred Fifty Two Only
6.03	Plain/Reinforced cement concrete in open foundation complete as per drawing and technical specifications.					
(i)	RCC M-30	cum	524	5,437	28,48,988	Rs. Twenty Eight Lakhs Forty Eight Thousands Nine Hundred Eighty Eight Only
6.04	Plain/Reinforced cement concrete in sub-structure complete as per drawing and technical specifications.					
(i)	RCC M-30	cum	1,218	5,437	66,22,266	Rs. Sixty Six Lakhs Twenty Two Thousands Two Hundred Sixty Six Only
6.05	PCC M15 Grade leveling course below approach slab complete as per drawing and Technical specifications.	Cum	181	4,082	7,38,842	Rs. Seven Lakhs Thirty Eight Thousands Eight Hundred Forty Two Only
6.06	Reinforced cement concrete approach slab including reinforcement and formwork complete as per drawing and Technical specification.					
(i)	RCC M-30	cum	361	8,900	32,12,900	Rs. Thirty Two Lakhs Twelve Thousands Nine Hundred Only
6.07	Providing and laying cement concrete wearing coat M-30 grade including reinforcement complete as per drawing and MoRTH specification section 2702.	Cum	407	10,730	43,67,110	Rs. Forty Three Lakhs Sixty Seven Thousands One Hundred Ten Only
6.08	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specification MoRTH Section 1600,2200.	MT	112	95,000	1,06,40,000	Rs. One Crore Six Lakhs Forty Thousands Only
6.09	Providing and laying of filter media with granular materials/ stone crushed aggregates satisfying the requirements laid down in Clause 2504.2. Of MoRTH specifications to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and technical specifications clause 710.1.4 of IRC 78 & MoRTH section 2200.	Cum	623	522	3,25,206	Rs. Three Lakhs Twenty Five Thousands Two Hundred Six Only
6.10	Providing and laying flooring complete as per drawing and Technical specification laid over cement concrete bedding 15 cm thick as per MoRTH specification clause 2505, 1700.					
(i)	Cement concrete blocks Grade M-15 in CM 1:3 with form work.	Cum	200	5,701	11,40,200	Rs. Eleven Lakhs Forty Thousands Two Hundred Only

S. No.	Description	Unit	Qty.	Rate (Rs.)	Amount (Rs.)	Amount in words
6.11	Flexible apron: Construction of flexible apron 1 m thick comprising of loose stone boulders weighing not less than 40 Kg beyond curtain wall complete as per MoRTH specification clause 2507.2	Cum	1,261	893	11,26,073	Rs. Eleven Lakhs Twenty Six Thousands Seventy Three Only
6.12	Providing A.C pipe Weep holes 150mm dia in Masonry/Plain Concrete/Reinforced Concrete abutment, wing wall/return wall complete as per drawing and technical specification.[MoRTH Specification Clause 2205]	Mtr	836	115	96,140	Rs. Ninety Six Thousands One Hundred Forty Only
6.13	Drainage Spouts complete as per drawing and Technical specification.	Each	52	1,736	90,272	Rs. Ninety Thousands Two Hundred Seventy Two Only
6.14	Provision of reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with concrete with HYSD reinforcement conforming to IRC: 21 and dowel bars 25 mm dia , 450 mm long at expansion joints filled with pre-moulded asphalt filler board, keyed to the structure on which it is built and installed as per design given in the enclosure to MOST Circular No. RW/ NH- 33022/ 1/ 94-DO III dated 24th June 1994 as per dimensions in the approved drawing and at locations directed by the Engineer , all as specified as per MORTH specification Cl. 809.					
(i)	M-30 grade Concrete	Mtr	285	3,607	10,27,995	Rs. Ten Lakhs Twenty Seven Thousands Nine Hundred Ninety Five Only
6.15	Providing and laying filter material underneath pitching on slopes complete as per drawing and MoRTH specifications clause 2504.	cum	137	654	89,598	Rs. Eighty Nine Thousands Five Hundred Ninety Eight Only
6.16	Providing and laying pitching on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and MoRTH specifications clause 2504.					
(i)	Using Stone/ Boulder weighing not less than 40 Kg., thickness not less than 150mm & specific gravity not less than 2.65.	Mtr	274	845	2,31,530	Rs. Two Lakhs Thirty One Thousands Five Hundred Thirty Only
6.17	Curtain wall excluding excavation filter media weep holes etc.complete as per drawing and MoRTH specification clause 2507.1, 1700.					
(i)	Cement concrete grade M 15.	cum	471	4,244	19,98,924	Rs. Nineteen Lakhs Ninety Eight Thousands Nine Hundred Twenty Four Only
6.18	Back filling behind abutment, wing wall and return wall, in 150mm layers, with mechanical compaction, complete with all lead and lift, as per drawing and technical specification. [MoRTH Specification : Clause : 304]					
(i)	Sandy material	cum	292	368	1,07,456	Rs. One Lakh Seven Thousands Four Hundred Fifty Six Only
6.19	Filler joint (Providing & fixing 2 mm thick corrugated copper plate in expansion joint complete as per drawing & Technical Specification, including cost of all labour, material, usage charges of machinery, lead, lifts, loading, unloading, transporting, etc., complete)	Mtr	351	3,744	13,14,144	Rs. Thirteen Lakhs Fourteen Thousands One Hundred Forty Four Only
6.20	Painting two coats on new concrete surfaces (Painting two coats after filling the surface with synthetic enamel paint in all shades on new plastered concrete surfaces, including cost of all materials all labour, lead, lifts, loading, unloading, transporting, etc., complete)					
(i)	New Surface	Sq	313	69	21,597	Rs. Twenty One Thousands Five Hundred Ninety Seven Only
Total (Rs)					3,84,53,004	Rs. Three Crores Eighty Four Lakhs Fifty Three Thousands Four

Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212+800) to Bhiwadi (Km 221+350) in the state of Rajasthan

Bill of Quantities (BILL No. - 7: DRAINAGE WORKS)

Item No.	Descriptions	Total Quantity	Unit	Rate	Amount (Rs.)	Amount in words
7.01	PCC 1:3:6 in Foundation (Providing and laying mechanically mixed and vibrated Cement Concrete in foundation up to a depth of 1.5 meters below ground level and 1.50 meters above Ground/Bed level. [MoRTH Specification : Clause 1000/1700]) Cement concrete 1:3:6 mix crushed stone aggregates 40mm nominal size.	2190	cum	3,789	82,97,910	Rs. Eighty Two Lakhs Ninety Seven Thousands Nine Hundred Ten Only
7.02	Stone masonry work in cement mortar 1:3 in foundation complete as drawing and Technical Specification					
(i)	Random Rubble Masonry	23	cum	3,711	85,353	Rs. Eighty Five Thousands Three Hundred Fifty Three Only
7.03	Plain/Reinforced cement concrete in open foundation complete as per drawing and technical specifications					
(i)	PCC Grade M15	45	cum	4,244	1,90,980	Rs. One Lakh Ninety Thousands Nine Hundred Eighty Only
7.04	Providing and laying cement concreting including curing compaction etc. complete using stone aggregate 20mm nominal size mechanically mixed & vibrated in foundation and plinth including the cost of shuttering if required.					
(i)	RCC Grade M20	9055	cum	4,905	4,44,14,775	Rs. Four Crores Forty Four Lakhs Fourteen Thousands Seven Hundred Seventy Five Only
7.05	Supplying, fitting and placing un-coated HYSD bar reinforcement in foundation complete as per drawing and technical specifications	213	MT	95,000	2,02,35,000	Rs. Two Crores Two Lakhs Thirty Five Thousands Only
7.06	Pointing with cement mortar (1:3) on brick work in substructure as per Technical specifications	62	sqm	106	6,572	Rs. Six Thousands Five Hundred Seventy Two Only
7.07	Laying Reinforced Cement Concrete Pipe NP4/prestrssed concrete pipe on first class bedding in single row . (Laying Reinforced cement concrete pipe NP4/prestrssed concrete pipe for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets .)					
(i)	1200 mm dia(on Crossing Roads)	230	Mtr	7,774	17,88,020	Rs. Seventeen Lakhs Eighty Eight Thousands Twenty Only
	Total of Drainage & Protection work (Drainage Work)				Rs. 7,50,18,610	Rs. Seven Crores Fifty Lakhs Eighteen Thousands Six Hundred Ten Only

Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212+800) to Bhiwadi (Km 221+350) in the state of Rajasthan

Bill of Quantities (BILL No. - 8: Bill of Quantities of Junctions)

S. No	Description of Item	Unit	Qty.	Rate (Rs.)	Amount (Rs.)	Amount in words
8.01	Clearing and grubbing road land including uprooting rank vegetation, grass, brush, shrubs, saplings and trees of girth upto 300 mm, removal of stumps, disposal of unserviceable material upto 1000 m from road boundary. (MoRTH Specification : Clause 201)	Hect	2.70	16,669	45,006	Rs. Forty Five Thousands Six Only
8.02	Construction of sub-grade and earthen shoulders with approved material obtained from borrow pits with all lifts and leads, transportings to site, spreading, grading to require slope and compacted by vibratory roller 8-10 tonne to meet requirement of Table 300-2 as per MoRTH specification : Clause No. 305	Cum	13496.0	150	20,24,400	Rs. Twenty Lakhs Twenty Four Thousands Four Hundred Only
8.03	Granular Sub-Base with Coarse Graded Material (Table:- 400- 2) (Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401)	cum	5398.0	1,240	66,93,520	Rs. Sixty Six Lakhs Ninety Three Thousands Five Hundred Twenty Only
8.04	Providing laying, spreading and compacting crushed graded stone aggregate as per table 400.10 and 400.11 to wet mix macadam specification including premixing the material with water to OMC in mechanical mixer (Pug mill) as per design mix, carriage of mixed material by tipper to site laying in uniform layers, with motor grade/ F.E. loader / paver finisher in sub base / base course on a well prepared under base and compacting with vibratory roller to achieve the desired density including lighting, guarding, barricating and maintenance of diversion etc (MoRTH specification : clause 406). By mechanical means with lead upto 1 Km.	Cum	6748.0	1,450	97,84,600	Rs. Ninety Seven Lakhs Eighty Four Thousands Six Hundred Only
8.05	Providing and applying primer coat over prepared surface of granular base with bitumen emulsion as per IS:8887 & manufacturer specification @7 kg/10 Sqm. with a self propelled or towed bitumen pressure sprayer equipped for spraying the material uniformly at specified rates and temperatures (including cleading of road surface) as per MoRTH specification :CL.502, 112.	Sqm	18563.0	38	6,96,113	Rs. Six Lakhs Ninety Six Thousands One Hundred Thirteen Only
8.06	Providing and applying tack coat on the prepared surface, with bitumen emulsion as per IS:8887 & manufacturer's specification @0.2 kg/Sqm. with a self propelled or towed bitumen pressure sprayer equipped for spraying the material uniformly at specified rates and temperatures (including cleading of road surface) as per MoRTH specification :CL.502, 112.	Sqm	18563.0	12	2,19,043	Rs. Two Lakhs Nineteen Thousands Forty Three Only

S. No	Description of Item	Unit	Qty.	Rate (Rs.)	Amount (Rs.)	Amount in words
8.07	Providing and Laying Dense Bituminous Macadam on prepared surface with specified graded crushed aggregates (as per table 500-9, 500-10 and design mix) for base/binder course including loading of material with F.E. loader, heating of binder (including cost of anti stripping compound, wherever required) aggregates and filler in hot mix plant (40-60 TPH), transporting the mixed material by tippers and laying with sensor paver finisher as per clause 504.3.5 to the required level and grade. rolling by self propelled power rollers and vibratory rollers or pneumatic tyred roller, 150-250 KN TP=0.7 Mpa, to achieve the desired density (approved by the department) but excluding primer/tack coat. (MoRTH specification : Clause 507,112)					
(i)	Grading I (40 mm nominal size) - Bitumen @ minimum 4.0 % of mix (VG-30 grade) & thickness 80 - 100 mm	Cum	1114.0	7,015	78,14,710	Rs. Seventy Eight Lakhs Fourteen Thousands Seven Hundred Ten Only
8.08	Providing and laying bituminous concrete with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 per cent of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 509 complete in all respects					
(i)	PMB-40 grade	Cum	557.0	10,384	57,83,888	Rs. Fifty Seven Lakhs Eighty Three Thousands Eight Hundred Eighty Eight Only
8.09	Construction of cement concrete kerb with top and bottom width 115 and 165 mm respectively, 250 mm high in M 20 grade on M-15 grade foundation 150 mm thick, foundation having 50 mm projection beyond kerb stone, kerb stone laid with kerb laying machine, foundation concrete laid manually, all complete as per clause 409 as per drawing, form work, curing including cost of all materials all labour, usage charges of all machinery, all lead, lifts, loading, unloading transporting etc., complete. Using concrete Batching and Mixing plant item 1 Km. mix lead is considered..	Mtr	1239.0	343	4,24,977	Rs. Four Lakhs Twenty Four Thousands Nine Hundred Seventy Seven Only
8.10	Footpaths and Separators (Construction of footpath/separator by providing a 150 mm compacted granular sub base as per clause 401 and 25 mm thick cement concrete grade M15, over laid with precast concrete tiles in cement mortar 1:3 including provision of all drainage arrangements but excluding kerb channel..)	Sqm	1103.0	525	5,79,075	Rs. Five Lakhs Seventy Nine Thousands Seventy Five Only
			Total of Junction		3,40,65,332	Rs. Three Crores Forty Lakhs Sixty Five Thousands Three Hundred Thirty Two Only

Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212+800) to Bhiwadi (Km 221+350) in the state of Rajasthan

Bill of Quantities (BILL No. - 9: TRAFFIC SIGNS, MARKINGS & APPURTENANCES)

Item No.	Descriptions	Unit	Qty.	Rate (Rs.)	Amount (Rs.)	Amount in words
9.01	Cast in Situ Cement Concrete M20 kerb (Construction of cement concrete kerb with top and bottom width 115 and 165 mm respectively, 250 mm high in M 20 grade PCC on M-10 grade foundation 150 mm thick, foundation having 50 mm projection beyond kerb stone, kerb stone laid with kerb laying machine, foundation concrete laid manually, all complete as per clause 408)	Mtr	4306	343.00	14,76,958	Rs. Fourteen Lakhs Seventy Six Thousands Nine Hundred Fifty Eight Only
(i)	Using Concrete Batching and Mixing Plant					
9.02	Retro- reflectorised Traffic signs (Providing and fixing of retro- reflectorised cautionary, mandatory and informatory sign as per IRC :67 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing)	each	100	4310.00	4,31,000	Rs. Four Lakhs Thirty One Thousands Only
(i)	90 cm equilateral triangle	each	50	5199.00	2,59,950	Rs. Two Lakhs Fifty Nine Thousands Nine Hundred Fifty Only
(ii)	80 mm x 60 mm rectangular	each	14	6512.00	91,168	Rs. Ninety One Thousands One Hundred Sixty Eight Only
(iii)	90 cm high octagon	each				
9.03	Direction and Place Identification signs upto 0.9 sqm size board. (Providing and erecting direction and place identification retro-reflectorised sign as per IRC:67 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick with area not exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing)	Each	20	5047.00	1,00,940	Rs. One Lakh Nine Hundred Forty Only
(i)	for 600 X 900 mm size board (For Villages)	Each	18	5047.00	90,846	Rs. Ninety Thousands Eight Hundred Forty Six Only
(ii)	for 900 X 600 mm size board (For Minor Junction)	Each	10	8413.00	84,130	Rs. Eighty Four Thousands One Hundred Thirty Only
(iii)	for 1200 X750 mm size board	Each	10	6309.00	63,090	Rs. Sixty Three Thousands Ninety Only
(iv)	for 900 X 750 mm size board	Each				

Item No.	Descriptions	Unit	Qty.	Rate (Rs.)	Amount (Rs.)	Amount in words
9.04	Direction and Place Identification signs with size more than 0.9 sqm size board. (Providing and erecting direction and place identification retro- reflectorised sign as per IRC :67 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick with area exceeding 0.9 sqm supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm, 2 Nos. firmly fixed to the ground by means of properly designed foundation with M 15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing)	Sqm	17	20189.00	3,43,213	Rs. Three Lakhs Forty Three Thousands Two Hundred Thirteen Only
(i)	for 1800 X 1200 mm size board	Sqm	14	16825.00	2,35,550	Rs. Two Lakhs Thirty Five Thousands Five Hundred Fifty Only
9.05	Overhead Signs (Providing and erecting overhead signs with a corrosion resistant aluminium alloy sheet reflectorised with high intensity retro-reflective sheeting of encapsulated lens type with vertical and lateral clearance given in clause 802.2 and 802.3 and installed as per clause 802.7 over a designed support system of aluminium alloy or galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans)					
(i)	Truss and Vertical Support	Tonne	29	74216	21,52,264	Rs. Twenty One Lakhs Fifty Two Thousands Two Hundred Sixty Four Only
(ii)	Aluminium alloy plate for over head sign	sqm	329	5821.00	19,15,109	Rs. Nineteen Lakhs Fifteen Thousands One Hundred Nine Only
9.06	Road Marking with Hot Applied Thermoplastic Compound with Reflectorisng Glass Beads on Bituminous Surface (Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorisng glass beads @ 250 gms per 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.)	sqm	7647	565.00	43,20,555	Rs. Forty Three Lakhs Twenty Thousands Five Hundred Fifty Five Only
9.07	Kilo Metre Stone (Supply & fixing of precast reinforced cement concrete M-15 grade kilometre stone of standard design as per IRC: 8-1980, fixing in position in cement concrete 1:4:8 including painting and printing etc.)					
(i)	5th kilometre stone (precast)	each	4	2261.00	9,044	Rs. Nine Thousands Forty Four Only
(ii)	Ordinary Kilometre stone (Precast)	each	13	1390.00	18,070	Rs. Eighteen Thousands Seventy Only
(iii)	Hectometer stone (Precast)	each	66	374.00	24,684	Rs. Twenty Four Thousands Six Hundred Eighty Four Only
9.08	Road Delineators (Supplying and fixing delineators with 15cm. dia cement concrete M-15 solid block with nominal reinforcement 80-100 cm. long embedded in cement concrete 1:4:8 (1 cement : 4 coarse sand : 8 coarse aggregate 20mm nominal size (45cm. x 45cm.x 60cm.) painted 15 cm. wide alternate strips black /white with enamel paint (black strip at top) with white round reflector 7.5 cm. dia at top on side facing the traffic and opposite side (as per IRC-79).	each	315	491.00	1,54,665	Rs. One Lakh Fifty Four Thousands Six Hundred Sixty Five Only

Item No.	Descriptions	Unit	Qty.	Rate (Rs.)	Amount (Rs.)	Amount in words
9.09	Boundary pillar (Reinforced cement concrete M15 grade boundary pillars of standard design as per IRC:25-1967, fixed in position including finishing and lettering but excluding painting)	each	332	531.00	1,76,292	Rs. One Lakh Seventy Six Thousands Two Hundred Ninety Two Only
9.1	Metal Beam Crash Barrier -Type - A, "W" : Metal Beam Crash Barrier (Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fittings to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per clause 810)	metre	2000	3304.00	66,08,000	Rs. Sixty Six Lakhs Eight Thousands Only
9.11	Cable Duct Across the Road (Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum 450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings.)					
(i)	Single Row for one utility service	metre	510	1960.00	9,99,600	Rs. Nine Lakhs Ninety Nine Thousands Six Hundred Only
9.12	Road Markers/Road Stud with Lense Reflector (Providing and fixing of road stud 100x 100 mm, die cast in aluminium, resistant to corrosive effect of salt and grit, fitted with lense reflectors, installed in concrete or asphaltic surface by drilling hole 30 mm upto a depth of 60 mm and bedded in a suitable bituminous grout or epoxy mortar, all as per BS 873 part 4:1973)	each	7466	458.00	34,19,428	Rs. Thirty Four Lakhs Nineteen Thousands Four Hundred Twenty Eight Only
9.13	Supply of 'L' type Bollard made out of 1.25 mm thick M.S. sheet height 134 cm, welded in circular type ring section having upper dia 15 cm. and lower dia 21 cm with another attachment of 15x15 cm circular section with 15 cm. face plate and hold fast at bottom, whole body is processed in white stoving enamel and red reflective 3 hands, each of 7.5 cm end one reflective sheet of 15 cm. dia provided to it complete in all respect.	each	12	1594.00	19,128	Rs. Nineteen Thousands One Hundred Twenty Eight Only
9.14	Fixing of Bollard including excavation and laying cement concrete (1:3:6) (size 45x45x30cm) in foundation & curing complete as per specifications	each	12	289.00	3,468	Rs. Three Thousands Four Hundred Sixty Eight Only
9.15	Supply an fixing of Shevron sign of size 600x450 mm thick with fixing provision on MS angle iron post 50x50x6mm 3M long screwed with stainless steel nut bolts of 8m dia plate is covered by high intensity grade retro reflective sheeting and black reflective arrow, complete in all respect	each	180	4066.00	7,31,880	Rs. Seven Lakhs Thirty One Thousands Eight Hundred Eighty Only
9.16	Construction of Median and Island with Soil Taken from Borrow Areas (Construction of median and Island above road level with approved material brought from borrow pits, spread, sloped and compacted as per clause 408)	Cum	294	230.00	67,620	Rs. Sixty Seven Thousands Six Hundred Twenty Only
	Total of Traffic Signs, Markings & Appurtenances			Rs.	2,37,96,652	Rs. Two Crores Seventy Five Lakhs Thirty Seven Thousands Seven Hundred Forty Only

SECTION 8
SECURITIES AND OTHER FORM

BID SECURITY (BANK GUARANTEE)

WHEREAS, _____ [name of Bidder] (hereinafter called "the Bidder") has submitted his Bid dated _____ [date] for the works "Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212+800) to Bhiwadi (Km 221+350) in the state of Rajasthan" (hereinafter called "the Works").

KNOW ALL PEOPLE by these presents that We _____ [name of bank] having our registered office at _____ (hereinafter called "the Bank") are bound unto Road Infrastructure Development Company of Rajasthan Ltd (hereinafter called "the Employer") in the sum of Rs 50.00 Lacs for which payment well and truly to be made to the said Employer the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of _____ 2023.

THE CONDITIONS of this obligation are:

- (1) If after Bid opening the Bidder withdraws his Bid during the period of Bid validity specified in the Form of Bid; or
- (2) If the Bidder having been notified of the acceptance of his Bid by the Employer during the period of Bid 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 Instruction to Bidders; or
 - (c) does not accept the correction of the Bid Price pursuant to Clause 12 of ITB;

we undertake to pay to the Employer up to 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 one or any of the three conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force for 165 days i.e. upto and including 45 days after the Bid validity period (120 days) as stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this guarantee should reach the Bank not later than the above date.

DATE _____ SIGNATURE OF THE BANK _____

WITNESS _____ SEAL _____

[signature, name, and address]

PERFORMANCE BANK GUARANTEE

To

_____ [name of Employer]
_____ [address of Employer]

WHEREAS _____ [name and address of Contractor] (hereafter called "the Contractor") has undertaken, in pursuance of Contract 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 by a recognized bank for the sum specified therein as security for compliance with his obligation in accordance with the Contract;

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

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you on behalf of the Contractor, up to a total of _____ [amount of guarantee] _____ *(in words), such sum being payable in the types and proportions of currencies in which the Contract Price is payable, 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 your 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 Defect Liability Period.

Signature and Seal of the guarantor _____
Name of Bank _____
Address _____
Date _____

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

BANK GUARANTEE FOR ADVANCE PAYMENT

To

_____ [name of Employer]
_____ [address of Employer]
_____ [name of Contractor]

Gentlemen:

In accordance with the provisions of the Conditions of Contract, sub-clause 51.1 ("Advance Payment") of the above-mentioned Contract, _____ [name and address of Contractor] (hereinafter called "the Contractor") shall deposit with _____ [name of Employer] a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____ [amount of Guarantee]

* _____ [in words].

We, the _____ [bank of financial institution], as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to _____ [name of Employer] on his first demand without whatsoever right of obligation on our part and without his first claim to the Contractor, in the amount not exceeding _____ [amount of guarantee] * _____ [in words].

We further agree that no change or addition to or other modification of the terms of the Contractor or Works to be performed there under or of any of the Contract documents which may be made between _____ [name of Employer] 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 remain valid and in full effect from the date of the advance payment under the Contract until _____ [name of Employer] receives full repayment of the same amount from the Contractor.

Yours truly,

Signature and Seal: _____
Name of Bank / Financial Institution: _____
Address: _____
Date: _____

*An amount shall be inserted by the Bank or Financial Institution representing the amount of the Advance Payment, and denominated in Indian Rupees.

Letter of Acceptance
(Letterhead paper of the Employer)

_____ (Date)

To

_____ (Name and address of the Contractor)

Dear Sirs,

This is to notify you that your Bid dated _____ for execution of the _____ (name of the contract and identification number, as given in the Instructions to Bidders) for the Contract Price of Rupees _____ (_____) (amount in words and figures), as corrected and modified in accordance with the Instructions to Bidders) is hereby accepted by our agency.

You are hereby requested to furnish Performance Security, in the form detailed in Para 34.1 of **ITB** for an amount equivalent to Rs.

_____ within 10 days of the receipt of this letter of acceptance valid up to 28 days from the date of expiry of defects Liability Period i.e. up to and sign the contract, failing which action as stated in Para 34.3 of **ITB** will be taken.

Yours faithfully,

Authorized Signature
Name and title of
Signatory Name of Agency

-
1. Delete "corrected and" or "and modified" if only one of these actions applies. Delete as corrected and modified in accordance with the Instructions to Bidders, if corrections or modifications have not been affected.
 - 2 To be used only if the Contractor disagrees in his Bid with the Adjudicator proposed by the Employer in the "Instructions to Bidders".

Issue of Notice to proceed with the work
(Letterhead of the Employer)

_____ (Date)

To

_____(Name and address of the Contractor)

Dear Sirs,

Pursuant to your furnishing the requisite security as stipulated in ITB
Clause 34.1 and signing of the Contract for the construction of

_____ at a Bid Price of Rs.

You are hereby instructed to proceed with the execution of the said works
in accordance with the contract documents.

Yours faithfully,

(Signature, name and title of signatory
authorized to sign on behalf of Employer)

Agreement Form

Agreement

This agreement, made the _____ day of _____ between _____ (name and address of Employer) [hereinafter called "the Employer] and _____ (name and address of contractor) hereinafter called "the Contractor" of the other part.

Whereas the Employer is desirous that the Contractor execute

_____ (name and identification number of Contract) (hereinafter called "the Works") and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein, at a cost of Rs. _____

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expression shall have the same meanings as are respectively assigned to them in the conditions of contract hereinafter referred to and they shall be deemed to form and be read and construed as part of this Agreement.
2. 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 aspects with the provisions of the contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein 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.
4. The following documents shall be deemed to form and be ready and construed as part of this Agreement viz.
 - i) Letter of Acceptance
 - ii) Notice to proceed with the works;
 - iii) Contractor's Bid
 - iv) Condition of Contract: General and Special
 - v) Contract Data
 - vi) Additional condition
 - vii) Drawings
 - viii) Bill of Quantities and
 - ix) Any other documents -listed in the Contract Data as forming part of the Contract.

Inwitnessed whereof the parties there to have caused this Agreement to be executed the day and year first before written.

The Common Seal of _____

was hereunto affixed in the presence of :

Signed, Sealed and Delivered by the said _____

in the presence of :

Binding Signature of Employer _____

Binding Signature of Contractor _____

Original

UNDERTAKING

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

(Signed by an Authorized Officer of the Firm)

Title of Officer

Name of Firm

DATE

SPECIAL CONDITIONS OF CONTRACT

NAME OF WORK: Upgradation of Existing State Highway-25 from 4-Lane to 6 Lane including construction of drain for the stretch between Tapukara (Km 212+800) to Bhiwadi (Km 221+350) in the state of Rajasthan

1. All the works shall be carried out as per Ministry's Specification for Road and Bridge work April 2013 (5th Revision), Ministry's guidelines/circulars/instructions issued from time to time.
2. Photographs/ Video graphs shall be taken by the contractor before and after execution of work and furnished to this department in three soft and hard copies for record on his own cost.
3. Collection of material on the road side should be so planned that it would commensurate with the physical progress of works and collected materials should not cause any hindrance to the traffic. It must be ensured that contractor arranges for separate land for storage of road construction material and machinery and these shall not be allowed to be stacked on road side.
4. The work fronts may not be operated in more than 4 Km. length simultaneously, without completing the bituminous surfacing in the stretches where excavation/granular layers are carried out to avoid severe inconvenience to traffic during construction. The contractor has to maintain proper traffic management and diversions for easy & safe movement of traffic.
5. The contractor will procure bitumen required for the execution of work from authorized refinery at his level and furnish the bitumen testing certificate from Government Agency/Regional Laboratory/MNIT Jaipur/ NABL (National Accreditation Board for Testing and Calibration Laboratories).
6. The Contractor will set up a quality Control lab for regular Testing of the material and he shall ensure that all the testing of material/Aggregate etc. are done regularly and as per the frequency prescribed in quality control manual/MORTH specification by engaging technical personnel at his own cost.
7. The work is to be carried out in accordance with the "Hand Book of Quality control for construction of Road and Runways (Second Revision)-IRC:SP:11-1988", observing strict quality control instructions in MORTH letter No. NH-III/P/I/83 dated 19-04-1984. Some of the Quality control should be done through NABL.
8. Testing of Bitumen shall be done as per norms, for which equipment shall be made available at site by contractor in a laboratory, to be established at plant site by Contractor.
9. The original copy of CRC of bitumen & emulsion shall be furnished by the Contractor for keeping records.
10. The contractor will provide all the equipments and men to the field staff required for various quality control tests at field laboratory established at plant site and road site. The equipments such as core cutting machine for C.C. & Bituminous work and compressive strength testing machines shall also to be arranged by contractor at his cost.

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11. The Contractor shall prepare the working drawing of works and shall obtain approval of department before execution of work.
12. The various drawings and details as required in chapter survey, investigation and preparation of road projects of explanatory note Highways and I.R.C. Special Publication No. IRC 19-1977 "Manual for survey, investigation and preparation of road projects" should be complied and prepared by the contractor on his own cost and shall obtain approval of department before execution of the work.
13. The foundation, piers, Abutments and wing walls of RCC for minor bridge to be design, bar bending schedule and preparation of detailed working drawings as per soil characteristics at site by the contractor at his own cost from approved Government agency/Government Engineering College and shall obtain approval of department before execution of work.
14. The contractor shall arrange Job mix design for CC/bitumen work from Regional Laboratory/ MNIT, Jaipur / Authorized laboratory/NABL and will get it approved from Engineer-in-charge.
15. During the course of execution, the traffic, shall be regulated in accordance with guideline laid vide MoRTH letter No. NH-III-33(126)/72 Dt. 20.3.1973.
16. The riding quality of treated reach shall be as per MORTH standards. The contractor shall arrange for roughness test of completed reach.
17. Rolling of granular sub base layer shall be carried out with suitable vibratory rollers wherever required to achieve the density as per specifications.
18. Before start of work display boards showing the name of work, sanctioned amount, date of start, date of completion, name of division, contract telephone/mobile phone No. etc. shall be displayed on either end of the project sections as per Ministry's guideline of NH Works. It shall be responsibility of the contractor himself to procure earth required as specified in respective item for construction of embankment after temporary acquisition, if required, at his own cost.
19. The contractor shall use modern machinery like vibratory roller, computerized batch type hot mix plant, paver finisher with electronic sensor device concrete weigh batch mixer (electronic) & other machinery / equipments for RCC work as per direction of Engineer in charge.
20. If there is any typographical or clerical error or otherwise in the BOQ nomenclature as given in BSR shall prevail.
21. The Contractor shall follow the contract labour (Regulation) Act 1970 and Rules, 1971 as amended from time to time.
22. The initial level of existing surface before laying of each subsequent layers of earth work, GSB, WMM, DBM and BC after laying of layers will be carried out by contractor in presence of site in-charge and submitted by them before execution of work intermediate work and after completion of work and quantity calculation to verify at site on contractor's cost and equipment as per MORTH specification.
23. Measurement of pavement thickness of pavement on volume basis shall be computed by taking levels in accordance with the provision of MORTH specifications.
24. The items of DBM and BC are to be executed using batching plant as per MORTH specification. The use of self-propelled paver fitted with electronic sensor device conforming to MORTH specification shall be mandatory..

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25. Bitumen of grade VG 30/PMB 40 shall be procured by the contractor and used in the work. The proper testing of bitumen should be carried out before its use and a record of the same shall be maintained. For tack coat bituminous emulsion as per clause 503 of Ministry's specifications shall be used. Use of imported bitumen can be permitted subject to compliance of MoRTH stipulation as detailed in Circular issued on 23th Aug 2023
26. The rates are inclusive of all leads and lift and complete finished works, unless and otherwise the same is specifically stated in the BSR. No extra lead claims will be entertained for mix materials transportation on account of position of Hot Mix Plant fixed by the contractor of the rates given in "G" Schedule.
27. The contractor shall give trials of the equipment for establishing the capability to achieve the laid down specifications and tolerance to the satisfaction of the Engineer before commencement of work, if so desired by the Engineer in charge.
28. All equipment provided shall be of proven efficiency and shall be operated and maintained at all times in a manner acceptable to the Engineer In charge.
29. No extra payment shall be made to the Contracting agency on account of maintenance of Road/Bridge/C.D. works and removal of defects during Defect Liability Period.
30. The local unskilled labour should be engaged on the work and generally labour from outside the state would not be engaged.
38. The contractor has to arrange all type of machinery and equipments necessary for execution of the work as per direction of engineer in-charge.
39. It shall be responsibility of the contractor himself to procure earth required as specified in respective item for construction of embankment after temporary acquisition, if required, at his own cost.
40. In case contracting agency fails to rectify the defects within stipulated period notified to him by the Engineer-in-charge concerned under contract agreement, the Engineer-in-charge shall serve a final notice for 15 days time reckoned from the date of issue of notice to rectify the defects. In case the contracting agency not responding to the notice and fails in rectification of defects the Engineer-in-charge will get the defects removed at the risk & cost of the contracting agency. Action such as encasement of Bank Guarantee and action under enlistment rules etc. shall also be taken against the contracting agency by the competent authority.
41. The defect arises due to earthquake, cyclone and nature calamities shall not be the responsibility of contracting agency.
42. Every cement/ steel lot should bear test certificate from the manufacturer in addition to test certificate from MNIT Jaipur/ NABL
43. New ply shuttering shall only be used for R.C.C. work.
44. The working drawings shall be prepared by contracting agency without additional cost of department and will get approved from Engineer-in-charge before start of work. The work shall then be executed strictly as per approved working drawings.

Special Condition for Vehicle/Technical Assistant/or other:

1. The Contractor shall duly provide **1 Nos. Four wheeler vehicle** (Innova AC or equivalent) to the concerned divisional/Sub divisional office which will be used for the office purposes and site visit of ongoing works under the Division for maximum 3500 kms per Month during the Construction period. No Payment shall be made for this facility to the Contractor. On Failure, a vehicle will be hired by the Department and charges may be recovered from the contractor and the following conditions will be applicable.
 - (a) The vehicle shall be insured and registered with RTO/registering authority and it shall be of the model of the Year 2020-21 (not to be more than 3-year-old) and onwards. The vehicle shall be completely fit and be in good condition.
 - (b) The Approved contractor is responsible for all taxes, permit, Insurance, service tax, fitness, timely obtaining pollution control certificate, legal claims challan for violation of Rules/Laws and all legal matters pertaining to vehicle and driver.
 - (c) The Expenditure of toll tax and parking charges if any will not be reimbursed by the Government.
 - (d) The vehicle as far as possible shall be parked in the office premises, but on the risk of the approved contractor.
 - (e) The driver shall be dressed neatly and also keep the vehicle neat and clean and be have properly with the officers using the vehicle.
 - (f) Generally, duty time of the vehicle be from 8.00-AM to 6.00 PM or desired by the user officer.
 - (g) Vehicle shall be provided by the approved contractor as per demand of the office. The department will inform the approved contractor as per.
 - (h) During the course of journey original papers of the vehicle. e.g. Registration certificate, fitness certificate, permit of jurisdiction and other relevant papers must be in the vehicle in the custody of the driver.
2. All type of liabilities including accidental claims. if any shall be borned by the approved contractor.
3. The Contractor shall provide One **Computer Operator** (of minimum monthly salary@ Rs. 10000/-) for Project Manager, Alwar Office Purposes during the construction period. No Payment shall be made for this facility to the Contractor.
4. The Contractor shall estabiles well furnished camp office at site and shall establish a well equipped QC Lab (including all QC Equipments desired by Engineer In-Charge). No Payment shall be made for this work to the Contractor.

Signature of Contractor