Request for Proposal

For

[IRQP of NH-234 (Old NH-91A) (Ch. 142.00 to 158.400) District Kannauj in the State of Uttar Pradesh]

ON
Engineering, Procurement & Construction
(EPC) Mode

Ministry of Road Transport & Highways (MoRT&H)

May, 2026

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In the Anticipation of Sanction

OFFICE OF THE SUPERINTENDING ENGINEER
NH CIRCLE, PWD, KANPUR UTTAR PRADESH
12/476 Macrobertganj, Kanpur-208001 (U.P.)

Notice Inviting Bid

NIT No. SIS **M/13M-NHCK/26** **Dated.** 20/5/2026

RFP for IRQP of NH-234 (Old NH-91A) (Ch. 142.00 to 158.400) District Kannauj in the State of Uttar Pradesh. The Ministry of Road Transport & Highways through UPPWD is engaged in the development of National Highways and as part of this endeavor, it has been decided to undertake One time Improvement work of NH-234 (Old NH-91A) Ch. 142.00 to 158.400) District Kannauj in the State of Uttar Pradesh. through an Engineering, Procurement & Construction (EPC) Contract

The Uttar Pradesh Public work Department represented by its CE (NH) PWD, Uttar Pradesh now invites bids from eligible contractors for the following project:

State	NH No.	ICB No.	Name of work	Estimated Cost (Rs. In Cr) Excluding GST)	Bid Security (Rs.Lakh)	Completion period	Maintenance period/DLP
Uttar Pradesh	NH-91A		IRQP of NH-234 (Old NH-91A) (Ch. 142.00 to 158.400) District Kannauj in the State of Uttar Pradesh	**48.44 Cr**	48.45	10 (Ten Months)	03 years

The complete BID document can be viewed/downloaded from official portal of the CPPP website **https://eprocure.gov.in/eprocure/app** from 20-05-2026 (from 15:00 Hrs. IST) to 07-07-2026 (up to 15:00 Hrs. IST). Bidder must submit its Financial Bid and Technical Bids at https//eprocure.gov.in/eprocure/app on or before 07-07-2026, (upto15:00 hours IST). Further, Bidders also needs to upload technical bids on **BIMS i.e. https://bims.gov.in/**. Bids received online shall be opened on 08-07-2026 at 15:00 Hrs.

Bid through any other mode shall not be entertained. The scanned copy of the original documents, Bid Security, copy of online receipt/D.D towards document fee, Power of Attorney etc. along with the bid shall be submitted online only by the Bidder on or before 07-07-2026 (up to 15:00 hrs IST). However, original documents along with Bid Security, document fee, power of attorney etc shall be submitted physically by the bidder on or before 08.07.2026 (up to 12:00 Hrs) at any place as mentioned in RFP documents. Please note that the Ministry reserves the right to accept or reject all or any of the BIDs without assigning any reason whatsoever.

(Arun Kumar Jayant)
Executive Engineer
NH Division UPPWD, Kanpur

(Arvind Kumar)
Superintending Engineer
NH Circle UPPWD, Kanpur

Copy to-for information & necessary action

1- Chief Engineer Zone-I Ministry of Road Transport & Highways, New Delhi.
2- Chief Finance & Account Officer, PWD, Lucknow.
3- Chief Engineer-Regional Officer (MoRT&H), Lucknow.
4- Chief Engineer (NH) UPPWD, Lucknow.
5- Executive Engineer NH Division PWD, Kanpur with the direction kindly prepared the RFP documents and get the tender documents uploaded.

Superintending Engineer
NH Circle UPPWD, Kanpur

DISCLAIMER

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

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

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

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

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

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

The Bidder shall bear all its costs associated with or relating to the preparation and submission of its BID including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by the Authority or any other costs incurred in connection with or relating to its BID. All such costs and expenses will remain with the Bidder and the Authority shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by a Bidder in preparation or submission of the BID, regardless of the conduct or outcome of the Bidding Process.

GLOSSARY

Agreement	As defined in Clause 1.1.4
Authority	As defined in Clause 1.1.1
Bank Guarantee	As defined in Clause 2.20.1
BID(s)	As defined in Clause 1.2.2
Bidders	As defined in Clause 1.2.1
Bidding Documents	As defined in Clause 1.1.5
BID Due Date	As defined in Clause 1.1.5
Bidding Process	As defined in Clause 1.2.1
BID Security	As defined in Clause 1.2.4
BID Price or BID	As defined in Clause 1.2.6
Contractor	As defined in Clause 1.1.2
Construction Period	As defined in Clause 1.2.6
Conflict of Interest	As defined in Clause 2.2.1(c)
Defect Liability Period	As defined in Clause 1.2.6
Eligible Experience	As defined in Clause 2.2.2.5 (i)
Eligible Projects	As defined in Clause 2.2.2.5 (i)
EPC	As defined in Clause 1.1.1
EPC Contract	As defined in Clause 1.1.2
Estimated Project Cost	As defined in Clause 1.1.3
Feasibility Report	As defined in Clause 1.2.3
Financial Capacity	As defined in Clause 2.2.2.3 (i)
Government	Government of *********
Joint Venture	As defined in Clause 2.2.1
Jt. Bidding Agreement	As defined in Clause 2.1.11(f)
Lead Member	As defined in Clause 2.1.11 (c)
Lowest Bidder	As defined in Clause 1.2.6
LOA	As defined in Clause 3.3.4
Net Worth	As defined in Clause 2.2.2.9 (ii)
Performance Security	As defined in Clause 2.21.1
Additional Performance Security	As defined in Clause 2.21.1
Project	As defined in Clause 1.1.1
Re. or Rs. or INR	Indian Rupee
RFP or Request for Proposals	As defined in the Disclaimer
Selected Bidder	As defined in Clause 3.3.1
Technical Capacity	As defined in Clause 2.2.2.2 (i)
Tie BIDs	As defined in Clause 3.3.2
Threshold Technical Capacity	As defined in Clause 2.2.2.2 (i)

The words and expressions beginning with capital letters and defined in this document shall, unless repugnant to the context, have the meaning ascribed there to herein.

[MINISTRY OF ROAD TRANSPORT & HIGHWAYS]

SECTION 1

1.1 INTRODUCTION

Background

1.1.1 The Ministry of Road Transport & Highways through Public Works Department, Uttar Pradesh represented by Chief Engineer (NH) PWD, Uttar Pradesh (the "Authority") is engaged in the development of National Highways and as part of this endeavor, the Authority has decided to undertake work of **IRQP of NH-234 (Old NH-91A) (Ch. 142.00 to 158.400) District Kannauj in the State of Uttar Pradesh.**(the **"Project"**) through an Engineering, Procurement and Construction (the "**EPC**") Contract, and has decided to carry out the bidding process for selection of a Bidder to whom the Project may be awarded. A brief description of the project may be seen in the Information Memorandum of the Project at the CPPP website https://eprocure.gov.in/eprocure/app. Brief particulars of the Project are as follows:

Name of the National Highway	Length in Km	Estimated Project Cost excluding GST (Rs. in Cr.)	Duration of completion of work
NH-91A	16.400	48.44	10 months

1.1.2 The selected Bidder (the "**Contractor**") shall be responsible for designing, engineering, procurement and construction of the Project under and in accordance with the provisions of an engineering, procurement and construction contract (the "**EPC Contract**") to be entered into between the Contractor and the Authority in the form provided by the Authority as part of the Bidding Documents pursuant hereto. The Contractor shall also be responsible for the maintenance of the project during the Defect Liability Period. The scope of work will broadly include rehabilitation, upgradation and augmentation of the existing carriageway to [two- lane with/ without paved shoulders] standards with construction of new pavement, rehabilitation of existing pavement, construction and/or rehabilitation of major and minor bridges, culverts, road intersections, interchanges, drains, etc. and maintenance of the Project during the **Defect Liability Period, which shall be 3 years**.

1.1.3 The estimated cost of the Project (the **"Estimated Project Cost"**) has been specified in the clause 1.1.1 above. The assessment of actual costs, however, will have to be made by the Bidders.

1.1.4 The Agreement sets forth the detailed terms and conditions for award of the project to the Contractor, including the scope of the Contractor's services and obligations.

1.1.5 The Authority shall receive BIDs pursuant to this RFP in accordance with the terms set forth in this RFP and other documents to be provided by the Authority pursuant to this RFP (collectively the "**Bidding Documents**"), and all BIDs shall be prepared and submitted in accordance with such terms on or before the BID due date specified in Clause 1.3 for submission of BIDs (the "**BID Due Date**").

1.2 Brief description of Bidding Process

1.2.1 The Authority has adopted a single stage two part system (referred to as the "**Bidding Process**") for selection of the Bidder for award of the Project. Under this process, the bid shall be invited under two parts. Eligibility and qualification of the Bidder will be first examined based on the details submitted under first part (Technical Bid) with respect to eligibility and qualifications criteria prescribed in this RFP (the "**Bidder**", which expression shall, unless repugnant to the context, include the members of the Joint Venture). The Financial Bid under the second part shall be opened of only those Bidders whose Technical Bids are responsive to eligibility and qualifications requirements as per this RFP.

[GOI has issued guidelines (see Annexure VII of Appendix-1A of RFP) for qualification of Bidders seeking to acquire stakes in any public sector enterprise through the process of disinvestment. These guidelines shall apply mutatis mutandis to this Bidding Process. The Authority shall be entitled to disqualify any Bidder in accordance with the aforesaid guidelines at any stage of the Bidding Process. Bidders must satisfy themselves that they are qualified to bid, and should give an undertaking to this effect in the form at Appendix-IA].

1.2.2 The Bid shall be valid for a period of 120 days from the date specified in Clause 1.3 for submission of BIDs.

1.2.3 The complete Bidding Documents including the draft Agreement for the Project is enclosed for the Bidders. The Feasibility Report / Detailed Project Report prepared by the Authority/ consultants of the Authority (the "**Feasibility Report/Detailed Project Report**") is also enclosed. The Feasibility Report / Detailed Project Report of the Project is being provided only as a preliminary reference document by way of assistance to the Bidders who are expected to carry out their own surveys, investigations and other detailed examination of the Project before submitting their Bids. Nothing contained in the Feasibility Report/Detailed Project Report shall be binding on the Authority nor confer any right on the Bidders, and the Authority shall have no liability whatsoever in relation to or arising out of any or all contents of the Feasibility Report/Detailed Project Report. The aforesaid documents and any addenda issued subsequent to this RFP Document, will be deemed to form part of the Bidding Documents. However, Feasibility Report / Detailed Project Report prepared by the Authority/ consultants of the Authority (the "**Feasibility Report/Detailed Project Report**") is not required in case of maintenance works like PR/HIPR to be taken on EPC mode.

1.2.4 A Bidder is required to submit, along with its BID, a BID Security of Rs. 48,45,000/- (Rs. Forty Eight Lakh and Forty Five Thousand Only) , refundable not later than 150 (One hundred & fifty) days from the BID Due Date, except in the case of the Selected Bidder whose BID Security shall be retained till it has provided a Performance Security and Additional Performance Security (if any) as per the provision of this RFP and LOA. BID Security shall be submitted in the form of Insurance Surety Bond, Account Payee Demand Draft, Banker‟s Cheque or Electronic Bank Guarantee (e-Bank Guarantee), Physical Bank Guarantee. The Insurance Surety Bond shall be verified from the specific portal created for this purpose. The e-Bank Guarantee shall be transmitted through SFMS Gateway to NHAI/MORTH/State PWD/ NHIDCL/BROs Bank. This Guarantee shall be transmitted through SFMS Gateway to MORTH‟ s Bank. The Bidders shall also submit Bid document fee amounting to Rs 10,000/- through Non Tax Receipt Portal i.e. www.bharatkosh.gov.in in favour of Regional Pay & Accounts Officer, Ministry of Road Transport & Highways, Lucknow (DDO Code: 235040). Proof of fee submissions shall be submitted along with the online Bid.

Details of designated bank account are as under:

Sr. No.	Particulars Details	Details
1	Name of Beneficiary	Regional Pay and Account Office (NH), MoRT&H, Lucknow
2	Name of Bank	Canara Bank
3	Account No	85043020000077
4	IFSC Code	CNRB0018504

1.2.5 Bidders are advised to examine the Project in greater detail, and to carry out, at their cost, such studies as may be required for submitting their respective BIDs for award of the contract including implementation of the Project.

1.2.6 BIDs will be evaluated for the Project on the basis of the lowest cost required by a Bidder for implementing the Project (the "**BID Price**"). The total time allowed for completion of construction under the Agreement (the "**10 Months**") and the period during which the Contractor shall be liable for maintenance and rectification of any defect or deficiency in the Project after completion of the Construction Period (the "10 **(Months**") shall be pre- determined, and are specified in the draft Agreement forming part of the Bidding Documents.

In this RFP, the term **"Lowest Bidder"** shall mean the Bidder who is quoting the lowest BID price.

1.2.7 Generally, the Lowest Bidder shall be the selected Bidder. In case such Lowest Bidder withdraws or is not selected for whatsoever reason except the reason mentioned in Clause 2.1.12 (b) (4), and **clause 3.3.1**, the Authority shall annul the Bidding Process and invite fresh BIDs.

1.2.8 Other details of the process to be followed under this bidding process and the terms thereof are spelt out in this RFP.

1.2.9 Any queries or request for additional information concerning this RFP shall be submitted by e- mail to the officer designated in Clause 2.11.4 below with identification/ title: "Queries /Request for Additional Information: RFP for "**IRQP of NH-234 (Old NH-91A) (Ch. 142.00 to 158.400) District Kannauj in the State of Uttar Pradesh.**

1.2.10 A Bidder is required to submit, along with its technical bid, a self-certification that the item offered needs the local content requirement for „Class–I local supplier‟/Class–II local supplier‟, as the case may be. The self-certification shall also have details of the location(s) at which the local value addition is made. In case, bidder has not submitted the aforesaid certification, the bidder will be treated as „Non Local Supplier‟.

In the above pretext, the Class–I local supplier, Class–II local supplier and the Non-Local Supplier are defined under:

(i) „Class–I local Supplier‟ means a Supplier a service provider, whose goods, services for work offered for procurement, meets the local content as prescribed for „Class–I Local Supplier‟ under this RFP. The „local content‟ requirement to categorize a supplier as „Class–I local Supplier‟ is minimum 50%.

(ii) „Class–II local Supplier‟ means a Supplier a service provider, whose goods, services for work offered for procurement, meets the local content as prescribed for „Class–II Local Supplier‟ under this RFP. The „local content‟ requirement to categorize a supplier as „Class – II local Supplier‟ is minimum 20%.

(iii) „Non - local Supplier‟ means a Supplier a service provider, whose goods, services for works offered for procurement, has local content less than that prescribed for „Class –II Local Supplier‟ under this RFP.

(iv) „local Content‟ means the amount of value added in India which shall be the total value of item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

In case of procurement for a value in excess of Rs.10 Crores, the „Class- I Local Supplier‟ / „Class –II Local Supplier‟ shall provide a certificate from the statutory auditor or cost auditor of the company (n case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content. As per ministry circular no. RW/NH-33044/88/2021-S&R(P&B)/DNT (215840) dated 18th January,2023, in this context, it has been decided that if the above-mentioned certificate has not been submitted by the bidder in its Technical Bid, as opportunity must be given to the bidder to submit the said certificate during technical evaluation of Bid. In case the bidder is not able to submit the said certificate, further action may please be taken as RFP.

1.3 Schedule of Bidding Process

The Authority shall endeavor to adhere to the following schedule:

Sl. No.	Event Description	Date
1.	Invitation of RFP (NIT)	20.05.2026
2.	Last date for receiving queries	30.06.2026
3.	Pre-BID meeting at venue 2.11.4 (ii)	30.06.2026
4.	Authority response to queries latest by	30.06.2026
5.	Last date of Request for BID Document	07.07.2026
6	BID Due Date	07.07.2026
7.	Physical Submission of Bid Security /POA etc.	As per RFP
8.	Opening of Technical BIDs at venue 2.11.4 (i)	08.07.2026
9.	Declaration of eligible / qualified Bidders	To be intimated later
10.	Opening of Financial BID	To be intimated later
11.	Letter of Acceptance (LOA)	As per RFP
12.	Return of signed duplicate copy of LOA	--
13.	Validity of BID	120 days from BID Due Date
14.	Submission of Performance Security (PS) and Additional Performance Security (APS), if any	As per RFP
15.	Signing of Agreement	As per RFP

SECTION-2
INSTRUCTIONS TO BIDDERS

A. GENERAL

2.1 General terms of Bidding

2.1.1 No Bidder shall submit more than one BID for the Project. A Bidder bidding individually or as a member of a Joint Venture shall not be entitled to submit another BID either individually or as a member of any Joint Venture, as the case may be.

2.1.2 An International Bidder bidding individually or as a member of a Joint Venture shall ensure that Power of Attorney is apostille by appropriate authority and requirement of Indian Stamp Act is duly fulfilled.

2.1.3 Notwithstanding anything to the contrary contained in this RFP, the detailed terms specified in the draft Agreement shall have overriding effect; provided, however, that any conditions or obligations imposed on the Bidder hereunder shall continue to have effect in addition to its obligations under the Agreement. Further, the statements and explanations contained in this RFP are intended to provide a better understanding to the Bidders about the subject matter of this RFP and should not be construed or interpreted as limiting in any way or manner the scope of services and obligations of the Contractor set forth in the Agreement or the Authority's rights to amend, alter, change, supplement or clarify the scope of work, the work to be awarded pursuant to this RFP or the terms thereof or herein contained. Consequently, any omissions, conflicts or contradictions in the Bidding Documents including this RFP are to be noted, interpreted and applied appropriately to give effect to this intent, and no claims on that account shall be entertained by the Authority

2.1.4 The BID shall be furnished in the format exactly as per Appendix-I i.e. Technical Bid as per Appendix IA and Financial Bid as per Appendix IB. BID amount shall be indicated clearly in both figures and words, in Indian Rupees in prescribed format of Financial Bid and it will be signed by the Bidder's authorized signatory. In the event of any difference between figures and words, the amount indicated in words shall be taken into account.

2.1.5 The Bidder should submit a Power of Attorney as per the format at Appendix-III, authorizing the signatory of the BID to commit the Bidder.

~~2.1.6 In case the Bidder is a Joint Venture, the Members thereof should furnish a Power of Attorney in favour of the Lead Member in the format at Appendix-IV. And joint bidding agreement in the format at Appendix V~~

2.1.7 Any condition or qualification or any other stipulation contained in the BID shall render the BID liable to rejection as a non-responsive BID.

2.1.8 The BID and all communications in relation to or concerning the Bidding Documents and the BID shall be in English language.

2.1.9 This RFP is not transferable.

2.1.10 Any award of Project pursuant to this RFP shall be subject to the terms of Bidding Documents and also fulfilling the criterion as mentioned in clause 2.2.

~~2.1.11 In case the Bidder is a Joint Venture, it shall comply with the following additional requirements:~~

(a) Number of members in a Joint Venture shall not exceed 3 (Three);

(b) subject to the provisions of clause (a) above, the Bid should contain the information required for each Member of the Joint Venture;

(c) Members of the Joint Venture shall nominate one member as the lead member (the "**Lead Member**"). Lead Member shall met at least 60% requirement of Bid Capacity, Technical and Financial Capacity, required as per Clause 2.2.2.1, 2.2.2.2(i) & 2.2.2.3. The nomination(s) shall be supported by a Power of Attorney, as per the format at Appendix-III, signed by all the other Members of the Joint Venture. Other Member(s) shall meet at least 20% requirement of Bid Capacity, Technical and Financial Capacity required as per Clause 2.2.2.1, 2.2.2.2(i) & 2.2.2.3 (except otherwise specified in RFP) and the JV as a whole shall communicatively/collectively fulfil the 100% requirement; Provided further that, **In the case of a Joint Venture (JV), each member is required to hold a minimum of 26% (twenty six percent) of the total equity or shareholding in the JV**.

(d) the Bid should include a brief description of the roles and responsibilities of individual members, particularly with reference to financial, technical and defect liability obligations;

(e) the Lead Member shall itself undertake and perform at least 51(fifty one) per cent of the total length of the Project Highway,

(f) members of the Joint Venture shall have entered into a binding Joint Bidding Agreement, substantially in the form specified at Appendix V (the "**Jt. Bidding Agreement**"), for the purpose of making the Application and submitting a Bid in the event of being pre-qualified. The Jt. Bidding Agreement, to be submitted along with the Application, shall, *inter alia*:

(i) convey the commitment(s) of the Lead Member in accordance with this RFP, in case the contract to undertake the Project is awarded to the Joint Venture; and clearly outline the proposed roles & responsibilities, if any, of each member;

(ii) commit the approximate share of work to be undertaken by each member conforming to sub-clause 2.1.11 (e) mentioned above;

(iii) include a statement to the effect that all members of the Joint Venture shall be liable jointly and severally for all obligations of the Contractor in relation to the Project until the Defect Liability Period is achieved in accordance with the EPC Contract; and

(g) except as provided under this RFP, there shall not be any amendment to the Jt. Bidding Agreement.

(h) No Joint Venture up to Estimate Project Cost of Rs. 100 Crores (One Hundred Crores). However, Joint Venture for any Estimated Project Cost is permissible in case of maintenance works to be taken up on EPC mode.

2.1.12 While bidding is open to persons from any country, the following provisions shall apply:

(a) Where, on the date of the Application, not less than 50% (fifty percent) of the aggregate issued, subscribed and paid up equity share capital in the L-1 Bidder or its Member is held by persons resident outside India or where a Bidder or its Member is controlled by persons resident outside India, then the eligibility and award of the project to such L-1 Bidder shall be subject to approval of the competent authority from national security and public interest perspective as per the instructions of the Government of India applicable at such time. The decision of the authority in this behalf shall be final and conclusive and binding on the Bidder.

(b) (1) Further, where the LoA of a project has been issued to an agency, not covered under the category mentioned above, and it subsequently wishes to transfer its share capital in favour of another entity who is a resident outside India or where a Bidder or its Member is controlled by persons resident outside India and thereby the equity capital of the transferee entity exceeds 50% or above, any such transfer of equity capital shall be with the prior approval of the competent authority from national security and public interest perspective as per the instructions of the Government of India applicable at such point in time.

(2) The holding or acquisition of equity control, as above shall include direct or indirect holding, acquisition, including by transfer of the direct or indirect legal or beneficial ownership or control, by persons acting for themselves or in concert and in determining such holding or acquisition, the Authority shall be guided by the principles, precedents and definitions contained in the Securities and Exchange Board of India (Substantial Acquisition of Shares and Takeovers) Regulations, 2011, or any substitute thereof, as in force on the date of such acquisition.

(3) The Bidder shall promptly inform the authority of any change in the shareholding, as above, and failure to do so shall render the Bidder liable for disqualification from the Bidding process.

(4) In case the L-1 Applicant under (a) above is denied the security clearance, for whatsoever reasons, then the applicants emerging as L-2, L-3 eligible Bidders (in that order) may be given a counter-offer (one by one sequentially) to match the bid of L-1 applicant/preferred Bidder. In the event of acceptance of the counter-offer by another eligible Bidder, the project may be awarded to such Bidder. In case no applicant matches the bid of the L-1 applicant, the bid process shall be annulled and fresh bids invited.

2.1.13 Notwithstanding anything to the contrary contained herein, in the event that the Bid Due Date falls within three months of the closing of the latest financial year of a Bidder, it shall ignore such financial year for the purposes of its Bid and furnish all its information and certification with reference to the 5 (five) years or 1 (one) year, as the case may be, preceding its latest financial year. For the avoidance of doubt, financial year shall, for the purposes of a Bid hereunder, mean the accounting year followed by the Bidder in the course of its normal business.

2.1.14 The Bidder, including an individual or any of its Joint Venture member, should not be a non-performing party on the bid submission date. The Bidder, including any Joint Venture Member, shall be deemed to be a non-performing party any or more of the following conditions in any of its ongoing or completed project:

(i) Fails to set up institutional mechanism and procedure as per contract;

(ii) Fails to mobilize key construction equipment within a period of 1 months from the Appointed Date;

(iii) Fails to complete or has missed any milestone and progress not commensurate with contiguous unencumbered project=length/ROW available even after lapse of 4 months from respective project milestone/Schedule Completion date, unless Extension of Time has been granted due to Authority‟s Default or Force Majeure;

(iv) Fails to achieve progress commensurate with funds released from Escrow Account (Equity + Debt + Grant) in BOT or HAM project and variation is more than 25% in the last 365 days;

(v) Fails to achieve the target progress or complete the project as per schedule agreed at the time of sanctioning of funds under One Time Funds Infusion (OTFI) or relaxations to contract conditions to improve cash flow solely on account of Concessionaire's/contractor's failure/default;

(vi) Fails to complete rectification (excluding minor rectifications) as per time given in non-conformity reports (NCR) in design/completed works/maintenance or reported in Inspection Reports issued by Quality Inspectors deployed by the Authority or Officers of the Authority.

(vii) Fails to complete minor rectifications exceeding 3 instances in a project as per time given in non-conformity reports (NCR) in design/completed works/maintenance;

(viii) Fails to fulfill its obligations to maintain a highway in a satisfactory condition in spite of two rectification notices issued in this regard;

(ix) Damages/penalties recommended by Independent/Authority's Engineer during O&M Period and remedial works are still not taken up;

(x) Fails to complete Punch list items even after lapse of time for completion of such items excluding delays attributable to the Authority;

(xi) Occurrence of minor failure of structures/highway due to construction defect wherein no causalities are reported (causalities include injuries to human being / animals);

(xii) Occurrence of major failure of structures/highway due to construction defect wherein no casualties are reported (causalities include injuries to human being /animals);

(xiii) Occurrence of major failure of structures/highway due to construction defect leading to loss of human lives besides loss of reputation etc. of the authority;

(xiv) Fails to make premium payments excluding the current installment in one or more projects;

(xv) Fails to achieve financial closure in two or more projects within the given or extended period (which shall not be more than six months in any case);

(xvi) Fails to submit the Performance Security within the permissible time period in more than one project;

(xvii) Rated as an unsatisfactory performing entity/non-performing entity by an independent third-party agency and so notified on the website of the Authority;

(xviii) Failed to perform for the works of Expressways, National Highways, ISC & El works in the last 2(two) years, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitral award against the Bidder, including individual or any of its Joint Venture Member, as the case may be;

(xix) Expelled from the contract or the contract terminated by the Ministry of Road Transport & Highways or its implementing agencies for breach by such Bidder, including individual or any of its Joint Venture Member; Provided that any such decision of expulsion or termination of contract leading to debarring of the Bidder from further participation in bids for the prescribed period should have been ordered after affording an opportunity of hearing party.

(xx) Fails to start the works or causes delay in maintenance & repair/overlay of the project.

(The clause 2.1.14 has been superseded by the ministry's Circular No. RW/NH-33044/76/2021-S&R(P&B) dated 6.10.2021)

The Ministry's Circular No. RW/NH-33044/76/2021-S&R(P&B) dated 6.10.2021 and Ministry's Circular No. RW/NH-33044/76/2021-S&R(P&B) dated 04.01.2022 will be considered part of the RFP.

The Bidder, including individual or each member of Joint Venture, shall give the list of the projects of Expressways, National Highways, ISC and EI works of Ministry of Road Transport & Highways or its implementing agencies (NHAI/NHIDCL/State PWDs) and the status of above issues in each project as on the bid submission date and undertake that they do not attract any of the above categories (Ref. Sr. No.6, Annex-I of Appendix–IA).

The Bidder including individual or any of its Joint Venture Member may provide

(i) details of all their on-going projects along with updated stage of litigation, if so, against the Authority / Governments;

(ii) details of updated on-going process of blacklisting if so, under any contract With Authority/ Government; and

(iii) Details of all their on-going projects in the format at Annexure-VIII of Appendix IA (Ref Clause 10.3 (iv) of Draft EPC Agreement).

The Authority reserves the right to reject an otherwise eligible Bidder on the basis of the information provided under this clause 2.1.14. The decision of the Authority in this case shall be final

2.1.15 All orders of Ministry of Finance/DPIIT/any other Government agencies, as applicable and prevalent on the date of LOA, shall be applicable.

2.1.16 Entities of countries which have been identified by Ministry of Road Transport & Highways as not allowing Indian companies to participate in their Government procurement for any item related to ministry of Road Transport & Highways shall not be allowed to participate in Government procurement in India for all item related to Ministry of Road Transport & Highways, except for the list of items published by the Ministry of Road Transport & Highways permitting their participation.

2.1.17 Office Memorandum No. F.1/20/2018-PPD dated 2nd November, 2021 issued by Department of Expenditure, Ministry of Finance, Procurement Policy Division, Government of India subjected to Guidelines on Debarment of firms from Bidding shall be treated as part of this RFP. Further, Ministry's circular no. NH-35014/20/2020-HPart(2) dated 18.08.2022 and clarification issued by Ministry of Finance vide O.M No F.20/56/2022-PPD dated 31.08.2022 shall be treated as part of this RFP.

2.2. Eligibility and qualification requirements of Bidder

2.2.1 For determining the eligibility of Bidder the following shall apply:

(a) The Bidder may be a single entity or a group of entities (the **"Joint Venture"**), coming together to implement the Project. The term Bidder used herein would apply to both a single entity and a Joint Venture. However, in case the estimated cost of the project for which bid is invited is up to Rs. 100 Crore, then Joint Venture shall not be allowed.

(b) Bidder may be a natural person, private entity, or any combination of them with a formal intent to enter into a Joint Venture agreement or under an existing agreement to form a Joint Venture. A Joint Venture shall be eligible for consideration subject to the conditions set out in Clause 2.1.11 above.

(c) A Bidder shall not have a conflict of interest **("Conflict of Interest")** that affects the Bidding Process. Any Bidder found to have a Conflict of Interest shall be disqualified and liable for forfeiture of the BID Security or Performance Security as the case may be. A Bidder shall be deemed to have a Conflict of Interest affecting the Bidding Process, if:

(i) The Bidder, its Joint Venture Member (or any constituent thereof) and any other Bidder, its Member or any Member of its Joint Venture thereof (or any constituent thereof) have common controlling shareholders or other ownership interest; provided that this disqualification shall not apply in cases where the direct or indirect shareholding of a Bidder, or its Joint Venture Member thereof (or any shareholder thereof having a shareholding of more than 5% (five percent)

of the paid up and subscribed share capital of such Bidder, or its Joint Venture Member, as the case may be), in the other Bidder, its Joint Venture Member is less than 5% (five percent) of the subscribed and paid up equity share capital thereof; provided further that this disqualification shall not apply to any ownership by a bank, insurance company, pension fund or a public financial institution referred to in section 4A of the Companies Act 1956. For the purposes of this Clause 2.2.1(c), indirect shareholding held through one or more intermediate persons shall be computed as follows: (aa) where any intermediary is controlled by a person through management control or otherwise, the entire shareholding held by such controlled intermediary in any other person (the "**Subject Person**") shall be taken into

account for computing the shareholding of such controlling person in the Subject Person; and (bb) subject always to sub- clause (aa) above, where a person does not exercise control over an intermediary, which has shareholding in the Subject Person, the computation of indirect shareholding of such person in the Subject Person shall be undertaken on a proportionate basis; provided, however, that no such shareholding shall be reckoned under this sub-clause (bb) if the shareholding of such person in the intermediary is less than 26% of the subscribed and paid up equity shareholding of such intermediary; or

(ii) a constituent of such Bidder is also a constituent of another Bidder; or

(iii) such Bidder, or any of its Joint Venture Member thereof receives or has received any direct or indirect subsidy, grant, concessional loan or subordinated debt from any other Bidder, or any of its Joint Venture Member thereof or has provided any such subsidy, grant, concessional loan or subordinated debt to any other Bidder, its Member or any of its Joint Venture Member thereof; or

(iv) such Bidder has the same legal representative for purposes of this Application as any other Bidder; or

(v) such Bidder, or any of its Joint Venture Member thereof has a relationship with another Bidder, or any of its Joint Venture Member thereof, directly or through common third party/ parties, that puts either or both of them in a position to have access to each other's information about, or to influence the Application of either or each other; or

(vi) such Bidder, or any of its Joint Venture Member thereof has participated as a consultant to the Authority in the preparation of any documents, design or technical specifications of the Project.

(d) For determining the eligibility of Bidder from a country which shares a land border with India the following shall apply:

(i) Any Bidder from a country which shares a land border with India will be eligible to bid, only if the Bidder is registered with the Competent Authority, specified in Annexure-I of Order (Public Procurement No. 1) issued by Ministry of Finance, Department of Expenditure Public Procurement Division vide F. No. 6/18/2019-PPD, dated 23rd July 2020, which shall form an integral part of RFP and DCA (Copy enclosed).

(ii) "Bidder from a country which shares a land border with India" means:

a) An entity incorporated, established or registered in such a country, or
b) A subsidiary of an entity incorporated, established or registered in such a country; or
c) An entity substantially controlled through entities incorporated, established or registered in such a country; or
d) An entity whose beneficial owner is situated in such a country; or
e) An Indian (or other) agent of such an entity; or
f) A natural person who is a citizen of such a country: or
g) A Consortium or joint venture where any member of the under any of the above.

(ii) **Beneficial owner for the purpose of (ii) Above means:**

1. In case of a company of Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more judicial person, has a controlling ownership interest or who exercises control through other means.

Explanation: -

a) "Controlling ownership interest" means ownership of or entitlement to more than twenty-fine per cent of shares or capital or profits of the company.

b) "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholding agreements or voting agreements;

2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or one or more juridical person: has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or though one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individual;

4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;

5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

(iv) An Agent is a person employed to do any act for another, or to represent another in dealings with third person.

(v) The Selected Bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority. The definition of "contractor from a country which shares a land border with India" shall be as in Clause 2.2.1 (d)(ii) above.

Certificate regarding Compliance:

A Certificate on the letterhead of the Bidder shall be required to be submitted by the bidders certifying the following:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from a country or, if from such a country, has been registered with the Competent Authority as defined in Public Procurement Order No. F. No.6/18/2019-PPD dated 23rd July 2020. I hereby certify that this regard and is eligible to be considered."

It may be noted that in case the above certification if found to be false, this would be a ground for immediate rejection of Bid/termination and further legal action in accordance with low.

Validity of Registration:

In respect of RFP, registration should be valid at the time of submission of Bids and at the time of acceptance of bids. If the Bidder was validly registered at the time of acceptance, registration shall not be a relevant consideration during contract execution.

2.2.2 Qualification requirements of Bidders:

2.2.2.1 BID Capacity

Bidders who *inter alia* meet the minimum qualification criteria will be qualified only if their available BID capacity is more than the total BID value (value as per Clause 1.1.1). The available BID capacity will be calculated as per following, based on information mentioned at Annexure-VI of Appendix-IA:

Assessed Available BID capacity = (A*N*2.5 – B + C), Where

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

A = Maximum value of civil engineering works excluding the amount of bonus received, if any, in respect of EPC Projects executed in any one year during the last five years (updated to the price level of the year indicated in table at Note- 3 below) taking into account the completed as well as works in progress. The **EPC Projects** include turnkey project/ Item rate contract/ Construction works.

B = Value (updated to the price level of the year indicated in table at Note-3 below) of existing commitments, works for which the bidder has emerged as the winner of the bids or on-going works to be carpeted during the period of completion of the works for which BID is invited. For the sake of clarification, it is mentioned that works for which bidder has emerged as the winner of the bids but LOA has not been issued as on the day before opening the financial bids shall also be considered while calculating value of B.

C = The amount of bonus received, if any, in EPC Projects during the last 5 years (updated to the price level of the year indicated in table at Note-3 below).

Note:

1. The Statement showing the value of all existing commitments, works for which the contractor has emerged as the winner of the bid as given by the and ongoing works as well as the stipulated period of completion remaining for each of the works listed should be countersigned by the Client or its Engineer- in-charge not below the rank of Executive Engineer or equivalent in respect of EPC Projects **or** Concessionaire /Authorized Signatory of SPV in respect of BOT Projects and verified by Statutory Auditor.

2. The amount of bonus received, if any, in EPC Projects should be countersigned by the Client or its Engineer-in-charge not below the rank of Executive Engineer or equivalent in respect of EPC Projects.

3. The factor for the year for updations to the price level is indicated as under:

Year	Year-1	Year-2	Year-3	Year-4	Year-5
Up-dation factor	1.00	1.05	1.10	1.15	1.20

4. **The bid capacity status of the bidder to be updated as on the day before opening the financial bids.**

2.2.2.2 Technical Capacity

(i) For demonstrating technical capacity and experience (the **"Technical Capacity"**), the Bidder shall, over the past [5 (five)] financial years preceding the Bid Due Date, have received payments for construction of Eligible Project(s), or has undertaken construction works by itself in a PPP project, such that the sum total thereof, as further adjusted in accordance with clause 2.2.2.5 (i) & (ii), is more than **[(4844.00 Lakh/- (Rs. Four Thousand Eight Hundred Forty Four lakh only)]** (the **"Threshold Technical Capacity"**)[8].

[8]This amount should be as follows:

(A) For Normal Highway Project :

Sl. No	Estimated Project Cost (EPC) of the Project being invited	Threshold Technical Capacity
1	Estimated Project Cost< = 100 Crore of normal highway project	0.75 time of EPC
2	Estimated Project Cost> 100 Crore&< = 500 Crore of normal highway project	1 time of EPC
3	Estimated Project Cost> 500 Crore of normal highway project	1 time of EPC

(B) For Stand-alone specialized projects (Major Bridges/ROB/Flyover/Tunnel) Normal Highway Project:

Sl. No	**Estimated Project Cost (EPC) of the Project being invited**	**Threshold Technical Capacity**
1	Estimated Project Cost< = 100 Crore of normal highway project	0.75 time of EPC
2	Estimated Project Cost> 100 Crore	1.0 times of EPC
3	Estimated Project Cost> 500 &<=1000 Crore	1.0 times of EPC
4	Estimated Project Cost> 1000 Crore	1.0 time of the estimate project cost or Rs. 1000 Crore, whichever is less
5	Estimated Project Cost> 1000 Crore of Stand- alone specialized projects	1.0 time of the estimate project cost or Rs. 1000 Crore, whichever is less

(i) For normal Highway projects (including Major Bridges /ROB /Flyovers /Tunnels):

Provided that at least either of the following:

i. Two similar completed works costing not less than amount equal to **25% each of estimated cost.**

Or

ii. One similar completed work costing not less than amount equals to **35% each of estimated cost**

Shall have been completed from the Eligible Projects in Category 1 and/or Category 3 specified in Clause 2.2.2.5 Certificate(s) from the concerned client(s) shall be required for the same. In case the claimed project/(s) are sub-contracting/JV project in such a case Approval from Govt. Authority/Client is required (restricted to allowable sub-contracting limit/JV share in original contract). [D1]
For this purpose, a project shall be considered to be completed, if more considered to be completed, if more than 90% of the value of work has been completed and such completed value of work is equal to or more than the above-mentioned criteria in the last 5 (five) financial years preceding the Bid Due Date or till the Bid Due Date. Eligible project costs shall include the following: -

(a) Widening/reconstruction/up-gradation works on NH/SH/Expressway or any category of road taken under CRF, ISC, EI, SARDP, LWE.
(b) Widening/reconstruction/ upgradation works on MDRs with loan assistance from multilateral agencies or on BOT basis.
(c) Widening/reconstruction/ upgradation works of roads in Municipal Corporation limits, construction of Bypasses.
(d) Construction of standalone bridges, ROBs, tunnels.
(e) Construction/reconstruction of linear projects like airport runways.
(f) Viaducts of Railways/Metro
(g) Container yard of ports,

If any Major Bridge/ROB/Flyover/Tunnel is (are) part of the project, then the sole Bidder or in case of Bidder being a Joint Venture, any member of Joint Venture shall necessarily demonstrate **additional experience** in construction of Major Bridge/ROBs/Flyovers/Tunnel in the last **7 (Seven)** financial years preceding the Bid Due Date **or till the Bid Due Date**
i.e. shall have completed at least one similar Major Bridge/ROB/Flyover having length equal to or greater than:

(a) In case longest span of Bridge /ROB/ Flyover is less than or equal to 60m, no additional qualification is required.

(b) When longest span is more than 60m 80% of the longest span or 100m, whichever is less, of the structure proposed in this project and 40% of the length Major Bridge/ROB/Flyover or 2 km, whichever is less, of the structure proposed in this project.

And in case of tunnel, if any, shall have completed construction of at least one tunnel consisting of single or twin tubes (including tunnel(s) for Roads/Railway/Metro Rail/Irrigation/Hydro-electric projects etc.) having at least.

(a) In case Tunnel is a part of project having length less than or equal to 200m, then no additional qualification is required.

(b) When length of tunnel more than 200m: 80% of the cross sectional area of proposed tunnel or two lane highway tunnel cross-sectional area, whichever is less and 40% length of the tunnel to be constructed (other than cut and cover method) in this project or 2km, whichever is less. For the purpose of this requirement, tunnel may have single/twin tubes for roads/railways/metro rail/irrigation/hydroelectricity projects etc.

(i) For Stand-alone specialized projects:

(a) Major Bridges/ROB/Flyovers projects:

The sole Bidder or in case the Bidder being a Joint Venture, Lead member of Joint Venture shall have completed at least one similar Major Bridge/ROB/Flyover Project in the last **7 (seven)** financial years preceding the Bid Due Date **or till date the Bid Due Date,** having span equal to or greater than **80%** of the longest span or 100m, whichever is less of the structure proposed in this project and 40% of the length Major Bridge/ROB/Flyover or 2 km, whichever is less and also the cost of such similar project shall be at least.

i. two similar completed works length not less than or equals to **25%** each of cost of the Major Bridge/ROB/Flyovers. or

ii. one similar completed work length not less than or equals to **35%** of cost of the Major Bridge/ROB/Flyovers.

For this purpose, a project shall be considered to be completed, if more than 90% of the value of work has been completed value of work is equal to or more than the above-mentioned criteria. Certificate(s) from the concerned client(s) shall be required for the same. In case the claimed project in such a case Approval from Govt. Authority /Client is required (restricted to allowable sub-contracting limit/JV share in original contract). [D2]

(b) Tunnel project: The sole Bidder or in case the Bidder being a Joint Venture, Lead member of Joint Venture shall have completed at least one tunnel project in the **last 7 (seven) financial years** preceding the Bid Due Date, **or till the Bid Due Date**, consisting of single or twin tubes (including tunnel(s) for roads /Railway /Metro rail /irrigation /Hydro-electric projects etc.) having at least 80% of the cross-sectional area of the tunnel to be constructed other than cut & cover method or cross-sectional area of 2 lane highway tunnel, whichever is less and 40% length of the tunnel to be constructed in this project or 2 Km whichever is less and the cost of such project shall be at least.

i. two similar completed works length not less than equals to 25% each of estimated cost of The tunnel.

or

ii. one similar completed work length not less than equals to 35% of estimated cost of the tunnel.

For this purpose, a project, a project shall be considered to be completed, if more than 90% of the value of work has been completed and such completed value of work is equal to or more than the above-mentioned criteria.
Certificate(s) from the concerned client(s) shall be required for the same. In case the claimed project/(s) are subcontracting/JV project in such a case Approval from Govt. Authority /Concessionaire is required (restricted to allowable sub-contracting limit/JV share in original contract).

(i) The updations factor to update the price of the eligible projects for the year indicated in table below:

Year	Year-1	Year-2	Year-3	Year-4	Year-5
Up-dation factor	1.00	1.05	1.10	1.15	1.20

2.2.2.3 Financial Capacity:

(i) The Bidder shall have a minimum Net Worth[9] (the **"Financial Capacity"**) of [Rs. 4.84 Crore (Rs. Four Crore and Eighty Four Lakh only)] at the close of the preceding financial year.

(ii) The Bidder shall have a minimum Average Annual Turnover (updated to the price level of the year based on factors indicated in table below) of [Rs.9.68 Crore (Rs. Nine Crore and Sixty Eight Lakhs only)] for the last 5 (five) financial years.

This amount should be 20% (twenty percent) of the Estimated Project Cost of the Project for which bids are being invited.

Year	Year-1	Year-2	Year-3	Year-4	Year-5
Up-dation factor	1.00	1.05	1.10	1.15	1.20

~~**2.2.2.4 In case of a Joint Venture:**~~

(i) The Bid Capacity, Technical Capacity and Financial Capacity of all the Members of Joint Venture would be taken into account for satisfying the above conditions of eligibility. Further, Lead Member shall meet at least 60% requirement of Bid Capacity, Technical and Financial Capacity as per Clause 2.2.2.1, 2.2.2.2(i) and 2.2.2.3 and each of other JV members shall meet at least 20% requirement of Bid Capacity, Technical and Financial Capacity individually as per Clause 2.2.2.1, 2.2.2.2 (i) and 2.2.2.3. For avoidance of doubt, it is further clarified that the Joint Venture must collectively and individually satisfy the above qualification criteria. JV shall cumulatively/collectively fulfill the 100% requirement.

(ii) For requirement of 2.2.2.2 (ii) & (iii), one similar work of 20% of Estimated Project Cost should have been completed from the Eligible Projects in Category 1 and/or Category 3 individually by any of the JV members as a single work.

2.2.2.5 Categories and factors for evaluation of Technical Capacity:

(i) Subject to the provisions of Clause 2.2.2 the following categories of experience would qualify as Technical Capacity and eligible experience (the **"Eligible Experience"**) in relation to eligible projects as stipulated in Clauses 2.2.2.6 (i) & (ii) (The **"Eligible Projects"**). In case the Bidder has experience across different categories, the experience for each category would be computed as per weight of following factors to arrive at its aggregated Eligible Experience:

Category	Project / Construction experience on Eligible Projects	Factors
1	Project in highways sector that qualify under Clause 2.2.2.6 (i)	1
2	Project in core sector that qualify under Clause 2.2.2.6 (i)	0.75
3	Construction in highways sector that qualify under Clause 2.2.2.6 (ii)	1
4	Construction in core sector that qualify under Clause 2.2.2.6 (ii)	0.75

(i) The Technical capacity in respect of an Eligible Project situated in a developed country which is a member of OECD shall be further multiplied by a factor of 0.5 (zero point five) and the product thereof shall be the Experience Score for such Eligible Project.

(i) **For the purpose of this RFP:**

(a) highways sector would be deemed to include highways, expressways, bridges, tunnels, runways, runways, (Viaducts of Railways/Metro, Container yard of ports and

(b) Core sector would be deemed to include civil construction cost of power sector, commercial setups (SEZs etc.), airports, industrial parks/ estates, logistic parks, pipelines, irrigation, water supply, sewerage, irrigation, water supply, stadium, Hospitals, Hotels, Smart city, Warehouses/Silos, Oil and gas and real estate development. Core sector will also include the projects with the title of RIDF, PMGSY road, link roads, city roads, rural roads, sector/municipality road, real estate projects which demonstrate road development/ construction bridges or culverts, **Performance-Based Maintenance Contracting work (PBMC), O&M work, Short Term Maintenance Contract (STMC), railways (construction/re-construction of railway tracks, etc.) metro rail and ports (including construction/re-construction cost of Jetties, any other linear infrastructure including bridges etc.)**.

(iv) In case of projects executed by applicant under category 3 and 4 as a member of Joint Venture, the project cost should be restricted to the share of the applicant in the joint venture for determining eligibility as per provision under clause 2.2.2.2
(ii). In case Statutory Auditor certifies that, the work of other member(s) is also executed by the applicant, then the total share executed by applicant can be considered for determining eligibility as per provision under clause 2.2.2.2.

(v) Maintenance works are not considered as eligible project for evaluation as per Instruction No.6 to Annex-IV. As such works with nomenclature like PR, OR, FDR,SR, site/micro grading, surface renewal, resurfacing work, Tarring, B.T. surface work, temporary restoration, urgent works, periodic maintenance, repair & rehabilitation, one time maintenance, permanent protection work of bank, external pre stressing, repair of central hinge, short term OMT contract of NHAI, any type of work related to border fencing, work of earthwork alone, construction of buildings/hostels, etc. or not specified, shall not be considered. However, such maintenance works shall be considered as eligible projects in case of Maintenance works to be taken up on EPC mode.

(vi) The works such as Improvement in Riding Quality work (IRQP/IRQ), shall be c o nsidered for Technical Capacity [2.2.2.2 (i)] but not for similar Completed works [2.2.2.2 (ii) and 2.2.2.2(iii)].However, such work shall be Considered for similar completed works [2.2.2.2 (ii)] in case of Maintenance works to be taken up on EPC mode.

(vi) In case both the estimated cost of project and revised cost of project are provided, the revised cost of project shall be considered for evaluation.

2.2.2.6 Eligible Experience on Eligible Projects in respect of each category:

(i) For a project to qualify as an Eligible Project under Categories 1 and 2:

(a) It should have been undertaken as a PPP project on BOT, BOLT, BOO, BOOT or other similar basis for providing its output or services to a public sector entity or for providing non-discriminatory access to users in pursuance of its charter, concession or contract, as the case may be. For the avoidance of doubt, a project which constitutes a natural monopoly such as an airport or port should normally be included in this category even if it is not based on a long-term agreement with a public entity;

(b) the entity claiming experience should have held, in the company owning the Eligible Project, a minimum of 26% (twenty six per cent) equity during the entire year for which Eligible Experience is being claimed;

(c) the capital cost of the project should be more than 10% of the amount specified as the Estimated Project Cost[1] ; and receipts[2] of less than 10% of the Estimated Project Cost.

(d) the entity claiming experience shall, during the last 5 (five) financial years preceding the Bid Due Date, have itself undertaken the construction of the project for an amount equal to at least one half of the Project Cost of eligible projects, excluding any part of the project for which any contractor, sub-contractor or other agent was appointed for the purposes of construction.

(ii) For a project to qualify as an Eligible Project under Categories 3 and 4, the Bidder should have received payments from its client(s) for construction works executed, fully or partially, or work executed and certified by the Engineer-in- charge/Independent Engineer/Authority's Engineer during the 5 (five) financial years immediately preceding the Bid Due Date, and only the amounts (gross) actually received/work executed, during such 5 (five) financial years shall qualify for purposes of computing the Experience Score. However, receipts of or work executed amount less than Rs. 4.84 Crore (Rs. four Crore and Eight four Lakhs only)] shall not be reckoned as receipts for Eligible Projects. For the avoidance of doubt, construction works shall not include supply of goods or equipment except when such goods or equipment form part of a turn-key construction contract/EPC contract for the project. Further, the cost of land and also cost towards pre- construction activities (like shifting of utilities etc.) shall not be included hereunder.

(iii) The Bidder shall quote experience in respect of a particular Eligible Project under any one category only, even though the Bidder (either individually or along with a member of the Joint Venture) may have played multiple roles in the cited project. Double counting for a particular Eligible Project shall not be permitted in any form.

(iv) Experience for any activity relating to an Eligible Project shall not be claimed by two or more Members of the Joint Venture. In other words, no double counting by a Joint Venture in respect of the same experience shall be permitted in any manner whatsoever.

2.2.2.7 Submission in support of Technical Capacity

(i) The Bidder should furnish the details of Eligible Experience for the last 5 (five) financial years immediately preceding the Bid Due Date.

(ii) The Bidder must provide the necessary information relating to Technical Capacity as per format at Annex-II of Appendix-IA.

(iii) The Bidder should furnish the required Project-specific information and evidence in support of its claim of Technical Capacity, as per format at Annex - IV of Appendix-IA.

2.2.2.8 Submission in support of Financial capacity

(i) The Technical Bid must be accompanied by the Audited Annual Reports of the Bidder (of each Member in case of a Joint Venture) for the last 5 (five) financial years, preceding the year in which the bid is submitted.

(ii) In case the annual accounts for the latest financial year are not audited and therefore the Bidder cannot make it available, the Bidder shall give an undertaking to this effect and the statutory auditor shall certify the same. In such a case, the Bidder shall provide the Audited Annual Reports for 5 (five) years preceding the year for which the Audited Annual Report is not being provided.

(iii) The Bidder must establish the minimum Net Worth specified in Clause 2.2.2.3, and provide details as per format at Annex-III of Appendix-IA.

[1] The actual capital cost of the project (i.e. without escalation) shall be considered for the evaluation.

[2] The actual payment receipt (i.e. without escalation) shall be considered for the evaluation.

2.2.2.9 The Bidder shall enclose with its Technical Bid, to be submitted as per the format at Appendix-IA, complete with its Annexes, the following:

(i) Certificate(s) from its statutory auditors$[3] or the concerned client(s) stating the payments received or in case of a PPP project, the construction carried out by itself, during the past 5 years, in respect of the Eligible Projects. In case a particular job/ contract has been jointly executed by the Bidder (as part of a Joint Venture), it should further support its claim for the payments received or construction carried out by itself in PPP Projects as applicable the share in work done for that particular job/ contract by producing a certificate from its statutory auditor or the client; and

(ii) Certificate(s) from its statutory auditors specifying the net worth of the Bidder, as at the close of the preceding financial year, and also specifying that the methodology adopted for calculating such net worth conforms to the provisions of this Clause 2.2.2.9 (ii). For the purposes of this RFP, net worth (the **"Net Worth"**) shall mean the aggregate value of the paid-up share capital and all reserves created out of the profits and securities premium account, after deducting the aggregate value of the accumulated losses, deferred expenditure and miscellaneous expenditure not written off, as per the audited balance sheet, but does not include reserves created out of revaluation of assets, write-back of depreciation and amalgamation.

2.2.2.10 **Deleted.**

2.3 Proprietary data

All documents and other information supplied by the Authority or submitted by a Bidder to the Authority shall remain or become the property of the Authority and are transmitted to the Bidders solely for the purpose of preparation and the submission of a BID in accordance herewith. Bidders are to treat all information as strictly confidential and shall not use it for any purpose other than for preparation and submission of their Bid. The provisions of this Clause 2.3 shall also apply *mutatis mutandis* to BIDs and all other documents submitted by the Bidders, and the Authority will not return to the Bidders any BID, document or any information provided along therewith.

2.4 Cost of Bidding

The Bidders shall be responsible for all of the costs associated with the preparation of their BIDs and their participation in the Bidding Process. The Authority will not be responsible or in any way liable for such costs, regardless of the conduct or outcome of the Bidding Process.

2.5 Site visit and verification of information

2.5.1 Bidders are encouraged to submit their respective BIDs after visiting the Project site and ascertaining for themselves the site conditions, traffic, location, surroundings, climate, availability of power, water & other utilities for construction, access to site, handling and storage of materials, weather data, applicable laws and regulations, and any other matter considered relevant by them. Bidders are advised to visit the site and familiarize themselves with the Project with in the stipulated time of submission of the Bid. No extension of time is likely to be considered for submission of Bids.

2.5.2 It shall be deemed that by submitting a BID, the Bidder has:

(a) made a complete and careful examination of the Bidding Documents, Schedules annexed to EPC agreement Document;

(b) received all relevant information requested from the Authority;

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[3] $In case duly certified audited annual financial statements containing explicitly the requisite details are provided, a separate certification by statutory auditors would not be necessary in respect of Clause 2.2.2.9 (i). In jurisdictions that do not have statutory auditors, the firm of auditors which audits the annual accounts of the Applicant may provide the certificates required under this RFP.

(c) accepted the risk of inadequacy, error or mistake in the information provided in the Bidding Documents or furnished by or on behalf of the Authority relating to any of the matters referred to in Clause 2.5.1 above. No claim shall be admissible at any stage on this account.

(d) satisfied itself about all matters, things and information including matters referred to in Clause 2.5.1 hereinabove necessary and required for submitting an informed BID, execution of the Project in accordance with the Bidding Documents and performance of all of its obligations thereunder;

(e) acknowledged and agreed that inadequacy, lack of completeness or incorrectness of information provided in the Bidding Documents or ignorance of any of the matters referred to in Clause 2.5.1 hereinabove shall not be a basis for any claim for compensation, damages, extension of time for performance of its obligations, loss of profits etc. from the Authority, or a ground for termination of the Agreement by the Contractor;

(f) acknowledged that it does not have a Conflict of Interest; and

(g) agreed to be bound by the undertakings provided by it under and in terms hereof.

2.5.3 The Authority shall not be liable for any omission, mistake or error in respect of any of the above or on account of any matter or thing arising out of or concerning or relating to RFP, including any error or mistake therein or in any information or data given by the Authority.

2.6 Verification and Disqualification

2.6.1 The Authority reserves the right to verify all statements, information and documents submitted by the Bidder in response to the RFP and the Bidder shall, when so required by the Authority, make available all such information, evidence and documents as may be necessary for such verification. Any such verification, or lack of such verification, by the Authority shall not relieve the Bidder of its obligations or liabilities hereunder nor will it affect any rights of the Authority thereunder.

2.6.2 The Authority reserves the right to reject any BID and appropriate the BID Security if:

(a) at any time, a material misrepresentation is made or uncovered, or

(b) the Bidder does not provide, within the time specified by the Authority, the supplemental information sought by the Authority for evaluation of the BID.

Such misrepresentation/ improper response shall lead to the disqualification of the Bidder. If the Bidder is a Joint Venture, then the entire Joint Venture and each Member of the Joint Venture may be disqualified/ rejected. If such disqualification/rejection occurs after the BIDs have been opened and the lowest Bidder gets disqualified / rejected, then the Authority reserves the right to annul the Bidding Process and invites fresh BIDs.

2.6.3 In case it is found during the evaluation or at any time before signing of the Agreement or after its execution and during the period of defect liability subsistence thereof, that one or more of the eligibility and /or qualification requirements have not been met by the Bidder, or the Bidder has made material misrepresentation or has given any materially incorrect or false information, the Bidder shall be disqualified forthwith if not yet appointed as the contractor either by issue of the LOA or entering into of the Agreement, and if the Selected Bidder has already been issued the LOA or has entered into the Agreement, as the case may be, the same shall, notwithstanding anything to the contrary contained therein or in this RFP, be liable to be terminated, by a communication in writing by the Authority to the Selected Bidder or the Contractor, as the case may be, without the Authority being liable in any manner whatsoever to the Selected Bidder or the Contractor. In such an event, the Authority shall be entitled to forfeit and appropriate the BID Security or Performance Security, as the case may be, as Damages, without prejudice to any other right or remedy that may be available to the Authority under the Bidding Documents and/or the Agreement, or otherwise.

2.6.4. A Bidder shall be liable for disqualification and forfeiture of BID Security, if any legal, financial or technical adviser of the Authority in relation to the Project is engaged by the Bidder, its Member or any Associate thereof, as the case may be, in any manner for matters related to or incidental to such Project during the Bidding Process or subsequent to the (i)

issue of the LOA or (ii) execution of the Agreement. In the event any such adviser is engaged by the selected Bidder or Contractor, as the case may be, after issue of the LOA or execution of the Agreement for matters related or incidental to the project, then notwithstanding anything to the contrary contained herein or in the LOA or the Agreement and without Prejudice to any other right or remedy or the Authority, including the forfeiture and appropriation of the BID Security or Performance Security, as the case may be, which the Authority may have there under or otherwise, the LOA or the Agreement, as the case may be, shall be liable to be terminated without the Authority being liable in any manner whatsoever to the Selected Bidder or Contractor for the same. For the avoidance or doubt, this disqualification shall not apply where such adviser was engaged by the Bidder, its Member or Associate in the past but its assignment expired or was terminated 6 (six) months prior to the date of issue of this RFP. Nor will this disqualification apply where such adviser is engaged after a period of 3 (three) years from the date of commercial operation of the Project.

B. DOCUMENTS

2.7 Contents of the RFP

2.7.1 This RFP comprises the Disclaimer set forth hereinabove, the contents as listed below, and will additionally include any Addenda issued in accordance with Clause 2.9.

Part –I

Invitation for BIDs

Section 1. Introduction

Section 2. Instructions to Bidders

Section 3. Evaluation of BIDs

Section 4. Fraud and Corrupt

Section 5. Pre-BID Conference

Section 6. Miscellaneous

Appendices

IA. Letter comprising the Technical BID including Annexure I to VII IB. Letter comprising the Financial BID

II. Bank Guarantee for BID Security

III. Power of Attorney for signing of BID

IV. Power of Attorney for Lead Member of Joint Venture

V. Joint Bidding Agreement for Joint Venture

VI. Integrity Pact Format

VII. Form of Bank Guarantee (For Performance Security)

VIII. Format of LOA

Part –II

Agreement Document with schedules

Part – III

[Feasibility Report / Detailed Project Report provided by the authority]

2.7.2 The draft Agreement and the Feasibility / Detailed Project Report provided by the Authority as part of the BID Documents shall be deemed to be part of this RFP.

2.8 Clarifications

2.8.1 Bidders requiring any clarification on the RFP may notify the Authority in writing by e-mail in accordance with Clause 1.2.9. They should send in their queries on or before the date mentioned in the Schedule of Bidding Process specified in Clause 1.3. The Authority shall endeavor to respond to the queries within the period specified therein, but no later than 15 (fifteen) days prior to the BID Due Date. The responses will be sent by fax or e-mail. The Authority will forward all the queries and its responses thereto, to all Bidders without identifying the source of queries.

2.8.2 The Authority shall endeavor to respond to the questions raised or clarifications sought by the Bidders. However, the Authority reserves the right not to respond to any question or provide any clarification, in its sole discretion, and nothing in this Clause shall be taken or read as compelling or

requiring the Authority to respond to any question or to provide any clarification.

2.8.3 The Authority may also on its own motion, if deemed necessary, issue interpretations & clarifications to all Bidders. All clarifications & interpretations issued by the Authority shall be deemed to be part of the Bidding Documents. Verbal clarifications and information given by Authority or its employees or representatives shall not in any way or manner be binding on the Authority.

2.9 Amendment of RFP

2.9.1 At any time prior to the BID Due Date, the Authority may, for any reason, whether at its own initiative or in response to clarifications requested by a Bidder, modify the RFP by the issuance of Addenda.

2.9.2 Any Addendum issued hereunder will be hosted on the GoI e-Tendering Portal (https://eprocure.gov.in/cppp).

2.9.3 In order to afford the Bidders a reasonable time for taking an Addendum into account, or for any other reason, the Authority may, in its sole discretion, extend the BID Due Date.

C. PREPARATION AND SUBMISSION OF BIDS

2.10 Format and Signing of BID

2.10.1 The Bidder shall provide all the information sought under this RFP. The Authority will evaluate only those BIDs that are received online in the required formats and complete in all respects and Bid Security, Copy of online receipt towards payment of cost of Bid document, POA and Joint Bidding Agreement etc. are received in hard copies.

2.10.2 The BID shall be typed and signed in indelible blue ink by the authorized signatory of the Bidder. All the alterations, omissions, additions or any other amendments made to the BID shall be initialed by the person(s) signing the BID.

2.11 Documents comprising Technical and Financial BID

2.11.1 The Bidder shall first upload all the project details, net worth details, turnover details, bridge and tunnel details and all other details required in this RFP for technical qualification. The Bidder shall ensure that all the details are updated as on the due date of submission of this bid. Also the same should be uploaded on BIMS portal.

The Bidder shall then apply for the RFP on the CPPP website https:// eprocure.gov.in/eprocure/app and BIMS portal (www.bims.gov.in) by submitting the documents mentioned below along with the supporting documents which shall comprise of the Technical BID on the CPPP portal.

Technical Bid

(a) Appendix-IA (Letter comprising the Technical Bid) including Annexure I-VI and supporting certificates / documents.

(b) Power of Attorney for signing the BID as per the format at Appendix-III;

(c) if applicable, Power of Attorney for Lead Member of Joint Venture as per the format at Appendix-IV;

(d) if applicable, Joint Bidding Agreement for Joint Venture as per the format at Appendix-V;

(e) Deleted

(f) BID Security of Rs. 48,45,000.00 (Rs. **Forty Eight Lakh and Forty Five Thousand Only**

Thousand Only in the form of Insurance Surety Bond (in the format at Appendix – IX issued by Insurance Company authorized by Insurance Regulatory and Development Authority of India), Account Payee Demand Draft, Banker‟s Cheque or e – Bank Guarantee (in the format at Appendix-II from a Scheduled Bank)

(g) Copy of Online receipt/ original Demand Draft towards payment of cost of Bid document of Rs. 10,000/- (Rupees Ten Thousand Only) to["Pay & Accounts Officer, Ministry of Road Transport and Highway Lucknow towards cost of Bid document.; The Bidders shall also submit Bid document fee amounting Rupees 10,000 through Non-Tax Receipt Portal
i.e. www.bharatkosh.gov.in in favour of Regional Pay & Accounts Officer, Ministry of Road Transport & Highways, Lucknow (DDO Code: 235040). Proof of fee submissions shall be submitted along with the online Bid.

(h) Deleted;

(i) Bidder shall comply with the provisions of Office Memorandum No. RW/NH-37010/4/2010/PIC-EAP(Printing) dated 22.02.2016 and its subsequent amendments if any, issued by MoRT&H (Appendix-VI) regarding Integrity Pact (IP) and the Integrity Pact (IP) duly signed by Authorised signatory shall be submitted by the Bidder with the RFP Bid & shall be part of the Contract Agreement;

(j) An undertaking from the person having PoA referred to in Sub. Clause-(b) above that they agree and abide by the Bid documents uploaded by MoRT&H/NHAI and amendments uploaded, if any; and

(k) Annexure-VIII of Appendix – IA showing details of all ongoing project works (Ref Clause 10.3 (iv) of Document for EPC Agreement).

(l) copy of Memorandum and Articles of Association, if the Bidder is a body corporate, and if a partnership then a copy of its partnership deed.

(m) Copies of duly audited complete annual accounts of the Bidder or of each member (in case of Joint Venture) for preceding 5 years.

(n) During submission of bid on CPP Portal, Bidders shall upload the certificate generated by BIMS regarding successful submission of online technical information on CPPP portal.

Financial Bid

(a) Appendix-IB (Letter comprising the Financial Bid) shall be submitted online through e-procurement portal on or before 07.07.2026 (up to 15.00 Hrs. IST).

Self-Certification

Self-certification by the Bidder that its Bid meets the Local Content requirement for Class-I Local Supplier‟ /Class-II Local Supplier‟ as the case may be. The self-certification shall also have details of the location(s) at which the local value addition is made. In case, bidder do not submit the aforesaid Certification, the bidder will be summarily treated as „Non- Local Supplier‟.

In case of procurement for a value in excess of Rs. 10 Crores, the 'Class –I Local supplier / 'Class II Local supplier' shall have to provide a Certificate from the Statutory Auditor or Cost Auditor of the Company (in case of Companies) or from a practicing Cost Accountant or practicing Chartered Accountant (in respect of Suppliers other than Companies) giving the percentage of Local Content upon Construction of the Project. As per ministry circular no. RW/NH-33044/88/2021-S&R(P&B)/DNT (215840) dated 18th January,2023, in this context, it has been decided that if the above-mentioned certificate has not been submitted by the bidder in its Technical Bid, as opportunity must be given to the bidder to submit the said certificate during technical evaluation of Bid. In case the bidder is not able to submit the said certificate, further action may please be taken as RFP.

~~2.11.2 The Lowest Bidder shall be required to submit original of documents listed below (before issuance of Letter of Acceptance (LOA) by the Authority:~~

(a) **Appendix-IA (Letter comprising the Technical Bid);**

(b) **Appendix-IB (Letter comprising the Financial BID);**

(c) **Annex-V Statement of Legal Capacity**

(d) Original Power of Attorney for signing the BID as per format at Appendix-III;

(e) if applicable, Original Power of Attorney for Lead Member of Joint Venture as per the format at **Appendix-IV**;

(f) if applicable, Original Joint Bidding Agreement for Joint Venture as per the ormat at **Appendix-V**;

(g) Bid Security of Rs. 48,45,000.00 (Rs. Forty Eight lakh and Forty five Thousand Only.) in the form of Insurance Surety Bond (in the format at Appendix – X issued by Insurance Company authorized by Insurance Regulatory and Development Authority of India), Account Payee Demand Draft, Banker's Cheque or e - Bank Guarantee (in the format at Appendix-II from a Scheduled Bank).

(h) Bidder shall comply with the provision of NHAI/Policy Guidelines/Vigilance/2020 Policy Circular No. 5. 8 dated 29.12.2020 issued by NHAI and its subsequent amendments if any, issued by NHAI/MoRT&H (Appendix-VI) regarding Integrity Pact (IP) and the Integrity Pact (IP) duly signed by Authorised signatory shall be submitted by the bidder with the RFP bid & shall be part of the Contract Agreement; and

(i) An undertaking from the person having PoA referred to in Sub. Clause-(a) above that they agree and abide by the Bid documents uploaded by NHAI and amendments uploaded, if any

(j) Copy of experience certificates apostille at foreign origin, if any

(k) Certificate regarding Compliance with Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs) as per format given in Appendix-XI shall be submitted by the Bidder with the RFP Bid duly signed by Authorised signatory & shall be part of the Contract Agreement ; and

(l) Proof of Registration with the Competent Authority as defined in Public Procurement Order No. F.No. 6/18/2019-PPD dated 23rd July, 2020, if applicable (to be submitted by the "Bidder from a country which shares a land border with India")

Note :While submitting Bid Security via Account Payee demand draft or Banker's cheque, it is to be ensured by the bidder that Account Payee demand draft or Banker's cheque are **submitted physically latest within 5 working days of the Bid Due Date (up to 17:00 Hours) to any of the following addresses** placed in a sealed envelope and bearing the identification Name of project - RFP for **IRQP of NH-234 (Old NH-91A) (Ch. 142.00 to 158.400) District Kannauj in the State of Uttar Pradesh.***(Length=16.400 Km)* Else the bid submitted will be rejected.

2.11.3 The documents listed at clause 2.11.2 shall be placed in an envelope, which shall be sealed. The envelope shall clearly bear the identification "**BID for the** RFP for **IRQP of NH-234 (Old NH-91A) (Ch. 142.00 to 158.400) District Kannauj in the State of Uttar Pradesh on engineering, procurement and construction (EPC) mode."** and shall clearly indicate the name and address of the Bidder. In addition, the BID Due Date should be indicated on the right hand top corner of the envelope.

2.11.4 The envelope shall be addressed to the following officer and shall be submitted at the respective address:

ATTN. OF:	Shri A. K. JAIN
DESIGNATION	Chief Engineer (NH)
ADDRESS:	UP PWD, Govt. of Uttar Pradesh, Nirman Bhawan, 96, Mahatma Gandhi Marg, Lucknow 226001 Email id: cenh.up@gmail.com

ATTN. OF:	(Shri Arvind Kumar)
DESIGNATION	Superintending Engineer
ADDRESS:	NH Circle, UP PWD, Kanpur Email id: nhcirclekanpur@gmail.com

ATTN. OF:	
DESIGNATION	Executive Engineer
ADDRESS:	NH Division PWD, Knapur, Email id: nhdivisionkanpur2012@gmail.com

2.11.5 If the envelope is not sealed and marked as instructed above, the Authority assumes no responsibility for the misplacement or premature opening of the contents of the BID submitted and consequent losses, if any, suffered by the Bidder.

2.11.6 BIDs submitted by fax, telex, telegram or e-mail shall not be entertained and shall be summarily rejected.

2.12 BID Due Date

Financial BID comprising of the documents listed at clause 2.11.1 of the RFP shall be submitted online through e-procurement CPPP website https:// eprocure.gov.in/eprocure/app on or before 07.07.2026 up to 15:00 hrs. Documents listed at clause 2.11.2 of the RFP shall be submitted physically latest within 5 working days of the Bid Due Date (upto 1700 Hours) at the address provided in Clause 2.11.4 in the manner and form as detailed in this RFP. A receipt thereof should be obtained from the person specified at Clause 2.11.4.

2.13 Late BIDs

E-procurement portal CPPP website https:// eprocure.gov.in/eprocure/app shall not allow submission of any Bid after the prescribed date and time at clause 2.12. Physical receipt of documents listed at clause 2.11.2 of the RFP after the prescribed date and time at clause 2.12 shall not be considered and the bid shall be summarily rejected.

2.14 Procedure for e-tendering

2.14.1 Accessing/Purchasing of BID documents

2.14.1.1 It is mandatory for all the Bidders to have class-III Digital Signature Certificate (DSC) (in the name of Authorized Signatory/Firm or Organization/Owner of the Firm or Organization) from any of the licensed Certifying Agency (Bidders can see the list of licensed CAs from the link www.cca.gov.in) to participate in e- tendering of MoRT&H/ NHAI/NHIDCL/BRO/State PWD.

DSC should be in the name of the authorized signatory as authorized in Appendix III of this RFP or person executing/delegating such Appendix III in favor of Authorized Signatory. It should be in corporate capacity (that is in Bidder capacity /in case of JV in the Lead Member capacity, as applicable). The Bidder shall submit document in support of the Class-III DSC. In other cases, the bid shall be considered Non-responsive.

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

(a) Registration with e-procurement portal should be valid at least up to the date of submission of BID.

(b) BIDs can be submitted only during the validity of registration.

It is also mandatory for the Bidders to get their firms registered with e- tendering portal. The Bidders shall update their project and other details on the portal on a regular basis and apply to the tenders via the portal.

2.14.1.3 If the firm / Joint Venture is already registered with e-tendering service provider, and validity of registration is not expired, then the firm / Joint Venture is not required a fresh registration.

2.14.1.4 The complete BID document can be viewed / downloaded by the Bidder from e-procurement portal https:// eprocure.gov.in/eprocure/app from 20.05.2026 to 07.07.2026 (up to 15.00 Hrs. IST).

2.14.1.5 Deleted

2.14.2 Preparation & Submission of BIDs:

2.14.2.1 The Bidder may submit his Bid online following the instructions appearing on the screen. The detailed guidelines for e-procurement is also available on e-procurement portal.

2.14.2.2 The documents listed at clause 2.11.1 shall be prepared and scanned in different files (in PDF or RAR format such that file size is not more than 30 MB) and uploaded during the on-line submission of BID.

2.14.2.3 Bid must be submitted online only through e-procurement portal https:// eprocure.gov.in/eprocure/app and BIMS portal (https://bims.gov.in/) using the digital signature of authorized representative of the Bidder on or before 07.07.2026 (upto 1500 Hrs. IST). Bidders shall upload the certificate generated by BIMS regarding successful submission of online technical information on CPP portal.

2.14.3 Modifications/ Substitution/ withdrawal of BIDs

2.14.3.1 The Bidder may modify, substitute or withdraw its e- BID after submission prior to the BID Due Date. No BID can be modified, substituted or withdrawn by the Bidder on or after the BID Due Date & Time.

2.14.3.2 For modification of e-BID, Bidder has to detach its old BID from e- procurement portal and upload /resubmit digitally signed modified BID. For withdrawal of BID, Bidder has to click on withdrawal icon at e- procurement portal and can withdraw its e-BID. Before withdrawal of a BID, it may specifically be noted that after withdrawal of a BID for any reason, Bidder cannot re-submit e-BID again.

2.15 Online Opening of BIDs.

2.15.1 Opening of BIDs will be done through online process.

2.15.2 The Superintending Engineer, NH Circle PWD, Kanpur shall on-line open Technical BIDs on 08.07.2026 at 1500 Hrs IST, in the presence of the authorized representatives of the Bidders, who choose to attend. Technical BID of only those Bidders shall be online opened whose documents listed at clause 2.11.2 of the RFP have been physically received The MoRT&H/NHAI/NHIDCL/State PWD will subsequently examine and evaluate the BIDs in accordance with the provisions of Section 3 of RFP.

2.16 Rejection of BIDs

2.16.1 Notwithstanding anything contained in this RFP, the Authority reserves the right to reject any BID and to annul the Bidding Process and reject all BIDs at any time without any liability or any obligation for such acceptance, rejection or annulment, and without assigning any reasons thereof. In the event that the Authority rejects or annuls all the BIDs, it may, in its discretion, invite all eligible Bidders to submit fresh BIDs hereunder.

2.16.2 The Authority reserves the right not to proceed with the Bidding Process at any time, without notice or liability, and to reject any BID without assigning any reasons.

2.17 Validity of BIDs

The BIDs shall be valid for a period of not less than 120 (one hundred and twenty) days from the BID Due Date. The validity of BIDs may be extended by mutual consent of the respective Bidders and the Authority.

2.18 Confidentiality

Information relating to the examination, clarification, evaluation and recommendation for the Bidders shall not be disclosed to any person who is not officially concerned with the process or is not a retained professional advisor advising the Authority in relation to, or matters arising out of, or concerning the Bidding Process. The Authority will treat all information, submitted as part of the BID, in confidence and will require all those who have access to such material to treat the same in confidence. The Authority may not divulge any such information unless it is directed to do so by any statutory entity that has the power under law to require its disclosure or is to enforce or assert any right or privilege of the statutory entity and/ or the Authority or as may be required by law or in connection with any legal process.

2.19 Correspondence with the Bidder

Save and except as provided in this RFP, the Authority shall not entertain any correspondence with any Bidder in relation to acceptance or rejection of any BID. However, the Authority would display the result of technical evaluation on the web portal for 7 days including reasons for non- responsiveness, if any**,** and the financial bid will be opened thereafter.

D. BID SECURITY

2.20 BID Security

2.20.1 The Bidder shall furnish as part of its BID, a BID Security referred to in Clause 1.2.4 herein above in the form of Insurance Surety Bond (issued by Insurance Company authorized by Insurance Regulatory and Development Authority of India in the format at Appendix IX) , Account Payee Demand Draft, Banker's Cheque or e – Bank Guarantee issued by nationalized bank, or a Scheduled Bank in India having a net worth of at least Rs. 1,000 Crore (Rs. One Thousand Crore), in favour of the Authority in the format at Appendix-II (the "Bank Guarantee") and having a validity period of not less than 180 (one hundred eighty) days from the BID Due Date, inclusive of a claim period of 60 (sixty) days, and may be extended as may be mutually agreed between the Authority and the Bidder from time to time. The Insurance Surety Bond shall be verified from the specific portal created for this purpose. The e–Bank Guarantee shall be transmitted through SFMS Gateway to [Ministry/NHAI/NHIDCL/State PWD/BRO]" Bank. In case the e – Bank Guarantee is issued by a foreign bank outside India, confirmation of the same by any nationalized bank in India is required. For the avoidance of doubt, Scheduled Bank shall mean a bank as defined under Section 2(e) of the Reserve Bank of India Act, 1934. A scanned copy of the Account Payee Demand Draft, Banker's Cheque or e–Bank Guarantee shall be uploaded on e-procurement portal while applying to the tender.

2.20.2 Any BID not accompanied by the BID Security shall be summarily rejected by the Authority as non-responsive.

2.20.3 The Selected Bidder's BID Security will be returned, without any interest, upon the Bidder signing the Contract Agreement and furnishing the Performance Security in accordance with the provisions thereof. The Authority may, at the Selected Bidder's option, adjust the amount of BID Security in the amount of Performance Security to be provided by him in accordance with the provisions of the Agreement.

2.20.4 The Authority shall be entitled to forfeit and appropriate the BID Security as Damages inter alia in any of the events specified in Clause herein below. The Bidder, by submitting its BID pursuant to this RFP, shall be deemed to have acknowledged and confirmed that the Authority will suffer loss and damage on account of withdrawal of its BID or for any other default by the Bidder during the period of BID validity as specified in this RFP. No relaxation of any kind on BID Security shall be given to any Bidder.

2.20.5 The BID Security shall be forfeited and appropriated by the Authority as damages payable to the Authority for, inter-alia, time cost and effort of the Authority without prejudice to any other right or remedy that may be available to the Authority under the bidding documents and / or under the Agreement, or otherwise, under the following conditions:

(a) Deleted

(b) If a Bidder engages in a corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice as specified in Section 4 of this RFP;

(c) If a Bidder withdraws its BID during the period of Bid validity as specified in this RFP and as extended by mutual consent of the respective Bidder(s) and the Authority;

(i) In the case of Selected Bidder, if it fails within the specified/extended time limit by Authority -To sign and return the duplicate copy of LOA;

(ii) To furnish the Performance Security /Additional Performance Security (if any) as per Clause 2.21; or

(iii) To sign the Agreement;

2.21 Performance Security

2.21.1 Within 30 (thirty) days of receipt of Letter of Acceptance, the selected Bidder shall furnish to the Authority in the form of **Insurance Surety Bond in the format at Appendix–X,** Account **Payee Demand Draft, Banker's Cheque or** irrevocable and unconditional guarantee **e–Bank Guarantee or Physical bank Guarantee** from a Bank in the form set forth in Appendix-VII (the "**Performance Security**") for an amount equal to 3% (three percent) of its Bid Price. In case of bids mentioned below, the Selected Bidder, along with the Performance Security, shall also furnish to the Authority **in the form of Insurance Surety Bond (issued by Insurance Company authorized by Insurance Regulatory and Development Authority of India in the format at Appendix–X)**, **Account Payee Demand Draft, Banker's Cheque or** an irrevocable and unconditional **e–Bank Guarantee or Physical bank Guarantee** from a Bank in the same form given at Appendix-VII towards an Additional Performance Security (the "**Additional Performance Security**") for an amount calculated as per as per **MoRTH Circular no. RW/NH- 33044/34/2024-S&R(P&B)(Computer No. 246283) dated 30.04.2025** as under:

(i) where the bid price is below 10% but not below 20% of the project cost put to bid, the additional performance guarantee/security percentage shall be incremented by 0.1% for every percentage of bid price below 10% of the project cost put to bid starting at 11% with the additional bid performance guarantee being 0.1% and this additional performance guarantee percentage shall be applied on the bid price;

(ii) where the bid price is below 20% or more below of the project cost put to bid, the additional performance guarantee percentage shall be incremented by 0.2% for every percentage of bid price below 20% of the project cost put to bid in addition to 1% of the bid price and this additional performance guarantee percentage shall be applied on the bid price.

(iii) The additional performance guarantee percentage shall be rounded off to the next lower percentage based on whether the decimal point of the percentage of bid price is below 0.5% or next higher percentage based on whether the decimal point of the percentage of bid is 0.5% or more.

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

2.21.2 The Performance Security shall be valid until 60(sixty) days after the Defects Liability Period. The Additional Performance Security shall be valid until 28 (twenty eight) days after Project Completion Date.

2.21.3 The Selected Bidder has the option to provide 50% of the Performance Security and 50% of the Additional Performance Security, if any, within 30 (thirty) days of receipt of Letter of Acceptance, in any case before signing of the Contract Agreement and the remaining Performance Security and Additional Performance Security, if any, shall be submitted within 30 days of signing of the agreement.

2.21.4 In the event the Selected Bidder fails to provide the remaining Performance Security and Additional Performance Security, if any, as prescribed herein, it may seek extension of time for a further period up to 60 days by paying the Damages upfront along with the request letter seeking the extension. The Damages shall be the sum calculated at the rate of 0.01% (zero point zero one per cent) of the Bid Price offered by the Selected Bidder for each day until the Performance Security and Additional Performance Security, if any, is provided in full as prescribed herein. The damages at full rate as given above shall be applicable even if a part of the Performance Security and the Additional Performance Security is provided.

2.21.5 For avoidance of any doubt, in case of failure of submission of Performance Security and Additional Performance Security, if any, within the additional 60 days" time period, the award shall be deemed to be cancelled/ withdrawn and the Bid Security shall be encashed and the proceeds thereof appropriated by the Authority. Thereupon all rights, privileges, claims and entitlements of the Contractor under or arising out of the Award shall be deemed to have been waived by, and to have ceased with the concurrence of the Contractor, and the Award shall be deemed to have been withdrawn by the Authority

2.22 The agreement will be executed within 10 days of receipt of 50% Performance Security and 50% of Additional Performance Security, if any, as per sub-clause 2.21 above.

SECTION-3
EVALUATION OF TECHNICAL BIDS AND OPENING & EVALUATION OF FINANCIAL BIDS

3.1 Evaluation of Technical Bids

3.1.1 The Authority shall open the BIDs received physically & online at 15 hours IST on 07.07.2026, at the place specified in Clause 2.11.4 (i); and in the presence of the Bidders who choose to attend. Technical BID of only those Bidders shall be online opened whose documents listed at clause 2.11.2 of the RFP have been received physically The Authority shall prepare minutes of the BID opening, including information disclosed to those present at the time of BID opening.

3.1.2 Technical Bids of those Bidders who have not submitted their Bid online, shall not be considered for opening and evaluation.

3.1.3 If any information furnished by the Bidder is found to be incomplete, or contained in formats other than those specified herein, the Authority may, in its sole discretion, exclude the relevant information for consideration of eligibility and qualification of the Bidder.

3.1.4 To facilitate evaluation of Technical BIDs, the Authority may, at its sole discretion, seek clarifications in writing from any Bidder regarding its Technical BID. Such clarification(s) shall be provided within the time specified by the Authority for this purpose. Any request for clarification(s) and all clarification(s) in response thereto shall be in writing. The bids will be examined and evaluated in accordance with the provisions set out in this Section 3. The Authority will subsequently flag issues, if any with the data updated by the Bidders.

3.1.5 If a Bidder does not provide clarifications sought under Clause 3.1.4 above within the prescribed time, its Bid may be liable to be rejected. In case the Bid is not rejected, the Authority may proceed to evaluate the Bid by construing the particulars requiring clarification to the best of its understanding, and the Bidder shall be barred from subsequently questioning such interpretation of the Authority.

3.1.6 **Tests of responsiveness**

3.1.6.1 As a first step towards evaluation of Technical BIDs, the Authority shall determine whether each Technical BID is responsive to the requirements of this RFP. A Technical BID shall be considered responsive only if:

(a) Technical BID is received online as per the format at Appendix-IA including Annexure I, IV, V and VI (Bid Capacity format);

(b) Documents listed at clause 2.11.2 are received physically on CPPP as mentioned;

(c) Security amounting to Rs. 48,45,000.00 (Rs. Forty Eight lakh and Forty Five Thousand Only) (the "Bid Security") in the form of Insurance Surety Bond (in the format at Appendix-IX issued by Insurance Company authorized by Insurance Regulatory and Development Authority of India) or Account Payee Demand Draft or Fixed Deposit Receipt or Bank Guarantee (including e-Bank Guarantee) in the format at Appendix-II from a Scheduled Bank.

(d) The Power of Attorney is uploaded on e-procurement portal as specified in Clause 2.1.5;

(e) Technical Bid is accompanied by Power of Attorney for Lead Member of Joint Venture and the Joint Bidding Agreement as specified in Clause 2.1.6, if so required;

(f) Technical Bid contains all the information (complete in all respects);

(g) Technical Bid does not contain any condition or qualification;and

(h) The Bidder shall submit the payment of Rs. 10,000/- [Rupees Ten Thousand Only] through NTRP (Non-Tax Received Portal) portal (http: //bharatkosh.gov.in/) to PAO MORTH Lucknow towards cost of Bid document.

The relevant details of PAO and DDO for NTRP are as follows:

Pay & Accounts Office (PAO)	035036 – PAO(NH), Lucknow
Drawing & Disbursing Office (DDO)	235040 – S.E.

3.1.6.2 The Authority reserves the right to reject any Technical BID which is non-responsive and no request for alteration, modification, substitution or withdrawal shall be entertained by the Authority in respect of such BID.

3.1.7 In the event that a Bidder claims credit for an Eligible Project, and such claim is determined by the Authority as incorrect or erroneous, the Authority may reject / correct such claim for the purpose of qualification requirements.

3.1.8 The Authority will get the BID security verified from the issuing authority and after due verification, the Authority will evaluate the Technical BIDs for their compliance to the eligibility and qualification requirements pursuant to clause 2.2.1 & 2.2.2 of this RFP.

3.1.9 After evaluation of Technical Bids, the Authority will publish a list of Technically Responsive Bidders whose financial bids shall be opened. The Authority shall not if y other Bidders that they have not been technically responsive. The Authority will not entertain any query or clarification from Applicants who fail to qualify.

3.2 Opening and Evaluation of Financial Bids

The Authority shall inform the venue and time of online opening of the Financial Bids to the technically responsive Bidders through e-procurement portal and e-mail. The Authority shall open the online Financial Bids of the technically responsive Bidders only on scheduled date and time in the presence of the authorized representatives of the Bidders who may choose to attend. The Authority shall publicly announce the Bid Prices quoted by the technically responsive Bidder. Thereafter, the Authority shall prepare a record of opening of Financial Bids.

3.3 Selection of Bidder

3.3.1 Subject to the provisions of Clause 2.16.1, the Bidder whose BID is adjudged as responsive in terms of Clause 3.1.6. The bidder shall be declared as the selected Bidder (the "Selected Bidder") in pursuance to the procedure defined hare under:

(i) Among all the responsive bidder, the lowest bidder will be termed as L1. If L1 is „Class-I Local Supplier", the contract will be awarded to L1.

(**i**) If L1 is not „Class-I Local Supplier', the lowest bidder among the „Class-I Local Supplier", will be invited to match L1 price subject to „Class-I Local Supplier", quoted price falling within the margin of purchase Preference and the contract will be awarded to such „Class-I Local Supplier", subject to matching the L1 price.

(**i**) In case such lowest eligible „Class-I Local Supplier" fails to match the L1 price, the „Class-I Local Supplier" with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the „Class-I Local Supplier' within the margin of purchase preference matches the L1 price, the contract shall be awarded to the L1 Bidder.

Margin of purchase preference" means the maximum extent to which the price quoted by a „Class-I Local Supplier" may be above the L1 for the purpose of purchase preference. The margin of purchase preference shall be 20%.

3.3.2 In the event that two or more Bidders quote the same BID Price (the "**Tie BIDs**"), the Authority shall identify the Selected Bidder by draw of lots, which shall be conducted, with prior notice, in the presence of the Tie Bidders who choose to attend.

3.3.3 In the event that the Lowest Bidder is not selected for any reason except the reason mentioned in Clause 2.1.12 (b) (4), the Authority shall annul the Bidding Process and invite fresh BIDs. In the event that the Authority rejects or annuls all the BIDs, it may, in its discretion, invite all eligible Bidders to submit fresh BIDs hereunder.

3.3.4 After selection, a Letter of Acceptance (the "**LOA**") shall be issued in the format set forth in Appendix-VIII, in duplicate, by the Authority to the Selected Bidder and the Selected Bidder shall, within 7(seven) days of the receipt of the LOA, sign and return the duplicate copy of the LOA in acknowledgement thereof. In the event the duplicate copy of the LOA duly signed by the Selected Bidder is not received by the stipulated date, the Authority may, unless it consents to extension of time for submission thereof, appropriate the BID Security of such Bidder as Damages on account of failure of the Selected Bidder to acknowledge the LOA.

3.3.5 After acknowledgement of the LOA as aforesaid by the Selected Bidder, it shall cause the Bidder to submit Performance Security and Additional Performance Security (if any) within the period prescribed/extended by Authority and then execute the Agreement within the period prescribed in Clause 1.3. The Selected Bidder shall not be entitled to seek any deviation, modification or amendment in the Agreement.

3.3.6 Authority shall return Bid Security of all bidders except L-1 and L -2 within 7 working days from opening of financial Bid subject to provision of Clause 2.1.12 (4). The bid security of L- 2 bidder shall be returned within 7 working days of issue of LOA. The Authority shall be responsible to return the Bid Security, as above, and the bidders shall not be required to ask for the same.

3.4 Contacts during BID Evaluation

BIDs shall be deemed to be under consideration immediately after they are opened and until such time the Authority makes official intimation of award/ rejection to the Bidders. While the BIDs are under consideration, Bidders and/ or their representatives or other interested parties are advised to refrain, save and except as required under the Bidding Documents, from contacting by any means, the Authority and/ or their employees/ representatives on matters related to the BIDs under consideration.

3.5 Correspondence with Bidder

Save and except as provided in this RFP, the Authority shall not entertain any correspondence with any Bidder in relation to the acceptance or rejection of any Bid.

3.6 Any information contained in the Bid shall not in any way be construed as binding on the Authority, its agents, successors or assigns, but shall be binding against the Bidder if the Project is subsequently awarded to it on the basis of such information.

SECTION-4

FRAUD AND CORRUPT PRACTICES

4.1 The Bidders and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Bidding Process and subsequent to the issue of the LOA and during the subsistence of the Agreement. Notwithstanding anything to the contrary contained herein, or in the LOA or the Agreement, the Authority may reject a BID, withdraw the LOA, or terminate the Agreement, as the case may be, without being liable in any manner whatsoever to the Bidder, if it determines that the Bidder, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in the Bidding Process. In such an event, the Authority shall be entitled to forfeit and appropriate the BID Security or Performance Security, as the case may be, as Damages, without prejudice to any other right or remedy that may be available to the Authority under the Bidding Documents and/ or the Agreement, or otherwise.

4.2 Without prejudice to the rights of the Authority under Clause 4.1 hereinabove and the rights and remedies which the Authority may have under the LOA or the Agreement, or otherwise if a Bidder or Contractor, as the case may be, is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Bidding Process, or after the issue of the LOA or the execution of the Agreement, such Bidder shall not be eligible to participate in any tender or RFP issued by the Authority during a period of 2 (two) years from the date such Bidder, or Contractor, as the case may be, is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practices, as the case may be.

4.3 For the purposes of this Section 4, the following terms shall have the meaning hereinafter respectively assigned to them:

(a) "corrupt practice" means the offering, giving, receiving or soliciting of anything of value, pressurizing to influence the action of a public official in the process of tendering and execution of the project;

(b) "fraudulent practice" means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the Bidding Process;

(c) "coercive practice" means impairing or harming, or threatening to impair or harm, directly or indirectly, any person or property to influence any person's participation or action in the Bidding Process;

(d) "undesirable practice" means (i) establishing contact with any person connected with or employed or engaged by the Authority with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Bidding Process; or (ii) having a Conflict of Interest; and

(e) "Restrictive practice" means forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating a full and fair competition in the Bidding Process.

SECTION-5

PRE-BID CONFERENCE

5.1 Pre-BID conference of the Bidders shall be convened at the designated date, time and place. A maximum of two representatives of prospective Bidders shall be allowed to participate on production of authority letter from the Bidder.

5.2 During the course of Pre-Bid conference(s), the Bidders will be free to seek clarifications and make suggestions for consideration of the Authority. The Authority shall endeavor to provide clarifications and such further information as it may, in its sole discretion, consider appropriate for facilitating a fair, transparent and competitive Bidding Process.

SECTION-6
MISCELLANEOUS

6.1 The Bidding Process shall be governed by, and construed in accordance with, the laws of India and the Courts at [New Delhi] shall have exclusive jurisdiction over all disputes arising under, pursuant to and/ or in connection with the Bidding Process.

6.2 The Authority, in its sole discretion and without incurring any obligation or liability, reserves the right, at any time, to;

(a) suspend and/ or cancel the Bidding Process and/ or amend and/ or supplement the Bidding Process or modify the dates or other terms and conditions relating thereto;

(b) consult with any Bidder in order to receive clarification or further information;

(c) retain any information and/ or evidence submitted to the Authority by, on behalf of, and/ or in relation to any Bidder; and/ or

(d) Independently verify, disqualify, reject and/ or accept any and all submissions or other information and/ or evidence submitted by or on behalf of any Bidder.

6.3 It shall be deemed that by submitting the Bid, the Bidder agrees and releases the Authority, its employees, agents and advisers, irrevocably, unconditionally, fully and finally from any and all liability for claims, losses, damages, costs, expenses or liabilities in any way related to or arising from the exercise of any rights and/ or performance of any obligations hereunder, pursuant hereto and/ or in connection with the Bidding Process and waives, to the fullest extent permitted by applicable laws, any and all rights and/ or claims it may have in this respect, whether actual or contingent, whether present or in future.

APPENDIX -IA

LETTER COMPRISING THE TECHNICAL BID

(Refer Clause 2.1.4, 2.11 and 3.1.6)

The Superintending Engineer

NH Circle PWD, Kanpur

mail:nhcirclekanpur@gmail.com

Sub: BID for RFP for **IRQP of NH-234 (Old NH-91A) (Ch. 142.00 to 158.400) District Kannauj in the State of Uttar Pradesh on engineering, procurement and construction (EPC) mode.**

Dear Sir,

With reference to your RFP document dated *** **$, I/we, having examined the Bidding Documents and understood their contents, hereby submit my/our BID for the aforesaid Project. The BID is unconditional and unqualified.

2. I/ We acknowledge that the Authority will be relying on the information provided in the BID and the documents accompanying the BID for selection of the Contractor for the aforesaid Project, and we certify that all information provided in the Bid and it's the Annexure I to VI along with the supporting documents are true and correct; nothing has been omitted which renders such information misleading; and all documents accompanying the BID are true copies of their respective originals.

3. This statement is made for the express purpose of our selection as EPC Contractor for the development, construction, rehabilitation and augmentation of the aforesaid Project and maintenance of the Project during the Defect Liability Period.

4. I/ We shall make available to the Authority any additional information it may find necessary or require to supplement or authenticate the BID.

5. I/ We acknowledge the right of the Authority to reject our BID without assigning any reason or otherwise and hereby waive, to the fullest extent permitted by applicable law, our right to challenge the same on any account whatsoever.

6. I/ We certify that in the last two years, we/ any of the JV partners have neither failed to perform for the works of Expressways, National Highways, ISC & EI works,, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitration award against us, nor been expelled or terminated by Ministry of Road Transport & Highways or its implementing agencies for breach on our part.

7. I/ We declare that:

   (a) I/ We have examined and have no reservations to the Bidding Documents, including any Addendum issued by the Authority; and

   (b) I/We do not have any conflict of interest in accordance with Clauses 2.2.1 (c) and 2.6.4 of the RFP document; and

   (c) I/We have not directly or indirectly or through an agent engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as defined in Clause 4.3 of the RFP document, in respect of any tender or request for proposal issued by or any Agreement entered into with the Authority or any other public sector enterprise or any government, Central or State; and

   (d) I/ We hereby certify that we have taken steps to ensure that in conformity with the provisions of Section 4 of the RFP, no person acting for us or on our behalf has engaged or will engage in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice; and

(e) the undertakings given by us along with the Application in response to the RFP for the Project and information mentioned for the evaluation of the BID Capacity in Annexure VI were true and correct as on the date of making the Application and are also true and correct as on the BID Due Date and I/we shall continue to abide by them.

8. I/ We understand that you may cancel the Bidding Process at any time and that you are neither bound to accept any BID that you may receive nor to invite the Bidders to BID for the Project, without incurring any liability to the Bidders, in accordance with Clause 2.16.2 of the RFP document.

9. I/We believe that we/our Joint Venture satisfy(s) the Threshold Technical Capacity, Net Worth criteria and meet(s) the requirements as specified in the RFP document.

10. I/ We declare that we/ any Member of the Joint Venture or our/Joint Venture member, are not a Member of any other Joint Venture submitting a BID for the Project.

11. I/ We certify that in regard to matters other than security and integrity of the country, we/ any Member of the Joint Venture or any of our/their Joint venture member have not been convicted by a Court of Law or indicted or adverse orders passed by a regulatory authority which could cast a doubt on our ability to undertake the Project or which relates to a grave offence that outrages the moral sense of the community.

12. I/ We further certify that in regard to matters relating to security and integrity of the country, we/ any Member of the Joint Venture or any of our/their Joint venture member have not been charge-sheeted by any agency of the Government or convicted by a Court of Law.

13. I/ We further certify that no investigation by a regulatory authority is pending either against us/any member of Joint Venture or against our CEO or any of our directors/ managers/ employees.

14. I/ We further certify that we are not disqualified in terms of the additional criteria specified by the Department of Disinvestment in their OM No. 6/4/2001-DD-II dated 13.7.01, a copy of which forms part of the RFP at Annexure VII of Appendix-IA thereof.

15. I/ We undertake that in case due to any change in facts or circumstances during the Bidding Process, we are attracted by the provisions of disqualification in terms of the guidelines referred to above, we shall intimate the Authority of the same immediately.

16. I/We further acknowledge and agree that in the event such change in control occurs after signing of the Agreement up to its validity. It would, notwithstanding anything to the contrary contained in the Agreement, be deemed a breach thereof, and the Agreement shall be liable to be terminated without the Authority being liable to us in any manner whatsoever.

17. I/ We hereby irrevocably waive any right or remedy which we may have at any stage at law or howsoever otherwise arising to challenge or question any decision taken by the Authority in connection with the selection of the Bidder, or in connection with the Bidding Process itself, in respect of the above mentioned Project and the terms and implementation thereof.

18. In the event of my/ our being declared as the Selected Bidder, I/we agree to enter into a Agreement in accordance with the draft that has been provided to me/us prior to the BID Due Date. We agree not to seek any changes in the aforesaid draft and agree to abide by the same.

19. I/ We have studied all the Bidding Documents carefully and also surveyed the [project highway and the traffic]. We understand that except to the extent as expressly set for thin the Agreement, we shall have no claim, right or title arising out of any documents or information provided to us by the Authority or in respect of any matter arising out of or relating to the Bidding Process including the award of Agreement.

20. I/We offer a Bid Security of Rs. 48,45,000.00 (Rs. Forty Eight lakh and forty five Thousand Only) to the Authority in accordance with RFP Documents.

21. The BID Security in the form of a Bank Guarantee is attached.

22. The documents accompanying the Technical BID, as specified in Clause 2.11.1 of the RFP, have been submitted in separate files.

23. I/ We agree and understand that the BID is subject to the provisions of the Bidding Documents. In no case, I/we shall have any claim or right of whatsoever nature if the Project / Contract is not awarded to me/us or our BID is not opened or rejected.

24. The BID Price has been quoted by me/us after taking into consideration all the terms and conditions stated in the RFP, draft Agreement, our own estimates of costs and after a careful assessment of the site and all the conditions that may affect the project cost and implementation of the project.

25. I/ We agree and undertake to abide by all the terms and conditions of the RFP document.

26. {We, the Joint Venture agree and undertake to be jointly and severally liable for. all the obligations of the EPC Contractor under the Contract Agreement}.

27. I/ We shall keep this offer valid for 120 (one hundred and twenty) days from the BID Due Date specified in the RFP.

28 I/ We hereby submit our BID and offer a BID Price as indicated in Financial Bid for undertaking the aforesaid Project in accordance with the Bidding Documents and the Agreement.

In witness thereof, I/we submit this BID under and in accordance with the terms of the RFP document.

Yours faithfully,

Date: (Signature, name and
Designation
Place: of the Authorized signatory)

Name & seal of Bidder/Lead Member

Note: Paragraphs in curly parenthesis may be omitted by the Bidder, if not applicable to it, and „Deleted" may be indicated there

APPENDIX - IB

Letter comprising the Financial BID

(Refer Clauses 2.1.4, 2.11 and 3.1.6)

Dated:

The Superintending Engineer
NH Circle, PWD, Kanpur
Email: nhcirclekanpur@gmail.com

Sub: BID for RFP for **IRQP of NH-234 (Old NH-91A) (Ch. 142.00 to 158.400) District Kannauj in the State of Uttar Pradesh on engineering, procurement and construction (EPC) mode.**

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Dear Sir,

With reference to your RFP document dated *****, I/we, having examined the Bidding Documents and understood their contents, hereby submit my/our BID for the aforesaid Project. The BID is unconditional and unqualified.

2. I/ We acknowledge that the Authority will be relying on the information provided in the BID and the documents accompanying the BID for selection of the Contractor for the aforesaid Project, and we certify that all information provided in the Bid are true and correct; nothing has been omitted which renders such information misleading; and all documents accompanying the BID are true copies of their respective originals.

3. The BID Price has been quoted by me/us after taking into consideration all the terms and conditions stated in the RFP; draft Agreement, our own estimates of costs and after a careful assessment of the site and all the conditions that may affect the project cost and implementation of the project.

4. I/ We acknowledge the right of the Authority to reject our BID without assigning any reason or otherwise and hereby waive, to the fullest extent permitted by applicable law, our right to challenge the same on any account whatsoever.

5. In the event of my/ our being declared as the Selected Bidder, I/we agree to enter into a Agreement in accordance with the draft that has been provided to me/us prior to the BID Due Date. We agree not to seek any changes in the aforesaid draft and agree to abide by the same.

6. I/ We shall keep this offer valid for 120 (one hundred and twenty) days from the BID Due Date specified in the RFP.

7. **I/ We hereby submit our BID and offer a BID Price Rs.....**
(Rs .....in words) Exclusive of GST for undertaking the aforesaid Project in accordance with the Bidding Documents and the Agreement.

Yours faithfully,

Date:
Place:

(Signature, name and designation of the Authorised Signatory)
Name & seal of Bidder/Lead Member
.....Class III DSC ID of Authorised Signatory:.....

Appendix IA
Annex-I

ANNEX-I
Details of Bidder

1. (a) Name:
   (b) Country of incorporation:
   (c) Address of the corporate headquarters and its branch office(s), India: if any, in
   (d) Date of incorporation and/ or commencement of business:

2. Brief description of the Bidder including details of its main lines of business and proposed role and responsibilities in this Project:

3. Details of individual(s) who will serve as the point of contact/ communication for the Authority:
   (a) Name:
   (b) Designation:
   (c) Company:
   (d) Address:
   (e) Telephone Number:
   (f) E-Mail Address:
   (g) Fax Number:

4. Particulars of the Authorized Signatory of the Bidder:
   (a) Name:
   (b) Designation:
   (c) Address:
   (d) Phone Number:
   (e) Fax Number:
   (f) Class III Digital Signature Certificate ID number

5. In case of a Joint Venture:
   (a) The information above (1-4) should be provided for all the Members of the Joint Venture.
   (b) A copy of the Jt. Bidding Agreement, as envisaged in Clause 2.1.11(f) should be attached to the Application.
   (c) Information regarding the role of each Member should be provided as per table below:

Sl.	**Name of Member**	**Role*** {Refer Clause 2.1.11(d)}$	**Share of work in the Project** {Refer Clauses 2.1.11(a), (f) & (g)}
1.			
2.			
3.			

* The role of each Member, as may be determined by the Applicant, should be indicated in accordance with instruction 4 at Annex-IV.

……contd

[$] All provisions contained in curly parenthesis shall be suitably modified by the Applicant to reflect the particulars relating to such Applicant.

(d) The following information shall also be provided w.r.t para 2.1.14 for each Member of the Joint Venture:

Name of Applicant/ member of Joint Venture:

Sl. No.	Criteria	Yes/No
1.	Has the Bidder/ constituent of the Joint Venture been barred by the Ministry of Road Transport & Highways or its implementing agencies for the works of Expressways, National Highways, ISC and EI works, from participating in bidding.	
2	If the answer to 1 is yes, does the bar subsist as on BID due date.	

6(a) I/ We certify that in the last two years, we/ any of the JV partners have neither failed to perform for the works of Expressways, National Highways, ISC & EI works, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitral award against us, nor been expelled or terminated by Ministry of Road Transport & Highways or its implementing agencies for breach on our part.

(b) I/ We certify that we/ any of the JV partners do not fall in any of the categories of being a non-performing entity given at Clause 2.1.14 of Instructions to Bidders in the projects of Expressways, National Highways, ISC and EI works of Ministry of Road Transport & Highways or its implementing agencies and furnished the complete details.

7(a) I/ We further certify that no investigation by a regulatory authority is pending either against us/any member of Joint Venture or our sister concern or against our CEO or any of our directors/managers/employees.

(b) I/ We further certify that no investigation by any investigating agency in India or outside is pending either against us/ any member of Joint Venture or our sister concern or against our CEO or any of our directors/managers/employees.

A statement by the Bidder and each of the Members of its Joint Venture (where applicable) disclosing material non-performance or contractual non-compliance in current projects, as on bid due date is given below (attach extra sheets, if necessary)
w.r.t. para 2.1.14.

Name of the Bidder /Member of JV: _____

Sr. No.	Categories of non-performer	Name of the Project
(i)	Fails to set up institutional mechanism and procedure as per contract.	
(ii)	Fails to mobilize key construction equipment within a period of 4 months from the Appointed Date.	

(iii)	Fails to complete or has missed any milestone and progress not commensurate with contiguous unencumbered project length /ROW available even after lapse of 6 months from respective project milestone/Schedule Completion date, unless Extension of Time has been granted due to Authority's Default or Force Majeure.	
(iv)	Fails to achieve progress commensurate with funds released from Escrow Account (Equity+ Debt Grant) in BOT or HAM project and variation is more than 25% in the last 365 days.	
(v)	Fails to achieve the target progress or complete the project as per schedule agreed at the time of sanctioning of funds under One Time Funds Infusion (OTFI) or relaxations to contract conditions to improve cash flow solely on account Concessionaire's/contractor's failure/default.	
(vi)	Fails to complete rectification (excluding minor rectifications) as per time. given in non-conformity reports (NCR) in design/completed works/maintenance or reported in Inspection Reports issued by Quality Inspectors deployed by the Authority or Officers of the Authority.	
(vii)	Fails to complete minor rectifications exceeding 3 instances in a project as per time given in non- conformity reports (NCR) in design/completed works/maintenance.	
(viii)	Fails to fulfill its obligations to maintain a highway in a satisfactory condition in spite of two rectification notices issued in this regard.	
(ix)	Damages/penalties recommended by Independent/Authority's Engineer during O&M Period and remedial works are still not taken up.	
(x)	Fails to complete Punch list items even after lapse of time for completion of such items excluding delays attributable to the Authority.	
(xi)	Occurrence of minor failure of structures/highway construction defect wherein no causalities are reported (causalities include injuries to human being / animals).	
(xii)	Occurrence of major failure of structures/highway due to construction defect wherein no casualties are reported (causalities include injuries to human being / animals).	

(xiii)	Occurrence of major failure of structures/highway due to construction defect leading to loss of human lives besides loss of reputation etc. of the authority.	
(xiv)	Fails to make premium payments excluding the current installment in one or more projects.	
(xv)	Fails to achieve financial closure in two or more projects within the given or extended period (which shall not be more than six months in any case).	
(xvi)	Fails to submit the Performance Security within the permissible time period in more than one project.	
(xvii)	Rated as an unsatisfactory performing entity/ non-performing entity by an independent third-party agency and so notified on the website of the Authority.	
(xviii)	Failed to perform for the works of Expressways, National Highways, ISC & El works in the last 2(two) years, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitral award against the Bidder, including individual or any of its Joint Venture Member, as the case may be.	
(xix)	Expelled from the contract or the contract terminated by the Ministry of Road Transport & Highways or its implementing agencies for breach by such Bidder, including individual or any of its Joint Venture Member; Provided that any such decision of expulsion or termination of contract leading to debarring of the Bidder from further participation in bids for the prescribed period should have been ordered after affording an Opportunity of hearing to such party.	
(xx)	Fails to start the works or causes delay in maintenance & repair/overlay of the project.	

I/ We certify that the list is complete and covers all the projects of Expressways, National Highways, ISC and EI works of Ministry of Road Transport & Highways or its implementing agencies and that we/ any of the JV partners do not fall in any of the above categories of being a non-performing entity.

(Signature, name and designation of the authorized signatory)

For and on behalf of……

ANNEX-II

Technical Capacity of the Bidder[@]

(*Refer to Clauses 2.2.2.2, 2.2.2.5 and 2.2.2.7 of the RFP*)

Applicant type	**Projec t Code***	**Cate-gory[$]**	**Experience[**]** (Equivalent Rs. crore)[$$]		**Technical Experience[£]**
			Payments received for construction of Eligible Projects in Categories 3 & 4	Value of self-construction in Eligible Projects in Categories 1 and 2	
(1)	(2)	(3)	(4)	(5)	(6)
Single entity Bidder or Lead Member including other members of the Joint Venture	a				
	b				
	c				
	d				
	e				
	f				
Aggregate Technical Experience =					

[@] Provide details of only those projects that have been undertaken by the Applicant, or its Lead member including members in case of joint venture, under its own name separately and/ or by a project company eligible under Clause 2.2.2.6(i)(b). In case of Categories 1 and 2, include only those projects which have an estimated capital cost exceeding the amount specified in Clause 2.2.2.6(i)(c) and for Categories 3 and 4, include only those projects where the payments received exceed the amount specified in Clause 2.2.2.6(ii). In case the Bid Due Date falls within 3 (three) months of the close of the latest financial year, refer to Clause 2.1.13.

** Refer Annex-IV of this Appendix-I. Add more rows if necessary.*

[$] Refer Clause 2.2.2.5(i)

*** Construction shall not include supply of goods or equipment except when such goods or equipment form part of a turn-key construction contract/ EPC contract for the project. In no case shall the cost of maintenance and repair, operation of Highways and land be included while computing the Experience Score of an Eligible Project.*

*[$$] For conversion of US Dollars to Rupees, the rate of conversion shall be Rupees ** (**)[14] to a US Dollar.*

[£]. In the case of an Eligible Project situated in an OECD country, the Experience Score so arrived at shall be further multiplied by 0.5, in accordance with the provisions of Clause 2.2.2.5(ii) and the product thereof shall be the Experience Score for such Eligible

Projects.

[14]*The conversion rate of USD into Rupees shall be the daily representative exchange rates published by the Reserve Bank of India for the relevant date. Where relevant date should be as on the date 28 (twenty-eight) days prior to the Application Due Date.*

NOTE: In case of a Joint Venture, information in Annex-II and Annex-IV of Appendix-I shall be provided separately for other Members so as to establish that each such Member has 20 percent or more of the Threshold Technical Capacity. *(Refer Clause 2.2.2.4).*

ANNEX-III

Financial Capacity of the Bidder

(*Refer to Clauses 2.2.2.3, 2.2.2.9(i), 2.2.2.8(iii) of the RFP*)

(In Rs. crore[$])

Bidder type	**Net Cash Accruals**					**Net Worth[£]**
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 1**
Single entity Bidder or Lead Member including other members of the Joint Venture						
TOTAL						

Bidder type	**Annual Turnover**										**Average Annual Turnover (In Rs. crore[$])**
	Year 1		**Year 2**		**Year 3**		**Year 4**		**Year 5**		
	(Rs.)	Updation factor	(Rs.)	Updation factor	(Rs.)	Updation factor	(Rs.)	Updation factor	(Rs.)	Updation factor	
1	2	3	4	5	6	7	8	9	10	11	(2x3+4x5+6x7+8x9+10x11)/5
Single entity Bidder or Lead Member including other members of the Joint Venture		**1.00**		**1.05**		**1.10**		**1.15**		**1.20**	

Name & address of Bidder's Bankers:

[$] For conversion of other currencies into rupees, see note below Annex-II of Appendix-I.

£ The Bidder should provide details of its own Financial Capacity.

Instructions:

1. The Bidder shall attach copies of the balance sheets, financial statements and Annual Reports for 5 (five) years preceding the Bid Due Date. The financial statements shall:
   (a) reflect the financial situation of the Bidder;
   (b) be audited by a statutory auditor;
   (c) be complete, including all notes to the financial statements; and
   (d) correspond to accounting periods already completed and audited (no
   (e) statements for partial periods shall be requested or accepted).

2. Net Cash Accruals shall mean Profit After Tax + Depreciation.

3. Net Worth (the "Net worth") shall means the aggregate value of the paid-up share capital and all reserves created out of the profits and securities premium account, after deducting the aggregate value of the accumulated losses, deferred expenditure and miscellaneous expenditure not written off, as per the audited balance sheet, but does not include reserves created out of revaluation of assets, write-back of depreciation and amalgamation.

4. Year 1 will be the latest completed financial year, preceding the bidding. Year 2 shall be the year immediately preceding Year 1 and so on. In case the Bid Due Date falls within 3 (three) months of the close of the latest financial year, refer to Clause 2.1.13.

5. In the case of a Joint Venture, a copy of the Jt. Bidding Agreement shall be submitted in accordance with Clause 2.1.15 (g) of the RFP document.

6. The Bidder shall also provide the name and address of the Bankers to the Bidder.

7. The Bidder shall provide an Auditor's Certificate specifying the net worth of the Bidder and also specifying the methodology adopted for calculating such net worth in accordance with Clause 2.2.2.9 (ii) of the RFP document.

Appendix IA

Annex-IV

ANNEX-IV

Details of Eligible Projects

(*Refer to Clauses 2.2.2.2, 2.2.2.5 and 2.2.2.7of the RFP*)

Project Code:

Entity: Self/Members:

Item	Refer Instruction	Particulars of the Project
Title & nature of the project		
Category	5	
Year-wise (a) payments received for construction or work executed and certified by the Engineer-in-charge/Independent Engineer/Authority's Engineer, and/or (b) revenues appropriated for self-construction under PPP projects	6	
Entity for which the project was constructed	7	
Location		
Project cost	8	
Date of commencement of project/ contract		
Date of completion/ commissioning	9	
Equity shareholding (with period during which equity was held)	10	

Instructions:

1. Bidders are expected to provide information in respect of each Eligible Projects in this Annex. The projects cited must comply with the eligibility criteria specified in Clause 2.2.2.6 (i) and 2.2.2.6 (ii) of the RFP, as the case may be. Information provided in this section is intended to serve as a backup for information provided in the Application. Applicants should also refer to the Instructions below.
2. The Project Codes would be a, b, c, d etc.
3. A separate sheet should be filled for each Eligible Project.
4. In case the Eligible Project relates to other Members, write "Member".
5. Refer to Clause 2.2.2.5 of the RFP for category number.
6. The total payments received and/or revenues appropriated for self-construction for each Eligible Project are to be stated in Annex-II of this Appendix-I. The figures to be provided here should indicate the break-up for the past 5 (five) financial years. Year 1 refers to the financial year immediately preceding the Bid Due Date; Year 2 refers to the year before Year 1, Year 3 refers to the year before Year 2, and so on (Refer Clause 2.1.13). For Categories 1 and 2, expenditure on construction of the project by the Applicant itself should be provided, but only in respect of projects

having an estimated capital cost exceeding the amount specified in Clause 2.2.2.6(i)(c). In case of Categories 3 and 4, payments received only in respect of construction should be provided, but only if the amount received exceeds the minimum specified in Clause 2.2.2.6(ii). Receipts for construction works should only include capital expenditure, and should not include expenditure on maintenance & repair and operation of Highways.

7. In case of projects in Categories 1and 2, particulars such as name, address and contact details of owner/ Authority/ Agency (i.e. concession grantor, counter party to concession, etc.) may be provided. In case of projects in Categories 3 and 4, similar particulars of the client need to be provided.

8. Provide the estimated capital cost of Eligible Project. Refer to Clauses 2.2.2.6(i) and 2.2.2.6(ii)

9. For Categories 1 and 2, the date of commissioning of the project, upon completion, should be indicated. In case of Categories 3 and 4, date of completion of construction should be indicated. In the case of projects under construction, the likely date of completion or commissioning, as the case may be, shall be indicated.

10. For Categories 1 and 2, the equity shareholding of the Bidder, in the company owning the Eligible Project, held continuously during the period for which Eligible Experience is claimed, needs to be given (Refer Clause 2.2.2.6(i)).

11. Experience for any activity relating to an Eligible Project shall not be claimed twice. In other words, no double counting in respect of the same experience shall be permitted in any manner whatsoever.

12. Certificate from the Bidder's statutory auditor[$] or its respective clients must be furnished as per formats below for each Eligible Project. In jurisdictions that do not have statutory auditors, the auditors who audit the annual accounts of the Bidder may provide the requisite certification.

13. If the Bidder is claiming experience under Categories 1 & 2[£], it should provide a certificate from its statutory auditor in the format below as per Clause 2.2.2.6 (i)

(d) :

Certificate from the Statutory Auditor regarding PPP projects

Based on its books of accounts and other published information authenticated by it, this is to certify that …….. *(name of the* Bidder*)* is/ was an equity shareholder in …….. *(title of the project company)* and holds/held Rs .....cr. (Rupees …….. crore) of equity (which constitutes..... %[€] of the total paid up and subscribed equity capital) of the project company from ……... *(date)* to …….. *(date)*[¥]The project was/is commenced on ……(date) and likely to be commissioned on ….....*(date of commissioning of the project).*

We further certify that the total estimated capital cost of the project is Rs. .....cr. (Rupees ….....crore), of which the applicant has itself undertaken the construction of project of Rs. ……(Rupees.....Crores) excluding any part of the project for which any contractor, sub-contractor or other agent was appointed for the purpose of construction ~~as per Clause 2.2.2.6 (i) (d)~~ by the aforesaid Applicant itself, during the past five financial years as per year-wise details noted below:

……

……

Name of the audit firm:

Seal of the audit firm: (Signature, name and designation

Date: of the authorised signatory)

[$] In case duly certified audited annual financial statements containing the requisite details

are provided, a separate certification by statutory auditors would not be necessary.

£ Refer Clause 2.2.2.5 of the RFP.

Provide Certificate as per this format only. Attach Explanatory Notes to the Certificate, if necessary. Statutory auditor means the entity that audits and certifies the annual accounts of the company.

€ Refer instruction no. 10 in this Annex-IV.

¥ In case the project is owned by the Applicant company, this language may be suitably modified to read: "It is certified that ……. (Name of Applicant) constructed .....and/ or owned the ……(name of project) From ..... (date) to (date)."

14. If the Bidder is claiming experience under Category 3 & 4 , as per Clauses 2.2.2.5 and 2.2.2.6(ii) of the RFP, it should provide a certificate from its Statutory Auditor/client/ Engineer-in charge/ Independent Engineer/Authority" s Engineer in the format below:

Certificate regarding construction works

Based on its books of accounts and other published information authenticated by it, This is to certify that ……..(name of the Bidder) was engaged by ……..(title of the project company) to execute ..... (name of project) for..... (nature of project). The construction of the project commenced on ……..(date) and the project was/ is likely to be commissioned on..... (date, if any). It is certified that Bidder received payments from its Clients for Construction Works executed by them or work executed and certified by the Engineer-in-charge/Independent Engineer/Authority's Engineer, in the aforesaid construction works. We further certify that the total estimated capital cost of the project is Rs ..... cr. (Rupees … .....crore), of which the Applicant received or has executed the work as certified by the Engineer-in-charge/Independent Engineer/Authority's Engineer Rs. …… cr. (Rupees.....crore), during the past five financial years as per year-wise details noted below:

……

……

It is further certified that the receipts indicated above are restricted to the share of the Applicant who undertook these works as a partner or a member of joint venture.

We further certify that applicant has a share of_____% in the Joint Venture/Consortium.

(Authorized Signatory)

Date:

15. It may be noted that in the absence of any detail in the above certificates, the information would be considered inadequate and could lead to exclusion of the relevant project in computation of Experience.

Refer Clauses 2.2.2.5 and 2.2.2.6(ii) of the RFP.

Provide Certificate as per this format only. Attach Explanatory Notes to the Certificate, if necessary. Statutory auditor means the entity that audits and certifies the annual accounts of the company. However, in case the work of other member(s) is also executed by the applicant, then this fact should also be certified by the Statutory Auditor and accordingly the language may be suitably modified.

This certification should be strike out in case of jobs/ contracts, which are executed a sole firm. The payments indicated in the certificate should be restricted to the share of Applicant in such partnership/ joint venture. This portion may be omitted if the contract did not involve a partnership/ joint venture. In case where work is not executed by partnership/ joint venture, this paragraph may be deleted.

ANNEX-V

Statement of Legal Capacity

(To be forwarded on the letterhead of the Applicant/ Lead Member of Joint Venture)

Ref. Date:

To,
****
****

Dear Sir,

We hereby confirm that we/ our members in the Joint Venture (constitution of which has been described in the application) satisfy the terms and conditions laid out in the RFP document.

We have agreed that..... (insert member's name) will act as the Lead Member of our Joint Venture. *

We have agreed that..... (insert individual's name) will act as our representative/ will act as the representative of the Joint Venture on its behalf* and has been duly authorized to submit the RFP. Further, the authorized signatory is vested with requisite powers to furnish such letter and authenticate the same.

Thanking you,

Yours faithfully,

(Signature, name and designation of the authorized signatory) for and on

behalf of……..

**Please strike out whichever is not applicable.*

Appendix - IA
Annexure-VI

Information required to evaluate the BID Capacity under clause 2.2.2.1:

To calculate the value of "A" and "C"

1. A table containing value of Civil Engineering Works in respect of EPC Projects (Turnkey projects / Item rate contract/ Construction works) undertaken by the Bidder during the last 5 years is as follows (the amount of bonus received, if any, shall be indicated separately):

2.

Sl. No.	Year	Value of Civil Engg. Works undertaken w.r.t. EPC Projects including bonus, if any (Rs. in Crores)	Amount of bonus (Rs. in Crores)	Net Value excluding bonus (Rs. in Crores)
1	2024-25			
2	2023-24			
3	2022-23			
4	2021-22			
5	2020-21			

3. Maximum value of projects that have been undertaken during the F.Y._____out of the last 5 years and value excluding amount of bonus thereof is Rs. Crores (Rupees_____). Further, value updated to the price level of the year indicated in Appendix is as follows:

Rs._____Crores x_____(*Updation Factor as per Appendix*) = Rs._____Crores (Rupees_____)

4. Amount of bonus received, if any, in EPC Projects during the last 5 years (updated to the price level of the year indicated in Appendix):

Sl. No.	F.Y. / Calendar Year	Amount of Bonus (Rs. in Crores)	Updation Factor	Updated Amount of Bonus (Rs. in Crores)
1	2024-25		1.00	
2	2023-24		1.05	
3	2022-23		1.10	
4	2021-22		1.15	
5	2020-21		1.20	
			Total (C)=	

…… ……. Name of the Statutory Auditor" s firm: Seal of the audit firm: (Signature, name and designation and Membership No. of authorized signatory)	…….. …….. Signature, name and designation of Authorized Signatory For and on behalf of .....(*Name of the*

Date:
Place:

To calculate the value of "B"

A table containing value of all the existing commitments and on-going works to be completed during the next ** years is as follows:

Sl. No.	Name of Project/ Work	Percentage of participation of Bidder in the project	Date of start / appointed date of project	Construction period as per Agreement/ LOA	Value of contract as per Agreement /LOA[β]	Value of work completed	Balance value of work to be completed	Anticipated date of completion	Balance value of work at 2020-21/2020 price level
					Rs. in Crore	Rs. in Crore	Rs. in Crore		Rs. in Crore
1	2	3	4	5	6	7	8= (6-7)	9	10(3x 8x #)

Updation Factor as given below:

For Year	F.Y. / Calendar Year	Updation Factor
1	2024-25	1.00
2	2023-24	1.05
3	2022-23	1.10
4	2021-22	1.15
5	2020-21	1.20

The Statement showing the value of all existing commitments, anticipated value of work to be completed in the period of construction of the project for which bid is invited and ongoing works as well as the stipulated period of completion remaining for each of the works mentioned above is verified from the certificate issued that has been countersigned by the Client or its Engineer- in- charge not below the rank of Executive Engineer or equivalent in respect of EPC Projects **or** Concessionaire / Authorised Signatory of SPV in respect of BOT Projects. No awarded / ongoing works has been left in the aforesaid statement which has been awarded to M/s .....individually / and other member M/s ... .and M/s ... ., as on bid due date of this RFP.

……..
……..
Signature, name and designation of Authorised Signatory

Date:
Place:

For and on behalf of..... (*Name of the Bidder)*

……
…….
Name of the Statutory Auditor's firm:
Seal of the audit firm: (Signature, name and designation and Membership No. of authorised signatory)

Date: Place:

[β] In case balance period of construction is less than the value of period of construction of the project for which bid is invited, then full value of contract as per Agreement/LOA to be mentioned, else, anticipated value of work to be completed in the period of construction of the project for which bid is invited is to be mentioned. In the absence of the anticipated value of work to be completed, the proportionate value shall be considered while evaluating the Assessed Available Bid Capacity.

APPENDIX-IA
Annexure VII

Guidelines of the Department of Disinvestment
(Refer Clause1.2.1)

No. 6/4/2001-DD-II
Government of India
Department of
Disinvestment

Block 14, CGO Complex
New Delhi.
Dated 13th July, 2001.

OFFICE MEMORANDUM

Sub: Guidelines for qualification of Bidders seeking to acquire stakes in Public Sector Enterprises through the process of disinvestment

Government has examined the issue of framing comprehensive and transparent guidelines defining the criteria for Bidders interested in PSE-disinvestment so that the parties selected through competitive bidding could inspire public confidence. Earlier, criteria like net worth, experience etc. used to be prescribed. Based on experience and in consultation with concerned departments, Government has decided to prescribe the following additional criteria for the qualification/ disqualification of the parties seeking to acquire stakes in public sector enterprises through disinvestment:

(a) In regard to matters other than the security and integrity of the country, any conviction by a Court of Law or indictment/ adverse order by a regulatory authority that casts a doubt on the ability of the Bidder to manage the public sector unit when it is disinvested, or which relates to a grave offence would constitute disqualification. Grave offence is defined to be of such a nature that it outrages the moral sense of the community. The decision in regard to the nature of the offence would be taken on case to case basis after considering the facts of the case and relevant legal principles, by the Government of India.

(b) In regard to matters relating to the security and integrity of the country, any charge-sheet by an agency of the Government/ conviction by a Court of Law for an offence committed by the bidding party or by any sister concern of the bidding party would result in disqualification. The decision in regard to the relationship between the sister concerns would be taken, based on the relevant facts and after examining whether the two concerns are substantially controlled by the same person/ persons.

(c) In both (a) and (b), disqualification shall continue for a period that Government deems appropriate.

(d) Any entity, which is disqualified from participating in the disinvestment process, would not be allowed to remain associated with it or get associated merely because it has preferred an appeal against the order based on which it has been disqualified. The mere pendency of appeal will have no effect on the disqualification.

(e) The disqualification criteria would come into effect immediately and would apply to all Bidders for various disinvestment transactions, which have not been completed as yet.

(f) Before disqualifying a concern, a Show Cause Notice why it should not be disqualified would be issued to it and it would be given an opportunity to explain its position.

(g) Henceforth, these criteria will be prescribed in the advertisements seeking Expression of Interest (EOI) from the interested parties. The interested parties would be required to provide the information on the above criteria, along with their Expressions of Interest (EOI). The Bidders shall be required to provide with their EOI an undertaking to the effect that no investigation by a regulatory authority is pending against them. In case any investigation is pending against the concern or its sister concern or against its CEO or any of its Directors/ Managers/ employees, full details of such investigation including the name of the investigating agency, the charge/ offence for which the investigation has been launched, name and designation of persons against whom the investigation has been launched and other relevant information should be disclosed, to the satisfaction of the Government. For other criteria also, a similar undertaking shall be obtained along with EOI.

sd/-
(A.K. Tewari)
Under Secretary to the Government of India

Appendix - IA
Annexure-VIII

Details of ongoing works (Ref Clause 10.3 (iv) of Draft EPC Agreement)

S. No.	Name of the work	Contract Price (INR Cr)	Appointed Date	Original Scheduled Completion Date	Likely Date of Completion	Reason for Delay[#]
1						
2						
3						
…						

(In the event that the Bidder had failed to achieve the Completion of any project within a period of 90 (ninety) days from the Schedule Completion Date of the project, unless such failure had occurred due to Force Majeure or for reasons solely attributable to the Authority, the Bidder shall be deemed to be ineligible for bidding this project (under bidding), both as the sole party or as one of the parties of Joint Venture/ Consortium, if any, during the period from Scheduled Completion Date to issuance of Completion Certificate for that project. This restriction is applicable if the contract value of the delayed project was not less than Rs. 300 Crore.)

[#]To be supported with valid certificate issued from Independent Engineer / Authority" s Engineer / Supervision Consultant / Engineer-in-charge

I / We certify that all the information furnished above is true in all respects.

… .....Name of the Bidder

Signature of the authorized signatory: _____

Name of the Authorised Signatory**:** _____

Date: _____

Place: _____

APPENDIX - II

Bank Guarantee for BID Security (Refer Clauses 2.20)

B.G. No. Dated:

1. In consideration of you, ****, having its office at ****, (hereinafter referred to as the "Authority", which expression shall unless it be repugnant to the subject or context thereof include its, successors and assigns) having agreed to receive the BID of …… and having its registered office at … .....(and acting on behalf of its JV) (hereinafter referred to as the "Bidder" which expression shall unless it be repugnant to the subject or context thereof include its/their executors, administrators, successors and assigns), for the*** ** Project on EPC basis (hereinafter referred to as "the Project") pursuant to the RFP Document dated …… issued in respect of the Project and other related documents including without limitation the draft contract Agreement (hereinafter collectively referred to as "Bidding Documents"), we (Name of the Bank) having our registered office at …… and one of its branches at …….. (hereinafter referred to as the "Bank"), at the request of the Bidder, do hereby in terms of Clause 1.2.4 read with Clause 2.20 of the RFP Document, irrevocably, unconditionally and without reservation guarantee the due and faithful fulfilment and compliance of the terms and conditions of the Bidding Documents (including the RFP Document) by the said Bidder and unconditionally and irrevocably undertake to pay forthwith to the Authority an amount of Rs. *** ** (Rupees *** ** only) (hereinafter referred to as the "Guarantee") as our primary obligation without any demur, reservation, recourse, contest or protest and without reference to the Bidder if the Bidder shall fail to fulfil or comply with all or any of the terms and conditions contained in the said Bidding Documents.

2. Any such written demand made by the Authority stating that the Bidder is in default of the due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents shall be final, conclusive and binding on the Bank.

3. We, the Bank, do hereby unconditionally undertake to pay the amounts due and payable under this Guarantee without any demur, reservation, recourse, contest or protest and without any reference to the Bidder or any other person and irrespective of whether the claim of the Authority is disputed by the Bidder or not, merely on the first demand from the Authority stating that the amount claimed is due to the Authority by reason of failure of the Bidder to fulfil and comply with the terms and conditions contained in the Bidding Documents including failure of the said Bidder to keep its BID open during the BID validity period as set forth in the said Bidding Documents for any reason whatsoever. Any such demand made on the Bank shall be conclusive as regards amount due and payable by the Bank under this Guarantee. However, our liability under this Guarantee shall be restricted to an amount not exceeding Rs. *** **(Rupees *** ** only).

4. This Guarantee shall be irrevocable and remain in full force for a period of 180 (one hundred and eighty) days from the BID Due Date inclusive of a claim period of 60 (sixty) days or for such extended period as may be mutually agreed between the Authority and the Bidder, and agreed to by the Bank, and shall continue to be enforceable till all amounts under this Guarantee have been paid.

5. We, the Bank, further agree that the Authority shall be the sole judge to decide as to whether the Bidder is in default of due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents including, inter alia, the failure of the Bidder to keep its BID open during the BID validity period set forth in the said Bidding Documents, and the decision of the Authority that the Bidder is in default as aforesaid shall be final and binding on us, notwithstanding any differences between the Authority and the Bidder or any dispute pending before any Court, Tribunal, Arbitrator or any other Authority.

6. The Guarantee shall not be affected by any change in the constitution or winding up of the Bidder or the Bank or any absorption, merger or amalgamation of the Bidder or the Bank with any other person.

7. In order to give full effect to this Guarantee, the Authority shall be entitled to treat the Bank as the principal debtor. The Authority shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee from time to time to vary any of the terms and conditions contained in the said Bidding Documents or to extend time for submission of the BIDs or the BID validity period or the period for conveying acceptance of Letter of Award by the Bidder or the period for fulfilment and compliance with all or any of the terms and conditions contained in the said Bidding Documents by the said Bidder or to postpone for any time and from time to time any of the powers exercisable by it against the said Bidder and either to enforce or forbear from enforcing any of the terms and conditions contained in the said Bidding Documents or the securities available to the Authority, and the Bank shall not be released from its liability under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the said Bidder or any other forbearance, act or omission on the part of the Authority or any indulgence by the Authority to the said Bidder or by any change in the constitution of the Authority or its absorption, merger or amalgamation with any other person or any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of releasing the Bank from its such liability.

8. Any notice by way of request, demand or otherwise hereunder shall be sufficiently given or made if addressed to the Bank and sent by courier or by registered mail to the Bank at the address set forth herein.

9. We undertake to make the payment on receipt of your notice of claim on us addressed to [name of Bank along with branch address] and delivered at our above branch which shall be deemed to have been duly authorised to receive the said notice of claim.

10. It shall not be necessary for the Authority to proceed against the said Bidder before proceeding against the Bank and the guarantee herein contained shall be enforceable against the Bank, notwithstanding any other security which the Authority may have obtained from the said Bidder or any other person and which shall,at the time when proceedings are taken against the Bank hereunder, be outstanding or unrealized.

11. We, the Bank, further undertake not to revoke this Guarantee during its currency except with the previous express consent of the Authority in writing.

12. The Bank declares that it has power to issue this Guarantee and discharge the obligations contemplated herein, the undersigned is duly authorised and has full power to execute this Guarantee for and on behalf of the Bank.

13. For the avoidance of doubt, the Bank" s liability under this Guarantee shall be restricted to Rs. *** crore (Rupees *** ** crore only). The Bank shall be liable to pay the said amount or any part thereof only if the Authority serves a written claim on the Bank in accordance with paragraph 9 hereof, on or before [*** (indicate date falling 180 days after the BID Due Date)].

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

15. The guarantor/bank hereby confirms that it is on the SFMS (Structural Finance Messaging System) platform & shall invariably send an advice of this Bank Guarantee to the designated bank of [Ministry/NHAI/NHIDCL/State PWD/BRO], details of which is as under:

Sl. No.	Particulars	Details
1	Name of Beneficiary	Regional Pay and Account Officer (NH), MoRT&H, Lucknow
2	Name of Bank	Canara Bank, Hazratganj, Lucknow
3	Account No	85043020000077
4	IFSC Code	CNRB0018504

Challan details / Details required for e-BG

Sl. No.	Details of Beneficiary and Applicant	
1	Entity PAN/ UIN	NCMGR2473A
2	Entity Name	Ministry of Road Transport and Highways Lucknow
3	Entity Email ID	rolkorth@gmail.com

Signed and Delivered by ..... Bank
By the hand of Mr./Ms ....., its ..... and authorised official.

(Signature of the Authorized Signatory)

(Official Seal)

APPENDIX-III

Format for Power of Attorney for signing of BID

(Refer Clause 2.1.5)

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

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

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

For …….. (Signature, name, designation and address) of person authorized by Board Resolution (in case of Firm/ Company)/ partner in case of Partnership firm

Witnesses:

1.

2.

Accepted

… .....(Signature)

(Name, Title and Address of the Attorney)

(Notarized)

Person identified by me/ personally appeared before me/ Attested/ Authenticated* (*Notary to specify as applicable) (Signature Name and Address of the Notary)

Seal of the Notary

Registration No. of the Notary

Date:……

Notes:

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

APPENDIX-IV

Format for Power of Attorney for Lead Member of Joint Venture *(Refer*

Clause 2.1.6)

Whereas the Ministry of Road Transport & Highways through Public Works Department, Uttar Pradesh represented by CE (NH) PWD, Uttar Pradesh has invited BIDs for the ***** Project (the "Project").

Whereas, ……, ……., and..... (collectively the "Joint Venture") being Members of the Joint Venture are interested in bidding for the **IRQP of NH-234 (Old NH-91A) (Ch. 142.00 to 158.400) District Kannauj in the State of Uttar Pradesh on engineering, procurement and construction (EPC) mode.**
. Project in accordance with the terms and conditions of the Request for Proposal (RFP) and other BID documents including agreement in respect of the Project, and

Whereas, it is necessary for the Members of the Joint Venture to designate one of them as the Lead Member with all necessary power and authority to do for and on behalf of the Joint Venture, all acts, deeds and things as may be necessary in connection with the Joint Venture's BID for the Project and its execution.

NOW THEREFORE KNOW ALL MEN BY THESE PRESENTS

We, …… having our registered office at ……., M/s. having our registered office at …, M/s. … having our registered office at ….., and ….. having our registered office at, (hereinafter collectively referred to as the "Principals") do hereby irrevocably designate, nominate, constitute, appoint and authorize M/S ……. having its registered office at ....., being one of the Members of the Joint Venture, as the Lead Member and true and lawful attorney of the Joint Venture (hereinafter referred to as the "Attorney"). We hereby irrevocably authorize the Attorney (with power to sub-delegate) to conduct all business for and on behalf of the Joint Venture and any one of us during the bidding process and, in the event the Joint Venture is awarded the contract, during the execution of the Project and in this regard, to do on our behalf and on behalf of the Joint Venture, all or any of such acts, deeds or things as are necessary or required or incidental to the pre-qualification of the Joint Venture and submission of its BID for the Project, including but not limited to signing and submission of all applications, BIDs and other documents and writings, participate in pre BID and other conferences, respond to queries, submit information/ documents, sign and execute contracts and undertakings consequent to acceptance of the BID of the Joint Venture and generally to represent the Joint Venture in all its dealings with the Authority, and/ or any other Government Agency or any person, in all matters in connection with or relating to or arising out of the Joint Venture's BID for the in all respect Project and/ or upon award thereof till the EPC Contract is entered into with the Authority & Compelled.

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

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

For ……..	For ……..	For ……..
(Signature)	(Signature)	(Signature)
……..	……..	……..
(Name & Title)	(Name & Title)	(Name & Title)

(Executants)

(To be executed by all the Members of the Joint Venture)

Witnesses
:

1.

2.

Notes:

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

APPENDIX V

Format for Joint Bidding Agreement for Joint Venture

(Refer Clause 2.1.11)

(To be executed on Stamp paper of appropriate value)

THIS JOINT BIDDING AGREEMENT is entered into on this the …… day of ..... 20…

AMONGST

1. {…… Limited, and having its registered office at .....} (hereinafter referred to as the "**First Part**" which expression shall, unless repugnant to the context include its successors and permitted assigns)

AND

2. {…… Limited, having its registered office at .....} and (hereinafter referred to as the "**Second Part**" which expression shall, unless repugnant to the context include its successors and permitted assigns)

AND

3. {…… Limited, and having its registered office at.....} (hereinafter referred to as the "**Third Part**" which expression shall, unless repugnant to the context include its successors and permitted assigns)

The above-mentioned parties of the FIRST, {SECOND and THIRD} PART are collectively referred to as the **"Parties"** and each is individually referred to as a **"Party**"

WHEREAS,

(A) [The Ministry of Road Transport & Highways through Public Works Department, Uttar Pradesh represented by CE (NH) PWD, Uttar Pradesh have its office at 96, MG Road, Lucknow - 226016 (hereinafter referred to as the "**Authority**" which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) has invited bids (the **Bids**") by its Request for Proposal No..... dated (the "**RFP**") for award of contract for **IRQP of NH-234 (Old NH-91A) (Ch. 142.00 to 158.400) District Kannauj in the State of Uttar Pradesh on engineering, procurement and construction (EPC) mode.** Project (the "**Project**") through an EPC Contract.

(B) The Parties are interested in jointly bidding for the Project as members of a Joint Venture and in accordance with the terms and conditions of the RFP document and other bid documents in respect of the Project, and

(C) It is a necessary condition under the RFP document that the members of the Joint Venture shall enter into a Joint Bidding Agreement and furnish a copy thereof with the Application.

NOW IT IS HEREBY AGREED as follows:

1. Definitions and Interpretations

In this Agreement, the capitalized terms shall, unless the context otherwise requires, have the meaning ascribed thereto under the RFP.

2. Joint Venture

2.1 The Parties do hereby irrevocably constitute a Joint Venture (the "**Joint Venture**") for the purposes of jointly participating in the Bidding Process for the Project.

2.2 The Parties hereby undertake to participate in the Bidding Process only through this Joint Venture and not individually and/ or through any other Joint Venture constituted for this Project, either directly or indirectly.

3. Covenants

The Parties hereby undertake that in the event the Joint Venture is declared the selected Bidder and awarded the Project, it shall enter into an EPC Contract with the Authority for performing all its obligations as the Contractor in terms of the EPC Contract for the Project.

4. Role of the Parties

The Parties hereby undertake to perform the roles and responsibilities as described below:

(a) Party of the First Part shall be the Lead member of the Joint Venture and shall have the power of attorney from all Parties for conducting all business for and on behalf of the Joint Venture during the Bidding Process and for performing all its obligations as the Contractor in terms of the EPC Contract for the Project;

(b) Party of the Second Part shall be {the Member of the Joint Venture; and}

(c) Party of the Third Part shall be {the Member of the Joint Venture.}

5. Joint and Several Liability

The Parties do hereby undertake to be jointly and severally responsible for all obligations and liabilities relating to the Project and in accordance with the terms of the RFP and the EPC Contract, till such time as the completion of the Project is achieved under and in accordance with the EPC Contract.

6. Share of work in the Project

The Parties agree that the proportion of construction in the EPC Contract to be allocated among the members shall be as follows:

First Party:
Second Party:
{Third Party:}
Further, the Lead Member shall itself undertake and perform at least 51 (fifty one) per cent of the total length of the project highway if the Contract is allocated to the Joint Venture.

7. Representation of the Parties

Each Party represents to the other Parties as of the date of this Agreement that:

(a) Such Party is duly organized, validly existing and in good standing under the laws of its incorporation and has all requisite power and authority to enter into this Agreement;

(b) The execution, delivery and performance by such Party of this Agreement has been authorised by all necessary and appropriate corporate or governmental action and a copy of the extract of the charter documents and board resolution/ power of attorney in favour of the person executing this Agreement for the delegation of power and authority to execute this Agreement on behalf of the Joint Venture Member is annexed to this Agreement, and will not, to the best of its knowledge:

(i) require any consent or approval not already obtained;

(ii) violate any Applicable Law presently in effect and having applicability to it;

(iii) violate the memorandum and articles of association, by-laws or other applicable organizational documents thereof;

(iv) violate any clearance, permit, concession, grant, license or other governmental authorizations, approval, judgement, order or decree or any mortgage agreement, indenture or any other instrument to which such Party is a party or by which such Party or any of its properties or assets are bound or that is otherwise applicable to such Party; or

(v) create or impose any liens, mortgages, pledges, claims, security interests, charges or Encumbrances or obligations to create a lien, charge, pledge, security interest, encumbrances or mortgage in or on the property of such Party, except for encumbrances that would not, individually or in the aggregate, have a material adverse effect on the financial condition or prospects or business of such Party so as to prevent such Party from fulfilling its obligations under this Agreement;

(c) this Agreement is the legal and binding obligation of such Party, enforceable in accordance with its terms against it; and

(d) there is no litigation pending or, to the best of such Party's knowledge, threatened to which it or any of its Affiliates is a party that presently affects or which would have a material adverse effect on the financial condition or prospects or business of such Party in the fulfillment of its obligations under this Agreement.

8. Termination

This Agreement shall be effective from the date hereof and shall continue in full force and effect until Project completion (the “Defects Liability Period”) is achieved under and in accordance with the EPC Contract, in case the Project is awarded to the Joint Venture. However, in case the Joint Venture is either not pre- qualified for the Project or does not get selected for award of the Project, the Agreement will stand terminated in case the Applicant is not pre-qualified or upon return of the Bid Security by the Authority to the Bidder, as the case may be.

9. Miscellaneous

9.1 This Joint Bidding Agreement shall be governed by laws of {India}.

9.2 The Parties acknowledge and accept that this Agreement shall not be amended by the Parties without the prior written consent of the Authority.

IN WITNESS WHEREOF THE PARTIES ABOVE NAMED HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN.SIGNED, SEALED AND DELIVERED

For and on behalf of

LEAD MEMBER by:	SECOND PART	THIRD PART
(Signature)	(Signature)	(Signature)
(Name)	(Name)	(Name)
(Designation)	(Designation)	(Designation)
(Address)	(Address)	(Address)

In the presence of:

Notes:

1. The mode of the execution of the Joint Bidding Agreement should be in accordance with the procedure, if any, laid down by the Applicable Law and the charter documents of the executant(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.

2. Each Joint Bidding Agreement should attach a copy of the extract of the charter documents and documents such as resolution / power of attorney in favour of the person executing this Agreement for the delegation of power and authority to execute this Agreement on behalf of the Joint Venture Member.

3. For a Joint Bidding Agreement executed and issued overseas, the document shall be legalised by the Indian Embassy and notarized in the jurisdiction where the Power of Attorney has been executed.

APPENDIX VI

INTEGRITY PACT FORMAT

(To be executed on plain paper and submitted along with Technical Bid/Tender documents for tenders having a value of Rs. 5 cr. or above for Consultancy projects and 100 cr. or above for Construction projects. To be signed by the Bidder and same signatory competent/ authorized to sign the relevant contract on behalf of the MoRTH)

This integrity Pact is made at____on this_____day of_____2024.

BETWEEN

[President of India through Ministry of Road Transport & Highways, Government of India represented by Director General (Road Development) & Special Secretary, Transport Bhawan, 1-Parliament Street New Delhi-110001], (hereinafter referred to as the "**Principal/Owner**" which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns)

AND

{Name and address of the Firm/Company}, (hereinafter referred to as "The Bidder(s)/Contractor(s)/Concessionaire(s)/Consultant(s)" and which expression shall unless repugnant to be meaning or context thereof include its successors and permitted assigns.)

Preamble

Whereas, the Principal has floated the Tender {*NIT No……dtd .....}* (hereinafter referred to as "Tender/Bid") and intends to award, under laid down organizational procedure, contract/s for *{RFP* for **IRQP of NH-234 (Old NH-91A) (Ch. 142.00 to 158.400) District Kannauj in the State of Uttar Pradesh on engineering, procurement and construction (EPC) mode.**, Procurement & Construction (EPC) Basis Contract.} (hereinafter referred to as the "Contract"). And Whereas the Principal values full compliance with all relevant laws of the land, rules of land, regulations, economic use of resources and of fairness/ transparency in its relations with its Bidder(s) and/ or Contractor(s)/Concessionaire(s)/Consultant(s). And whereas to meet the purpose aforesaid, both the parties have agreed to enter into this Integrity Pact (hereafter referred to as "Integrity Pact" or "Pact") the terms and conditions of which shall also be read as integral part and parcel of the Tender documents and contract between the parties. Now, therefore, in consideration of mutual covenants contained in this pact, the parties hereby agree as follows and this pact witnesses as under:

Article-1: Commitments of the Principal

(1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

(a) No employee of the Principal, personally or through family members, will in connection with the Tender for, or the execution of a Contract, demand, take a promise for or accept, for self, or third person, any material of immaterial benefit which the person is not legally entitled to.

(b) The Principal will, during the Tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.

(c) The Principal will exclude all known prejudiced persons from the process, whose conduct in the past has been of biased nature.

(2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act or any other Statutory Acts or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions as per its internal laid down Rules/Regulations.

Article – 2: Commitments of the Bidder(s)/ Contractor(s)/ Concessionaire(s) / Consultant(s).

The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

(a) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal" s employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

(b) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contract, submission or non-submission or bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

(c) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) will not commit any offence under the relevant IPC/PC Act and other Statutory Acts; further the Bidder(s)/Contractor(s)/ Concessionaire(s)/ Consultant(s) will not use improperly, for purposes of completion or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

(d) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) of foreign origin shall disclose the name and address of the Agents/ Representatives in India, if any. Similarly, the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) of Indian Nationality shall furnish the name and address of the foreign principle, if any.

(e) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract. He shall also disclose the details of services agreed upon for such payments.

(f) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

(g) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) will not bring any outside influence through any Govt. bodies/quarters directly or indirectly on the bidding process in furtherance of his bid.

Article - 3 Disqualification from tender process and exclusion from future contracts.

(1) If the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s), before award or during execution has committed a transgression through a violation of any provision of Article- 2, above or in any other form such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) from the tender process.

(2) If the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) has committed a transgression through a violation of Article-2 such as to put his reliability or credibility into question, the Principal shall be entitled to exclude including blacklist and put on holiday the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) for any future tenders/ contract award process. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the Principal taking into consideration the full facts and circumstances of each case particularly taking into account the number of transgressions, the position of the transgressors within the company hierarchy of the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) and the amount of the damage. The exclusion will be imposed for a maximum of 3 years.

(3) A transgression is considered to have occurred if the Principal after due consideration of the available evidence concludes that "On the basis of facts available there are no material doubts".

(4) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) with its free consent and without any influence agrees and undertakes to respect and uphold the Principal" s absolute rights to resort to and impose such exclusion and further accepts and undertakes not to challenge or question such exclusion on any ground, including the lack of any hearing before the decision to resort to such exclusion is taken. This undertaking is given freely and after obtaining independent legal advice.

(5) The decision of the Principal to the effect that a breach of the provisions of this Integrity Pact has been committed by the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s)shall be final and binding on the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s), however, the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) can approach IEM(s) appointed for the purpose of this Pact.

(6) On occurrence of any sanctions/ disqualification etc. arising out from violation of integrity pact, the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) shall not be entitled for any compensation on this account.

(7) Subject to full satisfaction of the Principal, the exclusion of the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) could be revoked by the Principal if the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s)can prove that he has restored/ recouped the damage caused by him and has installed a suitable corruption prevention system in his organization.

Article – 4: Compensation for Damages.

(1) If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Arcticle-3, the Principal shall be entitled to forfeit the Earnest Money Deposit/ Bid Security or demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security apart from any other legal right that may have accrued to the Principal.

(2) In addition to 1 above, the Principal shall be entitled to take recourse to the relevant provisions of the contract related to Termination of Contract due to Contractor/ Concessionaire/Consultant's Default. In such case, the Principal shall be entitled to forfeit the Performance Bank Guarantee of the Contractor/ Concessionaire/ Consultant and/ or demand and recover liquidated and all damages as per the provisions of the contract/concession agreement against Termination.

Article – 5: Previous Transgressions

(1) The Bidder declares that no previous transgressions occurred in the last 3 years immediately before signing of this Integrity Pact with any other Company in any country conforming to the anti-corruption/ Transparency International (TI) approach or with any other Public Sector Enterprise/ Undertaking in India or any Government Department in India that could justify his exclusion from the tender process.

(2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or action for his exclusion can be taken as mentioned under Article-3 above for transgressions of Article-2 and shall be liable for compensation for damages as per Article-4 above.

Article – 6: Equal treatment of all Bidders/ Contractors/ Concessionaires/ Consultants/ Subcontractors.

(1) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) undertake(s) to demand from all sub-contractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.

(2) The Principal will enter into agreements with identical conditions as this one with all Bidders/ Contractors/ Concessionaires/ Consultants and subcontractors.

(3) The Principal will disqualify from the tender process all Bidders who do not sign this Pact or violate its provisions.

Article –7: Criminal charges against violating Bidder(s)/Contractor(s)/ Concessionaire(s)/ Consultant(s)/ Sub-contractor(s).

If the Principal obtains knowledge of conduct of a Bidder/ Contractor/ Concessionaire/ Consultant or subcontractor, or of an employee or a representative or an associate of a Bidder/ Contractor/ Concessionaire/ Consultant or Subcontractor, which constitutes corruption, or if the principal has substantive suspicion in this regard, the principal will inform the same to the Chief Vigilance Officer.

Article- 8: Independent External Monitor (IEM)

(1) The Principal has appointed Shri. R.S. Gujral as Independent External Monitor (herein after referred to as "Monitor") for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

(2) The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Director General (Road Development) & Special Secretary.

(3) The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s)accepts that the Monitor has the right to access without restriction to all project documentation of the Principal including that provided by the Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s). The Bidder(s)/ Contractor(s)/ Concessionaire(s)/ Consultant(s) will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s)/Subcontractor(s) with confidentiality.

(4) The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings**.**

(5) As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

(6) The Monitor will submit a written report to the Director General (Road Development) & Special Secretary within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.

(7) If the Monitor has reported to the Director General (Road Development) & Special Secretary, a substantiated suspicion of an offence under relevant IPC/PC Act, and the Director General (Road Development) & Special Secretary has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.

(8) The word 'Monitor' would include both singular and plural.

Article – 9 Pact Duration

This Pact begins when both parties have legally signed it (in case of EPC i.e. for projects funded by Principal and consultancy services). It expires for the Contractor/ Consultant 12 months after his Defect Liability Period is over or 12 months after his last payment under the contract whichever is later and for all other unsuccessful Bidders 6 months after this Contract has been awarded. (In case of BOT Projects) It expires for the concessionaire 24 months after his concession period is over and for all other unsuccessful Bidders 6 months after this Contract has been awarded.

If any claim is made/ lodged during his time, the same shall be binding and continue to be valid

despite the lapse of this pact as specified above, unless it is discharged/ determined by Director General (Road Development) & Special Secretary.

Article - 10 Other Provisions.

(1) This pact is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal, i.e. New Delhi.

(2) Changes and supplements as well as termination notices need to be made in writing.

(3) If the Bidder/Contractor/Concessionaire/Consultant is in a partnership or a ~~consortium~~ Joint Venture partner, this pact must be signed by all partners or ~~consortium~~ members.

(4) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(5) Any disputes/ differences arising between the parties with regard to term of this pact, any action taken by the Principal in accordance with this Pact or interpretation thereof shall not be subject to any Arbitration.

(6) The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provision of the extent law in force relating to any civil or criminal proceedings.

In witness whereof the parties have signed and executed this Pact at the place and date first done mentioned in the presence of following witness: -

(For & On behalf of the Principal)	(For & On behalf of the Bidder/ Contractor/ Concessionaire/ Consultant)

(Office Seal)

Place_____

Date_____

Witness 1 : (Name & Address):

Witness 2 : (Name & Address):

{COUNTERSIGNED and accepted by: JV Partner}

Appendix-VII (*See Clauses 2.21)*

FORM OF BANK GUARANTEE

[Performance Security/Additional Performance Security]

To

_____[name of Authority]

_____[address of Authority]

WHEREAS_____[name and address of Contractor] (hereafter called the "Contractor") has undertaken, in pursuance of Letter of Acceptance (LOA)

No. _____Dated_____ for construction of _____[name of the Project] (hereinafter called the "Contract").

AND WHEREAS the Contract requires the Contractor to furnish an {Performance Security/ Additional Performance Security} for due and faithful performance of its obligations, under and in accordance with the Contract, during the {Construction Period/ Defects Liability Period and Maintenance Period} in a sum of Rs….. cr. (Rupees .....crore) (the "**Guarantee Amount**"[15]).

AND WHEREAS we, …… through our branch at ..... (the "**Bank**") have agreed to furnish this Bank Guarantee (hereinafter called the **"Guarantee**") by way of Performance Security.

NOW, THEREFORE, the Bank hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The Bank hereby unconditionally and irrevocably guarantees the due and faithful performance of the Contractor's obligations during the {Construction Period/ Defects Liability Period and Maintenance Period} under and in accordance with the Contract, and agrees and undertakes to pay to the Authority, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Contractor, such sum or sums up to an aggregate sum of the Guarantee Amount as the Authority shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.

2. A letter from the Authority, under the hand of an officer not below the rank of [Superintending Engineer, NH Circle PWD], that the Contractor has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Contract shall be conclusive, final and binding on the Bank. The Bank further agrees that the Authority shall be the sole judge as to whether the Contractor is in default in due and faithful performance of its obligations during and under the Contract and its decision that the Contractor is in default shall be final and binding on the Bank, notwithstanding any differences between the Authority and the Contractor, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Contractor for any reason whatsoever.

[15] Guarantee Amount for Performance Security and Additional Performance Security shall be calculated as per Contract.

3. In order to give effect to this Guarantee, the Authority shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Contractor and/or the Bank, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under this Guarantee.

4. It shall not be necessary, and the Bank hereby waives any necessity, for the Authority to proceed against the Contractor before presenting to the Bank its demand under this Guarantee.

5. The Authority shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Contract or to extend the time or period for the compliance with, fulfillment and/ or performance of all or any of the obligations of the Contractor contained in the Contract or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Contractor, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Contract and/or the securities available to the Authority, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance, indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.

6. This Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by the Authority in respect of or relating to the Contract or for the fulfillment, compliance and/or performance of all or any of the obligations of the Contractor under the Contract.

7. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Guarantee is restricted to the Guarantee Amount and this Guarantee will remain in force for the period specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the Bank under this Guarantee all rights of the Authority under this Guarantee shall be forfeited and the Bank shall be relieved from its liabilities hereunder.

8. The Guarantee shall cease to be in force and effect on ****[$]. Unless a demand or claim under this Guarantee is made in writing before expiry of the Guarantee, the Bank shall be discharged from its liabilities hereunder.

9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on

10. Behalf of the Bank.

Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.

[$]Insert date at least 2 (two) years from the date of issuance of this Guarantee (in accordance with Clause 2.21 of the RFP). The Contractors can submit the BG for periods of 24 Months at one time and keep on renewing the same till the DLP is over if they have problems in getting the BG in one go for the entire DLP.

11. This Guarantee shall come into force with immediate effect and shall remain in force and effect for up to the date specified in paragraph 8 above or until it is released earlier by the Authority pursuant to the provisions of the Contract.

12. This Guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

Signed and sealed this ……. day of ……., 20…… at ……. SIGNED,

SEALED AND DELIVERED

For and on behalf of the Bank by: (Signature)

(Name) (Designation)

(Code Number)

(Address)

Appendix- VIII
(See Clauses 3.3.4)
Format of LOA

No._____

OFFICE OF THE CHIEF ENGINEER

To,

Dated,

{Name of selected Bidder}

Subject: **{ IRQP of NH-234 (Old NH-91A) (Ch. 142.00 to 158.400) District Kannauj in the State of Uttar Pradesh on engineering, procurement and construction (EPC) mode**- Letter of Acceptance (LOA)-Reg. **Reference: Your bid for the subject work dated ……..**

Sir,

This is to notify you that your Bid dated .....for execution of the {R F P for **IRQP of NH-234 (Old NH-91A) (Ch. 142.00 to 158.400) District Kannauj in the State of Uttar Pradesh on engineering, procurement and construction (EPC) mode** Basis Contract, at your quoted bid price amounting to Rs. /-

{amount in words} has been determined to be the lowest evaluated bid and is substantially responsive and has been accepted.

3. You are requested to return a duplicate of the LOA as an acknowledgement and sign the Contract Agreement within the period prescribed in Clause 1.3 of the RFP.

4. You are also requested to furnish Performance Security for an amount of ……. {and Additional Performance Security for an amount of ……. } as per Clause 2.21 of the RFP within 30 (thirty) days of receipt of this Letter of Acceptance (LOA). In case of delay in submission of Performance Security and Additional Performance Security, if any, you may seek extension of time for a period not exceeding 60 (Sixty) days in accordance with Clause 2.21 of RFP.

5. In case of failure of submission of Performance Security, Additional Performance Security (if any) and Security against Damages (if any) within the additional 60 (Sixty) days" time period, the award shall be deemed to be cancelled and Bid security shall be encased by the Authority as per Clause 2.21 of the RFP.

Accepted by

(Name of the Authorized person)
Yours faithfully,

(Name of the sole bidder/ lead partner of JV)
{Authorized signatory} Seal of the bidder"

Annexure-IIA
APPENDIX-IX

Surety Bond for Bid Security (Refer Clauses 2.20)

1. In consideration of you, *****, having its office at *****, (hereinafter referred to as the "Authority", which expression shall unless it be repugnant to the subject or context thereof include its, successors and assigns) having agreed to receive the Bid of……. and having its registered office at…… (and acting on behalf of its Consortium) (hereinafter referred to as the "Bidder" which expression shall unless it be repugnant to the subject or context thereof include its/their executors, administrators, successors and assigns), for the ****** Project on EPC basis (hereinafter referred to as "the Project") pursuant to the RFP Document dated ……. issued in respect of the Project and other related documents including without limitation the draft concession/contract agreement (hereinafter collectively referred to as "Bidding Documents"), we (Name of the Surety Insurer) having our registered office at …….. and one of its branches at……. (hereinafter referred to as the "Surety Insurer "), at the request of the Bidder, do hereby in terms of Clause 1.2.4 read with Clause 2.20 of the RFP Document, irrevocably, unconditionally and without reservation guarantee the due and faithful fulfilment and compliance of the terms and conditions of the Bidding Documents (including the RFP Document) by the said Bidder and unconditionally and irrevocably undertake to pay forthwith to the Authority an amount of Rs.***** (Rupees***** only) (hereinafter referred to as the "Surety Bond") as our primary obligation without any demur, reservation, recourse, contest or protest and without reference to the Bidder, if the Bidder shall fail to fulfil or comply with all or any of the terms and conditions contained in the said Bidding Documents.

2. Any such written demand made by the Authority stating that the Bidder is in default of the due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents shall be final, conclusive and binding on the Surety Insurer.

3. We, the Surety Insurer, do hereby unconditionally undertake to pay the amounts due and payable under this Surety Bond without any demur, reservation, recourse, contest or protest and without any reference to the Bidder or any other person and irrespective of whether the claim of the Authority is disputed by the Bidder or not, merely on the first demand from the Authority stating that the amount claimed is due to the Authority by reason of failure of the Bidder to fulfil and comply with the terms and conditions contained in the Bidding Documents including failure of the said Bidder to keep its Bid open during the Bid validity period as set forth in the said Bidding Documents for any reason whatsoever. Any such demand made on the Bank shall be conclusive as regards amount due and payable by the Surety Insurer under this Surety Bond. However, our liability under this Surety Bond shall be restricted to an amount not exceeding Rs. *** (Rupees only).

4. This Surety Bond shall be irrevocable and remain in full force for a period of 180 (one hundred and eighty) days from the Bid Due Date and a claim period of 60 (sixty) days or for such extended period as may be mutually agreed between the Authority and the Bidder, and agreed to by the Surety Insurer, and shall continue to be enforceable till all amounts under this Surety Bond have been paid.

5. We, the Surety Insurer, further agree that the Authority shall be the sole judge to decide as to whether the Bidder is in default of due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents including, inter alia, the failure of the Bidder to keep its Bid open during the Bid validity period set forth in the said Bidding Documents, and the decision of the Authority that the Bidder is in default as aforesaid shall be final and binding on us, notwithstanding any differences between the Authority and the Bidder or any dispute pending before any Court, Tribunal, Arbitrator or any other Authority.

6. The Surety Bond shall not be affected by any change in the constitution or winding up of the Bidder or the Surety Insurer or any absorption, merger or amalgamation of the Bidder or the Surety Insurer with any other person.

7. In order to give full effect to this Surety Bond, the Authority shall be entitled to treat the Surety Insurer as the principal debtor. The Authority shall have the fullest liberty without affecting in any way the liability of the Surety Insurer under this Surety Bond from time to time to vary any of the terms and conditions contained in the said Bidding Documents or to extend time for submission of the Bids or the Bid validity period or the period for conveying acceptance of Letter of Award by the Bidder or the period for fulfillment and compliance with all or any of the terms and conditions contained in the said Bidding Documents by the said Bidder or to postpone for any time and from time to time any of the powers exercisable by it against the said Bidder and either to enforce or forbear from enforcing any of the terms and conditions contained in the said Bidding Documents or the securities available to the Authority, and

the Surety Insurer shall not be released from its liability under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the said Bidder or any other forbearance, act or omission on the part of the Authority or any indulgence by the Authority to the said Bidder or by any change in the constitution of the Authority or its absorption, merger or amalgamation with any other person or any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of releasing the Surety Insurer from its such liability.

8. Any notice by way of request, demand or otherwise hereunder shall be sufficiently given in writing or made if addressed to the Surety Insurer and sent by courier or by registered post or by certified e- mail to the Surety Insurer at the address or e-mail set forth herein.

9. We undertake to make the payment on receipt of your notice of claim on us addressed to name of Surety Insurer along with branch address and delivered at our above branch who shall be deemed to have been duly authorised to receive the said notice of claim.

10. It shall not be necessary for the Authority to proceed against the said Bidder before proceeding against the Surety Insurer and the Surety Bond herein contained shall be enforceable against the Surety Insurer, notwithstanding any other security which the Authority may have obtained from the said Bidder or any other person and which shall, at the time when proceedings are taken against the Surety Insurer hereunder, be outstanding or unrealized.

11. We, the Surety Insurer, further undertake not to revoke this Surety Bond during its currency except with the previous express consent of the Authority In writing.

12. The Surety Insurer declares that it has power to issue this Surety Bond and discharge the obligations contemplated herein, the undersigned is duly authorized and has full power to execute this Surety Bond for and on behalf of the Surety Insurer.

13. For the avoidance of doubt, the Surety Insurer's liability under this Surety Bond shall be restricted to Rs. **** Crore (Rupees***** crore only). The Surety Insurer shall be liable to pay the said amount or any part thereof only if the Authority serves a written claim on the Surety Insurer in accordance with paragraph 9 hereof, on or before [**** (indicate date falling 180 days after the Bid Due Date)].

14. This Surety Bond shall also be operatable at our……, branch at New Delhi, from whom, confirmation regarding the issue of this Surety Bond or extension/renewal thereof shall be made available

on demand. In the contingency of this Surety Bond being invoked and payment hereunder claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.

15. The Insurance Surety Bond shall be verified from the specific portal created for this purpose.

Signed and Delivered by ..... Company
By the hand of Mr./Ms....., its ..... and authorized official

(Signature of the
Authorized Signatory) (Official seal)

Annexure II B

APPENDIX-X
(See Clauses 2.21)
FORM OF SURETY
BOND
[Performance Security/Additional Performance Security]

To

_____(name of the authority)

_____[address of Authority]

WHEREAS _____[name and address of Contractor] (hereafter called the "Contractor") has undertaken, in pursuance of Letter

_____

of Acceptance (LOA) No. Dated___

for construction of_____[name of the Project] (hereinafter called the "Contract").

AND WHEREAS the Contract requires the Contractor to furnish an (Performance Security/Additional Performance Security] for due and faithful performance of its obligations, under and in accordance with the Contract, during the (Construction Period/ Defects Liability Period and Maintenance Period) in a sum of Rs..... cr. (Rupees. crore) (the "Surety Bond amount").

AND WHEREAS we, through our branch at ..... (the "Surety Insurer") have agreed to furnish this surety Bond by way of

Performance security.

NOW, THEREFORE, the Surety Insurer hereby, unconditionally and irrevocably. guarantees and affirms as follows:

1. The Surety Insurer, herby unconditionally and irrevocably guarantees the due and faithful performance of the Contractor's obligations during the (Construction Period/ Defects Liability Period and Maintenance Period under and in accordance with the Contract, and agrees and undertakes to pay to the Authority, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Contractor, such sum or sums up to an aggregate sum of the Surety Bond Amount as the Authority shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.

2. A letter from the Authority, under the hand of an officer not below the rank of [Superintending Engineer of Ministry of Road Transport & Highways or General Manager, NHAI], that the Contractor has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Contract shall be conclusive, final and binding on the Surety Insurer. The Surety Insurer further agrees that the Authority shall be the sole judge as to whether the Contractor is in default in due and faithful performance of its obligations during and under the Contract and

its decision that the Contractor is in default shall be final and binding on the Surety Insurer, notwithstanding any differences between the Authority and the Contractor, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Contractor for any reason whatsoever.

3. In order to give effect to this Surety Bond, the Authority shall be entitled to act as if the Surety Insurer were the principal debtor and any/Change in the constitution of the Contractor and/or the Surety Insurer, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Surety Insurer under this Surety Bond.

4. It shall not be necessary, and the Surety Insurer hereby waives any necessity, for the Authority to proceed against the Contractor before presenting to the Surety Insurer its demand under this Surety Bond.

5. The Authority shall have the liberty, without affecting in any manner the liability of the Surety Insurer under this Surety Bond, to vary at any time, the terms and conditions of the Contract or to extend the time or period for the compliance with, fulfillment and/ or performance of all or any of the obligations of the Contractor contained in the Contract or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Contractor, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Contract and/or the securities available to the Authority, and the Surety Insurer shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance. indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Surety Insurer from its liability and obligation under this Surety Bond and the Surety Insurer hereby waives all of its rights under any such law.

6. This Surety Bond is in addition to and not in substitution of any other Surety Bond or security now or which may hereafter be held by the Authority in respect of or relating to the Contract or for the fulfillment, compliance and/or performance of all or any of the obligations of the Contractor under the Contract.

7. Notwithstanding anything contained hereinbefore, the liability of the Surety Insurer under this Surety Bond is restricted to the Surety

Bond Amount and this Surety Bond will remain in force for the period specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the Surety Insurer under this Surety Bond all rights of the Authority under this Surety Bond shall be forfeited and the Surety Insurer shall be relieved from its liabilities hereunder.

8. The Surety Bond shall cease to be in force and effect on. Unless[1] a demand or claim under this Surety Bond is made in writing before expiry of the Surety Bond, the Surety Insurer shall be discharged from its liabilities hereunder.

9. The Surety Insurer undertakes not to revoke this Surety Bond during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this Surety Bond and the undersigned has full powers to do so on behalf of the Surety Insurer.

10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Surety Insurer at its above referred branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.

11. This Surety Bond shall come into force with immediate effect and shall remain in force and effect for up to the date specified in paragraph 8 above or until it is released earlier by the Authority pursuant to the provisions of the Contract.

12. This Surety Bond is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

Signed and sealed this …….Day of …., 23 .....at

SIGNED, SEALED AND DELIVERED

For and on behalf of the bank by: (Signature)

(Name)

(Designation)

(Code number)

Address)

Annexure IIIA

APPENDIX-VII

S.B.No. Dated:

1. In consideration of you,*****, having its office at *****, (hereinafter referred to as the "Authority", which expression shall unless it be repugnant to the subject or context thereof include its, successors and assigns) having agreed to receive the Bid of ……(a Company registered under Companies Act, 1956/2013) and having its registered office at…….. (and acting on behalf of its Consortium) (hereinafter referred to as the "Bidder" which expression shall unless it be repugnant to the subject or context thereof include its/their executors, administrators, successors and assigns), for the (Name of the Project ********) (hereinafter referred to as "the Project") pursuant to the RFP Document dated……. issued in respect of the Project and other related documents including without limitation the draft concession agreement (hereinafter collectively referred to as "Bidding Documents"), we (Name of the Surety Insurer) having our registered office at..... and one of its branches at .....(hereinafter referred to as the "Surety Insurer "), at the request of the Bidder, do hereby in terms of Clause 2.1.6 read with Clause 2.1.7 of the RFP Document, irrevocably, unconditionally and without reservation guarantee the due and faithful fulfilment and compliance of the terms and conditions of the Bidding Documents (including the RFP Document) by the said Bidder and unconditionally and irrevocably undertake to pay forthwith to the Authority an amount of Rs.******(Rupees***** only) (hereinafter referred to as the "Surety Bond") as our primary obligation (Rupees * without any demur, reservation, recourse, contest or protest and without reference to the Bidder, if the Bidder shall fail to fulfil or comply with all or any of the terms and conditions contained in the said Bidding Documents.

2. Any such written demand made by the Authority stating that the Bidder is in default of the due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents shall be final, conclusive and binding on the Surety Insurer.

3. We, the Surety Insurer, do hereby unconditionally undertake to pay the amounts due and payable under this Surety Bond without any demur, reservation, recourse, contest or protest and without any reference to the Bidder or any other person and irrespective of whether the claim of the Authority is disputed by the Bidder or not, merely on the first demand from the Authority stating that

the amount claimed is due to the Authority by reason of failure of the Bidder to fulfil and comply with the terms and conditions contained in the Bidding Documents Including failure of the said Bidder to keep its Bid open during the Bid validity period as set forth in the said Bidding Documents for any reason whatsoever. Any such demand made on the Surety Insurer shall be conclusive as regards amount due and payable by the Surety Insurer under this Surety Bond. However, our liability under this Surety Bond shall be restricted to an amount not exceeding Rs, *** (Rupees only*****).

4. This Surety Bond shall be irrevocable and remain in full force for a period of 120 (one hundred and twenty) days from the Bid Due Date and a claim period of 60 (sixty) days or for such extended period as may be mutually agreed between the Authority and the Bidder, and agreed to by the Surety Insurer, and shall continue to be enforceable till all amounts under this Surety Bond have been paid.

5. We, the Surety Insurer, further agree that the Authority shall be the sole Judge to decide as to whether the Bidder is in default of due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents including, inter alia, the failure of the Bidder to keep its Bid open during the Bid validity period set forth in the said Bidding Documents, and the decision of the Authority that the Bidder is in default as aforesaid shall be final and binding on us, notwithstanding any differences between the Authority and the Bidder or any dispute pending before any Court, Tribunal, Arbitrator or any other Authority.

6. The Surety Bond shall not be affected by any change in the constitution or winding up of the Bidder or the Surety Insurer or any absorption, merger or amalgamation of the Bidder or the Surety Insurer with any other person.

7. In order to give full effect to this Surety Bond, the Authority shall be entitled to treat the Surety Insurer as the principal debtor. The Authority shall have the fullest liberty without affecting in any way the liability of the Surety Insurer under this Surety Bond from time to time to vary any of the terms and conditions contained in the said Bidding Documents or to extend time for submission of the Bids or the Bid validity period or the period for conveying acceptance of Letter of Award by the Bidder or the period for fulfillment and compliance with all or any of the terms and conditions contained in the said Bidding Documents by the said Bidder or to postpone for any time and from time to time any of the powers exercisable by it against the said Bidder and

either to enforce or forbear from enforcing any of the terms and conditions contained in the said Bidding Documents or the securities available to the Authority, and the Surety Insurer shall not be released from its liability under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the said Bidder or any other forbearance, act or omission on the part of the Authority or any indulgence by the Authority to the said Bidder or by any change in the constitution of the Authority or its absorption, merger or amalgamation with any other person or any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of releasing the Surety Insurer from its such liability.

8. Any notice by way of request, demand or otherwise hereunder shall be sufficiently given in writing or made if addressed to the Surety Insurer and sent by courier or by registered post or by certified e-mail to the Surety Insurer at the address or e-mail set forth herein.

9. We undertake to make the payment on receipt of your notice of claim on us addressed to name of Surety Insurer along with branch address and delivered at our above branch who shall be deemed to have been duly authorized to receive the said notice of claim.

10. It shall not be necessary for the Authority to proceed against the said Bidder before proceeding against the Surety Insurer and the Surety Bond herein contained shall be enforceable against the Surety Insurer, notwithstanding any other security which the Authority may have obtained from the said Bidder or any other person and which shall, at the time when proceedings are taken against the Surety Insurer hereunder, be outstanding or unrealized.

11. We, the Surety Insurer further undertake not to revoke this Surety Bond during its currency except with the previous express consent of the Authority in writing.

12. The Surety Insurer declares that it has power to issue this Surety Bond and discharge the obligations contemplated herein, the undersigned is duly authorized and has full power to execute this Surety Bond for and on behalf of the Surety Insurer.

13. For the avoidance of doubt, the Surety Insurer's liability under this Surety Bond shall be restricted to Rs. *** Crore (Rupees *** crore only). The Surety Insurer shall be liable to pay the said

amount or any part thereof only if the Authority serves a written claim on the Surety Insurer in accordance with paragraph 9 hereof, on or before [*** (indicate date falling 180 days after the Bid Due Date)].

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

15. The Insurance Surety Bond shall be verified from the specific portal created for this purpose.

Signed and Delivered by .....Company
By the hand of Mr./Ms…… Its ..... and authorized official

(Signature of the Authorized Signatory)
(Official seal)

Annexure III B

Annexure II of Schedule F (See Clauses 9.1)

FORM OF SURETY BOND

[Performance Security/Additional Performance Security]

To

_____(name of the authority)

_____[address of Authority]

WHEREAS:

(A) _____(the "Contractor") and (the "Authority") have entered into a concession agreement dated .....(the "Agreement") whereby the Authority has agreed to the Contractor undertaking development and operation of… on Hybrid Annuity Mode, subject to and in accordance with the provision of the agreement

(B) The agreement requires the Contractor to furnish a performance security to the Authority in a sum of Rs ***** Crore (Rupees ***** Crore) (the "Surety Bond Amount") as security for due and faithful performance of its obligations. under and in accordance with the Agreement, during the Construction Period (as defined in the Agreement)

(C) We,……. through our branch at.....(the "Surety Insurer") have agreed to furnish this Surety Bond by way of Performance security.

NOW, THEREFORE, the Surety Insurer hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The Surety Insurer herby unconditionally and irrevocably guarantees the due and faithful performance of the Contractor‟ s obligations during the Construction Period under and in accordance with the Agreement, and agrees and undertakes to pay to the Authority, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Contractor, such sum or sums up to an aggregate sum of the Surety Bond Amount as the Authority shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.

2. A letter from the Authority, under the hand of an officer not below the rank of [Superintending Engineer of Ministry of Road Transport & Highways] that the Contractor has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Agreement shall be conclusive, final and binding on the Surety Insurer. The Surety Insurer further agrees that the Authority shall be the sole judge as to whether

the Contractor is in default in due and faithful performance of its obligations during the Construction Period under the Agreement and its decision that the Contractor is in default shall be final, and binding on the Surety Insurer, notwithstanding any differences between the Authority and the Contractor, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Contractor for any reason whatsoever.

3. In order to give effect to this Surety Bond, the Authority shall be entitled to act as if the Surety Insurer were the principal debtor and any change in the constitution of the Contractor and/or the Surety Insurer, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Surety Insurer under this Surety Bond.

4. It shall not be necessary, and the Surety Insurer hereby walves any necessity, for the Authority to proceed against the Contractor before presenting to the Surety Insurer its demand under this Surety Bond.

5. The Authority shall have the liberty, without affecting in any manner the liability of the Surety Insurer under this Surety Bond, to vary at any time, the terms and conditions of the Agreement or to extend the time or period for the compliance with, fulfillment and/ or performance of all or any of the obligations of the Contractor contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Contractor, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the Authority, and the Surety Insurer shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance, indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Surety Insurer from its liability and obligation under this Surety Bond and the Surety Insurer hereby waives all of its rights under any such law.

6. This Surety Bond is in addition to and not in substitution of any other Surety Bond or security now or which may hereafter be held by the Authority in respect of or relating to the Agreement or for

the fulfillment, compliance and/or performance of all or any of the obligations of the Contractor under the Agreement.

7. Notwithstanding anything contained hereinbefore, the liability of the Surety insurer under this Surety Bond is restricted to the Surety Bond Amount and this Surety Bond will remain in force until the earlier of the
1 (first) anniversary of the Appointed Date or compliance of the conditions specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the Surety Insurer under this Surety Bond, no later than 6 (six) months from the date of expiry of this Surety Bond, all rights of the Authority under this Surety Bond shall be forfeited and the Surety Insurer shall be relieved from its liabilities hereunder.

8. The Performance Security shall cease to be in force and effect when the Contractor shall have expended on Project construction an aggregate sum not less than 30% (thirty per cent) of the Bid Project cost which is deemed to be Rs. ****** cr. (Rupees *** crore) for the purposes of this Surety Bond, and provided the Contractor is not in breach of this Agreement. Upon request made by the Contractor for release of the Performance Security along with the particulars required hereunder, duly certified by a statutory auditor of the Contractor, the Authority shall release the Performance Security forthwith.

9. The Surety Insurer undertakes not to revoke this Surety Bond during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this Surety Bond and the undersigned has full powers to do so on behalf of the Surety Insurer.

10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Surety Insurer at its above referred branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.

11. This Surety Bond shall come into force with immediate effect and shall remain in force and effect for a period of one year and six months or until it is released earlier by the Authority pursuant to the provisions of the Agreement.

12. This Surety Bond shall also be operatable at our……. Branch at New Delhi, from whom, confirmation regarding the issue of this bond or extension/renewal thereof shall be made available on demand in the contingency of this bond been invoked and payment thereunder claimed, the said branch shall accept such invocation on letter and make payment of amounts so demanded under the said invocation.

13. This Surety Bond is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

Signed and sealed this ……Day of……,23…….at……

SIGNED, SEALED AND DELIVERED

For and on behalf of the surety insurer by: (Signature)

(Name)

(Designation)

(Code Number)

(Address)

Annexure IV A

APPENDIX-VII
Surety Bond for Bid Security (Refer Clauses 2.1.7 and 2.20.1)

S.B. No. Dated:

1. In consideration of you,, having its office at ", (hereinafter referred to as the "Authority", which expression shall unless it be repugnant to the subject or context thereof include its, successors and assigns) having agreed to receive the Bid of. (a Company registered under Companies Act, 1956/2013) and having its registered office at (and acting on behalf of its Consortium) (hereinafter referred to as the "Bidder" which expression shall unless it be repugnant to the subject or context thereof include its/their executors, administrators, successors and assigns), for the basis (hereinafter referred to as "the Project") pursuant to the RFP Document dated on DBFOT issued in respect of the Project and other related documents including without limitation the draft Concession Agreement (hereinafter collectively referred to as "Bidding Documents"), we (Name of the Surety Insurer) having our registered office at and one of its branches at (hereinafter referred to as the " Surety Insurer "), at the request of the Bidder, do hereby in terms of Clause 2.1.7 read with Clause 2.1.8 of the RFP Document, irrevocably, unconditionally and without reservation guarantee the due and faithful fulfilment and compliance of the terms and conditions of the Bidding Documents (including the RFP Document) by the said Bidder and unconditionally and irrevocably undertake to pay forthwith to the Authority an amount of Rs. *** Crores (Rupees *** only) (hereinafter referred to as the "Surety Bond") as our primary obligation without any demur, reservation, recourse, contest or protest and without reference to the Bidder, if the Bidder shall fail to fulfil or comply with all or any of the terms and conditions contained in the said Bidding Documents.

2. Any such written demand made by the Authority stating that the Bidder is in default of the due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents shall be final, conclusive and binding on the Surety Insurer.

3. We, the Surety Insurer, do hereby unconditionally undertake to pay the amounts due and payable under this Surety Bond without any demur, reservation, recourse, contest or protest and without any reference to the Bidder or any other person and

irrespective of whether the claim of the Authority is disputed by the Bidder or not, merely on the first demand from the Authority stating that the amount claimed is due to the Authority by reason of failure of the Bidder to fulfil and comply with the terms and conditions contained in the Bidding Documents including failure of the said Bidder to keep Its Bld open during the Bid validity period as set forth in the sald Bidding Documents for any reason whatsoever. Any such demand made on the Surety Insurer shall be conclusive as regards amount due and payable by the Surety Insurer under this Surety Bond. However, our liability under this Surety Bond shall be restricted to an amount not exceeding Rs. *** Crores (Rupees only).

. This Surety Bond shall be irrevocable and remain in full force for a period of 120 (one hundred and twenty) days from the Bid Due Date and a claim period of 60 (sixty) days or for such extended period as may be mutually agreed between the Authority and the Bidder, and agreed to by the Surety Insurer, and shall continue to be enforceable till all amounts under this Surety Bond have been paid.

5. We, the Surety Insurer, further agree that the Authority shall be the sole judge to decide as to whether the Bidder is in default of due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents including, inter alia, the failure of the Bidder to keep its Bid open during the Bid validity period set forth in the said Bidding Documents, and the decision of the Authority that the Bidder is in default as aforesaid shall be final and binding on us, notwithstanding any differences between the Authority and the Bidder or any dispute pending before any Court, Tribunal, Arbitrator or any other Authority.

6. The Surety Bond shall not be affected by any change in the constitution or winding up of the Bidder or the Surety Insurer or any absorption, merger or amalgamation of the Bidder or the Surety Insurer with any other person.

7. In order to give full effect to this Surety Bond, the Authority shall be entitled to treat the Surety Insurer as the principal debtor. The Authority shall have the fullest liberty without affecting in any way the liability of the Surety Insurer under this Surety Bond from time to time to vary any of the terms and conditions contained in the said Bidding Documents or to extend time for submission of the Bids or the Bid validity period or the period for conveying acceptance of Letter of Award by the Bidder or

the period for fulfilment and compliance with all or any of the terms and conditions contained in the said Bidding Documents by the said Bidder or to postpone for any time and from time to time any of the powers exercisable by it against the said Bidder and either to enforce or forbear from enforcing any of the terms and conditions contained in the said Bidding Documents or the securities available to the Authority, and the Surety Insurer shall not be released from its liability under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the said Bidder or any other forbearance, act or omission on the part of the Authority or any Indulgence by the Authority to the said Bidder or by any change in the constitution of the Authority or its absorption, merger or amalgamation with any other person or any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of releasing the Surety Insurer from its such liability.

8. Any notice by way of request, demand or otherwise hereunder shall be sufficiently given or made if addressed to the Surety Insurer and sent by courier or by registered mail to the Surety Insurer at the address set forth herein.

9. We undertake to make the payment on receipt of your notice of claim on us addressed to name of Surety Insurer along with branch address and delivered at our above branch 10. It shall not be necessary for the Authority to proceed against the said Bidder before proceeding against the Surety Insurer and the Surety Bond herein contained shall be enforceable against the Surety Insurer, notwithstanding any other security which the Authority may have obtained from the said Bidder or any other person and which shall, at the time when proceedings are taken against the Surety Insurer hereunder, be outstanding or unrealised.

11. We, the Surety Insurer, further undertake not to revoke this Surety Bond during its currency except with the previous express consent of the Authority in writing.

12. The Surety Insurer declares that it has power to issue this Surety Bond and discharge the obligations contemplated herein, the undersigned is duly authorised and has full power to execute this Surety Bond for and on behalf of the Surety Insurer.

13. For the avoidance of doubt, the Surety Insurer's liability under this Surety Bond shall be restricted to Rs. ***** Crore (Rupees "**"* crore only). The Surety Insurer shall be liable to pay the said amount or any part thereof only if the Authority serves a

written claim on the Surety Insurer in accordance with paragraph 9 hereof, on or before [***(indicate date falling 180 days after the Bid Due Dates)].

14. The Insurance Surety Bond shall be verified from the specific portal created for this purpose

Signed and Delivered by Company
By the hand of Mr./Ms……., its.....and authorised official

(Signature of the Authorised Signatory)
(Official Seal)

Annexure IV B

Annexure I of Schedule F (See Clauses 9.1)

FORM OF SURETY BOND

[Performance Security/Additional Performance Security]

To

_____(name of the authority)

_____[address of Authority]

WHEREAS:

(A) _____(the "Contractor") and (the "Authority") have entered into a concession agreement dated .....(the "Agreement") whereby the Authority has agreed to the Contractor undertaking [Four-Laning of the**** section of National Highway No. ****] on design, build, finance, operate and transfer ("DBFOT") basis, subject to and in accordance with the provision of the Agreement.

(B) The Agreement requires the Contractor furnish a Performance Security to the Authority in a sum of Rs **** Crore (Rupees *** Crore) (the "Surety Bond Amount") as security for due and faithful performance of its obligations, under and in accordance with the Agreement, during the Construction Period (as defined in the Agreement).

(C) We. …….through our branch at… (the "Surety Insurer") have agreed to furnish this Surety Bond by way of Performance security.

NOW, THEREFORE, the Surety Insurer hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The Surety Insurer herby unconditionally and irrevocably guarantees the due and faithful performance of the Contractor‟ s obligations during the Construction Period, under and in accordance with the Agreement, and agrees and undertakes to pay to the Authority, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Contractor such sum or sums up to an aggregate sum of the Surety Bond Amount as the Authority shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.

2. A letter from the Authority, under the hand of an officer not below the rank of [Superintending Engineer of Ministry of Road Transport & Highways] that the Contractor has committed default in the due and faithful performance all or any of its obligations under and in accordance with the Agreement shall be conclusive, final and binding on the Surety Insurer. The Surety Insurer further agrees that the Authority shall be the sole judge as to whether the Contractor is in default in due and faithful performance of its obligations during the Construction

Period under the Agreement and its decision that the Contractor is in default shall be final, and binding on the Surety Insurer, notwithstanding any differences between the Authority and the Contractor, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Contractor for any reason whatsoever.

3. In order to give effect to this Surety Bond, the Authority shall be entitled to act as if the Surety Insurer were the principal debtor and any change in the constitution of the Contractor and/or the Surety Insurer, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Surety Insurer under this Surety Bond.

4. It shall not be necessary, and the Surety Insurer hereby waives any necessity, for the Authority to proceed against the Contractor before presenting to the Surety Insurer its demand under this Surety Bond.

5. The Authority shall have the liberty, without affecting in any manner the liability of the Surety Insurer under this Surety Bond, to vary at any time, the terms and conditions of the Agreement or to extend the time or period for the compliance with, fulfillment and/ or performance of all or any of the obligations of the Contractor contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Contractor, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the Authority, and the Surety Insurer shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance, Indulgence, act or omission on the part of the Authority or af any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Surety Insurer from its liability and obligation under this Surety Bond and the Surety Insurer hereby waves all of its rights under any such law.

6. This Surety Bond is in addition to and not in substitution of any other Surety Bond of security now or which may hereafter be held by the Authority in respect of or relating to the Agreement or for the fulfillment, compliance and/or performance of all or any of the obligations of the Contractor under the Agreement.

7. Notwithstanding anything contained hereinbefore, the lability of the Surety Insurer under this Surety Bond is restricted to the Surety Bond Amount and this Surety Bond will remain in force until the earlier of the 1 (first) anniversary of the Appointed Date or compliance of the conditions specified In paragraph 8 below and unless a demand or claim in writing is made by the Authority on the Surety Insurer under this Surety Bond, no later than 6 (six) months from the date of expiry of this Surety Bond, all rights of the Authority under this Surety Bond shall be forfeited and the Surety Insurer shall be relieved from its liabilities hereunder.

8. The Performance Security shall cease to be in force and effect when the Contractor shall have expended on Project construction an aggregate sum not less than 20% (twenty per cent) of the Total Project Cost which is deemed to be Rs, **** cr. (Rupees***** crore) for the purposes of this Surety Bond, and provided the Contractor is not in breach of this Agreement. Upon request made by the Contractor for release of the Performance Security along with the particulars required hereunder, duly certified by a statutory auditor of the Contractor, the Authority shall release the Performance Security forthwith.

9. The Surety Insurer undertakes not to revoke this Surety Bond during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this Surety Bond and the undersigned has full powers to do so on behalf of the Surety Insurer.

10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Surety Insurer at its above referred branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.

11. This Surety Bond shall come into force with immediate effect and shall remain in force and effect for a period of one year and six months or until it is released earlier by the Authority pursuant to the provisions of the Agreement.
Signed and seated this Day of ……., 20……. at..... ,

For and on behalf of the Surety Insurer by:

(Signature) (Name)

(Designation) (Code

Number) (Address)

Notes:

(i) The Surety Bond should contain the name, designation and code number of the officers) signing the band.

(ii) The address, telephone number and other details of the Head Office of the Surety Insurer. as well as of issuing Branch should be mentioned on the covering letter of sung Branch.

Note: Ministry circular No. NH-35014/35/2020-H-Part (II) (E-196662) dated 16/12/2021 Office memorandum, Subject (i) Changes in standard RFP & MCA of EPC, BOT (Toll) and HAM project in order to ensure compliance of PPP - Mll Order, 2017 and rule 144(xi)of GFR, 2017, (ii) Change in the clause no. 2.2.2.1 of the standard RFP of EPC to include all awarded works for determination of available BID Capacity and Ministry of Finance F.No..6/18/2019-PPD dated 23/07/2020 Office memorandum, Subject : Insertion of Rule 144(xi)in the General Financial Rules (GFRs), 2017, Order P(Public Procurement No.1) Subject: Restriction under Rule 144(xi) of the General Financial Rules (GFRs),2017 shall be followed..

EFile No.RW/NH-35072/05/2018-S&R (P&B) (Computer No.165688)

Government of India

Ministry of Road Transport & Highways

(S&R (P&B/New Technology) Zone)

Transport Bhawan, 1, Parliament Street, New Delhi-110001

Dated: 19th April, 2024

CIRCULAR

To

1. The Chief Secretaries of all the State Governments/ UTs.
2. The Principal Secretaries/ Secretaries of all States/ UTs Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes).
3. The Chairman, National Highways Authority of India, G-5 & 6, Sector-10, Dwarka, New Delhi-110 075.
4. The Managing Director, NHIDCL, PTI Building, New Delhi-110001.
5. The Director General (Border Roads), Seema Sadak Bhawan, Ring Road, New Delhi-110 010.
6. All Engineers-in-Chief and Chief Engineers of Public Works Department of States/ UTs/ Road Construction Department/ Highways Departments (dealing with National Highways and other centrally sponsored schemes).
7. The Secretary General, Indian Roads Congress
8. The Director, IAHE, Noida, UP
9. All CE-ROs, ROs and ELOs of the Ministry.

Subject: - Recommended Bitumen Type & Grade for Different Climate & Traffic Loading for National Highway and Expressway Works in India - Reg.

Reference: Ministry's Circular No. even dated 23.08.2023

Madam/Sir,

Bituminous binder is one of the most important ingredient which influences the performance of bituminous mixes. Selection of appropriate grade of bituminous binder for a particular section of National Highway/Expressway based on prevailing loading, ambient temperature, rainfall, snowfall and speed is indispensable to have durable flexible pavement. Para 2.1 of the Ministry's circular cited above stipulates that "**Selection of Appropriate Grade of Bituminous Binder**: Bituminous binder for conventional pavement courses shall be in accordance with IRC: 37 "Guidelines for the Design of Flexible Pavements". However, provisions contained in relevant IRC Guidelines/Standards shall be applicable for selection of binder type & grade for pavement courses such as Stone Matrix Asphalt (SMA), Gap-graded Rubberised Bituminous Mixes (GGRB), High Performance Mixes (HiPER) and Cement Grouted Bituminous Macadam (CGBM)". The selection of appropriate grade of binder as per IRC: 37 is on the basis of design traffic but pavement temperature which substantially impacts behaviour/performance of bitumen binder is not considered in the said selection process.

2.0 To bridge the gap and ensure rationale basis of selection of appropriate type and grade of bituminous binder, Ministry constituted a Task Force comprising of academicians, researchers, manufacturers, subject-matter experts, representative of Indian Roads Congress, Advisor MoRT&H under chairmanship of ADG(S&R). The mandate of the Task Force

was to specifically recommend the appropriate type & grade of bitumen/modified bitumen for different climatic zone considering ambient temperature, rainfall, snowfall, traffic loading intensity etc., across India.

3.0 Based on the Task Force recommendations, it has been decided that in supersession to provisions contained in para 2.1 of the Ministry's circular cited above, **Bitumen Type & Grade for Different Climate & Traffic Loading for National Highway and Expressway Works in India** shall be adopted as given in **Annexure-I**.

4.0 It should be applicable in case of all new projects for which bids as received 60days after the issue of this circular. The contents of the Circular may be brought into the notice of all concerned for needful compliance.

5.0 This issues with the approval of Competent Authority.

Yours sincerely,
Bidur Kant Jha
19.04.2024

(Bidur Kant Jha)
Director
(New Technology for Highway Development)
For Director General (Road Development) & Special Secretary

Copy to:

1. All CEs in the Ministry of Road Transport & Highways
2. All ROs of the Ministry of Road Transport & Highways
3. The Secretary General, Indian Roads Congress
4. Technical circular file of S&R (P&B) Section
5. NIC-for uploading on Ministry's website under "What's new"

Copy for kind information to:

1. PS to Hon'ble Minister (RT&H, MS&ME)
2. PS to Hon'ble MOS (RT&H)
3. Sr. PPS to Secretary (RT&H)
4. PPS to DG (RD) & SS
5. Sr. PPS/ PPS to Addl. Secretary (Road Safety)/ Addl. Secretary (RT&H & LA)
6. Sr. PPS/ PPS to AS&FA
7. Sr. PPS/ PPS to ADG (SKN) / ADG (RP)/ ADG(DS)
8. Sr. PPS/ PPS to JS (RT&MVL)/ JS (EIC) / JS (Logistics)/ JS (NHIDCL)

Recommended Bitumen Type & Grade for Different Climate & Traffic Loading for National Highway and Expressway Works in India						
ximum Pavement perature(T_{20mm})#	Minimum Pavement Temperature (T_{surf}) #	Mix Type	Traffic Loading computed for 20-year period			
			<=20msa	>20<=50msa	>50<=150msa	>150msa
≤ 58 °C	> (-)22°C	SMA	NA	NA	NA	NA
		GGRB	NA	NA	NA	NA
		BC	VG-30	VG-30	VG-30	VG-30
		DBM Upper/ DBM Lower /Single layer DBM	VG-30	VG-30	VG-30	VG-30
>58<=64 °C	>=(-)10°C	SMA	NA	NA	PMB64-10	PMB64-10
		GGRB	NA	NA	Rubberised Bitumen@	Rubberised Bitumen@
		BC	VG-40	VG-40	PMB64-10/CRMB55	PMB64-10/CRMB60
		DBM Upper/ DBM Lower /Single layer DBM	VG-30	VG-40	VG-40	VG-40
>64<=70 °C	>=(-)10°C	SMA	NA	NA	PMB70-10	PMB70-10
		GGRB	NA	NA	Rubberised Bitumen@	Rubberised Bitumen@
		BC	VG-40	VG-40/ PMB70-10/CRMB60	PMB70-10/CRMB60	PMB70-10/CRMB60
		DBM Upper/ DBM Lower /Single layer DBM	VG-40	VG-40	VG-40	VG-40
>70<=76 °C	>=(-)10°C	SMA	NA	NA	PMB76-10	PMB76-10
		GGRB	NA	NA	Rubberised Bitumen@	Rubberised Bitumen@
		BC	VG-40	PMB76-10/CRMB60	PMB76-10/CRMB60	NA
		DBM Upper/ DBM Lower /Single layer DBM	VG-40	VG-40	VG-40	VG-40 /(PG76-10 for upper DBM)/HIPER$ mixes

#. Maximum Pavement Temperature(T_{20mm}) & Minimum Pavement Temperature (T_{surf}) should be estimated using the following formula:
$T_{20mm} = 0.9545*(T_{airmax} - 0.00618Lat^2 + 0.2289\ Lat + 42.2) - 17.78$; where T_{airmax} is average of 7-day maximum air temperature (hottest 7-consecutive day period of a year) in (°C) and Lat is the geographical latitude of the project site (in degrees).
$T_{surf} = 0.859* T_{airmin} + 1.7$; where T_{airmin} is the lowest air temperature of a year in (°C).
VG Grade Bitumen should be as per BIS: 73-2013 except for VG-40 grade Bitumen Viscosity at 60°C should be minimum 3600Poise.
Polymer Modified Bitumen should be as per BIS: 15462-2019.
Polymer modified bitumen (PMB) for different service condition should be selected in accordance with Table 2 of BIS 15462:2019.
Crumb Rubber Modified Bitumen should be as per BIS: 17079-2019.
@-The specifications for base bitumen and Rubberised Bitumen to be used for GGRB mix should be as per the recommendations of IRC SP-107-2015.
$-Hiper mixes as per IRC: SP: 139-2023 for DBM Base/binder course should be considered in case of perpetual pavement to have cost-effective pavement.
Tests to be carried out on Pressure Aging Vessel (PAV) Residue (after RTFO)Complex modulus (G*) multiplied by Sin delta (G* sin δ) as Max 6000 kPa, 8 mm Plate, 2mm Gap, at 10 rad/s, at a temperature, 20°C for Polymer Modified Bitumen.

Bidyut Kautja.

RW/NH-24036/28/2025-BP&SP (Computer No. 248457)
Government of India
Ministry of Road Transport & Highways
(Highway Section)
Transport Bhawan, 1, Parliament Street, New Delhi-110001

Date: 29th April, 2025

To

1. The Chairman, National Highways Authority of India, G-5 7 6, Sector-10, Dwarka, New Delhi-110075
2. The Managing Director, NHIDCL, PTI Building, New Delhi-110001
3. Principal Secretaries/Secretaries of all States/UTs Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes)
4. All Engineers-in-Chief and Chief Engineers of Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes)
5. The Director General Border Roads, Seema Sadak Bhawan, Ring Road, New Delhi-110010
6. All CE-ROs, ROs and ELOs of the Ministry of Road Transport & Highways

Subject: Modification in Qualification Criteria for EPC Projects - reg.

Ref: Standard RFP for EPC Projects issued by Ministry's Letter No.RW/NH-37010/4/2010/EAP (Printing) Vol.-IV dated 05.03.2019 and its subsequent Amendments.

Sir,

The Ministry vide letter No.RW/NH-37010/4/2010/EAP (Printing) Vol.-IV dated 05.03.2019 and its subsequent amendments has specified the qualification criteria for contractors for EPC Projects. Numerous relaxation in the qualification criteria for eligibility in case of EPC contracts were given in 2019 to promote competition.

2. However, now it has been brought to the notice of the Ministry that the said relaxation in the qualification criteria has had a detrimental effect on the quality of construction.

3. In view of the above, the Ministry has revised/modified the qualification criteria of contractors for EPC contracts. The modifications made, inter-alia, include the minimum requirements for both standard highway construction projects as well as stand alone specialized projects such as tunnels, major bridges, ROBs, flyovers etc; a higher requirement for EPC projects with bid price over Rs 100 crore; checks on sub-contracting experience and modification of the highways and core sector definition to tighten the eligibility criteria. The modifications in detail are enclosed as **Annexure**.

4. Relevant provisions of the standard RFP of EPC Projects stand modified to this effect. All the executing agencies of the Ministry are directed to implement the aforesaid changes with immediate effect.

5. This issues with the approval of Hon'ble Minister (RT&H).

Yours faithfully,

(Mayank Tyagi)
Deputy Secretary to the Govt. of India

Encl: As above

Copy to:

1. Sr. PPS to Secretary (RT&H)
2. PSO to DG(RD)&SS
3. AS&FA/AS(H)/AS(T), MoRTH
4. All Joint Secretaries in the MoRTH
5. All ADGs/CEs in the MoRTH
6. Director (NIC), MoRTH for uploading on the Ministry's website and e-office

Annexure

MODIFICATION IN THE CLAUSES OF RFP DOCUMENTS OF RFP OF EPC PROJECTS

Sr. No.	Particulars	Existing Provision	Modified Provision
1.	**Net Worth at the close of the preceding financial year**	Footnote: This amount should be **5% (five percent)** of the Estimated Project Cost of the Project for which bids are being invited.	Footnote: For projects upto Rs 100 crore No Change For projects more than Rs 100 crore : This amount should be **10% (Ten percent)** of the Estimated Cost of the Project for which bids are being invited.
2.	**Average Annual Turnover of last 5 Financial Years**	Footnote: This amount should be **15% (fifteen percent)** of the Estimated Project Cost of the Project for which bids are being invited.	Footnote: This amount should be **20% (twenty percent)** of the Estimated Project Cost of the Project for which bids are being invited.
3.	**Single Work Criteria (Similar work executed)**	Provided that at least one similar work of **20% of Estimated Project Cost [Rs.***crore (Rs.****)]** shall have been completed from the Eligible Projects in Category 1 and/or Category 3 specified in Clause 2.2.2.5. For this purpose, a project shall be considered to be completed, if more than 90% of the value of work has been completed and such completed value of work is equal to or more than **20%** of the estimated project cost. Eligible project costs shall include the following: (a) Widening/ reconstruction/ up-graduation works on NH/SH//Expressway or on any category of road taken up under CRF, ISC/EI, SARDP, LWE (b) Widening/ reconstruction/ up-gradation works on MDRs with loan assistance from multilateral agencies or on BOT basis. (c) Widening/ reconstruction/ up-gradation works of roads in Municipal Corporation limits, construction of Bypasses. (d) Construction of Stand-alone bridges, ROBs, tunnels. (e) Construction/ reconstruction of linear projects like airport runways,	Provided that at least either of the following: **i. two similar completed works costing not less than amount equal to 25% each of estimated cost.** **Or** **ii. one similar completed work costing not less than amount equals to 35% each of estimated cost** shall have been completed from the Eligible Projects in Category 1 and/or Category 3 specified in Clause 2.2.2.5. **Certificate(s) from the concerned client(s) shall be required for the same. In case the claimed project /(s) are subcontracting/ JV project in such a case Approval from Govt. Authority / Client is required(restricted to allowable sub-contracting limit/ JV share in original contract).**[D1] For this purpose, a project shall be considered to be completed, if more than 90% of the value of work has been completed and such completed value of work is equal to or more than **the above mentioned criteria in the last 5 (five) financial years preceding the Bid Due Date or till the Bid Due Date**. Eligible project

Sr. No.	Particulars	Existing Provision	Modified Provision
		railways, (construction/ reconstruction of railway tracks, yards for keeping containers etc.) metro rail and ports (including construction/re-construction of Jetties).	costs shall include the following: (a) Widening/ reconstruction/ up-graduation works on NH/SH//Expressway or on any category of road taken up under CRF, ISC/EI, SARDP, LWE (b) Widening/ reconstruction/ up-gradation works on MDRs with loan assistance from multilateral agencies or on BOT basis. (c) Widening/ reconstruction/ up-gradation works of roads in Municipal Corporation limits, construction of Bypasses. (d) Construction of Stand-alone bridges, ROBs, tunnels. (e) Construction/ reconstruction of linear projects like airport runways. (f) Viaducts of Railways/ Metro g) Container yard of ports
4.	**Additional Work Criteria (Bridge & Tunnel)**	If any Major Bridge/ROB/Flyover/Tunnel is (are) part of the project, then the sole Bidder or in case the Bidder being a Joint Venture, any member of Joint Venture shall necessarily demonstrate additional experience in construction of Major Bridge/ROBs/Flyovers/Tunnel in the last 10 (ten) financial years preceding the Bid Due Date i.e. shall have completed at least one similar Major Bridge/ROB/Flyover having span equal to or greater than: **(a) In case, longest span of Bridge/ROB/flyover is less than or equal to 60 m, no additional qualification is required.** **(b) when longest span is more than 60 m :50% of the longest span or 100 m, whichever is less, of the structure proposed in this project.**	If any Major Bridge/ROB/Flyover/Tunnel is (are) part of the project, then the sole Bidder or in case the Bidder being a Joint Venture, any member of Joint Venture shall necessarily demonstrate additional experience in construction of Major Bridge/ROBs/Flyovers/Tunnel in the last **7 (seven)** financial years preceding the Bid Due Date **or till the Bid Due Date** i.e. shall have completed at least one similar Major Bridge/ROB/Flyover having length equal to or greater than: (a) In case, longest span of Bridge/ROB/flyover is less than or equal to 60 m, no additional qualification is required. (b) when longest span is more than 60 m :**80% of the longest span or 100 m, whichever is less, of the structure proposed in this project and 40% of the length Major Bridge/ROB/Flyover or 2 km, whichever is less, of the structure proposed in this project.**

Sr. No.	Particulars	Existing Provision	Modified Provision
		and in case of tunnel, if any, shall have completed construction of atleast one tunnel consisting of single or twin tubes (including tunnel(s) for roads/Railway/Metro rail/irrigation/hydro-electric projects etc.) having atleast **(a) In case Tunnel is a part of project having length less than or equal to 200 m, then no additional qualification is required.** (b) **When length of tunnel more than 200m : 50% of the cross sectional area of proposed tunnel or two lane highway tunnel cross-sectional area, whichever is less and 20% length of the tunnel to be constructed in this project or 2km, whichever is less.**	**And** in case of tunnel, if any, shall have completed construction of atleast one tunnel consisting of single or twin tubes (including tunnel(s) for roads/Railway/Metro rail/irrigation/hydro-electric projects etc.) having at least **(a) In case Tunnel is a part of project having length less than or equal to 200 m, then no additional qualification is required.** (b) **When length of tunnel more than 200m: 80% of the cross sectional area of proposed tunnel or two lane highway tunnel cross-sectional area, whichever is less and 40% length of the tunnel to be constructed (other than cut and cover method) in this project or 2km, whichever is less.**
5.	**Stand-alone specialized projects**	(iii)For Stand-alone specialized projects: (a)Major Bridges/ROB/Flyovers projects: (a1) In case the cost of specialized project is less than or equal to Rs. 1,000 Cr: The sole Bidder or in case the Bidder being a Joint Venture, any member of Joint Venture shall have completed atleast one similar Major Bridge/ROB/Flyover project in the last 10 (ten) financial years preceding the Bid Due Date, having span equal to or greater than 50% of the longest span or 100m, whichever is less of the structure proposed in this project and also the cost of such similar project shall be atleast 20% of the Estimated Project Cost. For this purpose, a project shall be considered to be completed, if more than 90% of the value of work has been completed and such completed value of work is equal to or more than 20% of the Estimated Project Cost.	(iii)For Stand-alone specialized projects: (a)Major Bridges/ROB/Flyovers projects: The sole Bidder or in case the Bidder being a Joint Venture, Lead member of Joint Venture shall have completed atleast one similar Major Bridge/ROB/Flyover project in the last **7 (seven)** financial years preceding the Bid Due Date **or till the Bid Due Date**, having span equal to or greater than **80%** of the longest span or 100m, whichever is less of the structure proposed in this project and 40% of the length Major Bridge/ RoB/ flyover or 2 km, whichever is less and also the cost of such similar project shall be alteast **i. two similar completed works length not less than or equals to 25% each of cost of the Major Bridges/ROB/Flyovers.** **or** **ii. one similar completed work**

Sr. No.	Particulars	Existing Provision	Modified Provision
		(a2) In case the cost of specialized project is more than Rs. 1,000 Cr: The sole Bidder or in case the Bidder being a Joint Venture, any member of Joint Venture shall have completed at least one similar Major Bridge/ ROB/ Flyover project in the last 10 (ten) financial years preceding the Bid Due Date, having span equal to or greater than 50% of the longest span of the structure proposed in this project or 100m, whichever is less, and also the cost of such similar project shall be atleast **20**% of the Estimated Project Cost or Rs. 1000Cr. whichever is less. For this purpose, a project shall be considered to be completed, if more than 90% of the value of work has been completed and such completed value of work is equal to or more than 20%of the Estimated Project Cost or Rs. 1000 Cr., whichever is less.	**length not less than equals to 35% of cost of the Major Bridges/ROB/Flyovers.** For this purpose, a project shall be considered to be completed, if more than 90% of the value of work has been completed and such completed value of work is equal to or more than **the above mentioned criteria. Certificate(s) from the concerned client(s) shall be required for the same. In case the claimed project /(s) are subcontracting/ JV project in such a case Approval from Govt. Authority / Client is required (restricted to allowable sub-contracting limit/ JV share in original contract).**[D2]
6.	**Tunnel project**	(b) Tunnel project: The sole Bidder or in case the Bidder being a Joint Venture, any member of Joint Venture shall have completed atleast one tunnel project in the last 10 (ten) financial years preceding the Bid Due Date, consisting of single or twin tubes (including tunnel(s) for roads/Railway/Metro rail/irrigation/hydro-electric projects etc.) having atleast 50% of the cross-sectional area of the tunnel to be constructed or cross sectional area of 2 lane highway tunnel, whichever is less, and 20% length of the tunnel to be constructed in this project or 2 km, whichever is less and the cost of such project shall be atleast 20% of the Estimated Project Cost or Rs. 1000 Cr., whichever is less. For this purpose, a project shall be considered to be completed, if more than 90% of the value of work has been completed and such completed value of work is equal	(b) Tunnel project: The sole Bidder or in case the Bidder being a Joint Venture, Lead member of Joint Venture shall have completed atleast one tunnel project in the last 7 (seven) financial years preceding the Bid Due Date **or till the Bid Due Date,** consisting of single or twin tubes (including tunnel(s) for roads/Railway/Metro rail/irrigation/hydro-electric projects etc.) having atleast 80% of the cross-sectional area of the tunnel to be constructed **other than Cut & Cover method** or cross sectional area of 2 lane highway tunnel, whichever is less, and 40% length of the tunnel. to be constructed in this project or 2 km, whichever is less and the cost of such project shall be atleast

Sr. No.	Particulars	Existing Provision	Modified Provision
		to or more than 20%of the Estimated Project Cost or Rs. 1000 Cr., whichever is less.	**i. two similar completed works length not less than equals to 25% each of estimated cost of the tunnel.** **or** **ii. one similar completed work length not less than equals to 35% of estimated cost of the tunnel.** For this purpose, a project shall be considered to be completed, if more than 90% of the value of work has been completed and such completed value of work is equal to or more than **the above mentioned criteria**. **Certificate(s) from the concerned client(s) shall be required for the same. In case the claimed project /(s) are subcontracting/ JV project in such a case Approval from Govt. Authority / Concessionaire is required (restricted to allowable sub-contracting limit/ JV share in original contract).**
7.	**Highways sector & Core Sector definition**	(a) highways sector would be deemed to include highways, expressways, bridges, tunnels, runways, **railways (construction/re-construction of railway tracks, yards for keeping containers etc.) metro rail and ports (including construction/re-construction cost of Jetties, any other linear infrastructure including bridges etc.)**; and (b) core sector would be deemed to include civil construction cost of power sector, commercial setups (SEZs etc.), airports, industrial parks/ estates, logistic parks, pipelines, irrigation, water supply, sewerage, stadium, hospitals, hotel, smart city, warehouses/ Silos, oil and gas and real estate development. Core sector will also include the projects with the title of RIDF, PMGSY road, link road, city roads, rural road, sector/	(a) highways sector would be deemed to include highways, expressways, bridges, tunnels, runways, (Viaducts of Railways/ Metro, Container yard of ports **and** (b) core sector would be deemed to include civil construction cost of power sector, commercial setups (SEZs etc.), airports, industrial parks/ estates, logistic parks, pipelines, irrigation, water supply, sewerage, stadium, hospitals, hotel, smart city, warehouses/ Silos, oil and gas and real estate development. Core sector will also include the projects with the title of RIDF, PMGSY road, link road, city roads, rural road, sector/ municipality road, real estate projects which demonstrate road

Sr. No.	Particulars	Existing Provision	Modified Provision
		municipality road, real estate projects which demonstrate road development/ construction bridges or culverts.	development/ construction bridges or culverts, **Performance-Based Maintenance Contracting work (PBMC), O&M work, Short Term Maintenance Contract (STMC), railways (construction/re-construction of railway tracks, etc.) metro rail and ports (including construction/re-construction cost of Jetties, any other linear infrastructure including bridges etc.).**
8.	**Technical Capacity – Min Value of works to be considered**	the capital cost of the project should be more than 5% of the amount specified as the Estimated Project Cost; and receipts of less than 5% of the Estimated Project Cost	For projects upto Rs 100 crore No Change For projects more than Rs 100 crore : the capital cost[1] of the project should be more than **10%** of the amount specified as the Estimated Project Cost; and receipts[2] of less than **10%** of the Estimated Project Cost
9.	**Original of Documents**	The Lowest Bidder shall be required to submit original of documents listed below (before issuance of Letter of Acceptance (LOA) by the Authority: (a) Original Power of Attorney for signing the BID as per format at Appendix-III; (b) if applicable, Original Power of Attorney for Lead Member of Joint Venture as per the format at Appendix-IV; (c) (c) if applicable, Original Joint Bidding Agreement for Joint Venture as per the format at Appendix-V; (d) (d) Bid Security of Rs. Xx Crore (Rupees only) in the form of Insurance Surety Bond (in the format at Appendix– X issued by Insurance Company authorized by Insurance Regulatory and Development Authority of India) or Account Payee Demand Draft or Fixed Deposit Receipt or Banker's Cheque or Bank Guarantee (including e-Bank Guarantee) in the	The Lowest Bidder shall be required to submit original of documents listed below (before issuance of Letter of Acceptance (LOA) by the Authority: **(a) Appendix-IA (Letter comprising the Technical Bid).** **(b) Appendix-IB (Letter comprising the Financial BID)** **(c) Annex-V Statement of Legal Capacity** (d) Original Power of Attorney for signing the BID as per format at Appendix-III; (e) if applicable, Original Power of Attorney for Lead Member of Joint Venture as per the format at Appendix-IV; (f) if applicable, Original Joint Bidding Agreement for Joint Venture as per the format at Appendix-V; (g) Bid Security of Rs. Xx Crore (Rupees only) in the form of Insurance Surety Bond (in the format at Appendix– X issued by Insurance Company authorized by Insurance Regulatory and

[1] The actual capital cost of the project (i.e. without escalation) shall be considered for the evaluation.
[2] The actual payment receipt (i.e. without escalation) shall be considered for the evaluation.

Sr. No.	Particulars	Existing Provision	Modified Provision
		format at Appendix-II from a Scheduled bank; (e) **Deleted;** **(f) Deleted;** (g) Bidder shall comply with the provisions of NHAI/Policy Guidelines/Vigilance/2020 Policy Circular No. 5. 8 dated 29th December 2020 issued by NHAI and its subsequent amendments if any, issued by NHAI/MoRT&H (Appendix-VI) regarding Integrity Pact (IP) and the Integrity Pact (IP) duly signed by Authorised signatory shall be submitted by the Bidder with the RFP Bid & shall be part of the Contract Agreement; and (h) An undertaking from the person having PoA referred to in Sub. Clause-(a) above that they agree and abide by the Bid documents uploaded by NHAI and amendments uploaded, if any (i) Copy of experience certificates apostille at foreign origin, if any (j) Certificate regarding Compliance with Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs) as per format given in Appendix-XI shall be submitted by the Bidder with the RFP Bid duly signed by Authorised signatory & shall be part of the Contract Agreement; and (k) Proof of Registration with the Competent Authority as defined in Public Procurement Order No. F. No. 6/18/2019-PPD dated 23rd July 2020, if applicable (to be submitted by the "Bidder from a country which shares a land border with India").	Development Authority of India) or Account Payee Demand Draft or Fixed Deposit Receipt or Banker's Cheque or Bank Guarantee (including e-Bank Guarantee) in the format at Appendix-II from a Scheduled bank; (h) Bidder shall comply with the provisions of NHAI/Policy Guidelines/Vigilance/2020 Policy Circular No. 5. 8 dated 29th December 2020 issued by NHAI and its subsequent amendments if any, issued by NHAI/MoRT&H (Appendix-VI) regarding Integrity Pact (IP) and the Integrity Pact (IP) duly signed by Authorised signatory shall be submitted by the Bidder with the RFP Bid & shall be part of the Contract Agreement; and (i) An undertaking from the person having PoA referred to in Sub. Clause-(a) above that they agree and abide by the Bid documents uploaded by NHAI and amendments uploaded, if any (j) Copy of experience certificates apostille at foreign origin, if any (k) Certificate regarding Compliance with Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs) as per format given in Appendix-XI shall be submitted by the Bidder with the RFP Bid duly signed by Authorised signatory & shall be part of the Contract Agreement; and (l) Proof of Registration with the Competent Authority as defined in Public Procurement Order No. F. No. 6/18/2019-PPD dated 23rd July 2020, if applicable (to be submitted by the "Bidder from a country which shares a land border with India").
10.	**Clause 2.1.11 (c) of RFP**	Members of the Joint Venture shall nominate one member as the lead member (the "Lead Member"). Lead Member shall met at least 60% requirement of Bid Capacity, Technical and Financial Capacity, required as per	Members of the Joint Venture shall nominate one member as the lead member (the "Lead Member"). Lead Member shall met at least 60% requirement of Bid Capacity, Technical and Financial Capacity, required as per

Sr. No.	Particulars	Existing Provision	Modified Provision
		Clause 2.2.2.1, 2.2.2.2(i) & 2.2.2.3. The nomination(s) shall be supported by a Power of Attorney, as per the format at Appendix-III, signed by all the other Members of the Joint Venture. Other Member(s) shall meet at least 20% requirement of Bid Capacity, Technical and Financial Capacity required as per Clause 2.2.2.1, 2.2.2.2(i) & 2.2.2.3 and the JV as a whole shall cumulatively/collectively fulfil the 100% requirement;	Clause 2.2.2.1, 2.2.2.2(i) & 2.2.2.3. The nomination(s) shall be supported by a Power of Attorney, as per the format at Appendix-III, signed by all the other Members of the Joint Venture. Other Member(s) shall meet at least 20% requirement of Bid Capacity, Technical and Financial Capacity required as per Clause 2.2.2.1, 2.2.2.2(i) & 2.2.2.3 (except otherwise specified in RFP) and the JV as a whole shall cumulatively/collectively fulfil the 100% requirement; Provided further that, **In the case of a Joint Venture (JV), each member is required to hold a minimum of 26% (twenty six percent) in the JV.**

Efile No.RW/NH-33044/34/2024-S&R (P&B) (Computer No.-246283)

Government of India
Ministry of Road Transport & Highways
(S&R (P&B/New Technology) Zone)
Transport Bhawan, 1, Parliament Street, New Delhi-110001

130.242

Dated: 30th April, 2025

CIRCULAR

To

1. The Chief Secretaries of all the State Governments/ UTs.
2. The Principal Secretaries/ Secretaries of all States/ UTs Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes).
3. The Chairman, National Highways Authority of India, G-5 & 6, Sector-10, Dwarka, New Delhi-110 075.
4. The Managing Director, NHIDCL, World Trade Centre, New Delhi-110029.
5. The Director General (Border Roads), Seema Sadak Bhawan, Ring Road, New Delhi-110 010.
6. All Engineers-in-Chief and Chief Engineers of Public Works Department of States/ UTs/ Road Construction Department/ Highways Departments (dealing with National Highways and other centrally sponsored schemes).
7. The Secretary General, Indian Roads Congress
8. The Director, IAHE, Noida, UP.
9. All CE-ROs, ROs and ELOs of the Ministry.

Subject: - Seeking Additional Performance Security for the bidders who have quoted abnormally low bid price - Reg.

Madam/Sir,

Reference is drawn towards Ministry's Circular No. NH 37015/01/2022-H dated 26.08.2022 (computer no. 208778) vide which Ministry has issued guidelines for seeking additional performance security in the Para 4 (i), (ii) & (iii):

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

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

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

2. It was further conveyed that Additional performance security shall be taken only after approval of Secretary, Ministry of Road Transport & Highways, mentioning specific reasons justifying the requirement of additional performance security along with track record of the bidder. The circular was issued in pursuance to Department of Expenditure Circular no. F.9/4/2020-PPD dated 12.11.2020.

Bidder read Re.

3. The matter has been reviewed considering the trend of abnormally low bid prices in National Highways projects and it has been decided that, henceforth, additional performance security will be taken from selected bidder for low bid as under:

(i) where the bid price is **below 10% but not below 20%** of the project cost put to bid, the additional performance guarantee/security percentage shall be incremented by 0.1% for every percentage of bid price below 10% of the project cost put to bid starting at 11% with the additional bid performance guarantee being 0.1% and this additional performance guarantee percentage shall be applied on the bid price;

(ii) where the bid price is **20% or more below** of the project cost put to bid, the additional performance guarantee percentage shall be incremented by 0.2% for every percentage of bid price below 20% of the project cost put to bid in addition to 1% of the bid price and this additional performance guarantee percentage shall be applied on the bid price;

(iii) The additional performance guarantee percentage shall be rounded off to the next lower percentage based on whether the decimal point of the percentage of bid price is below 0.5% or next higher percentage based on whether the decimal point of the percentage of bid price is 0.5% or more.

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

(v) An illustrative example for calculation of additional performance guarantee/security for a notional project where the project cost put to bid is Rs.1000 crore is given in **Annexure** for ready reference.

4. In respect of projects under Road Wing, Additional Performance Security shall be taken with approval from DG (RD) & SS, MoRTH.

5. These guidelines shall come into force with immediate effect. All the implementing agencies of the MoRT&H are requested to take action accordingly.

6. This issues with the approval of the Competent Authority.

Yours sincerely,

Bidur Kant Jha
30/04/2025

(Bidur Kant Jha)
Director
(New Technology for Highway development)
For DG (RD) & SS

Enclosure: As above.

Copy to:

1. All CEs in the Ministry of Road Transport & Highways
2. All ROs of the Ministry of Road Transport & Highways
3. All CE(NH) of PWD/R&B dealing with National Highways
4. Technical circular file of S&R (P&B) Section
5. NIC-for uploading on Ministry's website under "What's new" & "Comprehensive Compendium Circulars with CODE 130.242.

Copy for kind information to:

1. PS to Hon'ble Minister (RT&H)
2. PS to Hon'ble MOS (RT&H)
3. Sr. PPS to Secretary (RT&H)
4. Sr. PPS to DG (RD) & SS
5. Sr. PPS/ PPS to Addl. Secretary (Road Safety)/ Addl. Secretary (RT&H & LA)
6. Sr. PPS/ PPS to AS&FA
7. Sr. PPS/ PPS to all ADG (KB)/ ADG(SC)/ ADG(RS)
8. Sr. PPS/ PPS to JS (RT&MVL)/ JS (EIC) / JS (Logistics)/ JS (NHIDCL)

Bidur Kant Jha.

Bid Price of Bidder (Rs crore)	Performance Bank Guarantee (Rs crore)	% discount to project cost put to bid	Percentage Additional Performance Guarantee	Additional Performance Guarantee (Rs crore)	Total Performance Bank Guarantee (Rs crore)	PBG as % of project cost put to bid
	3%					
1000	30.00	0.00%	0.00%	0.00	30.00	3.00%
990	29.70	1.00%	0.00%	0.00	29.70	3.00%
980	29.40	2.00%	0.00%	0.00	29.40	3.00%
970	29.10	3.00%	0.00%	0.00	29.10	3.00%
960	28.80	4.00%	0.00%	0.00	28.80	3.00%
950	28.50	5.00%	0.00%	0.00	28.50	3.00%
940	28.20	6.00%	0.00%	0.00	28.20	3.00%
930	27.90	7.00%	0.00%	0.00	27.90	3.00%
920	27.60	8.00%	0.00%	0.00	27.60	3.00%
910	27.30	9.00%	0.00%	0.00	27.30	3.00%
900	27.00	10.00%	0.00%	0.00	27.00	3.00%
890	26.70	11.00%	0.10%	0.89	27.59	3.10%
880	26.40	12.00%	0.20%	1.76	28.16	3.20%
870	26.10	13.00%	0.30%	2.61	28.71	3.30%
860	25.80	14.00%	0.40%	3.44	29.24	3.40%
850	25.50	15.00%	0.50%	4.25	29.75	3.50%
840	25.20	16.00%	0.60%	5.04	30.24	3.60%
830	24.90	17.00%	0.70%	5.81	30.71	3.70%
820	24.60	18.00%	0.80%	6.56	31.16	3.80%
810	24.30	19.00%	0.90%	7.29	31.59	3.90%
800	24.00	20.00%	1.00%	8.00	32.00	4.00%
790	23.70	21.00%	1.20%	9.48	33.18	4.20%
780	23.40	22.00%	1.40%	10.92	34.32	4.40%
770	23.10	23.00%	1.60%	12.32	35.42	4.60%
760	22.80	24.00%	1.80%	13.68	36.48	4.80%
750	22.50	25.00%	2.00%	15.00	37.50	5.00%
740	22.20	26.00%	2.20%	16.28	38.48	5.20%
730	21.90	27.00%	2.40%	17.52	39.42	5.40%
720	21.60	28.00%	2.60%	18.72	40.32	5.60%
710	21.30	29.00%	2.80%	19.88	41.18	5.80%
700	21.00	30.00%	3.00%	21.00	42.00	6.00%
690	20.70	31.00%	3.20%	22.08	42.78	6.20%
680	20.40	32.00%	3.40%	23.12	43.52	6.40%
670	20.10	33.00%	3.60%	24.12	44.22	6.60%
660	19.80	34.00%	3.80%	25.08	44.88	6.80%
650	19.50	35.00%	4.00%	26.00	45.50	7.00%
640	19.20	36.00%	4.20%	26.88	46.08	7.20%
630	18.90	37.00%	4.40%	27.72	46.62	7.40%
620	18.60	38.00%	4.60%	28.52	47.12	7.60%
610	18.30	39.00%	4.80%	29.28	47.58	7.80%
600	18.00	40.00%	5.00%	30.00	48.00	8.00%
590	17.70	41.00%	5.20%	30.68	48.38	8.20%
580	17.40	42.00%	5.40%	31.32	48.72	8.40%
570	17.10	43.00%	5.60%	31.92	49.02	8.60%
560	16.80	44.00%	5.80%	32.48	49.28	8.80%
550	16.50	45.00%	6.00%	33.00	49.50	9.00%
540	16.20	46.00%	6.20%	33.48	49.68	9.20%
530	15.90	47.00%	6.40%	33.92	49.82	9.40%
520	15.60	48.00%	6.60%	34.32	49.92	9.60%
510	15.30	49.00%	6.80%	34.68	49.98	9.80%
500	15.00	50.00%	7.00%	35.00	50.00	10.00%

4/4 Bidder kaa Jo.

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन और राजमार्ग मंत्रालय, भारत सरकार)
National Highways Authority of India
(Ministry of Road Transport and Highways, Government of India)
जी-5 एवं 6, सेक्टर-10, द्वारका, नई दिल्ली - 110 075 • G-5 & 6, Sector-10, Dwarka, New Delhi-110075
दूरभाष/Phone : 91-11-25074100 / 25074200

NHAI/Policy Guidelines/ Atmanirbhar Bharat/ 2023
Policy Circular No.18.88/ 2023 dated 13th June, 2023
{Decision taken on E-Office File No. NHAI/F&A/SuretyBondInsurance/2022-23 (Comp. No. 182374)}

Sub: Inclusion of provisions regarding accepting E-Bank Guarantee and Insurance Surety Bonds as 'Bid Security' and 'Performance Security' in standard documents of EPC, HAM and BOT (Toll)- reg.

Ministry of Road Transport & Highways vide letter No.NH-24028/14/2014-H(Vol-II) (E-134863) dated 31.05.2023 has issued the changes in necessary clauses in the standard documents (RFP & MCA) of EPC, HAM and BOT(Toll) relating to inclusion of e-Bank Guarantee and Insurance Surety Bonds as means to accept 'Bid Security' and 'Performance Security'. A copy of the same is attached at **Annexure I** for information and implementation.

2. It is also pointed out that Highways Section of Ministry of Road Transport & Highways vide e-mail dated 31.05.2023 has mentioned that the formats for insurance surety bond for 'Bid Security' and 'Performance Security' has also been approved by Competent Authority, MoRTH. A copy of these formats is also attached at **Annexure IIA & IIB for EPC, Annexure IIIA & IIIB for HAM and Annexure IVA & IVB for BOT (Toll)** for implementation.

3. This issues with the approval of Competent Authority.

Encl.: As stated above

13/06/23
(Sanjay Kumar Patel)
General Manager (Coord.)

To:

All Officers of NHAI HQ/ ROs/ PIUs/ CMUs/ Site Offices

Copy to:

1. Hindi Officer for translation in Hindi.
2. Library for hosting the circular on library site.
3. Web Admin for circulation.

Annexure- I

No. NH-24028/14/2014-H(Vol-II) (E-134863)
Government of India
Ministry of Road Transport & Highways
(Highways Section)
Transport Bhawan, 1, Parliament Street, New Delhi-110001

Dated: 31 May, 2023

To

1. DG(RD) & SS, Ministry of Road Transport & Highways
2. The Chairman, NHAI, G-5&6, Sector -10, Dwarka, New Delhi-110075
3. The Managing Director, NHIDCL, PTI Building, New Delhi-110001
4. Principal Secretaries/Secretaries of all States/UTs Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes)
5. All Engineers-in-Chief and Chief Engineers of Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes)
6. The Director General Border Roads, Seema Sadak Bhawan, Ring Road, New Delhi-110010
7. All CE-ROs, ROs and ELOs of the Ministry of Road Transport & Highways

Subject: Inclusions of provisions regarding accepting E-Bank Guarantee and Insurance Surety Bonds as 'Bid Security' and 'Performance Security' in standard documents of EPC, HAM and BOT (Toll)

Sir(s)/Madam(s),

After the amendments done by Department of Expenditure in GFR, 2017 relating to inclusion of e-bank guarantee and Insurance Surety Bonds as means to accept 'Bid Security' and 'Performance Security', this Ministry has approved the changes in necessary clauses in the standard documents (RFP and MCA) of EPC, HAM and BOT (Toll) modes which are enclosed as **Annexure.**

2. For all the existing contracts - including road development, toll contracts, ropeways and any other contract wherein Ministry has prescribed a BG - any instrument of Bid Security / Performance Security may be replaced by Insurance Surety Bond as per availability. Further, if bank guarantee is being taken as bid security or performance security and it is not possible to furnish the same in the form of e-bank guarantee, physical BG can be accepted.

3. This issues with the approval of Hon'ble Minister (RT&H).

Yours faithfully,

(Sushant Sudan)
Deputy Secretary to the Government of India
Telephone No. 011-23724515

Copy to:

1. Sr. PPS to Secretary (RT&H)
2. AS&FA, MoRTH
3. AS(H&LA)
4. All Joint Secretaries in the MoRTH
5. All ADGs/CEs in the MoRTH
6. Sr. Director (NIC), MoRTH for uploading on the website of the Ministry

Annexure

Modifications in Standard RFP & Agreement of EPC

<table>
<tr><th colspan="4">(A) Amendments in Standard RFP of EPC issued vide MoRTH Letter No. RW/NH-37010/4/2010-EAP (Printing) Vol. - IV dated 05.03.2019</th></tr>
<tr><th>S.No.</th><th>Clause no.</th><th>Existing Clause</th><th>Amended Clause</th></tr>
<tr><td>1.</td><td>1.2.4</td><td>A Bidder is required to submit, along with its BID, a BID Security of Rs.******[1] (the "BID Security"), refundable not later than 150 (One hundred & fifty) days from the BID Due Date, except in the case of the Selected Bidder whose BID Security shall be retained till it has provided a Performance Security and Additional Performance Security (if any) as per the provision of this RFP and LOA. This Guarantee shall be transmitted through SFMS Gateway to NHAI/MORTH/State PWD/NHIDCL/BROs Bank. The Bidders shall also submit Demand Draft for Rs.__*** issued from a scheduled Bank in India in favour of ["Pay & Accounts Officer, Ministry of Road Transport & Highways, New Delhi /National Highways Authority of India"] payable at [New Delhi].</td><td>A Bidder is required to submit, along with its BID, a BID Security of Rs. ******[2] (the "BID Security"), refundable not later than 150 (One hundred & fifty) days from the BID Due Date, except in the case of the Selected Bidder whose BID Security shall be retained till it has provided a Performance Security and Additional Performance Security (if any) as per the provision of this RFP and LOA. BID Security shall be submitted in the form of Insurance Surety Bond, Account Payee Demand Draft, Banker's Cheque or Electronic Bank Guarantee (e-Bank Guarantee). The Insurance Surety Bond shall be verified from the specific portal created for this purpose. The e - Bank Guarantee shall be transmitted through SFMS Gateway to NHAI/MORTH/State PWD/ NHIDCL/BROs Bank. The Bidders shall also make online payment towards Cost of Tender Document of Rs. ****/- (Rupees ***** Only) in Authority's designated bank account and also upload online payment receipt of the same. Details of designated bank account are as under:
<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th></tr>
</table>
</td></tr>
</table>

[1] The Bid Security shall be an amount equivalent to 1% of the Estimated Project Cost. However, the Authority may, in its discretion, prescribe a higher Bid Security not exceeding 2% of the Estimated Project Cost. In case of a project having an Estimated Project Cost of Rs. 2,000 cr. Or above, the Authority may, in its discretion, reduce the Bid Security, but not less than 0.5% of the Indicative Project Cost in any case

[2] The Bid Security shall be an amount equivalent to 1% of the Estimated Project Cost. However, the Authority may, in its discretion, prescribe a higher Bid Security not exceeding 2% of the Estimated Project Cost. In case of a project having an Estimated Project Cost of Rs. 2,000 cr. Or above, the Authority may, in its discretion, reduce the Bid Security, but not less than 0.5% of the Indicative Project Cost in any case

			1.	Name of Beneficiary	National Highways Authority of India
			2.	Name of Bank	Canara Bank
			3.	Account No.	8598201005819
			4.	IFSC Code	CNRB0008598
2.	2.11.1 (f)	BID Security of Rs. ****(Rs. ****) in the form of Bank Guarantee in the format at Appendix-II from a Scheduled Bank (to be submitted physically as well);	BID Security of Rs. ****(Rs. ****) in the form of **Insurance Surety Bond (in the format at Appendix - IX issued by Insurance Company authorized by Insurance Regulatory and Development Authority of India), Account Payee Demand Draft, Banker's Cheque or e - Bank Guarantee** (in the format at Appendix-II from a Scheduled Bank)		
3.	2.11.2 (d)	BID Security of Rs. ****(Rs. ****) in the form of Original Bank Guarantee in the format at Appendix-II from a Scheduled Bank;	BID Security of Rs. ****(Rs. ****) in the form of **Insurance Surety Bond (in the format at Appendix - IX issued by Insurance Company authorized by Insurance Regulatory and Development Authority of India), Account Payee Demand Draft, Banker's Cheque or e - Bank Guarantee** (in the format at Appendix-II from a Scheduled Bank).		
4.	Below 2.11.2		While submitting Bid Security and Performance Security via Account Payee demand draft or Banker's cheque, it is to be ensured by the bidder that Account Payee demand draft or Banker's cheque are submitted physically latest within 5 working days of the Bid Due Date (upto11: 00 hours) to the following address placed in a sealed envelope and bearing the identification "Name of the Project" [Address: National Highways Authority of India G-5 & 6, Sector-10, Dwarka, New Delhi-110075]. Else the bid submitted will be rejected.		
5.	2.20.1	The Bidder shall furnish as part of its BID, a BID Security referred to in Clause 1.2.4 herein above in the form of a bank guarantee issued by	The Bidder shall furnish as part of its BID, a BID Security referred to in Clause 1.2.4 herein above in the form of **Insurance Surety Bond (issued by Insurance Company authorized by Insurance**		

		nationalized bank, or a Scheduled Bank in India having a net worth of at least Rs. 1,000 crore (Rs. one thousand crore), in favour of the Authority in the format at Appendix-II (the **"Bank Guarantee"**) and having a validity period of not less than 180 (one hundred eighty) days from the BID Due Date, inclusive of a claim period of 60 (sixty) days, and may be extended as may be mutually agreed between the Authority and the Bidder from time to time. This Bank Guarantee shall be transmitted through SFMS Gateway to [Ministry/NHAI/ NHIDCL/ State PWD/BRO]' Bank. In case the Bank Guarantee is issued by a foreign bank outside India, confirmation of the same by any nationalised bank in India is required. For the avoidance of doubt, Scheduled Bank shall mean a bank as defined under Section 2(e) of the Reserve Bank of India Act, 1934. A scanned copy of the Bank Guarantee shall be uploaded on e-procurement portal while applying to the tender.	**Regulatory and Development Authority of India in the format at Appendix IX) , Account Payee Demand Draft, Banker's Cheque** or **e - Bank Guarantee** issued by nationalized bank, or a Scheduled Bank in India having a net worth of at least Rs. 1,000 crore (Rs. one thousand crore), in favour of the Authority in the format at Appendix-II (the **"Bank Guarantee"**) and having a validity period of not less than 180 (one hundred eighty) days from the BID Due Date, inclusive of a claim period of 60 (sixty) days, and may be extended as may be mutually agreed between the Authority and the Bidder from time to time. **The Insurance Surety Bond shall be verified from the specific portal created for this purpose.** The **e - Bank Guarantee** shall be transmitted through SFMS Gateway to [Ministry/NHAI/NHIDCL/ State PWD/BRO]' Bank. In case the **e - Bank Guarantee** is issued by a foreign bank outside India, confirmation of the same by any nationalised bank in India is required. For the avoidance of doubt, Scheduled Bank shall mean a bank as defined under Section 2(e) of the Reserve Bank of India Act, 1934. A scanned copy of the **Account Payee Demand Draft, Banker's Cheque or e - Bank Guarantee** shall be uploaded on e-procurement portal while applying to the tender.
6.	2.21.1	Within 30 (thirty) days of receipt of Letter of Acceptance, the selected Bidder shall furnish to the Authority an irrevocable and unconditional guarantee from a Bank in the form set forth in Appendix-VII (the "Performance Security") for an amount equal to 5% (five percent) of its Bid Price. In case of bids mentioned below, the Selected Bidder, along with the Performance Security, shall	Within 30 (thirty) days of receipt of Letter of Acceptance, the selected Bidder shall furnish to the Authority in the form of **Insurance Surety Bond in the format at Appendix - X,** Account **Payee Demand Draft, Banker's Cheque** or irrevocable and unconditional guarantee **e - Bank Guarantee** from a Bank in the form set forth in Appendix-VII (the "Performance Security") for an amount equal to 3% (three percent) of its Bid Price. In case of bids mentioned below, the Selected Bidder, along with the Performance Security, shall also furnish to the

		also furnish to the Authority an irrevocable and unconditional guarantee from a Bank in the same form given at Appendix-VII towards an Additional Performance Security (the "Additional Performance Security") for an amount calculated as under: (i) If the Bid Price offered by the Selected Bidder is lower than 10% but upto 20% of the estimated Project Cost, then the Additional Performance Security shall be calculated @20% of the difference in the (i) Estimated Project Cost (as mentioned in RFP)-10% of the Estimated Project Cost and (ii) the Bid Price offered by the selected Bidder. (ii) If the Bid Price offered by the Selected Bidder is lower than 20% of the Estimated Project Cost, then the Additional Performance Security shall be calculated @ 30% of the difference in the (i) Estimated Project Cost (as mentioned in RFP)-10% of the Estimated Project Cost and (ii) the Bid Price offered by the Selected Bidder. (iii)This Additional Performance Security shall be treated as part of the Performance Security.	Authority **in the form of Insurance Surety Bond (issued by Insurance Company authorized by Insurance Regulatory and Development Authority of India in the format at Appendix - X), Account Payee Demand Draft, Banker's Cheque or** an irrevocable and unconditional **e - Bank Guarantee** from a Bank in the same form given at Appendix-VII towards an Additional Performance Security (the "Additional Performance Security") for an amount calculated as under (i) If the Bid Price offered by the Selected Bidder is lower than 20% of the Estimated Project Cost/Cost put to tender, the Additional Performance Security shall be calculated @ 20% of the difference in the (i) Estimated Project Cost (as mentioned in RFP)-20% of the Estimated Project Cost and (ii) the Bid Price offered by the Selected Bidder. (ii) Maximum Limit of additional performance security shall be limited to 3% of the Bid price offered by the selected bidder. (iii)This Additional Performance Security shall be treated as part of the Performance Security.
7.	Appendix IA Point 21	The BID Security in the form of a Bank Guarantee is attached.	The BID Security in the form of **Insurance Surety Bond,** Account **Payee Demand Draft/ Banker's Cheque / e - Bank Guarantee (Strike out whichever is not applicable)** is attached.

Amendments in Standard EPC Agreement issued vide MoRTH Letter No. RW/NH-37010/4/2010-EAP (Printing) Vol. - IV dated 05.03.2019			
S.No.	Clause no.	Existing Clause	Amended Clause
1.	Article-7 7.1 PS	7.1 Performance Security (i) (A) Within 30 (thirty) days of receipt of Letter of Acceptance, the selected Bidder shall furnish to the Authority an irrevocable and unconditional guarantee from a Bank in the form set forth in Annex-I of Schedule-G (the "Performance Security") for an amount equal to 5% (five percent) of its Bid Price. In case of bids mentioned below, the Selected Bidder, along with the Performance Security, shall also furnish to the Authority an irrevocable and unconditional guarantee from a Bank in the same form given at Annex-I of Schedule-G towards an Additional Performance Security (the "Additional Performance Security") for an amount calculated as under: (a) If the Bid Price offered by the Selected Bidder is lower than 10% but upto 20% of the estimated Project Cost, then the Additional Performance Security shall be calculated @20% of the difference in the (i) Estimated Project Cost (as mentioned in RFP)-10% of the Estimated Project Cost and (ii) the Bid Price offered by the selected Bidder. (b) If the Bid Price offered by the Selected Bidder is lower than 20% of the	7.1 Performance Security (i) (A) Within 30 (thirty) days of receipt of Letter of Acceptance, the selected Bidder shall furnish to the Authority in the form of **Insurance Surety Bond in the form set forth in Annex III of Schedule -G, Account Payee Demand Draft, Banker's Cheque** or irrevocable and unconditional **e - Bank Guarantee** from a Bank in the form set forth in Annex-I of Schedule-G (the "Performance Security") for an amount equal to 3% (three percent) of its Bid Price. In case of bids mentioned below, the Selected Bidder, along with the Performance Security, shall also furnish to the Authority in the form of **Insurance Surety Bond (in the same form given at Annex III of Schedule -G), Account Payee Demand Draft, Banker's Cheque or** irrevocable and unconditional **e - Bank Guarantee** from a Bank in the same form given at Annex-I Schedule-G towards an Additional Performance Security (the "Additional Performance Security") for an amount calculated as under: (a) if the Bid price offered by the selected bidder is lower than 20% of the estimated project cost/cost put to tender, the additional performance security shall be calculated @ 20% of the difference in the (i) Estimated Project Cost (as mentioned in RFP)-20% of the Estimated Project Cost and (ii) the Bid Price offered by the selected Bidder. (b) Maximum limit of additional performance security shall be limited to 3% of the Bid price offered by the selected bidder. (c) This Additional Performance Security shall be treated as part of the Performance Security.

		Estimated Project Cost, then the Additional Performance Security shall be calculated @ 30% of the difference in the (i) Estimated Project Cost (as mentioned in RFP)-10% of the Estimated Project Cost and (ii) the Bid Price offered by the Selected Bidder. (c) This Additional Performance Security shall be treated as part of the Performance Security.	

Annexure IIA

APPENDIX – IX

Surety Bond for Bid Security
(Refer Clauses 2.20)

S.B. No. Dated:

1. In consideration of you, ****, having its office at ****, (hereinafter referred to as the "Authority", which expression shall unless it be repugnant to the subject or context thereof include its, successors and assigns) having agreed to receive the Bid of ..... and having its registered office at ....., (and acting on behalf of its Consortium) (hereinafter referred to as the "Bidder" which expression shall unless it be repugnant to the subject or context thereof include its/their executors, administrators, successors and assigns), for the *** ** Project on EPC basis (hereinafter referred to as "the Project") pursuant to the RFP Document dated ..... issued in respect of the Project and other related documents including without limitation the draft concession/contract agreement (hereinafter collectively referred to as "Bidding Documents"), we (Name of the Surety Insurer) having our registered office at ..... and one of its branches at ..... (hereinafter referred to as the " Surety Insurer "), at the request of the Bidder, do hereby in terms of Clause 1.2.4 read with Clause 2.20 of the RFP Document, irrevocably, unconditionally and without reservation guarantee the due and faithful fulfilment and compliance of the terms and conditions of the Bidding Documents (including the RFP Document) by the said Bidder and unconditionally and irrevocably undertake to pay forthwith to the Authority an amount of Rs. *** ** (Rupees *** ** only) (hereinafter referred to as the "Surety Bond") as our primary obligation without any demur, reservation, recourse, contest or protest and without reference to the Bidder, if the Bidder shall fail to fulfil or comply with all or any of the terms and conditions contained in the said Bidding Documents.

2. Any such written demand made by the Authority stating that the Bidder is in default of the due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents shall be final, conclusive and binding on the Surety Insurer.

3. We, the Surety Insurer , do hereby unconditionally undertake to pay the amounts due and payable under this Surety Bond without any demur, reservation, recourse, contest or protest and without any reference to the Bidder or any other person and irrespective of whether the claim of the Authority is disputed by the Bidder or not, merely on the first demand from

the Authority stating that the amount claimed is due to the Authority by reason of failure of the Bidder to fulfil and comply with the terms and conditions contained in the Bidding Documents including failure of the said Bidder to keep its Bid open during the Bid validity period as set forth in the said Bidding Documents for any reason whatsoever. Any such demand made on the Bank shall be conclusive as regards amount due and payable by the Surety Insurer under this Surety Bond. However, our liability under this Surety Bond shall be restricted to an amount not exceeding Rs. *** ** (Rupees *** ** only) .

4. This Surety Bond shall be irrevocable and remain in full force for a period of 180 (one hundred and eighty) days from the Bid Due Date and a claim period of 60 (sixty) days or for such extended period as may be mutually agreed between the Authority and the Bidder, and agreed to by the Surety Insurer, and shall continue to be enforceable till all amounts under this Surety Bond have been paid.

5. We, the Surety Insurer , further agree that the Authority shall be the sole judge to decide as to whether the Bidder is in default of due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents including, inter alia, the failure of the Bidder to keep its Bid open during the Bid validity period set forth in the said Bidding Documents, and the decision of the Authority that the Bidder is in default as aforesaid shall be final and binding on us, notwithstanding any differences between the Authority and the Bidder or any dispute pending before any Court, Tribunal, Arbitrator or any other Authority.

6. The Surety Bond shall not be affected by any change in the constitution or winding up of the Bidder or the Surety Insurer or any absorption, merger or amalgamation of the Bidder or the Surety Insurer with any other person.

7. In order to give full effect to this Surety Bond, the Authority shall be entitled to treat the Surety Insurer as the principal debtor. The Authority shall have the fullest liberty without affecting in any way the liability of the Surety Insurer under this Surety Bond from time to time to vary any of the terms and conditions contained in the said Bidding Documents or to extend time for submission of the Bids or the Bid validity period or the period for conveying acceptance of Letter of Award by the Bidder or the period for fulfillment and compliance with all or any of the terms and conditions contained in the said Bidding Documents by the said Bidder or to postpone for any time and from time to time any of the powers exercisable by it against the said Bidder and either to enforce or forbear from enforcing any of the terms and conditions contained in the said Bidding Documents or the securities available to the Authority, and the Surety Insurer shall not be released from its liability under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the said Bidder

or any other forbearance, act or omission on the part of the Authority or any indulgence by the Authority to the said Bidder or by any change in the constitution of the Authority or its absorption, merger or amalgamation with any other person or any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of releasing the Surety Insurer from its such liability.

8. Any notice by way of request, demand or otherwise hereunder shall be sufficiently given in writing or made if addressed to the Surety Insurer and sent by courier or by registered post or by certified e-mail to the Surety Insurer at the address or e-mail set forth herein.

9. We undertake to make the payment on receipt of your notice of claim on us addressed to name of Surety Insurer along with branch address and delivered at our above branch who shall be deemed to have been duly authorised to receive the said notice of claim.

10. It shall not be necessary for the Authority to proceed against the said Bidder before proceeding against the Surety Insurer and the Surety Bond herein contained shall be enforceable against the Surety Insurer, notwithstanding any other security which the Authority may have obtained from the said Bidder or any other person and which shall, at the time when proceedings are taken against the Surety Insurer hereunder, be outstanding or unrealised.

11. We, the Surety Insurer, further undertake not to revoke this Surety Bond during its currency except with the previous express consent of the Authority in writing.

12. The Surety Insurer declares that it has power to issue this Surety Bond and discharge the obligations contemplated herein, the undersigned is duly authorised and has full power to execute this Surety Bond for and on behalf of the Surety Insurer.

13. For the avoidance of doubt, the Surety Insurer's liability under this Surety Bond shall be restricted to Rs. *** Crore (Rupees *** ** crore only) . The Surety Insurer shall be liable to pay the said amount or any part thereof only if the Authority serves a written claim on the Surety Insurer in accordance with paragraph 9 hereof, on or before [*** (indicate date falling 180 days after the Bid Due Date)].

14. This Surety Bond shall also be operatable at our ..... , branch at New Delhi, from whom, confirmation regarding the issue of this Surety Bond or extension/renewal thereof shall be made available on demand. In the contingency of this Surety Bond being invoked and payment hereunder

claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.

15. The Insurance Surety Bond shall be verified from the specific portal created for this purpose.

Signed and Delivered by ..... Company

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

(Signature of the Authorised Signatory)
(official seal)

Annexure II B

APPENDIX – X

(See Clauses 2.21)

FORM OF SURETY BOND

[Performance Security/Additional Performance Security]

To

_____ (name of the authority)

_____ [address of Authority]

WHEREAS _____ [name and address of Contractor] (hereafter called the "Contractor") has undertaken, in pursuance of Letter of Acceptance (LOA) No. _____Dated_____ for construction of_____ [name of the Project] (hereinafter called the "Contract").

AND WHEREAS the Contract requires the Contractor to furnish an {Performance Security/Additional Performance Security} for due and faithful performance of its obligations, under and in accordance with the Contract, during the {Construction Period/ Defects Liability Period and Maintenance Period} in a sum of Rs..... cr. (Rupees .... crore) (the **"Surety Bond amount"**[1]).

AND WHEREAS we, ... through our branch at ..... (the **"Surety Insurer"**) have agreed to furnish this **Surety Bond** by way of Performance security.

NOW, THEREFORE, the **Surety Insurer** hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The **Surety Insurer** herby unconditionally and irrevocably guarantees the due and faithful performance of the Contractor's obligations during the {Construction Period/ Defects Liability Period and Maintenance Period' under and in accordance with the Contract, and agrees and undertakes to pay to the Authority, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Contractor, such sum or sums up to an aggregate sum of the **Surety Bond** Amount as the Authority shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.

2. A letter from the Authority, under the hand of an officer not below the rank of [Superintending Engineer of Ministry of Road Transport & Highways or General Manager, NHAI], that the Contractor has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Contract shall be conclusive, final and binding on the

Surety Insurer. The **Surety Insurer** further agrees that the Authority shall be the sole judge as to whether the Contractor is in default in due and faithful performance of its obligations during and under the Contract and its decision that the Contractor is in default shall be final and binding on the **Surety Insurer**, notwithstanding any differences between the Authority and the Contractor, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Contractor for any reason whatsoever.

3. In order to give effect to this **Surety Bond**, the Authority shall be entitled to act as if the **Surety Insurer** were the principal debtor and any/Change in the constitution of the Contractor and/or the **Surety Insurer**, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the **Surety Insurer** under this **Surety Bond**.

4. It shall not be necessary, and the **Surety Insurer** hereby waives any necessity, for the Authority to proceed against the Contractor before presenting to the Surety Insurer its demand under this **Surety Bond**.

5. The Authority shall have the liberty, without affecting in any manner the liability of the **Surety Insurer** under this **Surety Bond**, to vary at any time, the terms and conditions of the Contract or to extend the time or period for the compliance with, fulfillment and/ or performance of all or any of the obligations of the Contractor contained in the Contract or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Contractor, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Contract and/or the securities available to the Authority, and the **Surety Insurer** shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance, indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the **Surety Insurer** from its liability and obligation under this **Surety Bond** and the **Surety Insurer** hereby waives all of its rights under any such law.

6. This **Surety Bond** is in addition to and not in substitution of any other **Surety Bond** or security now or which may hereafter be held by the Authority in respect of or relating to the Contract or for the fulfillment, compliance and/or performance of all or any of the obligations of the Contractor under the Contract.

7. Notwithstanding anything contained hereinbefore, the liability of the **Surety Insurer** under this **Surety Bond** is restricted to the **Surety Bond** Amount and this **Surety Bond** will remain in force for the period specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the **Surety Insurer** under this **Surety Bond** all rights of the Authority under this **Surety Bond** shall be forfeited and the **Surety Insurer** shall be relieved from its liabilities hereunder.

8. The **Surety Bond** shall cease to be in force and effect on ****[5]. Unless[1] a demand or claim under this **Surety Bond** is made in writing before expiry of the **Surety Bond**, the **Surety Insurer** shall be discharged from its liabilities hereunder.

9. The **Surety Insurer** undertakes not to revoke this **Surety Bond** during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this **Surety Bond** and the undersigned has full powers to do so on behalf of the **Surety Insurer.**

10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the **Surety Insurer** at its above referred branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.

11. This **Surety Bond** shall come into force with immediate effect and shall remain in force and effect for up to the date specified in paragraph 8 above or until it is released earlier by the Authority pursuant to the provisions of the Contract.

12. This **Surety Bond** is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

Signed and sealed this ..... Day of ....., 23 .....at .....

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[1] $Insert date atleast 2(two) years from the date of issuance of this Surety Bond (in accordance with Clause 2.21 of the RFP). The Contractors can submit the Surety Bond for periods of two years at one time and keep on renewing the same till the DLP is over if they have problems in getting the Surety Bond in one go for the entire DLP.

SIGNED, SEALED AND DELIVERED

For and on behalf of the bank by:

(Signature)

(Name)

(Designation)

(Code Number)

(Address)

Annexure IIIA

APPENDIX – VII

Surety Bond for Bid Security
(Refer Clauses 2.1.6 and 2.20.1)

S.B. No. Dated:

1. In consideration of you, *****, having its office at ****, (hereinafter referred to as the "Authority", which expression shall unless it be repugnant to the subject or context thereof include its, successors and assigns) having agreed to receive the Bid of ..... (a Company registered under Companies Act, 1956/2013) and having its registered office at ....., (and acting on behalf of its Consortium) (hereinafter referred to as the "Bidder" which expression shall unless it be repugnant to the subject or context thereof include its/their executors, administrators, successors and assigns), for the (Name of the Project **********) (hereinafter referred to as "the Project") pursuant to the RFP Document dated ..... issued in respect of the Project and other related documents including without limitation the draft concession agreement (hereinafter collectively referred to as "Bidding Documents"), we (Name of the Surety Insurer) having our registered office at ..... and one of its branches at ..... (hereinafter referred to as the " Surety Insurer "), at the request of the Bidder, do hereby in terms of Clause 2.1.6 read with Clause 2.1.7 of the RFP Document, irrevocably, unconditionally and without reservation guarantee the due and faithful fulfilment and compliance of the terms and conditions of the Bidding Documents (including the RFP Document) by the said Bidder and unconditionally and irrevocably undertake to pay forthwith to the Authority an amount of Rs. ***** (Rupees ***** only) (hereinafter referred to as the "Surety Bond") as our primary obligation without any demur, reservation, recourse, contest or protest and without reference to the Bidder, if the Bidder shall fail to fulfil or comply with all or any of the terms and conditions contained in the said Bidding Documents.

2. Any such written demand made by the Authority stating that the Bidder is in default of the due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents shall be final, conclusive and binding on the Surety Insurer.

3. We, the Surety Insurer , do hereby unconditionally undertake to pay the amounts due and payable under this Surety Bond without any demur, reservation, recourse, contest or protest and without any reference to the Bidder or any other person and irrespective of whether the claim of the Authority is disputed by the Bidder or not, merely on the first demand from

the Authority stating that the amount claimed is due to the Authority by reason of failure of the Bidder to fulfil and comply with the terms and conditions contained in the Bidding Documents including failure of the said Bidder to keep its Bid open during the Bid validity period as set forth in the said Bidding Documents for any reason whatsoever. Any such demand made on the Surety Insurer shall be conclusive as regards amount due and payable by the Surety Insurer under this Surety Bond. However, our liability under this Surety Bond shall be restricted to an amount not exceeding Rs. *** ** (Rupees *** ** only) .

4. This Surety Bond shall be irrevocable and remain in full force for a period of 120 (one hundred and twenty) days from the Bid Due Date and a claim period of 60 (sixty) days or for such extended period as may be mutually agreed between the Authority and the Bidder, and agreed to by the Surety Insurer, and shall continue to be enforceable till all amounts under this Surety Bond have been paid.

5. We, the Surety Insurer , further agree that the Authority shall be the sole judge to decide as to whether the Bidder is in default of due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents including, inter alia, the failure of the Bidder to keep its Bid open during the Bid validity period set forth in the said Bidding Documents, and the decision of the Authority that the Bidder is in default as aforesaid shall be final and binding on us, notwithstanding any differences between the Authority and the Bidder or any dispute pending before any Court, Tribunal, Arbitrator or any other Authority.

6. The Surety Bond shall not be affected by any change in the constitution or winding up of the Bidder or the Surety Insurer or any absorption, merger or amalgamation of the Bidder or the Surety Insurer with any other person.

7. In order to give full effect to this Surety Bond, the Authority shall be entitled to treat the Surety Insurer as the principal debtor. The Authority shall have the fullest liberty without affecting in any way the liability of the Surety Insurer under this Surety Bond from time to time to vary any of the terms and conditions contained in the said Bidding Documents or to extend time for submission of the Bids or the Bid validity period or the period for conveying acceptance of Letter of Award by the Bidder or the period for fulfillment and compliance with all or any of the terms and conditions contained in the said Bidding Documents by the said Bidder or to postpone for any time and from time to time any of the powers exercisable by it against the said Bidder and either to enforce or forbear from enforcing any of the terms and conditions contained in the said Bidding Documents or the securities available to the Authority, and the Surety Insurer shall not be released from its liability under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the said Bidder

or any other forbearance, act or omission on the part of the Authority or any indulgence by the Authority to the said Bidder or by any change in the constitution of the Authority or its absorption, merger or amalgamation with any other person or any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of releasing the Surety Insurer from its such liability.

8. Any notice by way of request, demand or otherwise hereunder shall be sufficiently given in writing or made if addressed to the Surety Insurer and sent by courier or by registered post or by certified e-mail to the Surety Insurer at the address or e-mail set forth herein.

9. We undertake to make the payment on receipt of your notice of claim on us addressed to name of Surety Insurer along with branch address and delivered at our above branch who shall be deemed to have been duly authorised to receive the said notice of claim.

10. It shall not be necessary for the Authority to proceed against the said Bidder before proceeding against the Surety Insurer and the Surety Bond herein contained shall be enforceable against the Surety Insurer, notwithstanding any other security which the Authority may have obtained from the said Bidder or any other person and which shall, at the time when proceedings are taken against the Surety Insurer hereunder, be outstanding or unrealised.

11. We, the Surety Insurer further undertake not to revoke this Surety Bond during its currency except with the previous express consent of the Authority in writing.

12. The Surety Insurer declares that it has power to issue this Surety Bond and discharge the obligations contemplated herein, the undersigned is duly authorised and has full power to execute this Surety Bond for and on behalf of the Surety Insurer.

13. For the avoidance of doubt, the Surety Insurer's liability under this Surety Bond shall be restricted to Rs. *** Crore (Rupees *** ** crore only) . The Surety Insurer shall be liable to pay the said amount or any part thereof only if the Authority serves a written claim on the Surety Insurer in accordance with paragraph 9 hereof, on or before [*** (indicate date falling 180 days after the Bid Due Date)].

14. This Surety Bond shall also be operatable at our ..... , branch at New Delhi, from whom, confirmation regarding the issue of this Surety Bond or extension/renewal thereof shall be made available on demand. In the contingency of this Surety Bond being invoked and payment hereunder

claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.

15. The Insurance Surety Bond shall be verified from the specific portal created for this purpose.

Signed and Delivered by ..... Company

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

(Signature of the Authorised Signatory)
(official seal)

Annexure III B

Annexure II of Schedule F

(See Clauses 9.1)

FORM OF SURETY BOND

[Performance Security/Additional Performance Security]

To

_____ (name of the authority)

_____ [address of Authority]

WHEREAS:

(A) _____ (the "Concessionaire") and the Chiarman, National Highways Authority of India (the "Authority") have entered into a concession agreement dated ..... (the "Agreement") whereby the Authority has agreed to the Concessionaire undertaking development and operation of ..... on Hybrid Annuity Mode, subject to and in accordance with the provision of the agreement

(B) The agreement requires the Concessionaire to furnish a performance security to the Authority in a sum of Rs ******* Crore (Rupees ******* Crore) (the " Surety Bond Amount") as security for due and faithful performance of its obligations, under and in accordance with the Agreement, during the Construction Period (as defined in the Agreement)

(C) We, ... through our branch at ..... (the **"Surety Insurer"**) have agreed to furnish this **Surety Bond** by way of Performance security.

NOW, THEREFORE, the **Surety Insurer** hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The **Surety Insurer** herby unconditionally and irrevocably guarantees the due and faithful performance of the Concessionaire's obligations during the Construction Period under and in accordance with the Agreement, and agrees and undertakes to pay to the Authority, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Concessionaire, such sum or sums up to an aggregate sum of the **Surety Bond** Amount as the Authority shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.

2. A letter from the Authority, under the hand of an officer not below the rank of General Manger in the National Highways Authority of India, that the Concessionaire has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Agreement shall

be conclusive, final and binding on the **Surety Insurer**. The **Surety Insurer** further agrees that the Authority shall be the sole judge as to whether the Concessionaire is in default in due and faithful performance of its obligations during the Construction Period under the Agreement and its decision that the Concessionaire is in default shall be final, and binding on the **Surety Insurer**, notwithstanding any differences between the Authority and the Concessionaire, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Contractor for any reason whatsoever.

3. In order to give effect to this **Surety Bond**, the Authority shall be entitled to act as if the **Surety Insurer** were the principal debtor and any change in the constitution of the Concessionaire and/or the **Surety Insurer**, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the **Surety Insurer** under this **Surety Bond**.

4. It shall not be necessary, and the **Surety Insurer** hereby waives any necessity, for the Authority to proceed against the Concessionaire before presenting to the Surety Insurer its demand under this **Surety Bond**.

5. The Authority shall have the liberty, without affecting in any manner the liability of the **Surety Insurer** under this **Surety Bond**, to vary at any time, the terms and conditions of the Agreement or to extend the time or period for the compliance with, fulfillment and/ or performance of all or any of the obligations of the Concessionaire contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Concessionaire, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the Authority, and the **Surety Insurer** shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Concessionaire or any other forbearance, indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the **Surety Insurer** from its liability and obligation under this **Surety Bond** and the **Surety Insurer** hereby waives all of its rights under any such law.

6. This **Surety Bond** is in addition to and not in substitution of any other **Surety Bond** or security now or which may hereafter be held by the Authority in respect of or relating to the Agreement or for the fulfillment, compliance and/or performance of all or any of the obligations of the Concessionaire under the Agreement.

7. Notwithstanding anything contained hereinbefore, the liability of the **Surety Insurer** under this **Surety Bond** is restricted to the **Surety Bond** Amount and

this **Surety Bond** will remain in force until the earlier of the 1st (first) anniversary of the Appointed Date or compliance of the conditions specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the **Surety Insurer** under this **Surety Bond,** no later than 6 (six) months from the date of expiry of this **Surety Bond,** all rights of the Authority under this **Surety Bond** shall be forfeited and the **Surety Insurer** shall be relieved from its liabilities hereunder.

8. The Performance Security shall cease to be in force and effect when the Concessionaire shall have expended on Project construction an aggregate sum not less than 30% (thirty per cent) of the Bid Project cost which is deemed to be Rs. **** cr. (Rupees ***** crore) for the purposes of this **Surety Bond**, and provided the Concessionaire is not in breach of this Agreement. Upon request made by the Concessionaire for release of the Performance Security alongwith the particulars required hereunder, duly certified by a statutory auditor of the Concessionaire, the Authority shall release the Performance Security forthwith.

9. The **Surety Insurer** undertakes not to revoke this **Surety Bond** during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this **Surety Bond** and the undersigned has full powers to do so on behalf of the **Surety Insurer**.

10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the **Surety Insurer** at its above referred branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.

11. This **Surety Bond** shall come into force with immediate effect and shall remain in force and effect for a period of one year and six months or until it is released earlier by the Authority pursuant to the provisions of the Agreement.

12. This **Surety Bond** shall also be operatable at our ..... Branch at New Delhi, from whom, confirmation regarding the issue of this bond or extension/renewal thereof shall be made available on demand in the contingency of this bond been invoked and payment thereunder claimed, the said branch shall accept such invocation on letter and make payment of amounts so demanded under the said invocation.

13. This **Surety Bond** is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

Signed and sealed this ..... Day of ....., 23 .....at .....

SIGNED, SEALED AND DELIVERED

For and on behalf of the surety insurer by:

(Signature)
(Name)
(Designation)
(Code Number)
(Address)

Annexure IV A

APPENDIX – VII

Surety Bond for Bid Security
(Refer Clauses 2.1.7 and 2.20.1)

S.B. No. Dated:

1. In consideration of you, *****, having its office at ****, (hereinafter referred to as the "Authority", which expression shall unless it be repugnant to the subject or context thereof include its, successors and assigns) having agreed to receive the Bid of ..... (a Company registered under Companies Act, 1956/2013) and having its registered office at ....., (and acting on behalf of its Consortium) (hereinafter referred to as the "Bidder" which expression shall unless it be repugnant to the subject or context thereof include its/their executors, administrators, successors and assigns), for the ****** on DBFOT basis (hereinafter referred to as "the Project") pursuant to the RFP Document dated ..... issued in respect of the Project and other related documents including without limitation the draft Concession Agreement (hereinafter collectively referred to as "Bidding Documents"), we (Name of the Surety Insurer) having our registered office at ..... and one of its branches at ..... (hereinafter referred to as the " Surety Insurer "), at the request of the Bidder, do hereby in terms of Clause 2.1.7 read with Clause 2.1.8 of the RFP Document, irrevocably, unconditionally and without reservation guarantee the due and faithful fulfilment and compliance of the terms and conditions of the Bidding Documents (including the RFP Document) by the said Bidder and unconditionally and irrevocably undertake to pay forthwith to the Authority an amount of Rs. ***** Crores (Rupees ***** only) (hereinafter referred to as the "Surety Bond") as our primary obligation without any demur, reservation, recourse, contest or protest and without reference to the Bidder, if the Bidder shall fail to fulfil or comply with all or any of the terms and conditions contained in the said Bidding Documents.

2. Any such written demand made by the Authority stating that the Bidder is in default of the due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents shall be final, conclusive and binding on the Surety Insurer.

3. We, the Surety Insurer , do hereby unconditionally undertake to pay the amounts due and payable under this Surety Bond without any demur, reservation, recourse, contest or protest and without any reference to the Bidder or any other person and irrespective of whether the claim of the Authority is disputed by the Bidder or not, merely on the first demand from the Authority stating that the amount claimed is due to the Authority by reason of failure of the Bidder to fulfil and comply with the terms and

conditions contained in the Bidding Documents including failure of the said Bidder to keep its Bid open during the Bid validity period as set forth in the said Bidding Documents for any reason whatsoever. Any such demand made on the Surety Insurer shall be conclusive as regards amount due and payable by the Surety Insurer under this Surety Bond. However, our liability under this Surety Bond shall be restricted to an amount not exceeding Rs. ***** Crores (Rupees ***** only) .

4. This Surety Bond shall be irrevocable and remain in full force for a period of 120 (one hundred and twenty) days from the Bid Due Date and a claim period of 60 (sixty) days or for such extended period as may be mutually agreed between the Authority and the Bidder, and agreed to by the Surety Insurer, and shall continue to be enforceable till all amounts under this Surety Bond have been paid.

5. We, the Surety Insurer , further agree that the Authority shall be the sole judge to decide as to whether the Bidder is in default of due and faithful fulfilment and compliance with the terms and conditions contained in the Bidding Documents including, inter alia, the failure of the Bidder to keep its Bid open during the Bid validity period set forth in the said Bidding Documents, and the decision of the Authority that the Bidder is in default as aforesaid shall be final and binding on us, notwithstanding any differences between the Authority and the Bidder or any dispute pending before any Court, Tribunal, Arbitrator or any other Authority.

6. The Surety Bond shall not be affected by any change in the constitution or winding up of the Bidder or the Surety Insurer or any absorption, merger or amalgamation of the Bidder or the Surety Insurer with any other person.

7. In order to give full effect to this Surety Bond, the Authority shall be entitled to treat the Surety Insurer as the principal debtor. The Authority shall have the fullest liberty without affecting in any way the liability of the Surety Insurer under this Surety Bond from time to time to vary any of the terms and conditions contained in the said Bidding Documents or to extend time for submission of the Bids or the Bid validity period or the period for conveying acceptance of Letter of Award by the Bidder or the period for fulfilment and compliance with all or any of the terms and conditions contained in the said Bidding Documents by the said Bidder or to postpone for any time and from time to time any of the powers exercisable by it against the said Bidder and either to enforce or forbear from enforcing any of the terms and conditions contained in the said Bidding Documents or the securities available to the Authority, and the Surety Insurer shall not be released from its liability under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the said Bidder or any other forbearance, act or omission on the part of the Authority or any indulgence by the Authority to the said Bidder or by any change in the

constitution of the Authority or its absorption, merger or amalgamation with any other person or any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of releasing the Surety Insurer from its such liability.

8. Any notice by way of request, demand or otherwise hereunder shall be sufficiently given or made if addressed to the Surety Insurer and sent by courier or by registered mail to the Surety Insurer at the address set forth herein.

9. We undertake to make the payment on receipt of your notice of claim on us addressed to name of Surety Insurer along with branch address and delivered at our above branch who shall be deemed to have been duly authorised to receive the said notice of claim.

10. It shall not be necessary for the Authority to proceed against the said Bidder before proceeding against the Surety Insurer and the Surety Bond herein contained shall be enforceable against the Surety Insurer, notwithstanding any other security which the Authority may have obtained from the said Bidder or any other person and which shall, at the time when proceedings are taken against the Surety Insurer hereunder, be outstanding or unrealised.

11. We, the Surety Insurer, further undertake not to revoke this Surety Bond during its currency except with the previous express consent of the Authority in writing.

12. The Surety Insurer declares that it has power to issue this Surety Bond and discharge the obligations contemplated herein, the undersigned is duly authorised and has full power to execute this Surety Bond for and on behalf of the Surety Insurer.

13. For the avoidance of doubt, the Surety Insurer's liability under this Surety Bond shall be restricted to Rs. **** Crore (Rupees *** ** crore only) . The Surety Insurer shall be liable to pay the said amount or any part thereof only if the Authority serves a written claim on the Surety Insurer in accordance with paragraph 9 hereof, on or before [*** (indicate date falling 180 days after the Bid Due Date)].

14. The Insurance Surety Bond shall be verified from the specific portal created for this purpose.

Signed and Delivered by ..... Company

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

(Signature of the Authorised Signatory)
(official seal)

Annexure IV B

Annexure I of Schedule F

(See Clauses 9.1)

FORM OF SURETY BOND

[Performance Security/Additional Performance Security]

To

_____ (name of the authority)

_____ [address of Authority]

WHEREAS:

(A) _____ (the "Concessionaire") and the Chairman, National Highways Authority of India (the "Authority") have entered into a concession agreement dated ..... (the "Agreement") whereby the Authority has agreed to the Concessionaire undertaking [Four-Laning of the**** section of National Highway No. **] on design, build, finance, operate and transfer ("DBFOT") basis, subject to and in accordance with the provision of the Agreement.

(B) The Agreement requires the Concessionaire to furnish a Performance Security to the Authority in a sum of Rs ******* Crore (Rupees ******* Crore) (the " Surety Bond Amount") as security for due and faithful performance of its obligations, under and in accordance with the Agreement, during the Construction Period (as defined in the Agreement)

(C) We, ... through our branch at ..... (the **"Surety Insurer"**) have agreed to furnish this **Surety Bond** by way of Performance security.

NOW, THEREFORE, the **Surety Insurer** hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The **Surety Insurer** herby unconditionally and irrevocably guarantees the due and faithful performance of the Concessionaire's obligations during the Construction Period, under and in accordance with the Agreement, and agrees and undertakes to pay to the Authority, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Concessionaire, such sum or sums up to an aggregate sum of the **Surety Bond** Amount as the Authority shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.

2. A letter from the Authority, under the hand of an officer not below the rank of General Manger in the National Highways Authority of India, that the Concessionaire has committed default in the due and faithful performance of

all or any of its obligations under and in accordance with the Agreement shall be conclusive, final and binding on the **Surety Insurer**. The **Surety Insurer** further agrees that the Authority shall be the sole judge as to whether the Concessionaire is in default in due and faithful performance of its obligations during the Construction Period under the Agreement and its decision that the Concessionaire is in default shall be final, and binding on the **Surety Insurer**, notwithstanding any differences between the Authority and the Concessionaire, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Contractor for any reason whatsoever.

3. In order to give effect to this **Surety Bond**, the Authority shall be entitled to act as if the **Surety Insurer** were the principal debtor and any change in the constitution of the Concessionaire and/or the **Surety Insurer**, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the **Surety Insurer** under this **Surety Bond**.

4. It shall not be necessary, and the **Surety Insurer** hereby waives any necessity, for the Authority to proceed against the Concessionaire before presenting to the Surety Insurer its demand under this **Surety Bond**.

5. The Authority shall have the liberty, without affecting in any manner the liability of the **Surety Insurer** under this **Surety Bond**, to vary at any time, the terms and conditions of the Agreement or to extend the time or period for the compliance with, fulfillment and/ or performance of all or any of the obligations of the Concessionaire contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Concessionaire, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the Authority, and the **Surety Insurer** shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Concessionaire or any other forbearance, indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the **Surety Insurer** from its liability and obligation under this **Surety Bond** and the **Surety Insurer** hereby waives all of its rights under any such law.

6. This **Surety Bond** is in addition to and not in substitution of any other **Surety Bond** or security now or which may hereafter be held by the Authority in respect of or relating to the Agreement or for the fulfillment, compliance and/or performance of all or any of the obligations of the Concessionaire under the Agreement.

7. Notwithstanding anything contained hereinbefore, the liability of the **Surety Insurer** under this **Surety Bond** is restricted to the **Surety Bond** Amount and this **Surety Bond** will remain in force until the earlier of the 1st (first) anniversary of the Appointed Date or compliance of the conditions specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the **Surety Insurer** under this **Surety Bond**, no later than 6 (six) months from the date of expiry of this **Surety Bond**, all rights of the Authority under this **Surety Bond** shall be forfeited and the **Surety Insurer** shall be relieved from its liabilities hereunder.

8. The Performance Security shall cease to be in force and effect when the Concessionaire shall have expended on Project construction an aggregate sum not less than 20% (twenty per cent) of the Total Project cost which is deemed to be Rs. **** cr. (Rupees ***** crore) for the purposes of this **Surety Bond**, and provided the Concessionaire is not in breach of this Agreement. Upon request made by the Concessionaire for release of the Performance Security alongwith the particulars required hereunder, duly certified by a statutory auditor of the Concessionaire, the Authority shall release the Performance Security forthwith.

9. The **Surety Insurer** undertakes not to revoke this **Surety Bond** during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this **Surety Bond** and the undersigned has full powers to do so on behalf of the **Surety Insurer**.

10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the **Surety Insurer** at its above referred branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.

11. This **Surety Bond** shall come into force with immediate effect and shall remain in force and effect for a period of one year and six months or until it is released earlier by the Authority pursuant to the provisions of the Agreement.

Signed and sealed this ..... Day of ....., 20 .....at .....

SIGNED, SEALED AND DELIVERED

For and on behalf of the Surety Insurer by:

(Signature)
(Name)
(Designation)
(Code Number)
(Address)

Notes :

(i) The Surety Bond should contain the name, designation and code number of the officer(s) signing the bond.

(ii) The address, telephone number and other details of the Head Office of the Surety Insurer as well as of issuing Branch should be mentioned on the covering letter of issuing Branch.

EFile No.RW/NH-34049/01/2020-S&R (B) (Computer No.-182692)
Government of India
Ministry of Road Transport & Highways
(S&R (P&B/New Technology) Zone)
Transport Bhawan, 1, Parliament Street, New Delhi-110001

1970.12

Dated: 24th June, 2025

CIRCULAR

To

1. The Chief Secretaries of all the State Governments/ UTs.
2. The Principal Secretaries/ Secretaries of all States/ UTs Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes).
3. The Chairman, National Highways Authority of India, G-5 & 6, Sector-10, Dwarka, New Delhi-110 075.
4. The Managing Director, NHIDCL, World Trade Centre, New Delhi-110029.
5. The Director General (Border Roads), Seema Sadak Bhawan, Ring Road, New Delhi-110 010.
6. All Engineers-in-Chief and Chief Engineers of Public Works Department of States/ UTs/ Road Construction Department/ Highways Departments (dealing with National Highways and other centrally sponsored schemes).
7. The Secretary General, Indian Roads Congress
8. The Director, IAHE, Noida, UP.
9. All CE-ROs, ROs and ELOs of the Ministry.

Subject: - Mandatory Use of Precast Concrete Components in National Highways Projects - Reg.

Ref: i) File No.RW/NH-34049/01/2020-S&R (B) dated 08.04.2022

Madam/Sir,

Ministry has issued 'National Highway Precast Concrete Policy' cited under reference. Need was felt to accelerate the use of precast concrete components to harness the benefits of precast technology in construction of National Highways, Expressways & Other Centrally Sponsored Road Projects. Use of Precast concrete elements in built-up area/urban municipal limits has several benefits such as reduced pollution, minimise user time delay, etc. In view of the same, following policy decisions have been taken:

2. Schedule 'B' or Schedule 'C' of the Contract Agreement for projects costing more than Rs. 300 crore (civil cost) shall have the provision of mandatory use of precast concrete components (may be either factory-made or precast at project site, in contractor's own casting yard). The schedules should also specify the drawings, specifications and the relevant standards as applicable for each element.
3. The contractor may be allowed to use the factory made precast elements subject to proper quality certification by the factory as per legal norms of the industry or be allowed to cast in the yard at site in accordance with the agreement. Authority Engineer/Independent Engineer of the Project shall approve the factory after duly inspection.
4. The use of precast concrete elements should initially be taken up for non-critical components of highway projects with total civil cost of over Rs 300 crore on mandatory basis. The main structures such as bridges and pavement should be only in accordance

Bidur Kant Jha

with the specifications of the contract agreement. The identified items/finished products which shall be mandatorily precast concrete (PCC/RCC/PSC as applicable) are as under:

i. Box Culverts of specified sizes
ii. Storm Water Drain cum footpath
iii. Chute drain with dissipation chamber
iv. Boundary wall/Toe Wall/fence
v. RCC Crash Barrier/RS Wall Friction Slab-cum-Crash Barrier
vi. Kerbs/Channels
vii. Pedestrian Railing/Median Railing

The proposal for sanction should accompany the sheet showing the extent of usage of precast elements mentioned above estimated in terms of amount, quantity in specified units and percentage of total quantity and amount proposed in the project.

5. Design, fabrication/casting and launching/installation of pre-cast concrete components will be done as per relevant IRC/BIS standards/guidelines/codes such as IRC: 112/IRC: 122/IS: 456/IS: 15916 furthermore taking into consideration expected handling/lifting stresses, etc. Any international guidelines such as AASHTO, FHWA (Accelerated Bridge Construction Guidelines), Japan codes, American Precast concrete Association (PCA), World Roads Congress, Euro/British/ French/Swiss/German, etc., may be followed in case of any gaps in IRC/BIS standards/ guidelines/codes till such time IRC/BIS guidelines are developed.

6. Design & Drawings of the proposed pre-cast concrete components shall be checked & approved by the AE/IE's of the Project. Any clarification sought by Engineer shall be obtained by the Contractor from the manufacturer and submit to Engineer for his satisfaction. AE/IE shall also conduct review of quality control documents in respect of factory manufactured materials/finished products, etc. as per IRC:SP:112.The precast concrete components shall be produced in accordance with the approved drawings.

7. Standardization of design/drawings/construction methodology of precast concrete components (whether procured from precast factory/contractor's own casting yard) is the key for its wider adoption and to take advantage of volumes and repetitive use of molds. Therefore, It is beneficial to keep the sizes of different precast concrete components as uniform as possible. All executing Agencies should maintain the as-design and as-built drawings and construction methodology for all such elements as repository in Data Lake of NHAI for record and reference. The details (including quantity and names of manufacturers) of the ex-situ pre-cast elements used and a quality review on standardised parameters shall be uploaded on the Datalake of NHAI for reference.

8. DPR should be prepared considering factory manufactured concrete for the identified components and accordingly rate analysis and cost should be estimated. In case of any gaps in rate of items, CPWD/Delhi Schedule of Rates may be followed.

9. Quality Assurance & Quality Control and Testing should be done as specified in NHAI Policy Circular dated 20th February 2025 and IS: 15916 including at the manufacturers facilities in case of ex-situ pre-cast elements.

10. Minimum facilities, Certifications protocol and Quality Control & Quality Assurance for Off-Site Manufacturing of Precast Concrete Components are given in **Annexure-1**, which shall be scrupulously followed to ensure quality of products. Certification shall not be required for pre-casting being done at Project site.

11. **This circular shall be made applicable for the new projects for which bids as received 90days after the issue of this circular.**

Bidur Kant ILA

12. It is requested that the contents of the circular may be brought into the notice of all concerned for needful compliance.

13. This issues with the approval of the Competent Authority.

Yours sincerely,
Bidur Kant Jha
24/06/2025
(Bidur Kant Jha)
Director
(New Technology for Highway development)
For DG (RD) & SS

Copy to:

1. All CEs in the Ministry of Road Transport & Highways
2. All ROs of the Ministry of Road Transport & Highways
3. All CE(NH) of PWD/R&B dealing with National Highways
4. Technical circular file of S&R (P&B) Section
5. NIC-for uploading on Ministry's website under "What's new" & "Comprehensive Compendium Circulars with CODE 1970.12.

Copy for kind information to:

1. PS to Hon'ble Minister (RT&H)
2. PS to Hon'ble MOS (RT&H)
3. Sr. PPS to Secretary (RT&H)
4. Sr. PPS to DG (RD) & SS
5. Sr. PPS/ PPS to Addl. Secretary (Road Safety)/ Addl. Secretary (RT&H & LA)
6. Sr. PPS/ PPS to AS&FA
7. Sr. PPS/ PPS to all ADG (KB)/ ADG(SC)/ ADG(RS)
8. Sr. PPS/ PPS to JS (RT&MVL)/ JS (EIC) / JS (Logistics)/ JS (NHIDCL)

Annexure-1

Minimum Facilities, Certification and QA&QC for Off-Site Manufacturing of Precast Concrete Components

DEFINITIONS:

BIS 15916:2020 as per Clause 11.1.2 Manufacture

The Manufacture of the Components can be done in a factory for the Commercial production established at the focal point based on the market potential or in a site Pre-casting yard set up at or near the site of work.

BIS 15916:2020 As per Clause 11.1.2.1 Factory prefabrication

Factory prefabrication is resorted to in a factory for the commercial production for the manufacture of standardized components on a long term basis. It is a capital intensive production where work is done throughout the year preferably under a closed shed to avoid effects of seasonal variations. High level of mechanization can always be introduced in this system where the work can be organized in a factory-like manner with the help of a constant team of workmen.

BIS 15916:2020 As Per Clause 11.1.2.2 Site prefabrication

In this scheme, prefabricated components are produced at site or as near the site of work as possible.

This system is normally adopted for a specific job order of large scale that will continue over a long period. This option provides definite economy with respect to cost of transportation thereby improving productivity. Even though temporary, the factory established should be comparable to high capacity permanent factory with equivalent state-of-the-art degree of mechanization and quality control. Under this category there are two types, that is, semi-mechanized and fully-mechanized.

a) Semi-mechanized – The work is normally carried out in open space with locally available labour force or skilled labour force depending on project complexity. The equipment/machinery used may be minor in nature and moulds are of mobile or stationary in nature.

b) Fully-mechanized – The work is carried out under a shed with skilled labour. The equipment used is similar to those of factory production. This type of precast yard will be set up for the production of precast components of high quality with a high rate of production.

i. The Precast Manufacturing Facility shall have the following facilities:
- Fully automatic RMC plant duly certified by BIS/QCI/ RCMA(Ready Mixed Concrete Manufacturers Association)
- MS Moulds duly designed & inspected for Product Tolerances prescribed as per methodology approved in BIS 15916
- Arrangement for steam curing,
- Mechanical handling of Concrete and Pre-cast components,
- Bar bending machines,
- Stacking yard for Raw material, Stores Finished Goods, with OH Cranes of adequate facilities
- Water Treatment Plant & RO plant for water purification

Bidder Seal & Sign.

- Recycling of Water Aggregates

ii. Precast factory shall have well-equipped laboratory at factory itself for internal quality control. Laboratory shall have ISO: 17025 "General requirements for the competence of testing and calibration laboratories" certification granted by NABL or other approved certification bodies (CBs) However, such certification shall not be insisted upon for Project site laboratory. Each equipment shall have valid calibration certificate. The laboratory shall be manned by a Quality Manager with min 10 yrs of experience, Inspectors of Concrete, REbars, Formwork & Safety with min 3 years' experience.

iii. The factory shall carry out Quality Control Tests on the Materials, Processes and Works to the frequency stipulated in Project's Specification with digitalisation of QC Process.

iv. Precast Concrete Factory shall employ a third-party PMC for QA&QC for the supervision of daily activities/testing conducted at the factory. All the tests shall be witnessed by the personnel of the PMC & recorded using digitalisation of QC Process.

v. PMC/AE/IE will do surprise check & audit the plant & its process as and when required by Authority.

vi. Precast factory shall have following valid certifications granted by BIS/QCI/other approved CBs:

- ISO 9001:2015 Quality Management System
- ISO 14001:2015 Environmental Management System
- ISO 45001:2018 Occupational Health & Safety Management System

vii. Precast Concrete Factory shall have also valid products certification along with license for ISI label marking on the precast concrete components by BIS. This is applicable only for the products for which BIS does the certification.

viii. On each of the precast concrete components bar code/QR code should also be engraved for traceability of lot, other QA&QC tests, etc.

ix. Manufacturers Test Certificate for each lot of the products shall be provided by Precast Concrete factory, which shall be submitted by the Contractor along with bills.

x. Plant also must have a Skill training facility for Interns in the Plant based on capacity of plant.

xi. Contractor/Concessionaire to satisfy himself about the quality of products as per relevant IRC specifications/BIS standards & comments on quality of products shall be hoisted on Data Lake of MoRT&H/NHAI for wider information to avoid recurrent/frequent tests of products by individual contractors on each occasion/order. Product quality certification shall be by the user himself.

Bidur Kant JLO.

No. NH-35014/35/2020-H-Part(II) (E-196662)
Government of India
Ministry of Road Transport & Highways
(Highways Section)
Transport Bhawan, 1, Parliament Street, New Delhi-110001

Dated: 16 December, 2021

Office Memorandum

Subject: (i) Changes in standard RFP & MCA of EPC, BOT(Toll) and HAM project in order to ensure compliance of PPP-MII Order,2017 and Rule 144 (xi) of GFR, 2017

(ii) Change in the clause no. 2.2.2.1 of the standard RFP of EPC to include all awarded works for determination of available BID Capacity.

Consequent upon the decision taken in the meeting of the Inter Ministerial Committee (IMC) held under the chairmanship of Secretary(RT&H) on 15.11.2021 on the above subject, NHAI has issued following 3 policy circulars (**copies enclosed**) incorporating the corresponding changes in standard RFP & MCA of EPC, BOT (Toll) and HAM project :

(i) **Policy Circular no. 11.32/2021 dated 07th December, 2021:** Amendment in the Standard Request for Proposal (RFP) and Standard EPC Agreement for National Highways and other centrally sponsored road projects proposed to be implemented on EPC mode of contract to make procurement compliant of Public Procurement (Preference to Make in India) Order, 2017 , Rule 144 (xi) of GFR and Changes in determination of Bid Capacity .

(ii) **Policy Circular no. 11.33/2021 dated 07th December, 2021 :** Amendment in the Combined Single Stage Request for Proposal (RFP) and Model Concession Agreement for National Highways and other centrally sponsored road projects proposed to be implemented on BOT(Toll) mode of contract to make procurement compliant of Public Procurement (Preference to Make in India) Order, 2017 , Rule 144 (xi) of GFR.

(iii) **Policy Circular no. 11.34/2021 dated 07th December, 2021 :** Amendment in the Standard Request for Proposal (RFP) and Model Concession Agreement for National Highways and other centrally sponsored road projects proposed to be implemented on Hybrid Annuity Model (HAM) mode of contract to make procurement compliant of Public Procurement (Preference to Make in India) Order, 2017 , Rule 144 (xi) of GFR.

2. It is conveyed that the above changes are applicable for projects implemented on the aforesaid modes of contract by all the executing agencies of MoRTH.

3. This issues with the approval of the competent authority.

Encl : As above

(Rajesh Gupta)
Director (LA)
Telephone No. 011-23718527

To

1. DG(RD) & SS, MoRTH
2. MD, NHIDCL

Copy to:

The Chairperson, NHAI

Copy also to:

1. Sr. PPS to Secretary (RT&H)
2. Sr. PPS to Additional Secretary (Highways)
3. Director (Technical), NIC, MoRTH to upload this OM on the website of MoRTH

1604658/2021/O/o JS (Highways)

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन और राजमार्ग मंत्रालय)
National Highways Authority of India
(Ministry of Road Transport and Highways)
जी-5 एवं 6, सेक्टर-10, द्वारका, नई दिल्ली-110075
G-5 & 6, Sector-10, Dwarka, New Delhi-110075

दूरभाष / Phone : 91-11-25074100/25074200
फैक्स / Fax : 91-11-25093507 / 25093514

NHAI/Policy Guidelines/ Standard Document/2021
Policy Circular no. 11.32/2021 dated 07th December, 2021
(Decision taken on e-office file No. NHAI/CMD/Misc/2021Comp. No.85726)

Sub.: Amendment in the Standard Request for Proposal (RFP) and Standard EPC Agreement for National Highways and other centrally sponsored road projects proposed to be implemented on EPC mode of contract to make procurement compliant of Public Procurement (Preference to Make in India) Order 2017, Rule 144 (xi) of GFR and Changes in determination of Bid Capacity- reg.

It may be mentioned that an Inter - Ministerial Committee meeting was held under the chairmanship of Secretary (RT&H) on 15.11.2021 to discuss the changes in Model RFP of EPC, BOT(Toll) and HAM project in order to ensure compliance of Public Procurement (Preference to Make in India) Order 2017 (amended on 16.09.2020), Rule 144(xi) of GFR, 2017 and changes in clause 2.2.2.1 of Model RFP of EPC document regarding determination of Bid Capacity. Based on the decision taken during the meeting, following amendments shall be made in the Standard Request for Proposal (RFP) and Standard EPC Agreement for National Highways and other centrally sponsored road projects proposed to be implemented on EPC mode of contract:

A. Amendment in the Standard Request for Proposal (RFP) issued by MoRTH vide letter no. RW/NH-37010/4/2010-EAP (Printing) Vol.-IV dated 05.03.2019

Sl. No.	Clause no.	Existing Provision	Proposed Provision
1	1.2.7	Generally, the Lowest Bidder shall be the selected Bidder. In case such Lowest Bidder withdraws or is not selected for whatsoever reason except the reason mentioned in Clause 2.1.12 (b) (4), the Authority shall annul the Bidding Process and invite fresh BIDs.	Generally, the Lowest Bidder shall be the selected Bidder. In case such Lowest Bidder withdraws or is not selected for whatsoever reason except the reason mentioned in Clause 2.1.12 (b) (4) & Clause 3.3.1, the Authority shall annul the Bidding Process and invite fresh BIDs.
2	1.2.10	New clause	A Bidder is required to submit, along with its technical BID, a self- certification that the item offered meets the local content requirement for 'Class - I local Supplier' / 'Class - II local Supplier', as the case may be. The self-certification shall also have details of the location(s) at which the local value addition is made. In case, bidder has not submitted the aforesaid certification the bidder will be treated as 'Non- Local Supplier'. In the above pretext, the Class - I Local Supplier, Class - II Local Supplier and the Non- Local Supplier are defined as under:

1604658/2021/O/o JS (Highways)

Sl. No.	Clause no.	Existing Provision	Proposed Provision
			(i) 'Class - I local Supplier' means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content as prescribed for 'Class - I local Supplier' under this RFP. The 'local content' requirement to categorize a supplier as 'Class - I local Supplier' is minimum 50%. (ii) 'Class - II local Supplier' means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content as prescribed for 'Class - II local Supplier' under this RFP. The 'local content' requirement to categorize a supplier as 'Class - II local Supplier' is minimum 20%. (iii) 'Non - local Supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than that prescribed for 'Class - II local supplier' under this RFP. (iv) 'Local content' means the amount of value added in India which shall be the total value of item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent In case of procurement for a value in excess of Rs. 10 crores, the 'Class - I local supplier' / 'Class - II local supplier' shall provide a certificate from the statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.
3	2.1.15	New Clause	All Orders of Ministry of Finance/DPIIT/any other Government agencies, as applicable and prevalent on the date of LOA, shall be applicable.
4	2.1.16	New Clause	Entities of countries which have been identified by Ministry of Road Transport & Highways as not allowing Indian companies to participate in their Government procurement for any item related to

1604658/2021/O/o JS (Highways)

Sl. No.	Clause no.	Existing Provision	Proposed Provision
			Ministry of Road Transport & Highways shall not be allowed to participate in Government procurement in India for all items related to Ministry of Road Transport & Highways, except for the list of items published by the Ministry of Road Transport & Highways permitting their participation.
5	2.2.1 (d)	New Clause	For determining the eligibility of Bidder from a country which shares a land border with India the following shall apply: (i) Any Bidder from a country which shares a land border with India will be eligible to bid, only if the Bidder is registered with the Competent Authority, specified in Annexure-I of Order (Public Procurement No. 1) issued by Ministry of Finance, Department of Expenditure Public Procurement Division vide F. No. 6/18/2019-PPD, dated 23rd July 2020, which shall form an integral part of RFP and DCA (Copy enclosed). (ii) **"Bidder from a country which shares a land border with India"** means: a) An entity incorporated, established or registered in such a country, or b) A subsidiary of an entity incorporated, established or registered in such a country; or c) An entity substantially controlled through entities incorporated, established or registered in such a country; or d) An entity whose beneficial owner is situated in such a country; or e) An Indian (or other) agent of such an entity; or f) A natural person who is a citizen of such a country; or g) A Consortium or joint venture where any member of the consortium or joint venture falls under any of the above. (iii). **Beneficial owner for the purpose of (ii) above means:** 1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more judicial person, has a controlling ownership interest or who exercises control through other means.

Sl. No.	Clause no.	Existing Provision	Proposed Provision
			Explanation: a) "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent of shares or capital or profits of the company. b) "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholding agreements or voting agreements; 2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or one or more juridical person: has ownership of entitlement to more than fifteen percent of capital or profits of the partnership; 3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individual; 4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official; 5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership. (iv). An Agent is a person employed to do any act for another, or to represent another in dealings with third person.

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Sl. No.	Clause no.	Existing Provision	Proposed Provision
			(v) The Selected Bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority. The definition of "contractor from a country which shares a land border with India" shall be as in Clause 2.2.1(d)(ii) above. **Certificate regarding Compliance:** A certificate on the letterhead of the Bidder shall be required to be submitted by the bidders certifying the following: "I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from a country or, if from such a country, has been registered with the Competent Authority as defined in Public Procurement Order no. F.no.6/18/2019- PPD dated 23rd July 2020. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered." It may be noted that in case the above certification is found to be false, this would be a ground for immediate rejection of Bid/termination and further legal action in accordance with law. **Validity of Registration:** In respect of RFP, registration should be valid at the time of submission of bids and at the time of acceptance of bids. If the Bidder was validly registered at the time of acceptance, registration shall not be a relevant consideration during contract execution.

Sl. No.	Clause no.	Existing Provision	Proposed Provision
6	2.2.2.1	Bidders who inter alia meet the minimum qualification criteria will be qualified only if their available BID capacity is more than the total BID value (value as per Clause 1.1.1). The available BID capacity will be calculated as per following, based on information mentioned at Annexure-VI of Appendix-IA: Assessed Available BID capacity = (A*N*2.5 - B + C), Where N= Number of years prescribed for completion of work for which Bid is invited. A = Maximum value of civil engineering works excluding the amount of bonus received, if any, in respect of EPC Projects executed in any one year during the last five years (updated to the price level of the year indicated in table at Note- 3 below) taking into account the completed as well as works in progress. The EPC projects include turnkey project/ Item rate contract/ Construction works. **B = Value (updated to the price level of the year indicated in table at Note-3 below) of existing commitments, works for which Appointed Date/ Commencement Date has been declared or on-going works to be completed during the period of completion of the works for which BID is invited. For the sake of clarification, it is mentioned that works for which LOA has been issued but Appointed Date/ Commencement Date not declared as on Bid Due Date shall not be considered while calculating value of B.** C = The amount of bonus received, if any, in EPC Projects during the last 5 years (updated to the price level of the year indicated in table at Note-3 below). Note: **1. The Statement showing the value of all existing commitments, works for which Appointed Date/ Commencement Date has been declared** and ongoing works as well as the stipulated period of completion remaining for each of the works listed should be countersigned by the Client or its Engineer-in-charge not below the rank of Executive Engineer or equivalent in respect	Bidders who *inter alia* meet the minimum qualification criteria will be qualified only if their available BID capacity is more than the total BID value (value as per Clause 1.1.1). The available BID capacity will be calculated as per following, based on information mentioned at Annexure-VI of Appendix-IA: Assessed Available BID capacity = (A*N*2.5 - B + C), Where N= Number of years prescribed for completion of work for which Bid is invited. A = Maximum value of civil engineering works excluding the amount of bonus received, if any, in respect of EPC Projects executed in any one year during the last five years (updated to the price level of the year indicated in table at Note- 3 below) taking into account the completed as well as works in progress. The EPC projects include turnkey project/ Item rate contract/ Construction works. **B = Value (updated to the price level of the year indicated in table at Note-3 below) of existing commitments, works for which the bidder has emerged as the winner of the bids or on-going works to be completed during the period of completion of the works for which BID is invited. For the sake of clarification, it is mentioned that works for which bidder has emerged as the winner of the bids but LOA has not been issued as on the day before opening the financial bids shall also be considered while calculating value of B.** C = The amount of bonus received, if any, in EPC Projects during the last 5 years (updated to the price level of the year indicated in table at Note-3 below). Note: **1. The Statement showing the value of all existing commitments, works for which the contractor has emerged as the winner of the bid as given by bidder and** ongoing works as well as the stipulated period of completion remaining for each of the works listed should be countersigned by the Client or its Engineer-in-charge not below

<table>
<tr><th>Sl. No.</th><th>Clause no.</th><th>Existing Provision</th><th>Proposed Provision</th></tr>
<tr><td></td><td></td><td>of EPC Projects or Concessionaire / Authorised Signatory of SPV in respect of BOT Projects and verified by Statutory Auditor.

2. The amount of bonus received, if any, in EPC Projects should be countersigned by the Client or its Engineer-in-charge not below the rank of Executive Engineer or equivalent in respect of EPC Projects.

3. The factor for the year for updation to the price level is indicated as under:<table><tr><td>Year</td><td>Year-1</td><td>Year-2</td><td>Year-3</td><td>Year-4</td><td>Year-5</td></tr><tr><td>Up-dation factor</td><td>1.00</td><td>1.05</td><td>1.10</td><td>1.15</td><td>1.20</td></tr></table></td><td>the rank of Executive Engineer or equivalent in respect of EPC Projects or Concessionaire / Authorised Signatory of SPV in respect of BOT Projects and verified by Statutory Auditor.

2. The amount of bonus received, if any, in EPC Projects should be countersigned by the Client or its Engineer-in-charge not below the rank of Executive Engineer or equivalent in respect of EPC Projects.

3. The factor for the year for updation to the price level is indicated as under:<table><tr><td>Year</td><td>Year-1</td><td>Year-2</td><td>Year-3</td><td>Year-4</td><td>Year-5</td></tr><tr><td>Up-dation factor</td><td>1.00</td><td>1.05</td><td>1.10</td><td>1.15</td><td>1.20</td></tr></table>
4. The Bid capacity status of the bidder to be updated as on the day before opening the financial bids.</td></tr>
<tr><td>7</td><td>3.3.1</td><td>Subject to the provisions of Clause 2.16.1, the Bidder whose BID is adjudged as responsive in terms of Clause 3.1.6 and who quotes lowest price shall be declared as the selected Bidder (the "Selected Bidder").</td><td>Subject to the provisions of Clause 2.16.1, the Bidder whose BID is adjudged as responsive in terms of Clause 3.1.6. The bidder shall be declared as the selected Bidder (the "Selected Bidder") in pursuance to the procedure defined hereunder:

(i) Among all the responsive bidder, the lowest bidder will be termed as L1. If L1 is 'Class -I Local Supplier', the contract will be awarded to L1.

(ii) If L1 is not 'Class - I local supplier', the lowest bidder among the 'Class - I local supplier', will be invited to match L1 price subject to Class - I local supplier's quoted price falling within the margin of purchase preference, and the contract will be awarded to such 'Class - I local supplier' subject to matching the L1 price.

(iii) In case such lowest eligible 'Class - I local supplier' fails to match the L1 price, the 'Class - I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the 'Class - I local</td></tr>
</table>

Sl. No.	Clause no.	Existing Provision	Proposed Provision
			supplier' within the margin of purchase preference matches the L1 price, the contract shall be awarded to the L1 bidder. 'Margin of purchase preference' means the maximum extent to which the price quoted by a 'Class - I local supplier' may be above the L1 for the purpose of purchase preference. The margin of purchase preference shall be 20%.
8	2.11.1:	New Clause <u>Self-Certification</u> (to be inserted below the heading Financial Bid)	Self- certification by the Bidder that its Bid meets the Local Content requirement for 'Class - I Local supplier'/ 'Class - II Local supplier', as the case may be. The Self-certification shall also have details of the location(s) at which the local value addition is made. In case, bidder do not submit the aforesaid Certification, the bidder will be summarily treated as 'Non Local Supplier'. In case of procurement for a value in excess of Rs. 10 crores, the 'Class - I Local supplier' / 'Class - II Local supplier' shall have to provide a Certificate from the Statutory Auditor or Cost Auditor of the Company (in case of Companies) or from a practicing Cost Accountant or practicing Chartered Accountant (in respect of Suppliers other than Companies) giving the percentage of Local Content upon Construction of the Project.

B. Amendment in the Standard EPC Agreement issued by MoRTH vide letter no. RW/NH-37010/4/2010-EAP(Printing) Vol.-IV dated 05.03.2019

Sl. No.	Clause no.	Existing Provision	Proposed Provision
1	4.14	New Clause **4.14 Obligations relating to Local Content**	The Contractor [Class I Local Supplier/ Class II Local Supplier/ Non Local Supplier] undertakes to ensure minimum Local Content in the Project Highway of at least [50%/20%] duly complying with the provisions of Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India Order No. P-45021/2/2017-PP (BE- II) dated September 16, 2020, as amended or modified till Bid Due Date and the provisions under Rule 144(xi) of GFR, 2017.

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2. This issues with the approval of Competent Authority.

07/12/2021
(Sanjay Kumar Patel)
General Manager (Coord.)

To:

All Officers of NHAI HQ/ ROs/ PIUs/ CMUs/ Site Offices

Copy to:

1. Hindi Officer for translation in Hindi.
2. Library for hosting the circular on library site.
3. Web Admin for circulation.

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F.No.6/18/2019-PPD
Ministry of Finance
Department of Expenditure
Public Procurement Division

161, North Block,
New Delhi
23rd July, 2020

Office Memorandum

Subject: Insertion of Rule 144 (xi) in the General Financial Rules (GFRs), 2017

Rule 144 of the General Financial Rules 2017 entitled 'Fundamental principles of public buying', has been amended by inserting sub-rule (xi) as under:

Notwithstanding anything contained in these Rules, Department of Expenditure may, by order in writing, impose restrictions, including prior registration and/or screening, on procurement from bidders from a country or countries, or a class of countries, on grounds of defence of India, or matters directly or indirectly related thereto including national security; no procurement shall be made in violation of such restrictions.

(Sanjay Prasad)
Joint Secretary (PPD)
Email ID: js.pfc2.doe@gov.in
Telephone: 011-23093882

To,
(1) Secretaries of All Ministries/ Departments of Government of India
(2) Chief Secretaries/ Administrators of Union Territories/ National Capital Territory of Delhi

1604658/2021/O/o JS (Highways)

F.No.6/18/2019-PPD
Ministry of Finance
Department of Expenditure
Public Procurement Division

161, North Block,
New Delhi
23rd July, 2020

Order (Public Procurement No. 1)

Subject: Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017

Attention is invited to this office OM no. 6/18/2019-PPD dated 23rd July 2020 inserting Rule 144 (xi) in GFRs 2017. In this regard, the following is hereby ordered under Rule 144 (xi) on the grounds stated therein:

Requirement of registration

1. Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority, specified in **Annex I.**

2. This Order shall not apply to (i) cases where orders have been placed or contract has been concluded or letter/notice of award/ acceptance (LoA) has been issued on or before the date of this order; and (ii) cases falling under **Annex II**.

Transitional cases

3. Tenders where no contract has been concluded or no LoA has been issued so far shall be handled in the following manner: -

   a) *In tenders which are yet to be opened, or where evaluation of technical bid or the first exclusionary qualificatory stage (i.e. the first stage at which the qualifications of tenderers are evaluated and unqualified bidders are excluded) has not been completed*: No contracts shall be placed on bidders from such countries. Tenders received from bidders from such countries shall be dealt with as if they are non-compliant with the tender conditions and the tender shall be processed accordingly.

   b) *If the tendering process has crossed the first exclusionary qualificatory stage*: If the qualified bidders include bidders from such countries, the

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entire process shall be scrapped and initiated *de novo*. The *de novo* process shall adhere to the conditions prescribed in this Order.

c) As far as practicable, and in cases of doubt about whether a bidder falls under paragraph 1, a certificate shall be obtained from the bidder whose bid is proposed to be considered or accepted, in terms of paras 8, 9 and 10 read with para 1 of this Order.

Incorporation in tender conditions

4. In tenders to be issued after the date of this order, the provisions of paragraph 1 and of other relevant provisions of this Order shall be incorporated in the tender conditions.

Applicability

5. Apart from Ministries / Departments, attached and subordinate bodies, notwithstanding anything contained in Rule 1 of the GFRs 2017, this Order shall also be applicable
   a. to all Autonomous Bodies;
   b. to public sector banks and public sector financial institutions; and
   c. subject to any orders of the Department of Public Enterprises, to all Central Public Sector Enterprises; and
   d. to procurement in Public Private Partnership projects receiving financial support from the Government or public sector enterprises/ undertakings.
   e. Union Territories, National Capital Territory of Delhi and all agencies/ undertakings thereof

Definitions

6. "Bidder" for the purpose of this Order (including the term 'tenderer', 'consultant' 'vendor' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency, branch or office controlled by such person, participating in a procurement process.

7. "Tender" for the purpose of this Order will include other forms of procurement, except where the context requires otherwise.

8. "Bidder from a country which shares a land border with India" for the purpose of this Order means

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a) An entity incorporated, established or registered in such a country; or
b) A subsidiary of an entity incorporated, established or registered in such a country; or
c) An entity substantially controlled through entities incorporated, established or registered in such a country; or
d) An entity whose *beneficial owner* is situated in such a country; or
e) An Indian (or other) agent of such an entity; or
f) A natural person who is a citizen of such a country; or
g) A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

9. "Beneficial owner" for the purpose of paragraph 8 above will be as under:

(i) In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person(s), has a controlling ownership interest or who exercises control through other means.
Explanation—

a. "Controlling ownership interest" means ownership of, or entitlement to, more than twenty-five per cent of shares or capital or profits of the company;

b. "Control" shall include the right to appoint the majority of the directors or to control the management or policy decisions, including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;

(ii) In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

(iii) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

(iv) Where no natural person is identified under (i) or (ii) or (iii) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;

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(v) In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

10. "Agent" for the purpose of this Order is a person employed to do any act for another, or to represent another in dealings with third persons.

Sub-contracting in works contracts

11. In works contracts, including turnkey contracts, contractors shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority. The definition of "contractor from a country which shares a land border with India" shall be as in paragraph 8 above. This shall not apply to sub-contracts already awarded on or before the date of this Order.

Certificate regarding compliance

12. A certificate shall be taken from bidders in the tender documents regarding their compliance with this Order. If such certificate given by a bidder whose bid is accepted is found to be false, this would be a ground for immediate termination and further legal action in accordance with law.

Validity of registration

13. In respect of tenders, registration should be valid at the time of submission of bids and at the time of acceptance of bids. In respect of supply otherwise than by tender, registration should be valid at the time of placement of order. If the bidder was validly registered at the time of acceptance / placement of order, registration shall not be a relevant consideration during contract execution.

Government E-Marketplace

14. The Government E-Marketplace shall, as soon as possible, require all vendors/ bidders registered with GeM to give a certificate regarding compliance with this Order, and after the date fixed by it, shall remove non-compliant entities from GeM unless/ until they are registered in accordance with this Order.

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Model Clauses/ Certificates

15. Model Clauses and Model Certificates which may be inserted in tenders / obtained from Bidders are enclosed as **Annex III**. While adhering to the substance of the Order, procuring entities are free to appropriately modify the wording of these clauses based on their past experience, local needs etc. without making any reference to this Department.

(Sanjay Prasad)
Joint Secretary (PPD)
Email ID: js.pfc2.doe@gov.in
Telephone: 011-23093882

To

(1) Secretaries of All Ministries/ Departments of Government of India for information and necessary action. They are also requested to inform these provisions to all procuring entities.

(2) Secretary, Department of Public Enterprises with a request to immediately reiterate these orders in respect of Public Enterprises.

(3) Secretary DPIIT with a request to initiate action as provided under Annex I

(4) Chief Secretaries/ Administrators of Union Territories/ National Capital Territory of Delhi

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Annex I: Competent Authority and Procedure for Registration

A. The Competent Authority for the purpose of registration under this Order shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT)*.

B. The Registration Committee shall have the following members*:

i. An officer, not below the rank of Joint Secretary, designated for this purpose by DPIIT, who shall be the Chairman;
ii. Officers (ordinarily not below the rank of Joint Secretary) representing the Ministry of Home Affairs, Ministry of External Affairs, and of those Departments whose sectors are covered by applications under consideration;
iii. Any other officer whose presence is deemed necessary by the Chairman of the Committee.

C. DPIIT shall lay down the method of application, format etc. for such bidders as stated in para 1 of this Order.

D. On receipt of an application seeking registration from a bidder from a country covered by para 1 of this Order, the Competent Authority shall first seek political and security clearances from the Ministry of External Affairs and Ministry of Home Affairs, as per guidelines issued from time to time. Registration shall not be given unless political and security clearance have both been received.

E. The Ministry of External Affairs and Ministry of Home Affairs may issue guidelines for internal use regarding the procedure for scrutiny of such applications by them.

F. The decision of the Competent Authority, to register such bidder may be for all kinds of tenders or for a specified type(s) of goods or services, and may be for a specified or unspecified duration of time, as deemed fit. The decision of the Competent Authority shall be final.

G. Registration shall not be granted unless the representatives of the Ministries of Home Affairs and External Affairs on the Committee concur*.

H. Registration granted by the Competent Authority of the Government of India shall be valid not only for procurement by Central Government and its agencies/ public enterprises etc. but **also for procurement by State Governments and their agencies/ public enterprises etc. No fresh registration at the State level shall be required.**

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I. The Competent Authority is empowered to cancel the registration already granted if it determines that there is sufficient cause. Such cancellation by itself, however, will not affect the execution of contracts already awarded. Pending cancellation, it may also suspend the registration of a bidder, and the bidder shall not be eligible to bid in any further tenders during the period of suspension.

J. For national security reasons, the Competent Authority shall not be required to give reasons for rejection / cancellation of registration of a bidder.

K. In transitional cases falling under para 3 of this Order, where it is felt that it will not be practicable to exclude bidders from a country which shares a land border with India, a reference seeking permission to consider such bidders shall be made by the procuring entity to the Competent Authority, giving full information and detailed reasons. The Competent Authority shall decide whether such bidders may be considered, and if so shall follow the procedure laid down in the above paras.

L. Periodic reports on the acceptance/ refusal of registration during the preceding period may be required to be sent to the Cabinet Secretariat. Details will be issued separately in due course by DPIIT.

[*Note:

i. In respect of application of this Order to procurement by/ under State Governments, all functions assigned to DPIIT shall be carried out by the State Government concerned through a specific department or authority designated by it. The composition of the Registration Committee shall be as decided by the State Government and paragraph G above shall not apply. However, the requirement **of political and security clearance as per para D shall remain and no registration shall be granted without such clearance**.

ii. Registration granted by State Governments shall be valid only for procurement by the State Government and its agencies/ public enterprises etc. and shall not be valid for procurement in other states or by the Government of India and their agencies/ public enterprises etc.]

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Annex II: Special Cases

A. Till 31st December 2020, procurement of medical supplies directly related to containment of the Covid-19 pandemic shall be exempt from the provisions of this Order.

B. *Bona fide* procurements made through GeM without knowing the country of the bidder till the date fixed by GeM for this purpose, shall not be invalidated by this Order.

C. *Bona fide* small procurements, made without knowing the country of the bidder, shall not be invalidated by this Order.

D. In projects which receive international funding with the approval of the Department of Economic Affairs (DEA), Ministry of Finance, the procurement guidelines applicable to the project shall normally be followed, notwithstanding anything contained in this Order and without reference to the Competent Authority. Exceptions to this shall be decided in consultation with DEA.

E. This Order shall not apply to procurement by Indian missions and by offices of government agencies/ undertakings located outside India.

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Annex III

Model Clause /Certificate to be inserted in tenders etc.

(While adhering to the substance of the Order, procuring entities and GeM are free to appropriately modify the wording of the clause/ certificate based on their past experience, local needs etc.)

Model Clauses for Tenders

I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority.

II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.

III. "Bidder from a country which shares a land border with India" for the purpose of this Order means: -
   a. An entity incorporated, established or registered in such a country; or
   b. A subsidiary of an entity incorporated, established or registered in such a country; or
   c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
   d. An entity whose *beneficial owner* is situated in such a country; or
   e. An Indian (or other) agent of such an entity; or
   f. A natural person who is a citizen of such a country; or
   g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

IV. The *beneficial owner* for the purpose of (iii) above will be as under:

   1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.
      Explanation—

      a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;

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b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;

2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;

5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.

VI. *[To be inserted in tenders for Works contracts, including Turnkey contracts]* The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

Model Certificate for Tenders (for transitional cases as stated in para 3 of this Order)

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I hereby certify that this bidder is not from such a country and is eligible to be considered."

Model Certificate for Tenders

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the

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Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

Model Certificate for Tenders for Works involving possibility of sub-contracting

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

Model Certificate for GeM:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this vendor/ bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this vendor/ bidder fulfills all requirements in this regard and is eligible to be considered for procurement on GeM. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

12/12

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Government of India
Ministry of Road Transport & Highways
(S&R Zone)
No.1, Parliament Street, Transport Bhavan, New Delhi-110001

File No: RW/NH-33044/88/2021-S&R(P&B)/DNT(215840) **Dated: 18th January, 2023**

CORRIGENDUM

To,

1. The Chief Secretaries of all State Governments/UTs
2. The Principal Secretaries/ Secretaries of all States/ UTs PWD dealing with National Highways, other centrally sponsored schemes and state schemes
3. The Chairperson, National Highways Authority of India (NHAI), G-5&6, Sector-10, Dwarka, New Dethi-110075.
4. The Managing Director, National Highway Infrastructure Development Corporation Ltd., 3 floor, PTI Building, Parliament Street, New Dethi-110001.
5. Director General (Border Roads), Seema Sadak Bhawan, Ring Road, New Delhi-110010.
6. Secretary General, IRC, IRC Bhawan, Kama Koti Marg, Sector-6, R.K.Puram, New Delhi-110022
7. Director, IAHE, Industrial Area, A-5, Sector-62, Noida-201309
8. NIC for uploading on Ministry's websites

Subject: Amendment in Standard RFP and MCA of EPC, BOT (Toll) and HAM Projects in order to ensure compliance of PPP-MII Order, 2017 and Rule 144(xi) of GFR, 2017.

Madam/Sir,

This is with reference to Ministry's letter of even number dated 17.01.2022 (copy enclosed) on the subject mentioned above and to say that the date of issue in the letter may be read as 17.01.2023.

The rest of the contents of the said letter will remain unchanged.

Yours faithfully,

Encl: As Above.

(A.K. Kushwaha)
SE, S&R (Roads)
For DG (RD) & SS

Copy to:

1. All ROs/ ELOs of MoRTH and all Technical Officers at MoRTH Headquarter.
2. Sr. PPS to Secretary (RTH), PSO to DG (RD) &SS, PS to AS&FA, PS to all ADGs.

Government of India
Ministry of Road Transport & Highways
(S&R Zone)
No.1, Parliament Street, Transport Bhavan, New Delhi-110001

File No: RW/NH-33044/88/2021-S&R(P&B)/DNT(215840) **Dated: 17th January, 2022**

To,

1. The Chief Secretaries of all State Governments/UTs
2. The Principal Secretaries/ Secretaries of all States/ UTs PWD dealing with National Highways, other centrally sponsored schemes and state schemes
3. The Chairperson, National Highways Authority of India (NHAI), G-5&6, Sector-10, Dwarka, New Dethi-110075.
4. The Managing Director, National Highway Infrastructure Development Corporation Ltd., 3 floor, PTI Building, Parliament Street, New Dethi-110001.
5. Director General (Border Roads), Seema Sadak Bhawan, Ring Road, New Delhi-110010.
6. Secretary General, IRC, IRC Bhawan, Kama Koti Marg, Sector-6, R.K.Puram, New Delhi-110022
7. Director, IAHE, Industrial Area, A-5, Sector-62, Noida-201309
8. NIC for uploading on Ministry's websites

Subject: Amendment in Standard RFP and MCA of EPC, BOT (Toll) and HAM Projects in order to ensure compliance of PPP-MII Order, 2017 and Rule 144(xi) of GFR, 2017.

Ref. : Ministry OM No: NH-35014/35/2020-H-Part(II)(E-196662), Dated- 16.12.2021.

Madam/Sir,

This is with reference to Ministry's Office Memorandum cited above. It has been mentioned in the said OM that Bidder is required to submit, along with its technical BID, a self- certification that the item offered meets the local content requirement for 'Class - I local Supplier' / 'Class - II local Supplier', as the case may be. In case of procurement for a value in excess of Rs. 10 crores, the 'Class - I local supplier' / 'Class - II local supplier' shall provide a certificate from the statutory auditor or cost auditor of the company (in case of companies) or from a practicing Cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

2. In this context, it has been decided that if the above mentioned certificate has not been submitted by the bidder in its Technical Bid, an opportunity must be given to the bidder to submit the desired certificate during technical evaluation of Bid. In case the bidder is not able to submit the said certificate, further action may please be taken as per RFP.

3. This issues with the approval of Competent Authority.

Yours faithfully,

(A.K. Kushwaha)
SE, S&R (Roads)
For DG (RD) & SS

Copy to:

1. All ROs/ ELOs of MoRTH and all Technical Officers at MoRTH Headquarter.
2. Sr. PPS to Secretary (RTH), PSO to DG (RD) &SS, PS to AS&FA, PS to all ADGs.

No.F.1/20/2018-PPD
Government of India
Department of Expenditure
Ministry of Finance
Procurement Policy Division

169-A, North Block, New Delhi,
2nd November, 2021.

OFFICE MEMORANDUM

Subject: Guidelines on Debarment of firms from Bidding

Attention is drawn towards Rule 151 of General Financial Rules (GFRs), 2017 regarding 'Debarment from Bidding' which is reproduced as under:

(i) A bidder shall be debarred if he has been convicted of an offence—

(a) under the Prevention of Corruption Act, 1988; or
(b) the Indian Penal Code or any other law for the time being in force, for causing any loss of life or property or causing a threat to public health as part of execution of a public procurement contract.

(ii) A bidder debarred under sub-section (i) or any successor of the bidder shall not be eligible to participate in a procurement process of any procuring entity for a period not exceeding three years commencing from the date of debarment. Department of Commerce (DGS&D) will maintain such list which will also be displayed on the website of DGS&D as well as Central Public Procurement Portal.

(iii) A procuring entity may debar a bidder or any of its successors, from participating in any procurement process undertaken by it, for a period not exceeding two years, if it determines that the bidder has breached the code of integrity. The Ministry/ Department will maintain such list which will also be displayed on their website.

(iv) The bidder shall not be debarred unless such bidder has been given a reasonable opportunity to represent against such debarment.

2. This department has received a reference from Department of Commerce with a proposal that the task of universal banning of firms as per Rule 151 (ii) of GFRs as above may be undertaken by Department of Expenditure or should be decentralized to individual line Ministries/ Departments as DGS&D had been wind up on 31.10.2017. Central Public Procurement Portal (CPPP) or the Department of Expenditure can then maintain a master data of all such banned firms and it can be made available in public domain.

3 In context of above, all issues regarding debarment have been reviewed in consultations with major procuring Ministries/ Departments and it is decided to issue attached 'Debarment Guidelines' in suppression to all earlier instructions on this subject.

4. This issues with the approval of Finance Secretary.

2.11.21

(Sanjay Aggarwal)
Advisor/ Procurement Policy Division
Email: sanjay.aggarwal68@nic.in
Tel: 23093224

To,

Secretaries, All Central Ministries/ Departments.

Secretary/ Department of Public Enterprises with a request to circulate these instructions to all Central Public Sector Undertakings (CPSUs).

Annexure

Guidelines on Debarment of firms from Bidding

1. The Guidelines are classified under following two types:

   (i) In cases where debarment is proposed to be limited to a single Ministry, the appropriate Orders can be issued by that Ministry itself, thereby banning all its business dealing with the debarred firm.

   (ii) Where it is proposed to extend the debarment beyond the jurisdiction of the particular Ministry i.e. covering to all central Ministries/ Departments, the requisite Orders shall be issued by Department of Expenditure (DoE), Ministry of Finance (MoF).

Definitions

2. Firm: The term 'firm' or 'bidder" has the same meaning for the purpose of these Guidelines, which includes an individual or person, a company, a cooperative society, a Hindu undivided family and an association or body of persons, whether incorporated or not, engaged in trade or business.

3. Allied firm: All concerns which come within the sphere of effective influence of the debarred firms shall be treated as allied firms. In determining this, the following factors may be taken into consideration:

   a. Whether the management is common;
   b. Majority interest in the management is held by the partners or directors of banned/ suspended firm;
   c. Substantial or majority shares are owned by the banned/ suspended firm and by virtue of this it has a controlling voice.
   d. Directly or indirectly controls, or is controlled by or is under common control with another bidder.
   e. All successor firms will also be considered as allied firms.

4. The terms "banning of firm", 'suspension', 'Black-Listing' etc. convey the same meaning as of "Debarment".

Debarment by a Single Ministry/ Department

5. Orders for Debarment of a firm(s) shall be passed by a Ministry/ Department/ organizations, keeping in view of the following:

   a. A bidder or any of its successors may be debarred from participating in any procurement process for a period not exceeding two years.
   b. Firms will be debarred if it is determined that the bidder has breached the code of integrity as per Rule 175 of GFRs 2017.

c. A bidder can also be debarred for any actions or omissions by the bidder other than violation of code of integrity, which in the opinion of the Ministry/ Department, warrants debarment, for the reasons like supply of sub-standard material, non-supply of material, abandonment of works, sub-standard quality of works, failure to abide "Bid Securing Declaration" etc.

d. It shall not be circulated to other Ministries/ Departments. It will only be applicable to all the attached/ subordinate offices, Autonomous bodies, Central Public Sector Undertakings (CPSUs) etc. of the Ministry/ Department issuing the debarment Order.

e. The concerned Ministry/ Department before issuing the debarment order against a firm must ensure that reasonable opportunity has been given to the concerned firm to represent against such debarment (including personal hearing, if requested by firm).

f. Secretary of Ministry/Department may nominate an officer at the rank of Joint Secretary/Additional Secretary as competent authority to debar the firms.

g. Ministry/ Department that issued the order of debarment can also issue an Order for revocation of debarment before the period of debarment is over, if there is adequate justification for the same. Ordinarily, the revocation of the Order before expiry of debarred period should be done with the approval of Secretary concerned of Ministry/Department.

h. The Ministry/Department will maintain list of debarred firms, which will also be displayed on its website.

i. Debarment is an executive function and should not be allocated to Vigilance Department.

6. Code of Integrity as contained in Rule 175 of the GFRs is reproduced as under:

No official of a procuring entity or a bidder shall act in contravention of the codes which includes

(i) prohibition of

(a) making offer, solicitation or acceptance of bribe, reward or gift or any material benefit, either directly or indirectly, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process.

(b) any omission or misrepresentation that may mislead or attempt to mislead so that financial or other benefit may be obtained or an obligation avoided.

(c) any collusion, bid rigging or anticompetitive behavior that may impair the transparency, fairness and the progress of the procurement process.

(d) improper use of information provided by the procuring entity to the bidder with an intent to gain unfair advantage in the procurement process or for personal gain.

(e) any financial or business transactions between the bidder and any official of the procuring entity related to tender or execution process of contract; which can affect the decision of the procuring entity directly or indirectly.

(f) any coercion or any threat to impair or harm, directly or indirectly, any party or its property to influence the procurement process.

(g) obstruction of any investigation or auditing of a procurement process.

(h) making false declaration or providing false information for participation in a tender process or to secure a contract;

(ii) disclosure of conflict of interest.

(iii) Disclosure by the bidder of any previous transgressions made in respect of the provisions of sub-clause (i) with any entity in any country during the last three years or of being debarred by any other procuring entity.

7. It is possible that the firm may be debarred concurrently by more than one Ministry/ Department.

8. Ministries/ Departments at their option may also delegate powers to to debar bidders to their CPSUs, Attached Offices/ Autonomous Bodies etc. In such cases, broad principles for debarment in para 5 as above are to be kept in mind. Debarment by such bodies like CPSUs etc. shall be applicable only for the procurements made by such bodies.

9. Similarly, Government e-Marketplace (GeM) can also debar bidders upto two years on its portal.

10. In case of debarments under para 8 as above, revocation the debarment orders before expiry of debarred period should be done only with the approval of Chief Executive Officer of concerned CPSUs etc.

Debarment across All Ministries/ Departments

11. Where a Ministry/ Department is of the view that business dealings with a particular firm should be banned across all the Ministries/ Departments by debarring the firm from taking part in any bidding procedure floated by the Central Government Ministries/ Departments, the Ministry/ Department concerned, should after obtaining the approval of the Secretary concerned, forward to DoE a self-contained note setting out all the facts of the case and the justification for the proposed debarment, along with all the relevant papers and documents. DoE will issue the necessary orders after satisfying itself that proposed debarment across all the Ministries/ Departments is in accordance with Rule 151 of GFRs, 2017. This scrutiny is intended to ensure uniformity of treatment in all cases.

12. The firm will remain in suspension mode (i.e. debarred) during the interim period till the final decision taken by DoE, only in the Ministry/ Department forwarding such proposal.

13. Ministry/ Department before forwarding the proposal to DoE must ensure that reasonable opportunity has been given to the concerned firm to represent against such debarment (including personal hearing, if requested by firm). If DoE realizes that

sufficient opportunity has not be given to the firm to represent against the debarment, such debarment requests received from Ministries/ Departments shall be rejected.

14. DoE can also give additional opportunity, at their option, to firm to represent against proposed debarment. DoE can also take suo-moto action to debar the firms in certain circumstances.

15. No contract of any kind whatsoever shall be placed on the debarred firm, including its allied firms by any Ministries/ Departments/ Attached/Subordinate offices of the Government of India including autonomous body, CPSUs etc. after the issue of a debarment order.

16. DoE will maintain list of such debarred firms, which will be displayed on Central Public Procurement Portal.

Revocation of Orders

14. An order for debarment passed shall be deemed to have been automatically revoked on the expiry of that specified period and it will not be necessary to issue a specific formal order of revocation.

15. A debarment order may be revoked before the expiry of the Order, by the competent authority, if it is of the opinion that the disability already suffered is adequate in the circumstances of the case or for any other reason.

Other Provisions (common to both types of debarment)

16. No contract of any kind whatsoever shall be placed to debarred firm including its allied firms after the issue of a debarment order by the Ministry/ Department. Bids from only such firms shall be considered for placement of contract, which are neither debarred on the date of opening of tender (first bid, normally called as technical bid, in case of two packet/two stage bidding) nor debarred on the date of contract. Even in the cases of risk purchase, no contract should be placed on such debarred firms.

17. If case, any debar firms has submitted the bid, the same will be ignored. In case such firm is lowest (L-1), next lowest firm shall be considered as L-1. Bid security submitted by such debarred firms shall be returned to them.

18. Contracts concluded before the issue of the debarment order shall, not be affected by the debarment Orders.

19. The Debarment shall be automatically extended to all its allied firms. In case of joint venture/ consortium is debarred all partners will also stand debarred for the period specified in Debarment Order. The names of partners should be clearly specified in the "Debarment Order".

20. Debarment in any manner does not impact any other contractual or other legal rights of the procuring entities.

To

21. The period of debarment shall start from the date of issue of debarment order.

22. The Order of debarment will indicate the reason(s) in brief that lead to debarment of the firm.

23. Ordinarily, the period of debarment should not be less than six months.

24. In case of shortage of suppliers in a particular group, such debarments may also hurt the interest of procuring entities. In such cases, endeavor should be to pragmatically analyze the circumstances, try to reform the supplier and may get a written commitment from the supplier that its performance will improve.

25. All Ministries/ Departments must align their existing Debarment Guidelines in conformity with these Guidelines within two months of issue of these Guidelines. Further, bidding documents must also be suitably amended, if required.

xxxxxxxx

8. The Director, IAHE, Noida, UP
9. All CE-ROs, ROs and ELOs of the Ministry.

Subject: Use of New/ Alternative Material and Technology in Construction and Maintenance of National Highways Projects and adoption of Value Engineering Practices therein-reg.

Reference: i) Ministry's Letter No. RW/NH-33044/18/2020-S&R (P&B) dated 14.12.2020

ii)Ministry's Letter No. RW/NH-34049/01/2020-S&R(P&B)pt. dated 30.08.2022

iii)Ministry's Letter No. RW/NH-34049/01/2020-S&R(P&B)pt. dated 22.02.2023

Madam/Sir,

Three circulars cited under reference have been issued during the past three years in respect of promoting new and alternative material and technology in the highway sector to reduce construction costs while meeting the objective of sustainable development. These circulars contained different provisions in respect of decrease in costs and the party to the concession/contract (Government Authority or Concessionaire/Contractor) entitled to retain such savings due to adoption of new material / technology.

Bidder Kept In.

2. To bring clarity to the above matter while ensuring the sanctity of the contract(s) already signed as well as to ensure due diligence while assessing optimum solution through value engineering during construction, the present circular is being issued as more clearly specified in para 4.9 & 4.10 of this circular.

3. Value Engineering during DPR

3.1 Value Engineering shall be assigned as one of the tasks in the Terms of Reference (ToR) for Feasibility Study and Detailed Engineering Projects. In the Inception Report itself, there shall be a chapter on value engineering, in which the Consultant shall include the potential & project-specific value engineering aspects identified by the respective domain experts based on site reconnaissance surveys. In the Feasibility Report, the Consultant shall examine the applicability, durability, constructability & appropriateness of the identified value engineering aspects. Consultant shall prepare cost estimate of different items of work involving conventional material/ technology and various value engineering options identified and will recommend the optimum option. During the design stage, the design shall be done for the approved option and considering the same the project cost shall be worked out and Schedules shall be prepared. The exercise shall include all such items/ components of the project where multiple options are available particularly involving new/ alternative material and technology. Some examples of materials/technology/processes leading to value engineering are given in **Annexure-1**. However, other applicable materials/technology can also be considered by Consultant.

3.2 In the Schedule 'B' and 'C' of the bid documents implemented under EPC/HAM/BOT mode, only the design parameters shall be specified. For example; in respect of pavement design only the Pavement Type (Rigid/Flexible/Bonded Concrete Pavement/Perpetual flexible Pavement/CRCP/White topping/Short Slab Concrete Pavement) shall be specified along with minimum design traffic (million standard axles) and Design Period. Pavement composition and minimum layer thickness shall not be specified. Minimum and maximum subgrade CBR shall not be mentioned in Schedule 'B' and the same will be in accordance with applicable pavement design standards.

3.3 During the Project appraisal, in PATSC/SFC memo, there shall be a paragraph on the value engineering practices examined/evaluated and finally adopted. The paragraph shall also contain a statement affirming that Schedule 'B' & 'C' of bid documents have been prepared in accordance with this para 3.

3.4 Above procedure shall also be applicable to all ongoing DPR consultancy services where draft feasibility report is yet to be submitted.

4. Value Engineering during Construction

4.1 In projects where Schedule 'B' and 'C' have been prepared in accordance with para 3.2 above, the concessionaire/contractor is free to adopt any value-engineered alternative for any item/component of works subject to satisfying requirements of this para 4.

4.2 The material/technology used in the project shall normally satisfy the requirements of Codes, Standards, Specifications, Guidelines etc. of IRC, MoRTH, AASHTO, ASTM, Euro Code and British Codes with regards to design, pre-construction, construction, quality assurance, quality control and acceptance. In respect of material/technology accredited by IRC on pilot basis or otherwise, the same can be used as per the conditions of accreditation or renewal given by IRC as the case may be subject to the condition that cost of such material / technology shall be within 2% of the project cost.

Bidur Kandel.

4.3 IE/AE shall review/approve the proposed value-engineered design within the stipulated time period specified in the Contract/Concession Agreement in respect of material/technology satisfying the requirements of Codes, Standards, Specifications, Guidelines etc. of IRC, MoRTH, AASHTO, ASTM, Euro Code and British Codes and material/technology accredited by IRC. While approving the design prepared by the Contractor/Concessionaire following Codes, Standards, Specifications, Guidelines etc. of AASHTO, ASTM, Euro Code and British Codes, IE/AE shall ensure that the design parameters conform to the applicable conditions of project site. In respect of other material/technology for which project owner's certificate is available for continued successful performance, design will be approved by Regional Officer of MoRTH or equivalent officer based on recommendation of Authority's Engineer/ Independent Engineer.

4.4 After acceptance of design, a detailed construction methodology along with requisite details such as proposed machinery/plants/equipment (e.g. purpose-built soil stabiliser for soil stabilisation), quality assurance & quality control, traffic diversion, environmental compliance, construction sequence, material design, etc., shall be submitted to IE/AE for review/approval.

4.5 Trial Section is a must for value engineered design. During trial laying, validation of material characteristic(s) considered in design shall be done and if necessary, modification in design shall be done. Construction shall be started incorporating the modifications, if any.

4.6 Schedule 'H' of EPC Agreement/ Annex-I of Schedule 'G' of HAM agreement shall be modified to indicate appropriate stage(s) of value engineered option(s). Such changes in Schedule 'H' or Annexure - I of Schedule 'G' shall be incorporated with the approval of competent authority through a supplementary agreement.

4.7 For any proprietary product such as Reinforced Soil Wall, Retaining Wall, Expansion Joints, Bridge Bearing, Pre-stressing Systems, Commercial Stabiliser, Geosynthetics Products, UHPFRC elements, etc., Contractor/Concessionaire shall ensure signing of agreement between the Contractor/Concessionaire and Technology Provider before use of such material/ technology/design in NH Project. The agreement shall have the provision of involvement of the Technology Provider during execution. Technology Provider shall deploy the requisite design experts/material technologist/skilled & trained construction supervision personnel to certify material testing & material characterization for design, proof check of the design, approve construction methodology including field trial sections before actual construction, quality control and supervision & certification of the day-to-day construction/execution. The warranty for proprietary product(s) shall be submitted by Technology Provider along with all other document(s) as required by IRC: SP: 112-2017 "Manual for Quality Control in Road and Bridge works". A copy of such agreement shall be furnished to AE/IE and to RO of the Ministry / NHAI/NHIDCL for reference and record.

4.8 The Concessionaire/Contractor shall be entitled to retain all the savings accrued to them on account of value engineering practices adopted by them.

4.9 **This circular shall be made applicable for the new projects for which bids shall be received on or after 1st November, 2024.** Instructions contained in Ministry's Letter No. RW/NH-34049/01/2020-S&R (P&B) pt. dated 22.02.2023 shall be followed for all projects for which bids were or are received between 22.02.2023 to 31st October, 2024.

4.10 Old ongoing projects for which bids were received before 22.02.2023 and the Schedule 'B' & 'C' of which are in accordance with para 3.2 above, provisions of para 4 of

Bidur Kant Jha

this circular shall also be made applicable. Separate instructions shall be issued for other old ongoing projects not covered under para 4.1 of this circular.

5. It is requested that the contents of the circular may be brought into the notice of all concerned for immediate needful compliance.

6. This issues with the approval of Competent Authority.

Yours sincerely,

Bidur Kant Jha
20/09/2024

(Bidur Kant Jha)

Director (New Technology for Highway Development)

For Director General (Road Development) & Special Secretary

Copy to:

1. All CEs in the Ministry of Road Transport & Highways
2. All ROs of the Ministry of Road Transport & Highways
3. The Secretary General, Indian Roads Congress
4. Technical circular file of S&R (P&B) Section
5. NIC-for uploading on Ministry's website under "What's new"

Copy for kind information to:

1. PS to Hon'ble Minister (RT&H)
2. PS to Hon'ble MOS (RT&H)
3. PSO to Secretary (RT&H)
4. PSO to DG (RD) & SS
5. Sr. PPS/ PPS to AS&FA/Addl. Secretary (Road Safety)/ ADG(SC)/ADG(BKS)/ADG(RS)/ADG(OPS)
6. Sr. PPS/ PPS to JS(Highways)/JS(EAP)/JS(Logistics)

Annexure-1

Typical materials/technologies/processes for value engineering practices for National Highway Projects:

A. **Materials/Technologies.**

i. Alternative pavement such as bonded concrete pavement (new IRC code under publication), CRCP (IRC: 118), Short Slab Concrete Pavement (IRC: SP: 140), Perpetual Pavement (IRC: 37).
ii. Whitetopping (IRC: SP: 76).
iii. Alternative flexible pavement courses such as CTSB (IRC:37), CTB (IRC:37), SMA (IRC:SP:79), GGRB (IRC:SP:107), CGBM (IRC:SP:125), Hiper mix (IRC:SP:139), Warm mix asphalt (IRC:SP:101), Micro surfacing (IRC:SP:81).
iv. Recycled Asphalt Pavement (IRC: 120).
v. Stabilization technology (IRC: SP: 89 Part-1 & Part-2).
vi. GFRP (IRC:137)
vii. UHPFRC (Ministry's circular dated 22nd Feb, 2022)
viii. Factory manufactured pre-cast concrete elements.
ix. Waste plastic (IRC:SP:98)
x. Construction and demolition waste (IRC:121)
xi. Steel slag (guidelines under preparation by IRC)
xii. Geo-synthetics (pavement reinforcement, crack retarding layer, drainage, slope protection, capillary cutoff layer, Basal reinforcement, reinforcement earth structure, erosion prevention) (IRC:56, IRC:SP:59, IRC:SP:48, IRC:113, IRC:SP:106)

B. **Processes.**

i. Rational inputs for rate analysis.

ii. Accountability of excavated soil and reclaimed existing pavement granular courses.

Bidder Kaul JV.

EFile No.RW/NH-35072/05/2018-S&R (P&B) (Computer No.165688)

Government of India

Ministry of Road Transport & Highways

(S&R (P&B/New Technology) Zone)

Transport Bhawan, 1, Parliament Street, New Delhi-110001

Dated: 19th April, 2024

CIRCULAR

To

1. The Chief Secretaries of all the State Governments/ UTs.
2. The Principal Secretaries/ Secretaries of all States/ UTs Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes).
3. The Chairman, National Highways Authority of India, G-5 & 6, Sector-10, Dwarka, New Delhi-110 075.
4. The Managing Director, NHIDCL, PTI Building, New Delhi-110001.
5. The Director General (Border Roads), Seema Sadak Bhawan, Ring Road, New Delhi-110 010.
6. All Engineers-in-Chief and Chief Engineers of Public Works Department of States/ UTs/ Road Construction Department/ Highways Departments (dealing with National Highways and other centrally sponsored schemes).
7. The Secretary General, Indian Roads Congress
8. The Director, IAHE, Noida, UP
9. All CE-ROs, ROs and ELOs of the Ministry.

Subject: - Recommended Bitumen Type & Grade for Different Climate & Traffic Loading for National Highway and Expressway Works in India - Reg.

Reference: Ministry's Circular No. even dated 23.08.2023

Madam/Sir,

Bituminous binder is one of the most important ingredient which influences the performance of bituminous mixes. Selection of appropriate grade of bituminous binder for a particular section of National Highway/Expressway based on prevailing loading, ambient temperature, rainfall, snowfall and speed is indispensable to have durable flexible pavement. Para 2.1 of the Ministry's circular cited above stipulates that "**Selection of Appropriate Grade of Bituminous Binder**: Bituminous binder for conventional pavement courses shall be in accordance with IRC: 37 "Guidelines for the Design of Flexible Pavements". However, provisions contained in relevant IRC Guidelines/Standards shall be applicable for selection of binder type & grade for pavement courses such as Stone Matrix Asphalt (SMA), Gap-graded Rubberised Bituminous Mixes (GGRB), High Performance Mixes (HiPER) and Cement Grouted Bituminous Macadam (CGBM)". The selection of appropriate grade of binder as per IRC: 37 is on the basis of design traffic but pavement temperature which substantially impacts behaviour/performance of bitumen binder is not considered in the said selection process.

2.0 To bridge the gap and ensure rationale basis of selection of appropriate type and grade of bituminous binder, Ministry constituted a Task Force comprising of academicians, researchers, manufacturers, subject-matter experts, representative of Indian Roads Congress, Advisor MoRT&H under chairmanship of ADG(S&R). The mandate of the Task Force

was to specifically recommend the appropriate type & grade of bitumen/modified bitumen for different climatic zone considering ambient temperature, rainfall, snowfall, traffic loading intensity etc., across India.

3.0 Based on the Task Force recommendations, it has been decided that in supersession to provisions contained in para 2.1 of the Ministry's circular cited above, **Bitumen Type & Grade for Different Climate & Traffic Loading for National Highway and Expressway Works in India** shall be adopted as given in **Annexure-I**.

4.0 It should be applicable in case of all new projects for which bids as received 60days after the issue of this circular. The contents of the Circular may be brought into the notice of all concerned for needful compliance.

5.0 This issues with the approval of Competent Authority.

Yours sincerely,
Bidur Kant Jha
19.04.2024

(Bidur Kant Jha)
Director
(New Technology for Highway Development)
For Director General (Road Development) & Special Secretary

Copy to:

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2. All ROs of the Ministry of Road Transport & Highways
3. The Secretary General, Indian Roads Congress
4. Technical circular file of S&R (P&B) Section
5. NIC-for uploading on Ministry's website under "What's new"

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5. Sr. PPS/ PPS to Addl. Secretary (Road Safety)/ Addl. Secretary (RT&H & LA)
6. Sr. PPS/ PPS to AS&FA
7. Sr. PPS/ PPS to ADG (SKN) / ADG (RP)/ ADG(DS)
8. Sr. PPS/ PPS to JS (RT&MVL)/ JS (EIC) / JS (Logistics)/ JS (NHIDCL)

Recommended Bitumen Type & Grade for Different Climate & Traffic Loading for National Highway and Expressway Works in India						
Maximum Pavement Temperature(T_{20mm})#	Minimum Pavement Temperature (T_{surf}) #	Mix Type	Traffic Loading computed for 20-year period			
			<=20msa	>20<=50msa	>50<=150msa	>150msa
≤ 58 °C	> (-)22°C	SMA	NA	NA	NA	NA
		GGRB	NA	NA	NA	NA
		BC	VG-30	VG-30	VG-30	VG-30
		DBM Upper/ DBM Lower /Single layer DBM	VG-30	VG-30	VG-30	VG-30
>58<=64 °C	>=(-)10°C	SMA	NA	NA	PMB64-10	PMB64-10
		GGRB	NA	NA	Rubberised Bitumen@	Rubberised Bitumen@
		BC	VG-40	VG-40	PMB64-10/CRMB55	PMB64-10/CRMB60
		DBM Upper/ DBM Lower /Single layer DBM	VG-30	VG-40	VG-40	VG-40
>64<=70 °C	>=(-)10°C	SMA	NA	NA	PMB70-10	PMB70-10
		GGRB	NA	NA	Rubberised Bitumen@	Rubberised Bitumen@
		BC	VG-40	VG-40/ PMB70-10/CRMB60	PMB70-10/CRMB60	PMB70-10/CRMB60
		DBM Upper/ DBM Lower /Single layer DBM	VG-40	VG-40	VG-40	VG-40
>70<=76 °C	>=(-)10°C	SMA	NA	NA	PMB76-10	PMB76-10
		GGRB	NA	NA	Rubberised Bitumen@	Rubberised Bitumen@
		BC	VG-40	PMB76-10/CRMB60	PMB76-10/CRMB60	NA
		DBM Upper/ DBM Lower /Single layer DBM	VG-40	VG-40	VG-40	VG-40 /(PG76-10 for upper DBM)/HIPER$ mixes

Note:

1. #. Maximum Pavement Temperature(T_{20mm}) & Minimum Pavement Temperature (T_{surf}) should be estimated using the following formula:
   $T_{20mm} = 0.9545*(T_{airmax} - 0.00618Lat^2 + 0.2289\ Lat + 42.2) - 17.78$; where T_{airmax} is average of 7-day maximum air temperature (hottest 7-consecutive day period of a year) in (°C) and Lat is the geographical latitude of the project site (in degrees).
   $T_{surf} = 0.859* T_{airmin} + 1.7$; where T_{airmin} is the lowest air temperature of a year in (°C).
2. VG Grade Bitumen should be as per BIS: 73-2013 except for VG-40 grade Bitumen Viscosity at 60°C should be minimum 3600Poise.
3. Polymer Modified Bitumen should be as per BIS: 15462-2019.
4. Polymer modified bitumen (PMB) for different service condition should be selected in accordance with Table 2 of BIS 15462:2019.
5. Crumb Rubber Modified Bitumen should be as per BIS: 17079-2019.
6. @-The specifications for base bitumen and Rubberised Bitumen to be used for GGRB mix should be as per the recommendations of IRC SP-107-2015.
7. $-Hiper mixes as per IRC: SP: 139-2023 for DBM Base/binder course should be considered in case of perpetual pavement to have cost-effective pavement.
8. Tests to be carried out on Pressure Aging Vessel (PAV) Residue (after RTFO)Complex modulus (G*) multiplied by Sin delta (G* sin δ) as Max 6000 kPa, 8 mm Plate, 2mm Gap, at 10 rad/s, at a temperature, 20°C for Polymer Modified Bitumen.

Bidyut Kalita.

EFile No.: DG(RD)&SS/04/2025 (Computer No.-258193)
Government of India
Ministry of Road Transport & Highways
(S&R (P&B/New Technology) Zone)
Transport Bhawan, 1, Parliament Street, New Delhi-110001

130.253

Dated: 06th April 2026

CIRCULAR

To

1. The Chief Secretaries of all the State Governments/ UTs.
2. The Principal Secretaries/ Secretaries of all States/ UTs Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes).
3. The Chairman, National Highways Authority of India, G-5 & 6, Sector-10, Dwarka, New Delhi-110 075.
4. The Managing Director, NHIDCL, World Trade Centre, New Delhi-110029.
5. The Director General (Border Roads), Seema Sadak Bhawan, Ring Road, New Delhi-110 010.
6. All Engineers-in-Chief and Chief Engineers of Public Works Department of States/ UTs/ Road Construction Department/ Highways Departments (dealing with National Highways and other centrally sponsored schemes).
7. The Secretary General, Indian Roads Congress.
8. The Director, IAHE, Noida, UP.
9. All CE-ROs, ROs and ELOs of the Ministry.

Subject: Normative Construction Period of National Highways (NHs) Projects- Reg.

Ref: Ministry circular No. RW/NH-33044/18/2012-S&R(R) dated 16th July 2013

Madam/Sir,

Ministry vide circular dated 16th July 2013 cited under reference has issued policy regarding timelines for completion of various civil construction works on National Highways on EPC mode. The framework was primarily on project type such as periodic renewal, improvement in riding quality (IRQP), strengthening (with bituminous layer), widening & strengthening, standalone bridges and difficult areas such as North-east areas, hilly areas. Also, Standard EPC Contract document specifies timelines using the following benchmarks:

- ≤ 50 km length and ≤ 200 m major bridge → 18-24 months
- > 50 km length or > 200 m major bridge → 24-30 months

2. Existing MoRTH guidelines issued vide circular dated 16th July 2013 provide a valuable baseline, but they are derived from a legacy linear model that does not explicitly account for voluminous earthwork encountered into difficult terrain of Himalayas, North-East, Western Ghat, Structural critical paths and Technological lead-times (pre-casting yards, tunnelling) leading to unrealistic Construction Period resulting into additional cost such as escalation linked to EOTs, risk, increase potential of arbitration and erodes the confidence of stakeholders to achieve the completion in time. Prime Construction Period Drivers are controlled by True Critical Path Drivers such as longest major structure (tunnel

Bidur Kant Jha.

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/ cable bridge / viaduct), Pre-cast yard setup, production techniques & cycles and non-parallel construction stages.

3. Therefore, a need was felt to revise the existing guidelines based on scientific analysis and understanding of completed projects and prescribe a realistic Construction Period for civil works at DPR and Bid Invitation Stage through a standard and scientific basis duly considering typical geographical variations in Indian conditions reflecting terrain, volume, structural complexity and expected constraints to improve predictability in completion of projects, reduce disputes, enhance the value and quality of National highway assets, for realistic and bankable bids, better quality outcomes, improved investor confidence and predictable reporting of completion time.

In view of above, following normative construction period for NHs projects executed under EPC/HAM/BOT has been prescribed. DPR Consultant shall also estimate the project specific construction period based on realistic project specific work programme, which shall be presented during projects appraisal before SFC.

3.1 **Base Construction Period**: Base Construction Period for NH Projects in Plain & Rolling Terrain should be on the basis of Total Civil Cost.

Total Civil Cost (₹ Cr)	Base Construction Period (Months)
Up to 300	12
301-500	18
501-1500	24
>1500	30

3.2 **Enhanced Base Construction Period**: Base Construction Period should be enhanced considering criticality of project.

Criticality of Project	Add (Months)
a. Multiple ROBs /flyover having viaduct length>60.0m excluding approaches and if their cost >=30% of the total civil cost **or** b. Elevated Structure Length>=10.0km **or** c. Tunnel length<=1.5km*	+6
Concrete Pavement throughout project length	+3

** For standalone tunnel projects, construction period should be as per tunnel criteria as per para 3.7 below.*

Bidur Kant Jha Page 2 / 5

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For project specific other criticalities, DPR Consultant should recommend the additional months requirement duly substantiated with work plan subject to maximum of +6 months.

3.3 Enhanced Construction Period should be capped to 24 months for Project Total Civil Cost <=500.0 crore; 30 months for Project Total Civil Cost in between 501-1500.0 crore and 36 months for Project Total Civil Cost >1500.0 crore.

3.4 **Compensation Months for Terrain-difficulty:**

3.4.1 Additional 12 Months should be added to Enhanced Base Construction Period to compensate for Terrain-difficulty related formation cutting & slope stabilization. This will be applied for the NH projects in hilly/mountainous steep terrain of Himalayan/ North-Eastern states such as Himachal Pradesh, Uttarakhand, J&K other than Jammu, Ladakh, Sikkim, Darjeeling hills, Arunachal Pradesh, Nagaland, Manipur, Mizoram and Meghalaya.

3.4.2 NH projects in Western Ghats which fall in extended monsoon period, additional 03 months should be added to the enhanced base construction period.

3.4.3 NH projects in Andaman Nicobar Island, further additional 12 months i.e. total 24 months should be added to Enhanced Base Construction Period to compensate logistics/accessibility/availability of road building materials.

3.5 **Construction Period of Long/Special Bridges:**

Type of Long/Special Bridges across Major perennial River	**Construction Period (Months)**
Bridges across rivers like Brahmaputra, Ganga and other rivers where **length of bridges** are **6.0 km to 10.0 km** with deep scour levels requiring large diameter and 50m to 60m deep well foundations from bed level. Also, depth of water during working season is about 6m to 20m.By providing long spans of about 100m the number of well foundations are expected to be 80 to 90 Nos. for about 8 to 9Km long bridges.	72
For 2.5 km to 6.0 km length of bridges across rivers like Mahanadi River, Godavari River, Krishna River Where foundation depth may be 20m to 30m and may be possible to provide pile foundations with **cable stayed / extradosed bridge** proposal/**iconic bridges.**	60
For 2.5 km to 6.0 km length of bridges across rivers	48
Bridge Across River like Mahanadi River, Godavari River, Krishna River Where foundation depth may be 20m to 30m and may be possible to provide pile foundations with **cable stayed / extradosed bridge** proposal. Considering 100m cable stayed/Extradosed spans about 20 to	48

Bidur Kant Jha Page 3 / 5

Type of Long/Special Bridges across Major perennial River	Construction Period (Months)
30 nos. foundations are expected **for 1.5 to 2.5 km long bridges.**	
Bridge Across River like Mahanadi River, Godavari River, Krishna River Where foundation depth may be 20m to 30m and may be possible to provide **pile foundations** and span length may be 40m to 120m; **Length of Bridges 1.5-2.5 km**	36

3.6 **Standalone RoB**: Construction period of standalone RoB should be 18 months.

3.7 **Tunnel Projects**: Construction period for tunnel projects primarily depends on type of Geology i.e. Himalayas or Western Ghat, access to the portals, Tunneling Method such as New Australian Tunneling Method (NATM) or Tunnel Boring Machine (TBM), length of tunnel etc.

Length of Tunnel (km)	In Western Ghat	In Himalayas	Tunnel in Urban areas/ under Water using TBM
Up to 2.0 km	24 months	36* months	18 months
For every 1.0 km increase in length	+4 months	+6 months	+3 months
Additional Time required for approach road, if **approach to portal** is **more than 2.0km**	+3 months	+3 months	-

** For excavation support class ESC V/ESC VI exist for more than 50% of the tunnel length, this period should be multiplied by 1.25.*

4. This circular shall be applicable on the date of issue of this circular for all DPR consultancy works for NHs projects and EPC/HAM/BOT bids at the invitation stage for which Bid Due Date is 06.05.2026 and beyond.

5. All implementing agencies shall ensure that HQs and their field units/offices viz. ROs, PIUs, etc. are in compliance with these norms while preparing the project reports.

6. It is requested that the contents of the circular may be brought into the notice of all concerned for needful compliance.

7. This issues with the approval of the Competent Authority.

Bidur Kant Jha

Yours sincerely,
Bidur Kant Jha
06.04.2026
(Bidur Kant Jha)
Director
(New Technology for Highway development)
For DG (RD) & SS

Copy to:

1. All CEs in the Ministry of Road Transport & Highways
2. All ROs of the Ministry of Road Transport & Highways
3. All CE(NH) of PWD/R&B dealing with National Highways
4. Technical circular file of S&R (P&B) Section
5. NIC-for uploading on Ministry's website under "What's new" & "Comprehensive Compendium Circulars with CODE 130.253.

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6. Sr. PPS/ PPS to AS&FA
7. Sr. PPS/ PPS to all ADGs
8. Sr. PPS/ PPS to JS (RT&MVL)/ JS (EIC) / JS (Logistics)/ JS (NHIDCL)

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Government of India
Ministry of Road Transport & Highways
(S&R (P&B/New Technology) Zone)
Transport Bhawan, 1, Parliament Street, New Delhi-110001

1100.37

Dated:16th March 2026

CIRCULAR

To

1. The Chief Secretaries of all the State Governments/ UTs.
2. The Principal Secretaries/ Secretaries of all States/ UTs Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes).
3. The Chairman, National Highways Authority of India, G-5 & 6, Sector-10, Dwarka, New Delhi-110 075.
4. The Managing Director, NHIDCL, World Trade Centre, New Delhi-110029.
5. The Director General (Border Roads), Seema Sadak Bhawan, Ring Road, New Delhi-110 010.
6. All Engineers-in-Chief and Chief Engineers of Public Works Department of States/ UTs/ Road Construction Department/ Highways Departments (dealing with National Highways and other centrally sponsored schemes).
7. The Secretary General, Indian Roads Congress.
8. The Director, IAHE, Noida, UP.
9. All CE-ROs, ROs and ELOs of the Ministry.

Subject: Standard Operating Protocol (SoP) for Use of Reinforced Soil (RS) Wall Technology in National Highways (NHs) Projects- Reg.

Madam/Sir,

Reinforced Soil (RS) Wall Technology is extensively used to retain high embankment approaches to structures in National Highways (NHs) projects as it requires least land. While a majority of these structures are performing well, varying levels of distress and performance issues have been observed in a few cases due to several reasons, including the following:

- Lack of knowledge and expertise: Inadequate understanding of RS wall system design principles, construction techniques, quality control and maintenance requirements among site engineers.
- Design and detailing deficiencies: Deviations in the design process, such as insufficient design calculations (settlement calculations and global stability checks often skipped), improper/inadequate geotechnical investigations and insufficient drawing detailing for construction.
- Construction deficiencies: Poor workmanship, use of substandard materials, negligence at site engineers' level, or failure to follow proper construction procedures.
- Inadequate maintenance: Inadequate maintenance, inspection and timely resolution.

To address these concerns and to have long-term performance durability of RS Wall structures, need was felt to have a Standard Operating Protocol (SoP) for selection,

Bidur Kant Jha

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investigation, design and construction including robust quality control measures. Accordingly, Ministry has funded a research scheme to IIT Delhi to study the modes of premature distresses/collapse and causative factors thereof. Further, NHAI has also conducted an open house discussion on this subject and an expert committee has been constituted.

2. On the basis of research findings, recommendations of the expert committee, experienced gained over the years, issues encountered and feedback/suggestions received from the stakeholders a SOP has been prepared. SoP includes quantum of sub-soil investigations, selection criteria matrix for RS Wall, good design and construction practices including Quality Assurance & Quality Control (QA&QC). This SoP is intended to function as a practical field-ready tool, enabling uniform practices, consistent quality and enhanced accountability across all RS wall projects.

3. Salient points of the SoP extracted from the enclosed detailed SoP at **Appendix** are as under:

3.1 **Geotechnical Investigations**: Boreholes spacing, number and depth are as under:

Sl. No.	Height/ Ground Conditions	Number/ Spacing/ Location of Boreholes	Minimum Depth of Boreholes/ Soundings
1.	Wall Height > 10m or poor ground condition	50 m	Least of the following: a) Four times the height of the reinforced soil structure b) Two times the average width of the embankment c) **30 m**
2.	Wall Height < 10m or other than poor ground condition	100 m	
3.	RS closure wall or true /load bearing abutments	Minimum two boreholes (One borehole close to the ends of the reinforced soil walls)	

3.2 **Selection Criteria for RS Wall**: Full height RS wall should be selected in general. The permissible height of the RS Wall should be on the basis of sub-soil parameters as detailed below:

S. No.	Ground Condition / Parameters		Permissible Height of RS Wall	Recommended Tests	Suggested Ground Improvement Measures
1	SPT-N <=2 or UCS <=25 kPa or Cu <=12 kPa	If depth from original ground level (OGL)<=**3.0m**	RS Wall may be adopted after full depth replacement with acceptable fill.	Detailed geotechnical investigations including: 1 Field vane shear test/ Laboratory vane shear test on undisturbed sample (UDS) in case of soft clays. 2. Consolidation tests for coefficient of consolidation (C_v),	-
		If depth from original ground level (OGL)>**3.0m**	Construction of RS Wall shall be avoided. In such case, Option of **Viaduct** may be adopted.		

Bijdur Kant JLa Page 2 / 5

S. No.	Ground Condition / Parameters	Permissible Height of RS Wall	Recommended Tests	Suggested Ground Improvement Measures
			initial void ratio(e_0), compression index (C_c) and other consolidation parameters. Hydrological & scour depth assessment in case of flood plain/erosion prone areas.	
2	2< SPT-N <= 4 or 25 kPa < UCS <= 50 kPa or 12 kPa< Cu <= 25 kPa	Height of RS wall may be restricted upto 6.0m.	-do-	1. Replacement with granular soil (if clay depth < 3.0 m) 2. Stone columns 3. Prefabricated vertical Drains (PVDs) 4. Basal reinforcement / Basal mattress
3	4<SPT-N <= 8 or 50 kPa < UCS <= 100 kPa or 25 kPa< Cu <= 50 kPa	Height of RS wall may be restricted upto 8.0m.	-do-	
4	SPT-N > 8 (or C_u > 50 kPa) but Waterlogged area, Marshy land and zone of sea backwater, etc.	Height of RS wall may be restricted upto 10.0m.	-do-	
5	Other cases	Design Height of RS wall may be restricted upto 15.0m (including embedded depth).	As per Clause 10.1 a) of IS:18591.	

Note:

- SPT test shall be conducted just after recession of monsoon to represent the weakest sub-soil condition.
- Appropriate ground improvement techniques shall be selected based on site conditions. Ground improvement shall be carried out as per design and extend beyond toe of the wall.
- Where stage construction is adopted, the increase in shear strength specified for each stage has to be checked in the field, by vane shear tests or laboratory tests on undisturbed samples. Work on next stage filling can be permitted only after it is ascertained that the strength gain needed for building the next stage has been reached.

Bijdur Rawat Jha Page 3 / 5

- Two staged constructions may be adopted where the structure is constructed on weak soils, being treated by PVDs as ground improvement techniques. The reinforced soil structure is first constructed with soft/compressible fascia systems. The deformations shall be monitored. After consolidation settlements have taken place, the soft facing may be covered with hard fascia with appropriate detailing to cater to further minor deformations.

3.3 **Internal Drainage System**: An aggregate drainage bay of minimum 600 mm width at the back of the facing shall be provided.

3.4 **Selection of Pavement Type/Layer**: Pavement above RS walls shall be flexible without using Cement Treated Base (CTB) layer. Rigid PQC pavements shall not be used.

3.5 **Reinforcement**: Field pullout testing of geosynthetic reinforcement shall be carried out to validate the soil-reinforcement interaction coefficient adopted in design, using the proposed geosynthetic, backfill and actual field compaction methodology.

3.6 **Gap Slab**: Gap slab type structure shall be avoided in all respect, by providing wall type abutment. In case of Gap slab is unavoidable, the maximum length of gap slab should be restricted to 2.0m.

3.7 **Warranty from RS Wall System Provider**: The system provider shall furnish 30 years warranty period.

3.8 **Involvement of System Provider during Execution**: Contractor/Concessionaire shall ensure signing of agreement between the Contractor/Concessionaire and Technology Provider before use of RS wall and Geosynthetic material in NH Project in compliance with Para 4.7 MoRT&H Policy Circular EFile No.RW/NH-34049/01/2020-S&R (P&B) pt. (Computer No.-207229) dated 20th September 2024. The agreement shall have the provision of involvement of the Technology Provider during execution from start to end of the RS wall construction. Technology provider shall be responsible for all aspects of RS wall construction including accuracy of geotechnical investigations, design, supervision and ensuring quality of construction including fill material.

4. This circular shall be made applicable for all DPR consultancy works for NHs projects which are issued on or after 30 days after the date of issue of this circular.

5. ROs and PDs of PIUs shall also ensure that Project Reports are in compliance with these provisions.

6. It is requested that the contents of the circular may be brought into the notice of all concerned for needful compliance.

7. This issues with the approval of the Competent Authority.

Yours sincerely,
Bidur Kant Jha
16.03.2026
(Bidur Kant Jha)
Director
(New Technology for Highway development)
For DG (RD) & SS

Enclosure: **Appendix- Detailed SoP for RS Wall (63pages).**

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7. Sr. PPS/ PPS to all ADGs/CEs
8. Sr. PPS/ PPS to JS (RT&MVL)/ JS (EIC) / JS (Logistics)/ JS (NHIDCL)

Bidur Kewtale

1. Introduction

Reinforced soil retaining wall (RS wall/ RE wall) are being extensively used in highway projects in India as it requires least land acquisition. While a majority of these structures are performing well, varying levels of distress and performance issues have been observed in a significant number of cases due to several reasons, including the following.

1. Lack of knowledge and expertise: Inadequate understanding of RS wall system design principles, construction techniques, quality control and maintenance requirements among site engineers.
2. Design and detailing deficiencies: Deviations in the design process, such as insufficient design calculations (settlement calculations and global stability checks often skipped), improper/inadequate geotechnical investigations, and insufficient drawing detailing for construction.
3. Construction deficiencies: Poor workmanship, use of substandard materials, negligence at site engineers' level, or failure to follow proper construction procedures.
4. Inadequate maintenance: Inadequate maintenance, inspection, and timely resolution.

Combinations of these factors can occur in complex ways during construction and lead to an increased likelihood of distress/failure. To address these concerns, it is essential to develop Standard Operating Protocol (SoP), implement robust quality control measures, ensure adequate training of site engineers, and conduct regular inspections and maintenance of RS walls.

The expert committee recommended the following actions/protocols which are intended to function as a practical field-ready tool, enabling uniform practices, consistent quality, and enhanced accountability across all RS wall projects.

2. Various Elements of RS Wall

2.1 Reinforced soil walls are composite structures wherein compacted fill is internally stabilized by placing discrete horizontal tensile reinforcements at design locations during construction. The major components of Reinforced Soil (RS) walls used for highways (See Figure 1) are:

1. Foundation
2. Facing panel and associated connection system
3. Fill Material
4. Reinforcement
5. Drainage bay
6. Levelling pad, Bearing pad, Crash barrier, Friction slab and Other Accessories

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2.2 Each component has a specific intended function, and hence requires use of a specific type of material. Each component has multiple design options for the designer to choose from. Hence RS walls as retaining structures are designer-friendly.

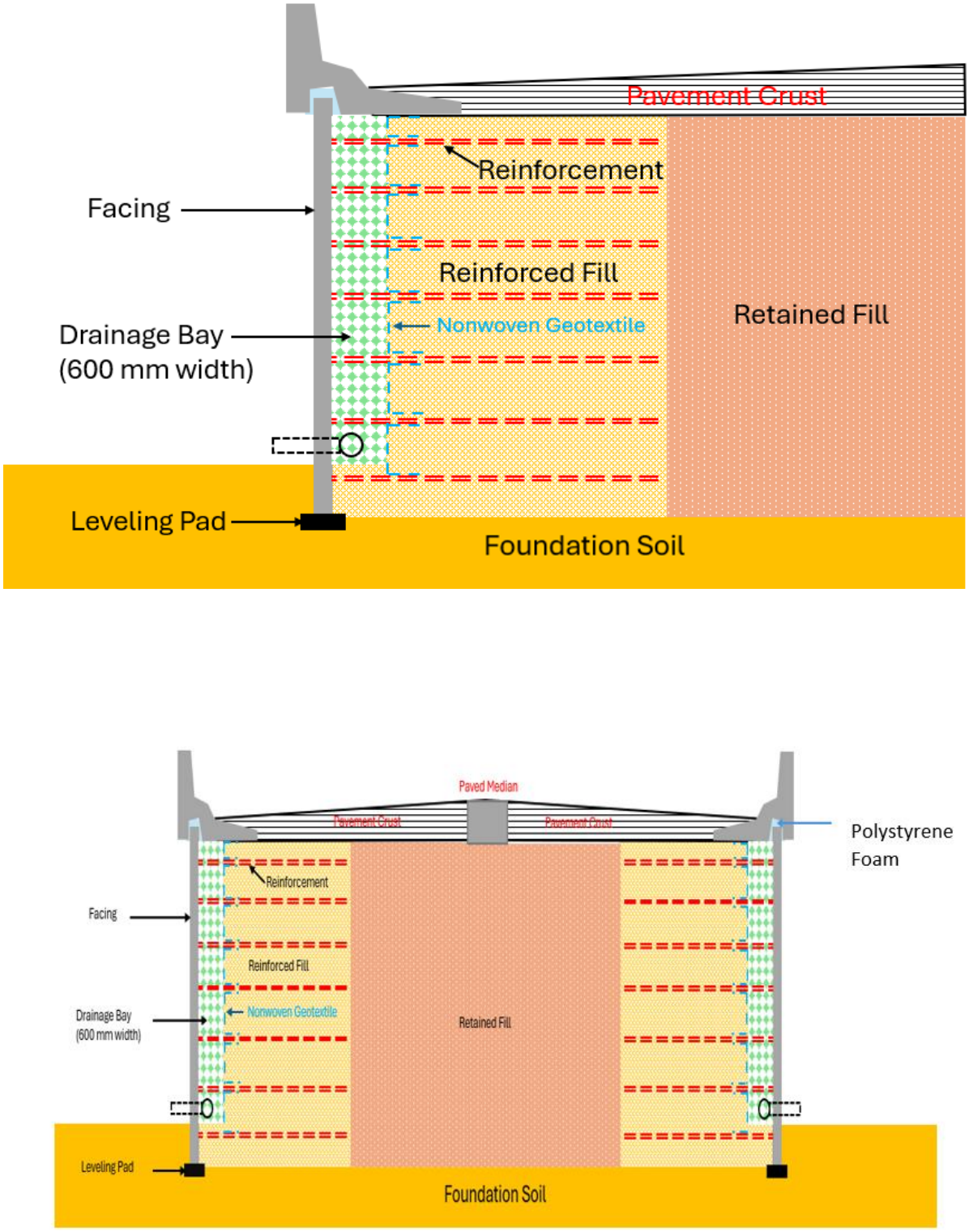

Figure 1: Elements of RS Walls

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3. Foundation

3.1 Geotechnical Investigations

3.1.1 Boreholes spacing, number and depth are given in table below:

Sl. No.	Height/ Ground Conditions	Number/ Spacing/ Location of Boreholes	Minimum Depth of Boreholes/ Soundings
1.	Wall Height > 10m or poor ground condition	50 m	Least of the following: a) Four times the height of the reinforced soil structure b) Two times the average width of the embankment **c) 30 m**
2.	Wall Height < 10m or other than poor ground condition	100 m	
3.	RS closure wall or true /load bearing abutments	Minimum two boreholes (One borehole close to the ends of the reinforced soil walls)	

3.1.2 Poor ground condition are:

1. Uncontrolled/unsuitable fills like loosely dumped soils, debris, waste materials;
2. Organic soils;
3. Weak and compressible fine-grained soils;
4. Expansive soils;
5. Loose coarse-grained soils; and
6. Strata with cavities

3.1.3 Geotechnical parameter for poor ground condition are mentioned in table below:

- **Cohesive Soils**

Consistency	Unconfined Compressive Strength (kPa)	SPT Value (N)	SCPT Value (kPa) (acc. to Akca (2003))
Very Soft	<25	0–2	0–400
Soft	25–50	2–4	400–800
Medium	50–100	4–8	800–1600

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- **Very loose /Loose sand**

Consistency	SPT-N	SCPT (qc in MPa)
Very Loose sand	0-4	< 3
Loose sand	4-10	3-6

Note:

1. Boreholes shall be located within the footprint of the reinforced soil zone, preferably one borehole each close to the ends of the reinforced soil wall.
2. At locations where rock/weathered rock is encountered at a shallow depth, which can safely support the reinforced soil structure, test pits may be used instead of boreholes, subject to the approval of the engineer.

For Detailed Geotechnical Investigation refer Section 2 IS 18591:2024.

3.1.4 Select field tests as per the Table given below based on strata. Laboratory tests: follow relevant BIS standards.

Sl. No.	Design Limit State	Property	Type of soil	Suitable Tests	Remarks
1.	Bearing capacity/ global capacity	Effective angle of shearing resistance (ϕ')	Sands	SCPT, SPT	
2.			Gravels	SPT	
3.			Residual Soils	SPT	
4.		Undrained shear strength	Very soft/ soft clays/ silts	FVST, SCPT	
5.			Medium stiff to stiff clays/ silts	SCPT, SPT, Undisturbed sample (UDS)	Driving the sampler using impact shall be avoided.
6.			Very stiff to hard clays/ silts	SCPT, SPT	Use of SCPT is limited to its reaction capacity.
7.	Settlement	Drained modulus (E')	Sands	SCPT, SPT	
8.			Gravels	SPT	

Sl. No.	Design Limit State	Property	Type of soil	Suitable Tests	Remarks
9.			Residual Soils	SPT	
10.		Undrained modulus (E_u)	Clays/ silts	SCPT, SPT	
11.		e_0, C_c, C_r, σ'_p, C_v	Clays /silts	Consolidation tests on Undisturbed sample (UDS).	Correlations with liquid limit, water content etc. are not reliable
12.	Liquefaction		Sands	SPT, SCPT	

Where

SCPT = Static cone penetration test;

SPT = Standard penetration test;

FVST = Field vane shear test;

UDS = Undisturbed sample;

e_0 = Initial void ratio;

C_c = Compression index;

C_r = Recompression index;

σ'_p = Pre-consolidation pressure; and

C_v = Coefficient consolidation in vertical direction.

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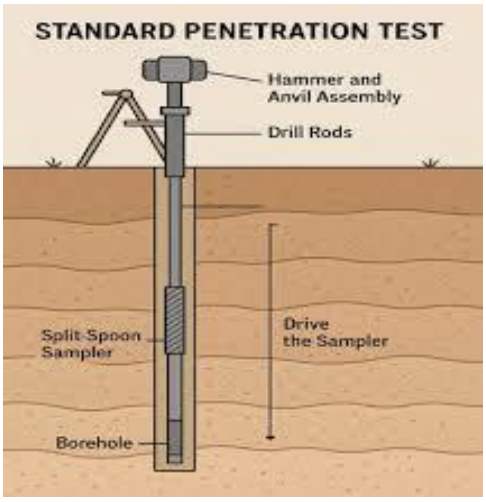
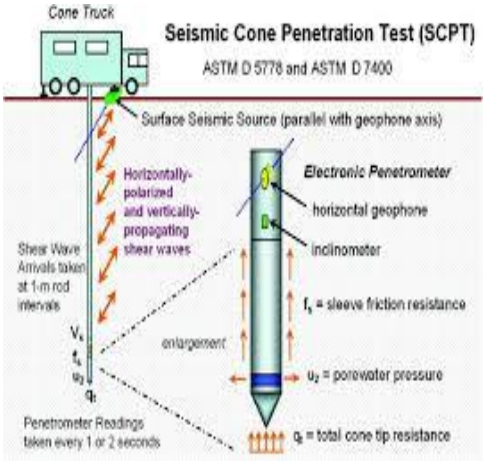
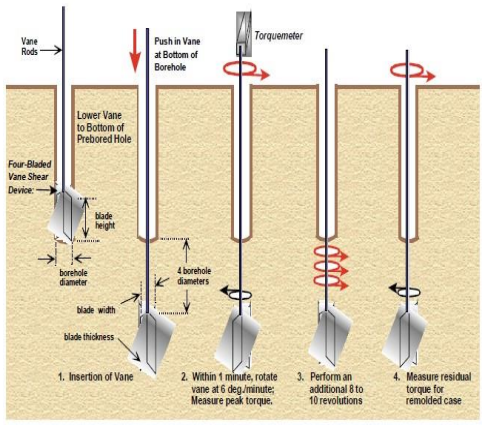
Summary of Geotechnical Field Tests

Test	Primary Measurement	Best Suited For	Key Engineering Parameters	Visual Diagram
SPT	Blow count (N-value)	Sands and stiff clays	Density, liquefaction potential, bearing capacity.	
SCPT	Tip resistance (q_c) & Sleeve friction (f_s)	Sands, silts, and soft clays	Soil stratigraphy, shear strength, and pile capacity.	
FVST	Torque	Soft to medium clays	Undrained shear strength (s_u) and sensitivity.	

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Note:

1. The above-mentioned minimum investigations are mandatory at DPR stage. The borehole location shall be geotagged and test checked by PD/representative of Authority. These geotagged reports shall from part of bidding document and form baseline (minimum requirement) for design of structures & RS walls.
2. Concessionaire/Contractor shall perform Geotechnical investigation at its own and accordingly, RS wall should be designed. Additional ground improvement be undertaken by the Concessionaire/Contractor at its own cost.
3. AE/IE must provide inputs of a geotechnical expert for 01 year on full time basis (During Development period 06 months; Construction period 06 months) and 100% sub-soil exploration certification.
4. NHAI Empaneled agencies may be utilized for quality geotechnical investigations.

4. RS Wall Type Selection

4.1 Prefer full-height RS walls

4.2 Avoid partial height RS walls. In exceptional cases where partial height RS wall is unavoidable, SOP (given in **Annexure-I**) shall be strictly followed.

4.3 **RS wall on soft clay**

In area of large deposit of soft soil, the height of RS wall may be restricted as per table given below:

S. No.	Ground Condition / Parameters		Permissible Height of RS Wall	Recommended Tests	Suggested Ground Improvement Measures
1	SPT-N <=2 or UCS <=25 kPa or Cu <=12 kPa	If depth from original ground level (OGL)**<=3.0m**	RS Wall may be adopted after full depth replacement with acceptable fill.	Detailed geotechnical investigations including: 1 Field vane shear test/ Laboratory vane shear test on undisturbed sample (UDS) in case of soft clays. 2. Consolidation tests for coefficient of consolidation (C_v), initial void ratio(e_0), compression index (C_c) and other consolidation	-
		If depth from original ground level (OGL**)>3.0m**	Construction of RS Wall shall be avoided. In such case, Option of **Viaduct** may be adopted.		

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S. No.	Ground Condition / Parameters	Permissible Height of RS Wall	Recommended Tests	Suggested Ground Improvement Measures
			parameters. Hydrological & scour depth assessment in case of flood plain/erosion prone areas.	
2	2< SPT-N <= 4 or 25 kPa < UCS <= 50 kPa or 12 kPa< Cu <= 25 kPa	Height of RS wall may be restricted upto 6.0m.	-do-	1. Replacement with granular soil (if clay depth < 3.0 m) 2. Stone columns 3. Prefabricated vertical Drains (PVDs) 4. Basal reinforcement / Basal mattress
3	4<SPT-N <= 8 or 50 kPa < UCS <= 100 kPa or 25 kPa< Cu <= 50 kPa	Height of RS wall may be restricted upto 8.0m.	-do-	
4	SPT-N > 8 (or C_u > 50 kPa) but Waterlogged area, Marshy land and zone of sea backwater, etc.	Height of RS wall may be restricted upto 10.0m.	-do-	
5	Other cases	Design Height of RS wall may be restricted upto 15.0m (including embedded depth).	As per Clause 10.1 a) of IS:18591.	

Note:

- SPT test shall be conducted just after recession of monsoon to represent the weakest sub-soil condition.
- Appropriate ground improvement techniques shall be selected based on site conditions. Ground improvement shall be carried out as per design and extend beyond toe of the wall.
- Where stage construction is adopted, the increase in shear strength specified for each stage has to be checked in the field, by vane shear tests or laboratory tests on undisturbed samples. Work on next stage filling can be permitted only after it is ascertained that the strength gain needed for building the next stage has been reached.
- Two staged constructions may be adopted where the structure is constructed on weak soils, being treated by PVDs as ground improvement techniques. The reinforced soil structure is first constructed with soft/compressible fascia systems. The deformations shall be monitored. After consolidation settlements have taken place, the soft facing may be covered with hard fascia with appropriate detailing to cater to further minor deformations.

5. Fill Material

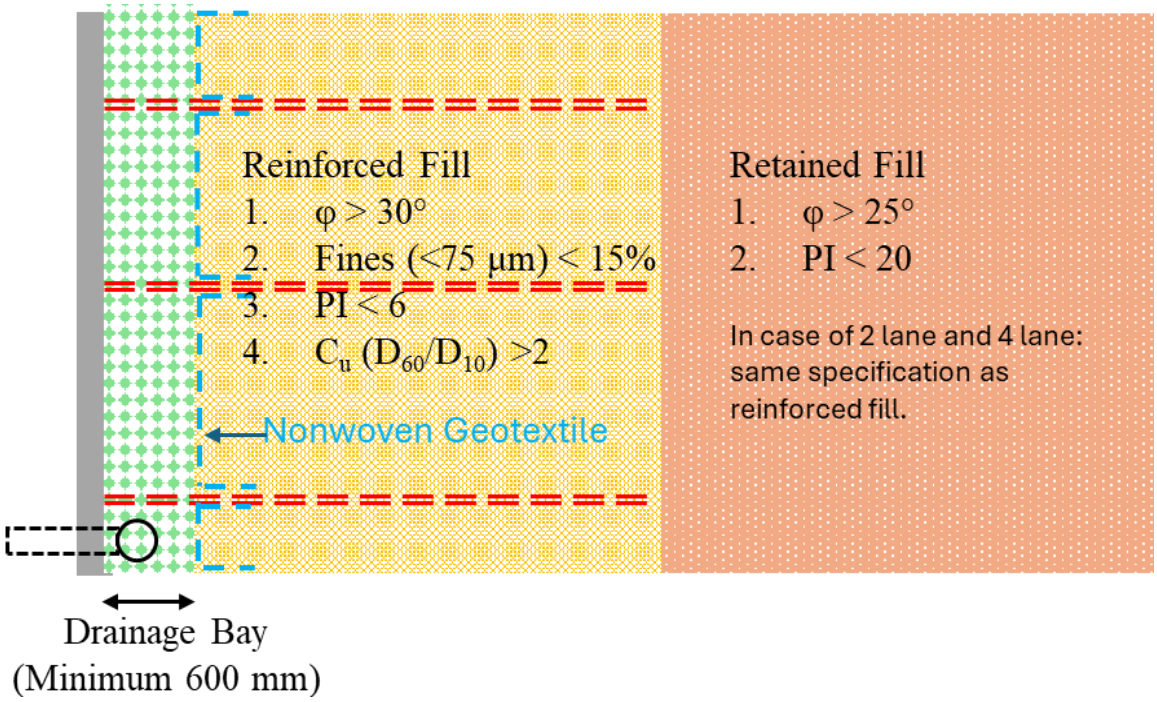

Figure 2: Schematic showing different fills in a reinforced soil structure

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5.1 Reinforced fill soil shall conform to Table given below

Sl. No.	IS Sieve Size	Percent Passing	Method of Test, Ref. to	Remarks
1.	75 mm	100	IS 2720 (Part 4)	Plasticity index should be less than 6, Drained angle of internal friction should not be less than 30°, C_u should be greater than 2.
2.	425 microns	60 to 90		
3.	75 microns	0 to 15		

Note:

1. Maximum particle size for fill materials be reduced to 19 mm for geosynthetics and epoxy and PVC coated steel reinforcements.
2. The materials shall be substantially free of shale or other soft, poor durability particles. The material shall have a magnesium sulphate soundness loss of less than 30 percent after four cycles or a sodium sulphate value less than 15 percent after five cycles [soundness test as per IS 2386 (Part 5)].

5.2 Pond ash (commonly called as flyash)

Pond ash shall conform to points given below and shall be obtained from single source for given structure.

1. Pond ash used for reinforced fill and retained fill shall be free-draining and shall have PI < 6 and Cu > 2. It is recommended to use pond ash with MDD greater than 10 kN/m3 [IS 2720 (Part 8)]. The minimum angle of friction of pond ash shall be 30° [IS 2720 (Part 11)].
2. Even if the pond ash material does not meet the gradation criteria for backfill/ reinforced material as per Clause 5.1, this criterion is relaxed, considering high shear strength and good permeability characteristics of pond ash or bottom ash.

5.3 Retained fill

- If the reinforced fill material is pond ash same material must be used for reinforced fill.
- The retained fill in case of 2 lane and 4 lane highway project, where total width is not significant shall be of same specification as reinforced fill.
- In case reinforced fill and retained fill are different. The retained filled should be ϕ >25, PI < 20.

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- Earth pressure acting on reinforced fill is more due to less ϕ value of retained fill. Therefore, alternate fill option of **Fig 2B** should be adopted.
- Drainage should be ensured by providing drainage bay between retained and reinforced fill.

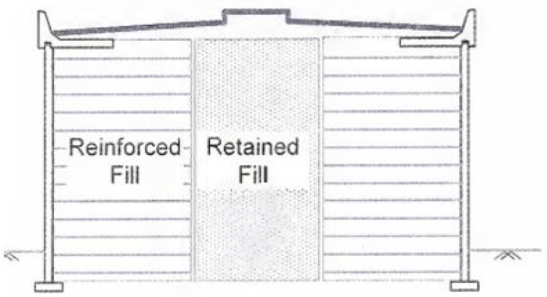


Fig. 2 A
More Earth Pressure

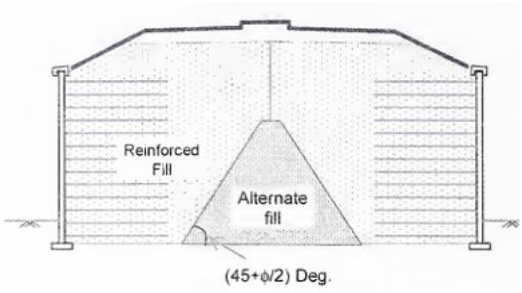
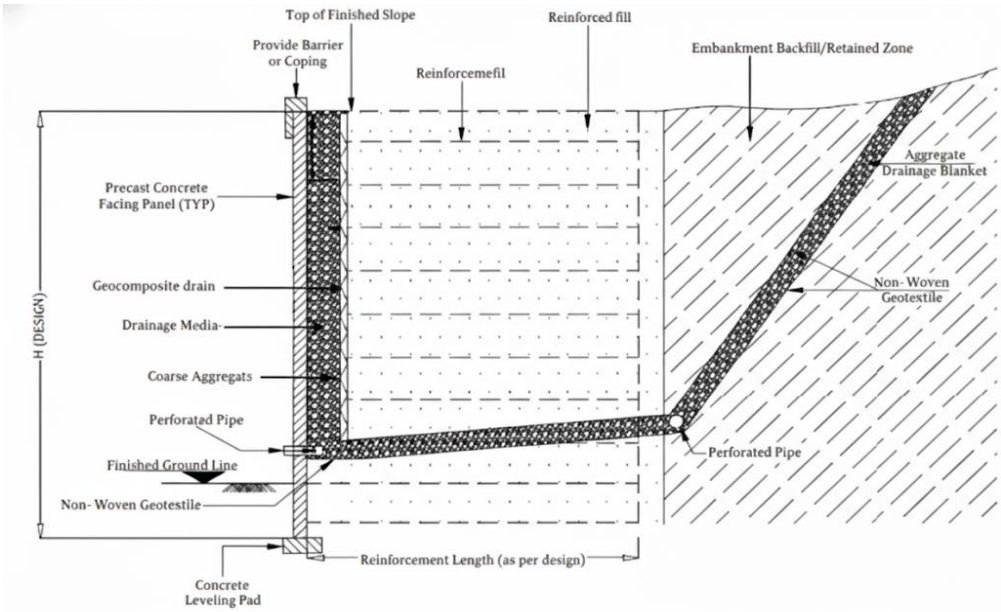


Fig. 2B
Less Earth Pressure



EXAMPLE DRAINAGE BLANKET BEHIND THE RETAINED BACKFILL USING GEOCOMPOSITE AND DRAINAGE AGGREGATES
(TYPICAL CONCRETE PANEL FASCIA)

5.4 Under no circumstances, multiple fill materials should be allowed within a given stretch of wall.

6. Drainage Requirements

6.1 RS structures are not designed for hydrostatic pressures. Therefore, proper drainage shall be ensured.

There are two types of drainage:

1. Internal Drainage System
2. External Drainage System

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6.2 Internal Drainage System

- A drainage bay of minimum 600 mm width at the back of the facing shall be provided as an adequate drainage measure.
- A non-woven geotextile shall be provided as a separation/filtration layer between the drainage aggregates and the reinforced fill material.
- Gradation Requirements for Drainage Bay

Sl. No.	Sieve Opening Size (mm)	Percentage Finer(%)	Remarks
1.	37.5	90 to 100	Drainage material shall be as per IS 18591:2024.
2.	20.0	80 to 100	
3.	12.5	0 to 20	

- **Slotted Drainage Pipe (SDP):**
  - The aggregate drainage bay must be connected to a longitudinal slotted/perforated drainage pipe of diameter 150 mm with outlet spacing 20-30 m. The PVC pipe shall conform to IS 15328. Longitudinal pipe shall be 200 mm above the ground level, so that the collected water is drained out of the structure.
  - The drainage pipe should have adequate slots/perforations for intake of water and should be wrapped with geotextile filter.
  - The longitudinal slotted drainage pipe should drain the collected water out of the RS wall at regular intervals by using a T-connection.
  - The third limb of the T-connection should pass through the sleeve hole in the facing and drain out on the front side of the toe into a local drainage system.

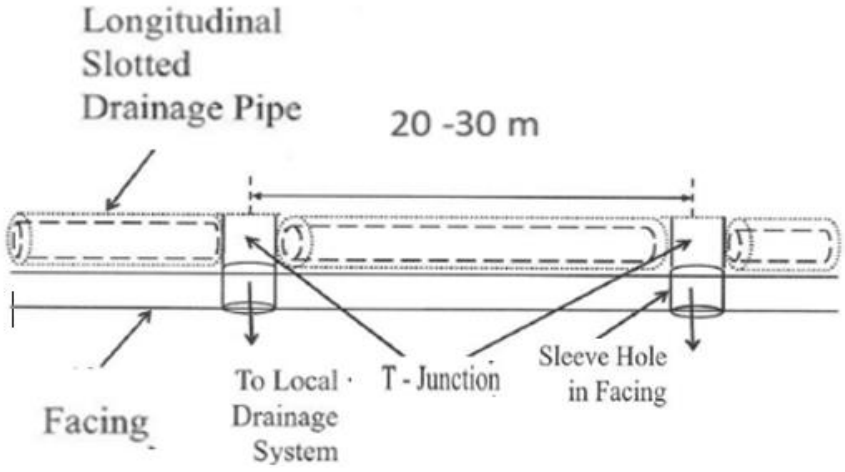

Figure 3: Longitudinal slotted drainage pipe with T-junction & exit through facing

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- **Pavement above RS walls shall be flexible without using Cement Treated Base (CTB) layer. Rigid PQC pavements shall not be used.**
- Medians above RS walls shall be fully paved (with cement concrete underlined by impermeable membrane) to prevent water ingress.
- Drain at toe of wall shall be provided at least 1m away from wall.

6.3 External Drainage System

- Designer should assess the potential stormwater and design surface drainage system upto final disposal of storm water.

7. Reinforcements

7.1 Different types of reinforcements used in reinforced soil walls are: -

1. **Non-Extensible**: Metallic elements like bars, strips, plates etc.
2. **Extensible**: Polymeric elements like strips, grids, rods, mesh etc.

7.2 All types of Reinforcements are taken beyond the Rankine zone into the resistant zone to ensure sufficient bond and anchorage.

7.3 Steel reinforcement used in RS wall systems shall conform to Clause 27.1 of IS 18591 given in **Annexure-II**.

7.4 Polymeric reinforcement (Geogrids and Geo-strap) used in RS wall systems shall conform to Clause 27.2 IS 18591 as given in **Annexure-II**.

7.5 Quality Assurance (number of tests and type of tests) for geosynthetic products shall conform to Clause 10 of IS 17373 and Clause 9 of IS 17372 given in **Annexure-II**.

7.6 Manufacturer of soil reinforcing elements and associated RS wall accessories shall be ISO 9001:2015 certified. Manufacturer shall have a NABL/GAI-LAP accredited in-house laboratory with computer-controlled testing machines for all QC tests of relevant supplied RS wall components.

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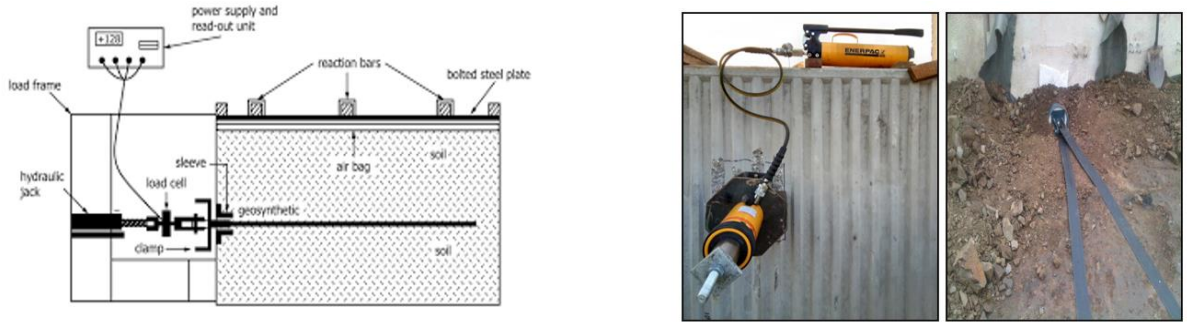
7.7 Field pullout testing of geosynthetic reinforcement shall be carried out to validate the soil-reinforcement interaction coefficient adopted in design, using the proposed geosynthetic, backfill, and actual field compaction methodology. (Pullout Test during construction should be performed as per **Annexure-III**).



Laboratory

Field pullout

Figure 4: Pullout Test

8. Facia Panel

8.1 The facing is provided to prevent spilling/falling over of the fill and also to provide firm anchorage to the reinforcement. Facings should be tough and robust. Facing also provides an aesthetic architectural finish to the RS structure.

1. Precast reinforced concrete panels
2. Precast concrete blocks and precast concrete hollow blocks
3. Gabion Facing

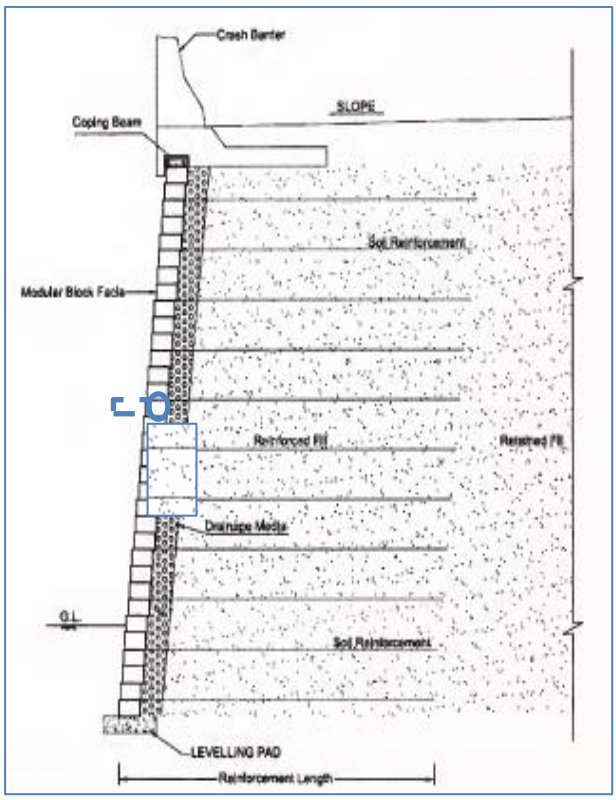


Figure 5: Typical Cross Section of RS Wall with Modular Block Facia

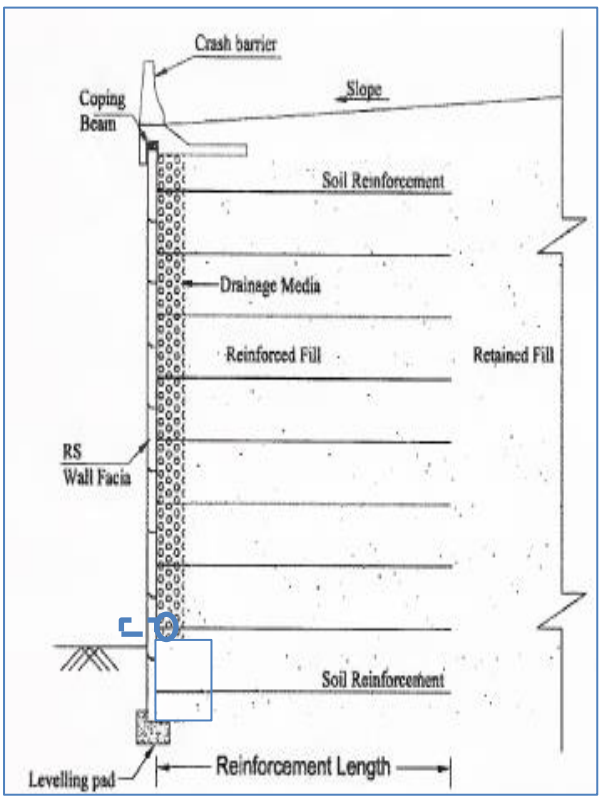


Figure 6: Typical Cross Section of RS Wall with Concrete Panel Facia

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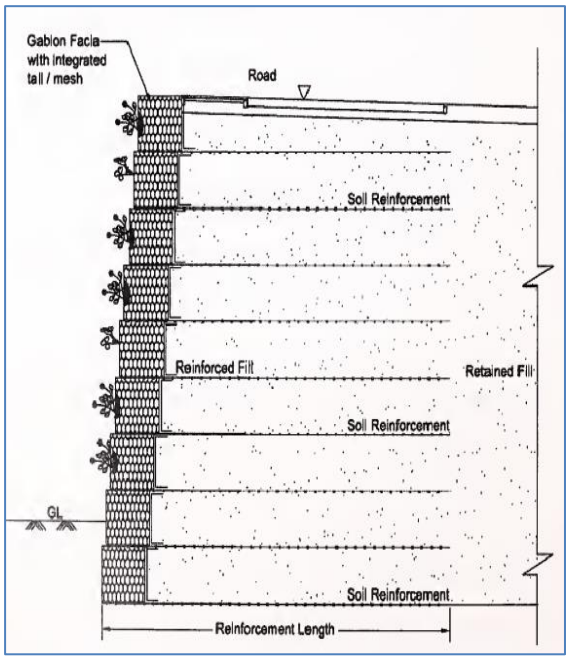

Figure 7: Typical Cross Section of RS Wall with Gabion Facia with Integrated Tail

Figure 8: Modular Blocks with Architectural Finish

Figure 9: Panels with Architectural Finish

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8.2 Minimum thickness of Facia panel should be 160 mm excluding architectural finish.

8.3 Modular Block should be manufactured by block making machine with minimum M35 Grade concrete. Hollow area should not exceed 40% of cross-sectional area. Outer side of block shall be 85 (mm) thick and inner side shall be 45 (mm) thick. The minimum thickness of the block shall be 300 mm to achieve connection strength through friction.

8.4 Facia Panel Tolerances are given in the table below

Sl. No.	Characteristics	Tolerance
1	For precast RCC panels:	
1a	All dimensions within (i.e., a and b shown in figure below)	± 5 mm
1b	Evenness of front face (like, m shown in figure below)	± 5 mm over 1500 mm
1c	Differences between length of two diagonals (i.e., between x and y shown in figure below)	5 mm (maximum)
1d	Thickness (i.e., c shown in figure below)	+5 mm
2	For modular blocks:	
2a	Length and Width (i.e., L and B shown in figure below)	± 2.5 mm
2b	Dimension for height (i.e., H shown in figure below)	± 1.5 mm

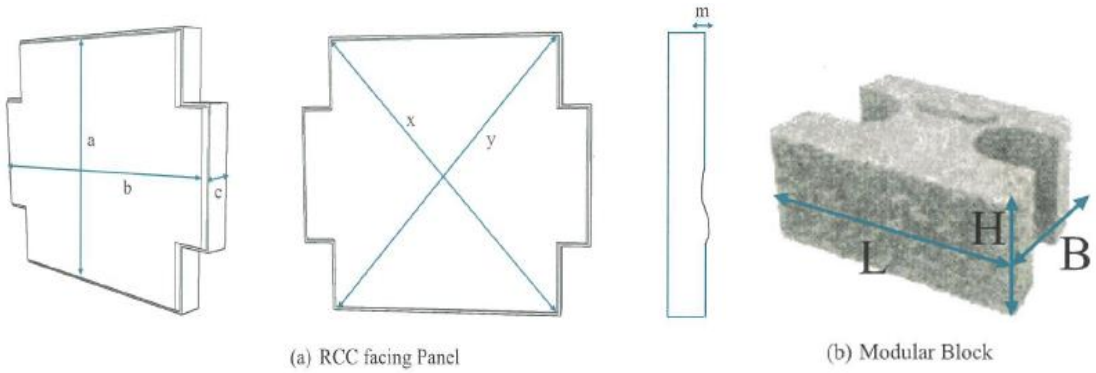

Figure 10: Representation of tolerances for (a) RCC facing panel, and (b) modular block

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8.5 Connection System

- Different type of reinforcements and Connections used in RS walls are shown in **Annexure-IV**.
- The connection between the facia panels and the reinforcing element can be constructed using various techniques like nut and bolt, HDPE inserts with bodkin joint, hollow embedded devices, polymeric/ steel strips/ rods/ pipes, fiberglass dowels, frictional or any other method after being duly designed and tested.
- In case of modular block facing where the reinforcement is held by friction between the facia block and the reinforcement, the results of pullout test as per ASTM D 6638 shall satisfy the requirement of the Long-Term Design Strength of the primary reinforcement.
- Project-specific connection tests are mandatory.

  1. Blocks-geogrid connection strength test is mandatory and shall be performed as per ASTM D6638 and IRC SP 102 Sec. 3.4.

  2. Panels-geogrid/geostrips connection strength test is mandatory. The connection Strength test as shown in **Annexure-V**.

- The connection strength values obtained from above tests shall be used in design check of connections as per Clause 34.12.15 of IS 18591.
- All exposed steel components including steel connection system, loops, bars etc. shall be galvanized to minimum 500 gsm.

9. Traffic Barrier

9.1 Traffic barriers (Crash barriers) are constructed over the front face of the reinforced walls. Commonly, a friction slab is used to transfer the lateral loads due to impact of vehicles on the Barriers.

9.2 Typically a friction slab varies from 1500 to 2500 mm width and 250 mm thick depending on the type of crash barrier provided.

9.3 The impact traffic load on barriers constructed over the front face of walls must be designed to resist the overturning moment by their own mass.

9.4 The wall design should ensure that the reinforcement does not rupture or pull-out during the impact event.

9.5 The impact force resulting due to the impact shall be distributed equally to the upper two rows of the soil reinforcement, which the reinforcements resist over their full length.

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9.6 The upper layer of soil reinforcement shall be designed for a rupture impact load equivalent to a static load of 33.5 kN/m of wall and the second layer be designed with a rupture impact load equivalent to a static load of 8.8 kN/m.

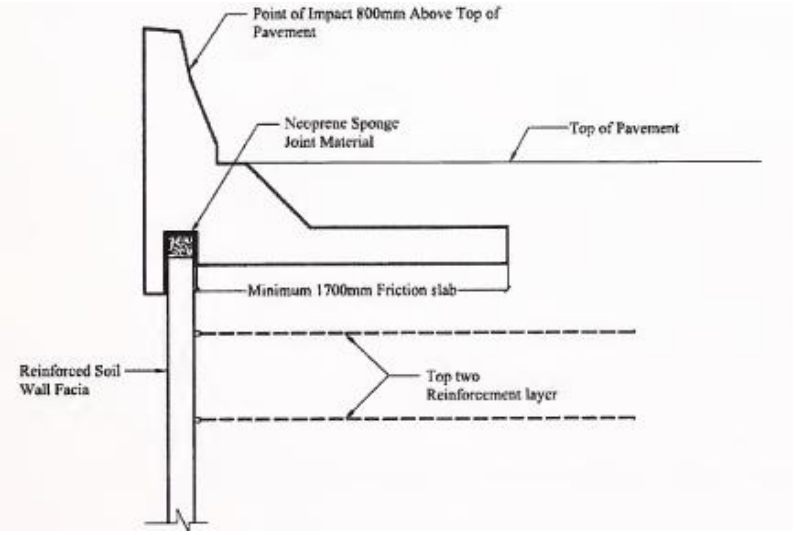

Figure 11: Crash Barrier Section without shoulder

10. Other Material Specifications

1 Non-woven geotextile to be used as separation/filtration **shall** conform to Section 3 of IS 18591.

Figure 12: Non-woven Geotextile

2 Bearing Pad:

1. Walls using segmental precast concrete panels require bearing pads in their horizontal joints (and diagonal, if applicable) that provide some compressibility and movement between panels during elastic compression and settlement of the reinforced fill and avoid concrete-to-concrete contact. These materials are generally ethylene propylene diene monomer (EPDM) rubber pads or HDPE.
2. Two bearing pads are usually used on 1.5 m wide panels and at least three bearing pads with 3 m wide panels. A minimum of three bearing pads are used per horizontal panel joint.

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3. The stiffness (axial and lateral), size, and number of bearing pads should be sized such that the final joint opening shall be at least 15 mm ± 5 mm unless otherwise shown on the plans.

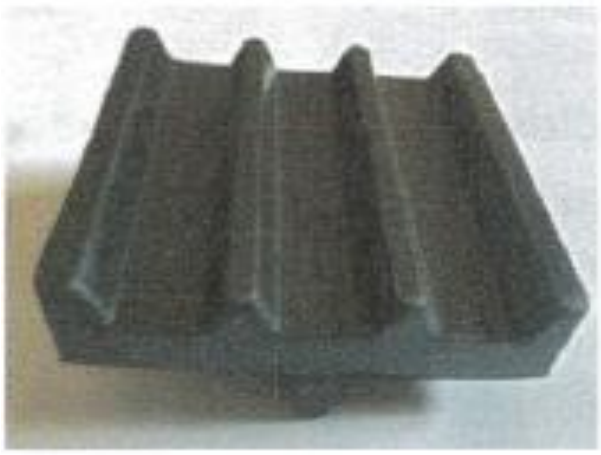

Figure 13: EPDM bearing pads

4. Requirements of Bearing Pads is given in the **Annexure-VI**.

11. Ground Improvement Techniques

11.1 Construction of RS wall over soft subsoil causes difficulties in both design and construction because of the low shear strength and high compressibility of such soils. Embankments on soft soil may fail due to:

1. Failure of soft subsoil in shear (failure in bearing capacity)
2. Sliding of embankment fill and underlying soft subsoil (failure along a slip circle)
3. Excessive settlements and also lateral displacements

11.2 Ground conditions which require ground improvement include:

1. Uncontrolled/unsuitable fills like loosely dumped soils, debris, waste materials;
2. Organic soils;
3. Weak and compressible fine-grained soils;
4. Expansive soils;
5. Loose coarse-grained soils; and
6. Strata with cavities

11.3 Various Ground Improvement Techniques to be used are:

1. Full replacement of soft subsoil covering entire width of embankments with soil of better load bearing characteristics
2. Use of Geocell Mattress or Geogrids (Basal Reinforcement)
3. Use of Stone Columns to improve the bearing capacity of soft subsoil
4. Use of Prefabricated Vertical Drains (PVD) with preloading
5. Combination of the above

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6. Any other appropriate deep treatment method based on soil strata type and loading conditions.

11.4 Geocell Mattress (Basal Reinforcement)

The methodology provides "stiff raft" by providing 3D confinement to granular material.

- Clear the site and level the ground. Lay a non-woven geotextile separator over the soft subgrade to prevent the "pumping" of fines into the geocell layer.
- Expand the geocell panels to their full dimensions. Use J-pins or rebar stakes to anchor the corners and maintain the honeycomb shape.
- Join adjacent panels using heavy-duty staples or specialized plastic keys to ensure the mattress acts as a continuous unit.
- Fill the cells with granular material (crushed stone, gravel, or sand). To avoid damaging the cells, minimum 150 mm granular material shall be placed above geocell.
- Compact the infill using a light vibratory roller (<8 T). The first pass should be done without vibration to lock the material, followed by standard compaction.

Figure 14: Geocell Basal Reinforcement (Prefabricated/Factory made Geocells)

Figure 15: Geogrid Basal Reinforcement

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The construction procedure for a site-fabricated geocell system (Figure 16) made from rigid geogrids is summarized below:

- Clear and level the ground. Place a geotextile separator if required. Lay the base rigid geogrid flat with minimum 300 mm overlap between adjacent sheets.
- Place uniaxial rigid geogrids perpendicular to the embankment centerline. Tie one edge to the base geogrid using nylon ties or braid at regular spacing.
- Fix temporary posts at both ends and insert rods through end apertures. Raise diaphragms to vertical position and apply manual tension. Provide intermediate posts for longer lengths if needed.
- Mark spacing along diaphragm tops and stagger alternate rows. Install diagonal grids between transverse members to form triangular/diamond cells. Connect using HDPE or compatible nodal connectors.
- Using the approved granular material, fill the first two rows of cells to half height. Then fill the first row to full height. Continue filling, ensuring that the leading row is always half filled before the trailing row is fully filled. Filling may be carried out by mechanical plant operating directly on top of filled cells. Provide minimum 150 mm compacted cover before trafficking and remove tensioning posts after filling.

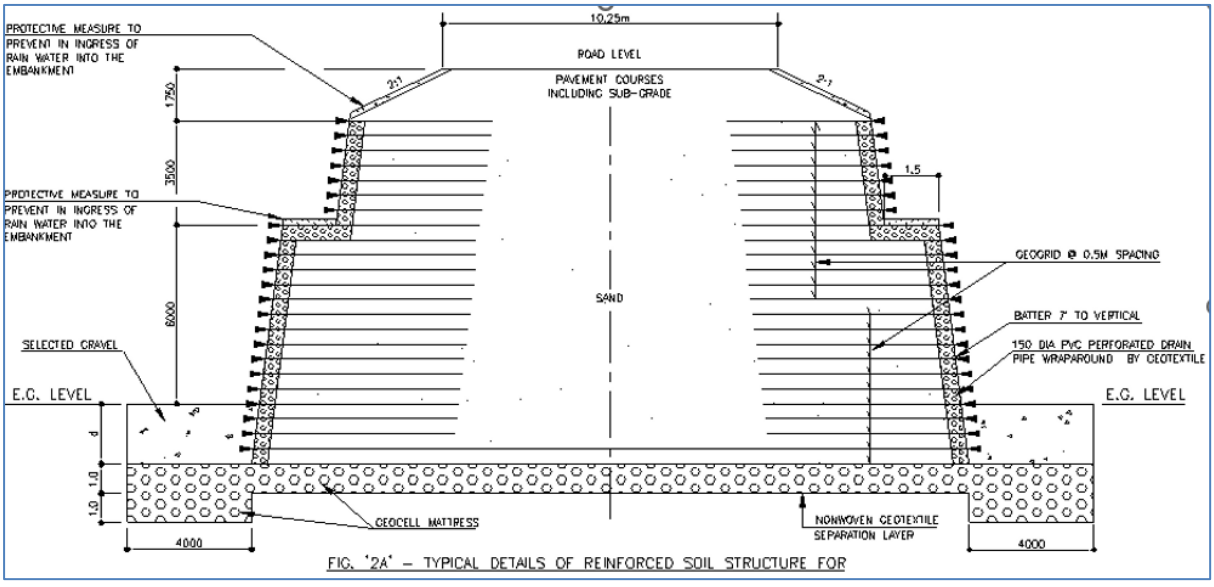

Figure 16: Geocell Mattress (Geocell made by rigid geogrids)

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11.5. Stone Columns (Vibro-Replacement)

- This method involves creating vertical columns of compacted stone to reinforce the soil and provide drainage.
- Approximate diameter of the stone column in the field may be determined from the known compacted volume of material required to fill the hole of known length and maximum and minimum densities of the stone.
- Stone columns should be installed preferably in an equilateral triangular pattern which gives the densest packing although a square pattern may also be used.

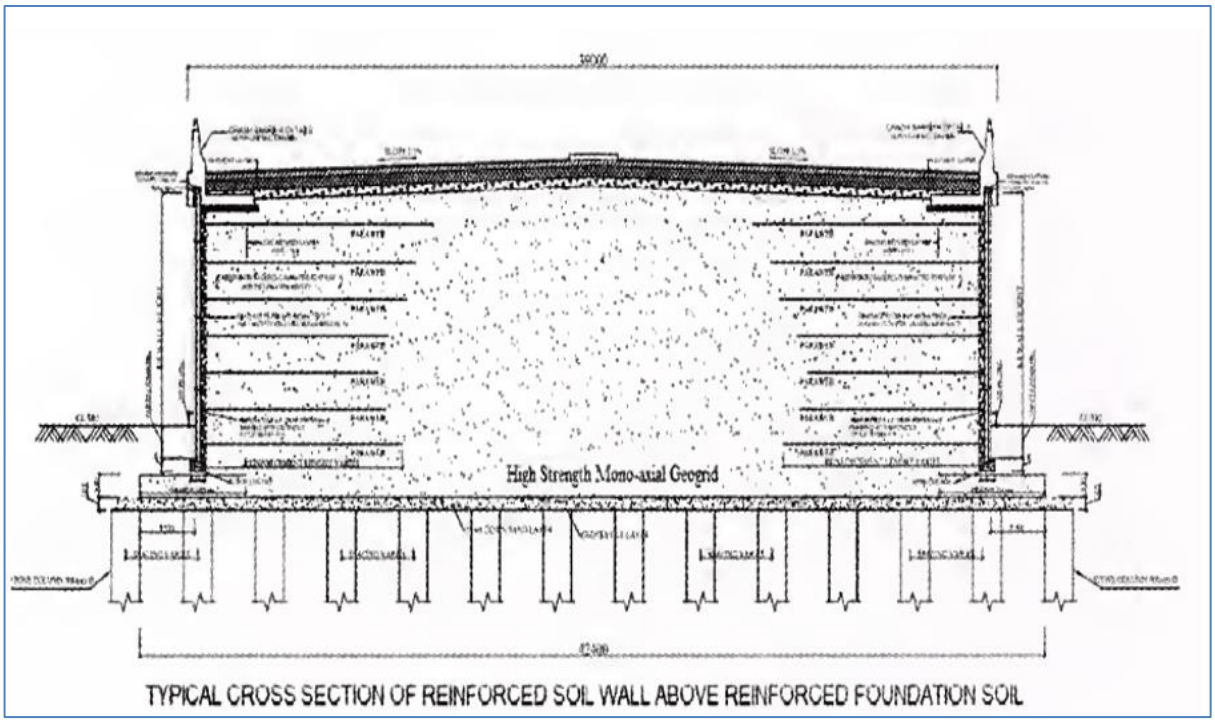

Figure 17: Stone Columns

11.6. Prefabricated Vertical Drains (PVD)

The methodology focuses on "stitching" the ground to allow pore water to escape under pressure.

- A sand blanket (0.5m to 1.0m thick) is laid over the entire area first. This acts as the horizontal drainage path for the water that the PVDs will bring to the surface.
- A specialized PVD rig with a tall mast and a hollow steel "mandrel" is used.
- The PVD material (the wick) is threaded through the mandrel and attached to a small steel anchor plate at the bottom.

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- The mandrel is pushed or vibrated into the ground to the required depth (often 10m to 30m).
- Once at depth, the mandrel is withdrawn. The anchor plate keeps the PVD in place at the bottom.
- The PVD is cut about 15–20cm above the sand blanket to ensure the water discharges into the drainage layer.

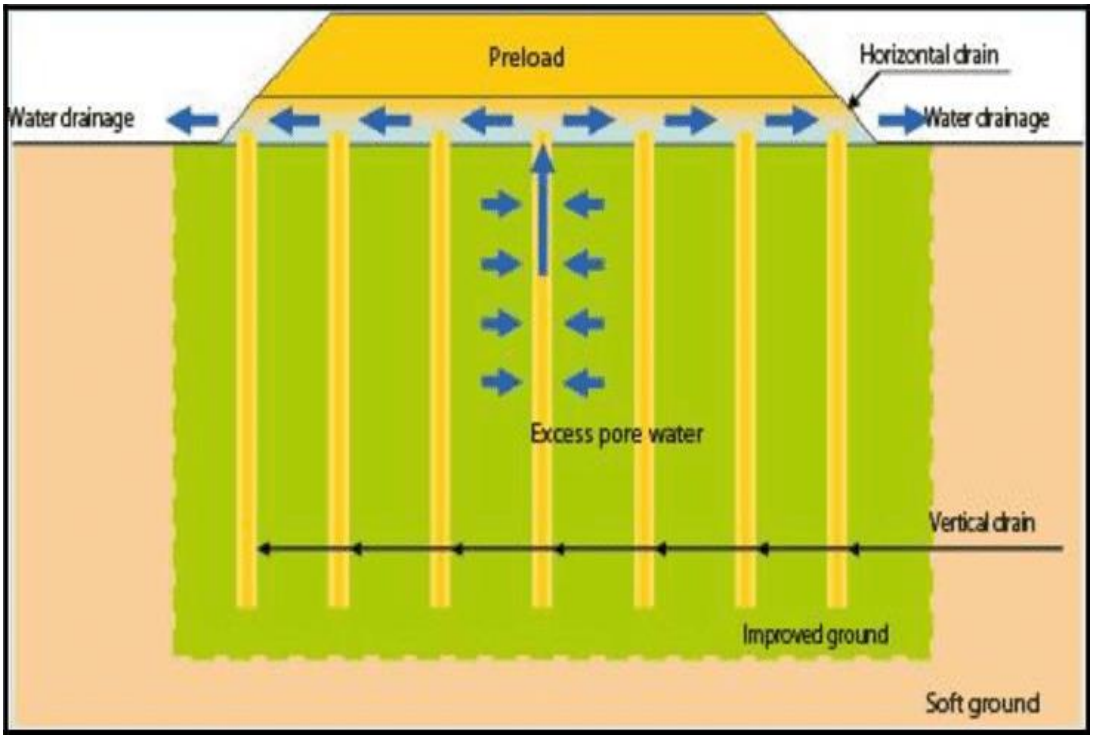

Figure 18: Prefabricated Vertical Drains (PVD)

12 Design and Detailing

12.1 Load and Resistance Factor Design (LRFD) method shall be used for design of RS walls. Strength (Resistance) shall be scaled down by a factor and applied load shall be scaled up as per section 4 of IS 18591.

12.2 The basic design parameters, steps and analysis for RS wall shall be as per Clause 34.5 of IS 18591.

12.3 Minimum length of reinforcement shall be greater than 0.7 X Design Height (Sum of embedment depth and exposed height of wall up to top of facing unit) or 3.0 m.

12.4 Vertical spacing of primary reinforcement shall not be greater than 800 mm for panel and 600 mm or twice the block depth whichever is minimum for block panel.

12.5 Gap slab type structure shall be avoided in all respect, by providing wall type abutment. Typical section shown in **Annexure-IX**.

12.6 In case of Gap slab is unavoidable, the maximum length of gap slab should be restricted to 2m. Gap slab arrangement is provided as per **Annexure-IX**.

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12.7 The reinforced soil wall shall be designed for different limit states in each failure mode that is, external, internal, compound, and global. The limit states to be checked in each mode are as follows:

12.8 Check for external stability:

1. Check for Sliding
2. Check for Bearing Capacity
3. Check for Global Stability

12.9 Check for Internal Stability:

1. Check for Internal Sliding
2. Check for Rupture of Reinforcement
3. Check for Adherence / Pull-out of Reinforcement

12.10 Long-Term Design Strength (LTDS) of Geosynthetic Reinforcement

- Manufacturer shall provide soil-reinforcement reduction factors certified by an accredited third-party or based on accredited laboratory (NABL/GAI-LAP) tests as per relevant BIS codes and produce certification like BBA, NTEPE and HKCED as per IRC 113.
- A Declaration of Conformity (DoC) shall be provided stating that supplied product is identical to tested product (creep, installation damage, durability).
    - The designer should check to make sure that the manufacturer data are representative of the products likely to be received at the project site (that is, the product test data should be current, and the product manufacturing process, polymer source etc., should not have changed since the testing was conducted). In all cases, the geosynthetic product line must be re-evaluated on a periodic basis to assess any changes that may affect the product and corresponding reduction values.
- Long term design strength, approval of product and creep testing requirements shall be as per IS 18591 and IRC SP 102 given in **Annexure-VII**.

13. Construction Protocols

13.1 Foundation and Leveling Pad

- Excavate foundation as per approved drawings. If site conditions contradict geotechnical reports, verify foundation soil through additional investigation. If founding soil is high compressibility and low shear strength (< 50 KPa), ground improvement is to be carried out as per **Clause no. 11**.
- Minimum Depth of foundation shall be 1.0 m below ground level in case rock is met above founding level, the depth of embedment shall be adjusted as per ground conditions.
- Levelling pad of 150 mm thick (minimum). M15 plain cement concrete having 1.0 m width for block and minimum 350 mm width for panels to be placed below the first row of facia layer.

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13.2 Facing and Reinforcement Placement

- Use a chalk line on the leveling pad to guide the first course of panels/blocks. Correct alignment which is critical as it dictates the positioning of all subsequent courses.
- Set facing unit at an additional batter than as provided in the drawings since there is a tendency for initially positioned units of facia to lean outward as the fill material is placed and compacted. Care and caution shall be taken to accommodate this phenomenon. At the end of the construction, the face may have a slight residual inward batter.
- Lay reinforcements (geogrids/geostrips) on an even surface, perpendicular to the wall face and the length shall be as shown in drawing.
- Ensure flexible reinforcement is pulled taut to remove all slack before covering it with fill.
- Cover polymeric reinforcements with fill within 24 hours of placement to prevent UV degradation.
- Place minimum three EPDM/HDPE bearing pads at every horizontal panel joint as specified in the drawings to prevent concrete-to-concrete contact and allow for minor movement.
- Cover all vertical and horizontal joints on the backside of the facing with geotextile filters to prevent backfill "bleeding".

13.3 Backfilling and Compaction Strategy

- The reinforcing elements shall be laid free from all kinks, damage and displacement during placing, spreading, leveling and compaction of the fill. The programme of filling shall be such that no construction plant moves directly on the reinforcement. Fill material shall conform to **Clause no. 5**.
- A drainage bay of minimum 600 mm width at the back of the facing shall be provided as an adequate drainage measure.
- All construction equipment having a mass exceeding 1.5 Tonnes shall be kept at least 1.5 m away from the face of slope or wall. In the area up to 1.5 m from the face of slope or wall, the following compaction equipment shall be used:
    - Vibratory roller having a weight per metre width not exceeding 1300 kg with total weight not exceeding 1500 kg
    - Vibratory plate compactor of maximum weight 1000 kg
    - Vibro tamper having a weight not exceeding 75 kg
- Before allowing the movement of vehicles over the reinforcement, a minimum compacted thickness of 150 mm shall be provided over the reinforcement and the speed of the vehicles shall be restricted to 10 km/hr.
- For design of copping beam, crash barrier and friction slab shall be provided as per the design and drawings.

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13.4 Summary of Compaction Protocols to be followed:

Description	Compaction within 1.5 m of fascia	Compaction away from 1.5 m of fascia
Recommended compaction equipment	Plate compactors or baby roller less than 1,500 kg weight	Vibratory roller (steel, smooth-drum vibratory roller equipped with a variable amplitude system, a speed control device, and a vibration frequency system with no less than 1,000 vibrations per minute) Use of Intelligent compactors shall be encouraged.
Maximum compacted lift thickness	200 mm	200 mm
Water	Before spreading water shall be added to achieve water content in range of +/-2% OMC	Before spreading water shall be added to achieve water content in range of +/-2% OMC
Number of passes	As per field compaction trial (**Annexure-VIII**)	As per field compaction trial (**Annexure-VIII**)
Relative Compaction Requirement	95% MDD of modified proctor laboratory test (For subgrade 97%)	95% MDD of modified proctor laboratory test (For subgrade 97%)

***Field compaction trial procedure shall be followed as per Annexure-VIII**

13.5 Field Quality Assurance of Fill Material during construction shall be as per frequency given below:

Test Method	**Frequency**
Field Density Sand Replacement Method	1 set per 3000 m^2 (1 set = 10 tests) of compacted area, or closer
Field Density If, Nuclear Gauge Method	Double Frequency (i.e., 20 tests per 3000 m^2)
Gradation and Atterberg limits	1 set per 3000 m^2 (1 set = 10 tests)
Direct Shear Test	1 set per 6000 m^2 (1 set = 10 tests)

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Test Method	Frequency
(at 95% MDD, OMC saturated sample Consolidated Drained test)	

Note:

- Ensure, atleast One (01) point of testing within 1.5 m of facing.
- Ensure, atleast One (01) point at middle of reinforced zone and 1 point at end of reinforced zone.
- For nuclear gauge method, site specific correlation shall be obtained at site calibration before using full-scale for density checks.
- The design friction angle, fill material gradation and PI should satisfy design and specification requirements.
- Filed density shall be greater than or equal to 95% MDD of modified proctor laboratory test for fill soil. Acceptance criteria shall be as per MORTH Clause 903.2.2.
- For gradation analysis, wet sieving and hydrometer analysis is compulsory for ensuring fines is less than 15% for reinforced fill.
- AE/IE shall appoint a dedicated civil engineer (geotechnical engineer preferable) only to ensure fill QA (borrow are testing, field densities, testing of fill during construction), record them appropriately and maintain required compliances. 100% QC/QA tests of reinforced fill should be checked by AE/IE.
- Site laboratory is compulsory and testing shall be done at site laboratory and personnel involved in testing shall be trained mandatory before start of project.

13.6 Best practices & Do's/Don'ts may be used for ready references.

Feature	Do's ✓	Don'ts ✗
Compaction	Use vibratory rollers for the main reinforced soil mass and lightweight roller / plate compactor within 1.5 m of the facing.	Do not use heavy compaction equipment within 1.5 m of the facing units, as it can cause panel tilting and excessive outward movement.
Reinforcement	Ensure geogrid is properly aligned, tensioned, and securely connected to the facing units as per approved design details.	Do not permit construction vehicles or equipment to operate directly on exposed geogrid without a minimum 150 mm protective soil cover.
Drainage	Provide a continuous drainage layer (graded aggregate) behind the facing up to the heel, along with longitudinal slotted drain pipe.	Do not obstruct or omit drainage layers or outlets, as buildup of pore water pressure is a primary cause of RS wall distress and failure.

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Feature	Do's ✓	Don'ts ✗
Fill Moisture Control	Maintain backfill moisture content within ±2% of OMC during placement and compaction.	Do not compact fill that is excessively wet or dry, as it leads to poor compaction.
Backfill Material	Use/Select backfill satisfying: $\phi > 30°$ Fines (<75 µm) < 15% PI < 6	Do not use clayey, highly plastic, or poorly graded soils within the reinforced zone, as they increase settlement and drainage problems.
Geosynthetic Storage	Store geosynthetic rolls off the ground, protected from UV exposure, rain, and damage.	Do not drag geosynthetic rolls on the ground or leave them exposed to sunlight/weather for more than 24 hours.
Facing Batter	Provide an initial inward batter to account for outward movement during compaction and service life.	Do not construct facing units plumb initially, as outward deformation is inevitable during compaction.
Fill Uniformity	Use uniform backfill material throughout a continuous wall stretch to ensure consistent performance.	Do not change fill type within the same wall stretch, as it leads to differential settlement and uneven deformation.
Panel Placement	Remove temporary wooden wedges/shims only after completion of one panel level atleast and sufficient confinement.	Do leave wedges till completion of total height of wall construction.
Surface Water Control	Provide proper diversion drains to prevent water from entering the RS wall construction area.	Do not allow surface runoff or stormwater to flow into the reinforced soil zone during or after construction.

Figure 19: Typical pre-cast panel lifting and placement using RS wall system vendor supplied panel lifting equipment and appropriate construction machinery

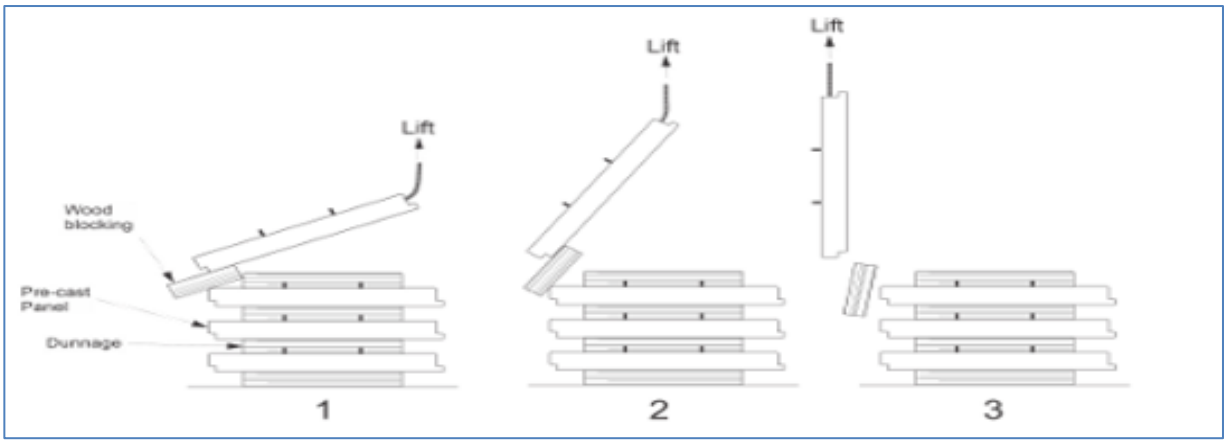

Figure 20: Recommended procedure for lifting pre-cast panels from stacks to minimize damage

Figure 21: Typical initial course pre-cast panel placement operation

14. Quality Assurance from System Provider

14.1 The system provider shall ensure following:

- To produce performance certificate as a documentary proof that the proposed system to be used (type of reinforcement, facing) for the given application i.e. RS wall, conforming to BIS Standards has been successfully used in India or elsewhere in Highways.
- Mandatorily provide One (01) Qualified and trained Engineer (BE Civil) and One (01) Qualified and Trained supervisor (Diploma Civil) at site, for every 20,000 sqm of reinforced soil fascia. The minimum relevant experience of the aforesaid manpower shall be 05 (five) Years.

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- Detailed design shall be done based on RS wall system components, materials and systems including connection system proposed by specialized technology provider, which shall be proof checked from reputed institutions like IIT/NIT/CRRI/capable independent geotechnical consultants.
- Contractor/Concessionaire shall ensure signing of agreement between the Contractor/Concessionaire and Technology Provider before use of RS wall and Geosynthetic material in NH Project in compliance with Para 4.7 MoRT&H Policy Circular EFile No.RW/NH-34049/01/2020-S&R (P&B)pt. (Computer No.-207229) dated 20th September 2024. The agreement shall have the provision of involvement of the Technology Provider during execution from start to end of the RS wall construction. Technology provider shall be responsible for all aspects of RS wall construction including accuracy of geotechnical investigations, design, supervision and ensuring quality of construction including fill material. Technology Provider shall deploy the requisite design experts/material technologist/skilled & trained construction supervision personnel to certify material testing & material characterization for design, proof check of the design, approve construction methodology including field trial sections before actual construction, quality control and supervision & certification of the day-to-day construction/execution. A copy of such agreement shall be furnished to AE/IE and to RO of the Ministry / NHAI/NHIDCL for reference and record. The agreement format is given in **Annexure-X**.
- The warranty for proprietary products shall be submitted by technology provider along with all other documents as required by IRC SP: 112-2017 “Manual for Quality Control in Road and Bridge works”. Minimum warranty period of the proprietary products shall be 30 years.

ANNEXURE-I

SOP for Partial Height RE walls

1. Partial height:

   i) **Design: Provision for Future Widening of Reinforced soil wall**

   To ensure long-term stability of the reinforced soil wall under both current and future conditions, the design must account for additional loads anticipated from future road widening, including:

- Active earth pressure from retained soil.
- Surcharge loads due to the widened roadway section.

  Following design steps to be considered

  1. Step-1-Wall shall be designed as partial height wall
  2. Step-2-Wall to be designed as full height wall.

The design shall consider both reinforcement length and strength for the Reinforced soil wall, ensuring that the wall dimensions and reinforcement detailing are adequate for the worst-case loading scenario, which includes future road widening and associated surcharge loads. This approach guarantees structural integrity without requiring future modifications.

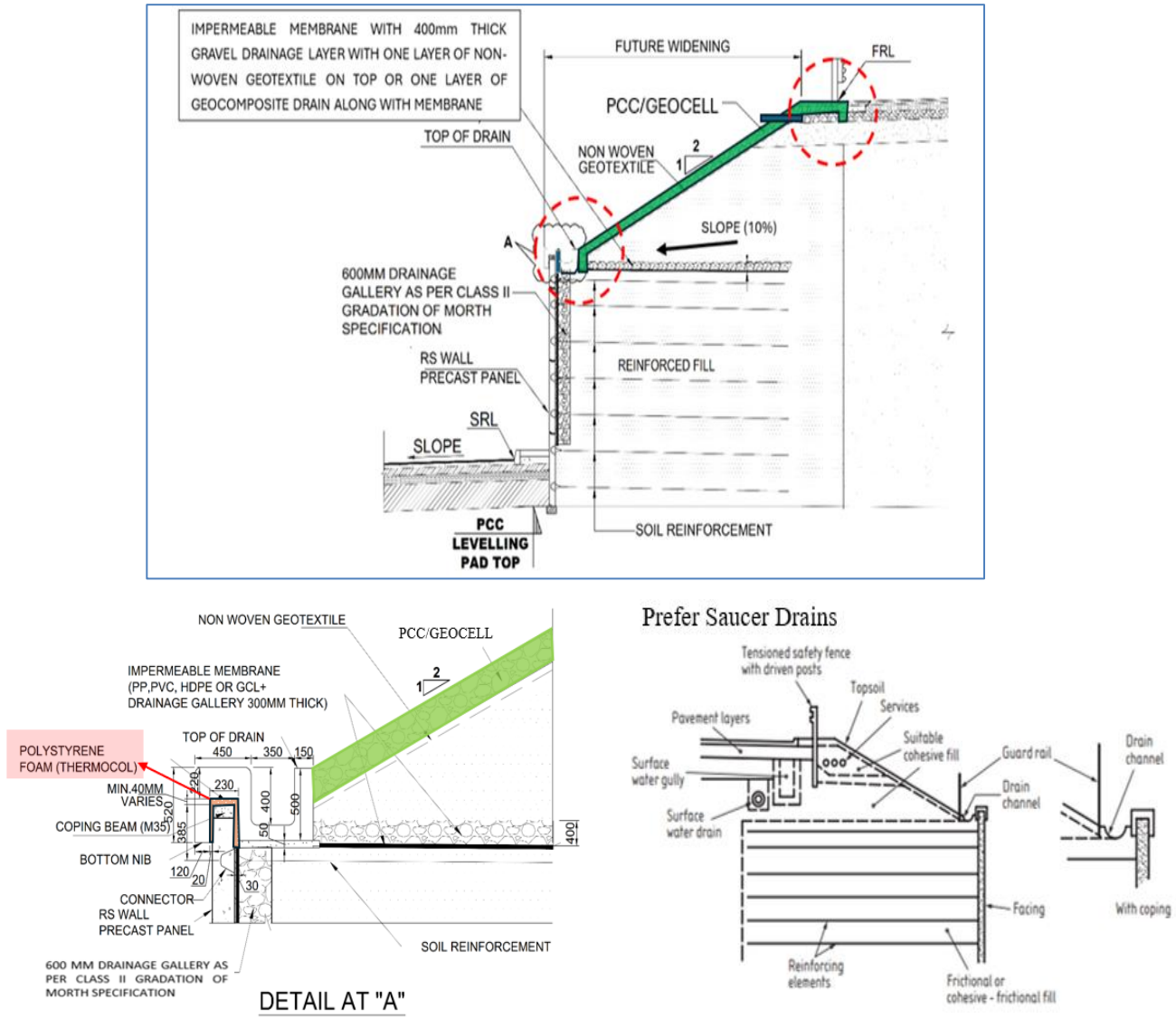

Figure 1: Partial Height wall detailing (Considering future widening)

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ANNEXURE-II

27.1 Steel Reinforcement

27.1.1 *Hot Dip Galvanised Steel Strips*

27.1.1.1 The steel strips shall be galvanized hot rolled steel strip with transverse ridges to have high pullout capacity type high adherence (HA) or thicker at connection point type high adherence reinforced (HAR) strips.

27.1.1.2 The steel strips shall have minimum tensile strength of 490 MPa complying with the requirements of IS 2062 with minimum elongation (on base metal) of 18 percent or the steel strips shall have minimum tensile strength of 550 MPa and yield strength of 450 MPa complying with minimum guaranteed elongation (on base metal) of 17 percent. The steel strip shall have minimum tensile, bearing and shear strength of 490 MPa, complying with the requirement of IS 2062. Fig. 2 shows typical steel strip reinforcement used in reinforced soil walls and Fig. 3 shows the typical connection details.

27.1.1.3 The steel strips shall be positively connected using nuts and bolt with the facing panels by using lugs, which are placed during pre-casting. The panel lugs are manufactured from hot-rolled steel strip. The steel strip used for lugs should have minimum tensile of 490 MPa, complying with the requirement of IS 2062, except the elongation (on base metal) shall be minimum 22. After fabrication, the HA and HAR strips and panel lugs are hot dip galvanized requirements as per IS 4759, except that the average zinc coating weight is not less than 520 g/m^2 (75 micron).

27.1.1.4 Reinforcing strips shall be cut to the lengths and tolerances shown on approved drawings. Holes for bolts shall be punched in the locations shown.

They shall be carefully inspected to ensure they are true to size and free from defects that may impair their strength or durability. The chemical requirement of the steel listed below as soil reinforcement shall be as given in Table 7.

Nominal dimensions and the design strength of the strips and panel lugs for 100 years of design life are given in Table 8.

Table 7 Chemical Requirement of the Steel Reinforcement

(*Clause* 27.1.1.4)

Sl No.	Characteristics	Requirement, Percent *Max*
(1)	(2)	(3)
i)	Carbon: C	0.24
ii)	Manganese: Mn	1.6
iii)	Phosphorus: P	0.045
iv)	Sulphur: S	0.045
v)	Silicon: Si	0.55

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Table 1 Requirements of Uniaxial Polyester Geogrids (Type 1, Knitted or Woven)

(*Clause* 6.2)

Sl No.	Characteristic	Requirement											Method of Test, Ref to
		60/20	80/30	100/30	120/30	150/30	180/30	200/30	250/30	300/30	350/30	400/30	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
i)	Ultimate tensile strength, kN/m, *Min*												IS 16635
	a) MD	≥60	≥80	≥100	≥120	≥150	≥180	≥200	≥250	≥300	≥350	≥400	
	b) CD	≥20	≥30	≥30	≥30	≥30	≥30	≥30	≥30	≥30	≥30	≥30	
ii)	Elongation at designated load, *percent*												IS 16635
	a) MD	≤15	≤15	≤15	≤15	≤15	≤15	≤15	≤15	≤15	≤15	≤15	
	b) CD	≤15	≤15	≤15	≤15	≤15	≤15	≤15	≤15	≤15	≤15	≤15	
iii)	UV resistance, strength retained after 500 h exposure, *percent*	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	IS 13162 (Part 2)
iv)	Chemical resistance, strength retained after 72 h immersion, *percent*	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	IS 17363
v)	Width, m	← 1 to 6 (Tolerance ± 10mm) →											—
vi)	Roll length, m	← 25 to 200 (Tolerance +1 m with no negative tolerance) →											—

MD: Machine Direction, CD: Cross Direction

NOTE — For weathering and chemical degradation having a range of products identical except for mass per area, it is sufficient to subject only the product with the lowest mass per area to the test. The results of the test may be applied for the other products in the range, unless they have been tested separately.

Table 3 Requirements of Uniaxial Polyester Geogrids (Type 3, Bonded)

(*Clause* 6.2)

Sl No.	Characteristic	Requirement																Method of Test, Ref to
		50	100	150	200	250	300	350	400	500	600	700	800	900	1000	1100	1200	1300	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
i)	Ultimate tensile strength (kN/m), *Min*																		IS 16635
	a) MD	50	100	150	200	250	300	350	400	500	600	700	800	900	1000	1100	1200	1300	
	b) CD	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
ii)	Elongation at designated load in MD and CD, *percent*	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	IS 16635
iii)	UV resistance, strength retained after 500 h exposure, *percent*	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	IS 13162 (Part 2)
iv)	Chemical resistance, strength retained after 72 h immersion, *percent*	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	IS 17363
v)	Width, m	← 1 to 6 (Tolerance ± 10mm) →																	—
vi)	Roll length, m	← 25 to 200 (Tolerance +1 m with no negative tolerance) →																	—

MD: Machine Direction, CD: Cross Direction

NOTE — For weathering and chemical degradation having a range of products identical except for mass per area, it is sufficient to subject only the product with the lowest mass per area to the test. The results of the test may be applied for the other products in the range, unless they have been tested separately.

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10 SAMPLING AND CRITERIA FOR CONFORMITY

10.1 Lot

All geogrid rolls of same material, construction and type dispatched to a buyer against one dispatch note shall constitute a lot.

10.2 Unless otherwise agreed to between the buyer and the seller, the number of geogrid rolls to be selected at random from a lot shall be as given in column 3 of Table 4.

Table 4 Scale of Sampling

(*Clause* 10.2)

Sl No.	No. of Rolls in Lot	Sample Size	Sub-Sample Size	Permissible No. of Defective Rolls
(1)	(2)	(3)	(4)	(5)
i)	Up to 50	3	2	0
ii)	51 - 150	5	2	0
iii)	151 - 300	8	3	1
iv)	301 - 500	13	5	2
v)	501 and above	20	5	3

10.3 Number of Test Specimens and Criteria for Conformity

Number of test specimens and criteria for conformity shall be as given in Table 5.

Table 5 Number of Test Specimens and Criteria for Conformity

(*Clause* 10.3)

Sl No.	Characteristic	No. of Rolls	Criteria for Conformity
(1)	(2)	(3)	(4)
i)	Clause **5.1**, Tensile, elongation, length and width	According to column 3 of Table 4	The defective rolls/pieces do not exceed the corresponding number given in column 5 of Table 4
ii)	All other requirements	According to column 4 of Table 4	All the test specimens shall pass the tests

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Table 1 Requirements of Geostrips (GS)

(*Clause* 5.2)

Sl No.	Characteristic	Requirement									Method of Test, Ref to
		GS-20	GS-30	GS-37.5	GS-40	GS-50	GS-60	GS-75	GS-85	GS-100	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
i)	Ultimate tensile strength (kN), *Min*	20	30	37.5	40	50	60	75	85	100	IS 16635
ii)	UV resistance (500h), strength retained, *percent*	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	IS 13162 (Part 2)
iii)	Chemical resistance, strength retained after 72 h immersion, *percent*	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	IS 17363
iv)	Width, mm	← 50 to 95 (Tolerance ± 3mm) →									—
v)	Roll length, m	← 50 to 150 (Tolerance +1 m with no negative tolerance) →									—

NOTE — For weathering and chemical degradation having a range of products identical except for mass per area, it is sufficient to subject only the product with the lowest mass per area to the test. The results of the test may be applied for the other products in the range, unless they have been tested separately.

9 SAMPLING AND CRITERIA FOR CONFORMITY

9.1 Lot

All geostrip rolls of same material, construction and type dispatched to a buyer against one dispatch note shall constitute a lot.

9.2 Unless otherwise agreed to between the buyer and the seller, the number of geostrip rolls to be selected at random from a lot shall be as given in column 3 of Table 2.

Table 2 Scale of Sampling

(*Clause* 9.2)

Sl No.	No. of Rolls in Lot	Sample Size	Sub-Sample Size	Permissible No. of Defective Rolls
(1)	(2)	(3)	(4)	(5)
i)	Up to 50	3	2	0
ii)	51 - 150	5	2	0
iii)	151 - 300	8	3	1
iv)	301 - 500	13	5	2

Table 10 Requirements of Woven Geotextile Made from Virgin Polymer of Polypropylene for Walls and Slopes

(*Clauses* 27.2.2 *and* 42.4)

Sl No.	Characteristics	Requirement	Method of Test, Ref to
(1)	(2)	(3)	(4)
i)	Ultimate tensile strength (machine direction: MD), kN/m	≥ 60	IS 16635
ii)	Ultimate tensile strength (cross direction: CD), kN/m	≥ 20	IS 16635
iii)	Elongation at ultimate strength in MD and CD, percent	≤ 35	IS 16635
iv)	Chemical resistance, strength retained after 72 h immersion, percent	≥ 70	IS 17363

NOTE — The design strength of reinforcement should be calculated as per the method given in Section 4.

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Table 9 Requirements of Woven Geotextile Made from Virgin Polymer of Polyester for Walls and Slopes

(*Clause* 27.2.2)

Sl No.	Characteristics	Requirements	Method of Test, Ref to
(1)	(2)	(3)	(4)
i)	Ultimate tensile strength (machine direction: MD), kN/m	≥ 60	IS 16635
ii)	Ultimate tensile strength (cross direction: CD), kN/m	≥ 20	IS 16635
iii)	Elongation at ultimate strength (MD&CD), percent	≤ 15	IS 16635
iv)	Chemical resistance, strength retained after 72 h immersion, percent	≥ 70	IS 17363

NOTES

1 Molecular weight of the polyester polymer shall be greater than 25 000 g/mol.

2 Carboxyl end groups < 30 mmol/kg.

3 The design strength of reinforcement shall be calculated as per method given in Section 4.

Table 11 Requirements of Woven Geotextile Made from Virgin Polymer of Polyester — Basal Reinforcement

(*Clauses* 27.2.2 *and* 42.4)

Sl No.	Characteristics	Requirement	Test Method, Ref to
(1)	(2)	(3)	(4)
i)	Ultimate tensile strength (machine direction: MD)	≥ 100 kN/m	IS 16635
ii)	Ultimate tensile strength (cross direction: CD)	≥ 20 kN/m	IS 16635
iii)	Elongation at ultimate strength (MD&CD)	≤ 15 %	IS 16635
iv)	Chemical resistance, strength retained after 72 h immersion	≥ 70 %	IS 17363

NOTES

1 Molecular weight should be greater than 25 000 g/mol.

2 Carboxyl end groups < 30 mmol/kg.

3 The design strength of reinforcement should be calculated as per Section 8.

4 The minimum strain requirements shall be satisfied as per Section 8 for a given application.

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Table 13 Requirements of Drainage Composite

(*Clause* 28.2)

Sl No.	Characteristics	Requirement	Tolerance	Method of Test, Ref to
(1)	(2)	(3)	(4)	(5)
i)	Thickness at 2kPa, mm, *Min*	6	–	IS 13162 (Part 3)
ii)	Mass per unit area, g/m², *Min*	1 040	–	IS 14716
iii)	Tensile strength MD/ CMD, kN/m	20/20	- 10 Percent	IS 16635
iv)	CBR puncture resistance, N, *Min*	3 000		IS 16078
v)	Resistance to weathering	To be covered with soil for 14 days		IS 13162 (Part 2)
vi)	Resistance to chemicals	Excellent		IS 17363

NOTE — Manufacturer has to provide test report for the factors, such as compression creep, chemical and biological clogging and geotextile intrusion, to derive long term flow.

Table 14 In-Plane Flow Requirements of Drainage Composite

(*Clause* 28.2)

Sl No.	Confining Pressure, kPa	Unit of Measurement	In-plane Water Flow MD (R/S) Hydraulic Gradient - 1.0		In-plane Water Flow MD (S/S) Hydraulic Gradient - 0.1		Method of Test, Ref to
			Requirement	Tolerance	Requirement	Tolerance	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(6)
i)	20	litre/m.s	2.4	- 0.40	0.67	- 0.13	IS 17179
ii)	100	litre/m.s	1.95	- 0.33	0.53	- 0.11	IS 17179
iii)	200	litre/m.s	1.45	- 0.24	0.37	- 0.07	IS 17179

NOTES

1 S/S with soft/soft foam contact surfaces to simulate textile intrusion into the core due to soil pressure from both sides.

2 R/S rigid/soft contact surfaces to simulate conditions where composite is placed against rigid concrete surface on one side and soil on other side.

3 Placement of drainage composite shall be carried out at site by keeping machine direction in vertical direction.

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ANNEXURE-III

Methodology for Conducting Field Pull Out Test on Geostrip for Reinforced Soil Wall

A. Apparatus and Material Required for Field Pull Out Test.

1. Precast concrete panels.

Precast concrete panels having same dimension as `panel to be used for the project need to be cast for this test with provision of central hole of dia. 160mm located at the centre of panel.

2. Hydraulic jack with pressure gauge.

Hydraulic jack with hollow plunger is to be used for the loading/pulling of Geostrip. The calibrated pressure gauge needs to be attached to measure the load/force.

Photo No 1: Hydraulic jack with pressure gauge.

3. Soil Reinforcement strips

Geostrip reinforcement strips should be free from any damage/ cuts. Width and length of Geostrip shall be in conformity with design and drawing.

4. Loop & toggle arrangement

To facilitate the pulling, Geostrip shall be connected to Loop & toggle or equivalent suitable arrangement (for destructive testing) with hydraulic jack as shown in photo. Loop & toggle arrangement consists of two steel loops of minimum 12mm dia. & toggle bars of minimum 30mm dia. This assembly is connected to jack with high tension bolt/ ropes on one side & connected with Geostrip on other side.

B. Soil Tests for Pull Out Test

Backfill or reinforced soil test shall be tested for ascertaining its properties. These properties are directly linked with the test results, hence same shall be derived before start of test.

Following are the tests to be conducted on backfill soil

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- Modified Proctor test for OMC & MDD
- Direct shear tests for shear strength parameters.

C. Site Preparation

- Precast panel should be cast and proper curing to be done for minimum 15 days. The hole position should at the centre of panel as shown in the drawing. The diameter of hole should be minimum 160mm.

Photo No 2: Panel with 160mm diameter Hole.

- The position of panel should be pre-planned and it should be at such a location where assembly of jack and stand can be done. Preferably the location should about 1m above the ground level.
- Place the precast panels at the required location.
- Backfilling shall be done in layers of 200mm compacted thickness. Compaction shall be carried out as per the standard procedure laid down in construction manual. FDD test should be done for each layer and compared with MDD report.
- Stop the backfilling process once it reached up to centre of hole.
- Place the foam in the hole so that soil should not come out from hole.
- Lay the Geostrip reinforcement in 'V' shape (as shown in drawing/photo) & pass it on toggle bar in such a way that other end of the loop & toggle shall be protruding till the

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centre of the hole. Anchor the rear end of the Geostrip reinforcement by J-hooks & anchor bar.

Photo No 3: Geostrip Installed for test.

- Measure the length & width of the Geostrip reinforcement strips which will be embedded in soil.
- Place and compact backfill over the Geostrip reinforcement strips as per the standard procedure laid down in construction manual.
- After 1st layer of backfill placement, remove "J" hook and rear anchor installed for tightening of Geostrip. Continue the backfilling process after removal rear anchor.
- Particular care should be taken around central hole that soil should not enter slip in the hole. Hand compaction need to be done nearby the hole.
- Continue with placement and compaction of the backfill to a height not exceeding 800mm above the reinforcement.

D. Methodology for Field Pull Out Test

Once the filling is done up to top of panel with proper compaction of soil & placing of reinforcement, set up is ready for testing. Geostrip shall be installed at minimum 3 locations for pull out testing.

Following steps need to be followed for the pull-out test.

- After proper placement of fill & Geostrip, the foam which is fixed inside the hole shall be removed, exposing the end of loop & toggle bar.

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- Stand for holding the jack on the panel should be fixed with anchor fastener arrangement.
- The position of stand should be aligned properly so that centre of hole and jack are aligned.
- Connect the high tensile bar/ rope to the loop and toggle assembly to exert pulling force.
- Place the jack on the stand. Secure the jack with stand to maintain its position for application of load.
- Pass the high tensile bar/rope through central hoe of jack. Jack and Pump with pressure gauge should be connected to each other.
- Assembly should be checked for its proper working. Measure the height of backfill on the Geostrip.

Photo No 4: Positioning of Jack and stand on hole

Photo No 5: Measurement of Backfill thickness above Geostrip.

- Fix the rear end of high tensile rod/rope with plunger/ moving ramp of jack.
- Once the jack and loop & toggle are placed in position, an appropriate calibrated displacement measuring gauge must be attached to monitor the displacement of the Geostrip.

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- The initial seating load (when pressure gauge records at least one division) shall be applied to overcome slack in the connections and assembly. This load on the pressure gauge must be recorded before commencing actual loading.
- The specimen must be loaded at a constant rate of 200 Psi. Load and displacement should be recorded at every 200 Psi interval.

Photo No 6: Jack and Pump Assembly

Photo No 7: Measurement of Displacement

- When further application of load does not result in an increase in load cell dial gauge reading, ;it can be interpreted that pullout has occurred. Pull out testing may be continued upto a displacement of 75 mm.
- The final load and displacement readings must then be recorded.

E. SUMMARY

The objective of pull-out test is to determine the pull-out resistance of the soil Geostrip reinforcement. Failure in the above test may be due to pull out of reinforcement from soil.

F. CALCULATIONS

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TEST DATA

- **Reinforcement grade –**
- **Reinforcement length –**
- **Reinforcement width --**
- **Density of backfill soil -**
- **Height of backfill soil above reinforcement. -**

Sl. No.	Pull out Force Applied Pa	Displacement	Interface Factor Ci

G EQUATIONS

- Interface Factor Ci = $\frac{Pa}{2(b*Le)*\gamma*h*tan\Phi \mathrm{p}}$

Where,

1. Pa = Max. pull out force recorded
2. b = width of the reinforcement
3. Le = Embedded length of reinforcement
4. γ = Unitweight of backfill soil
5. Φp = Angle of friction for backfill soil

H Conclusion -

The interface factor Ci calculated from test data should be greater than Ci taken in design against same over burden**.**

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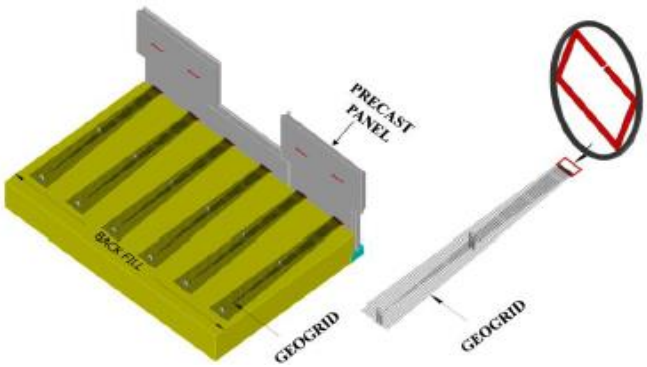
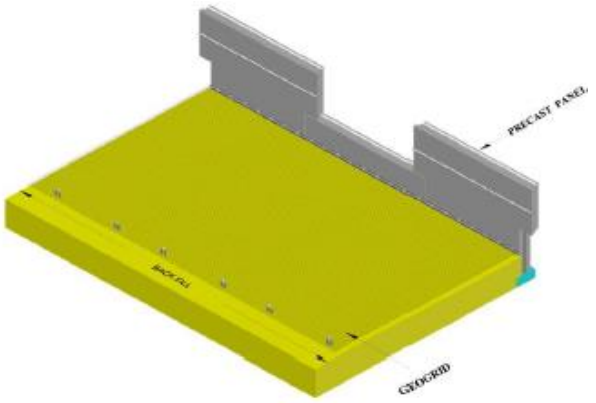
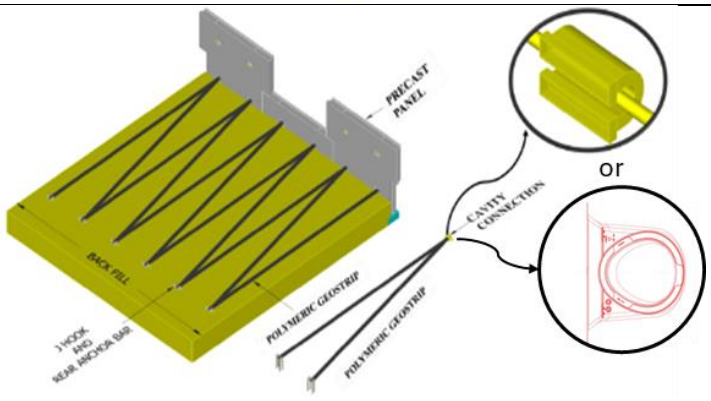
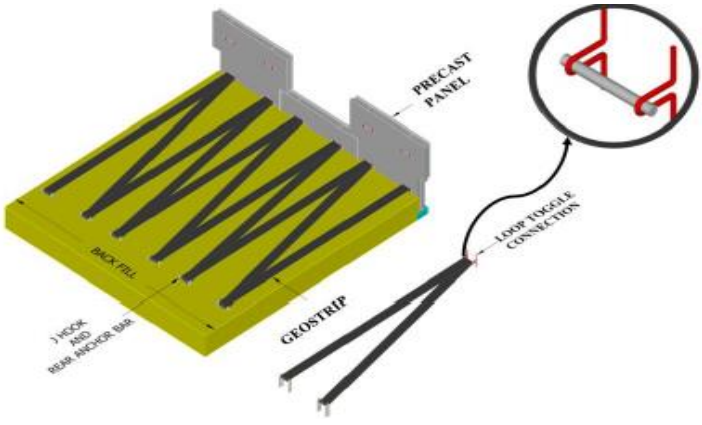
ANNEXURE-IV

Different type of reinforcements and Connections used in RS walls

S. No.	Type of Reinforcements in RS wall	Image
1.	Schematic of panel and geogrid reinforced soil wall system (c type connection)	
2.	Schematic of panel and geogrid reinforced soil wall system (loop and toggle connection)	
3.	Schematic of panel and geostrip reinforced soil wall system (cavity connection)	
4.	Schematic of panel and geostrip reinforced soil wall system (loop and toggle connection)	

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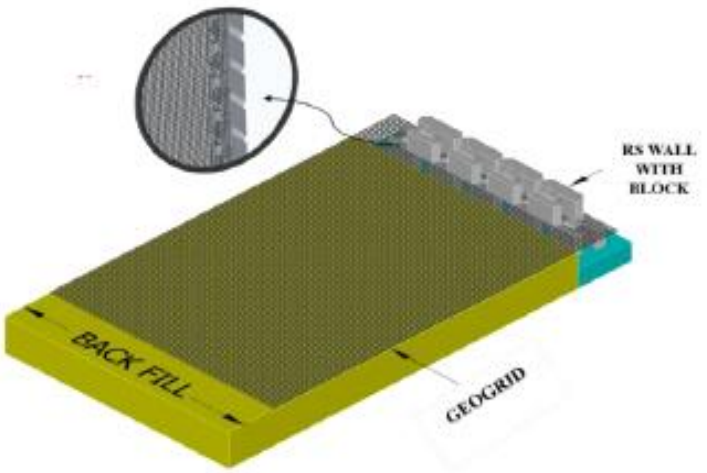
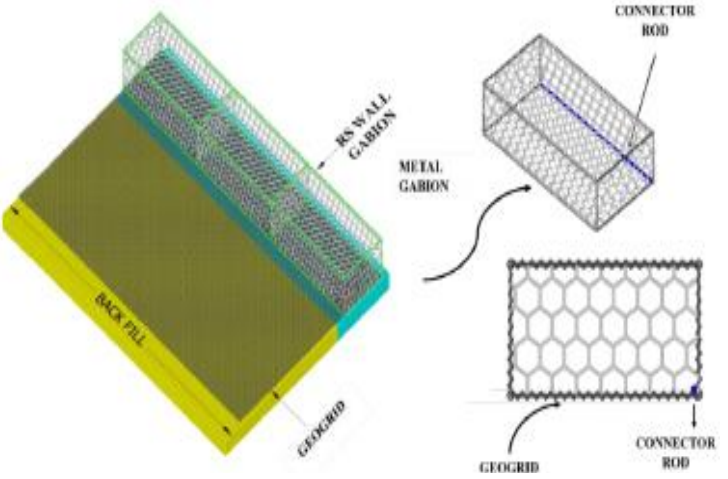
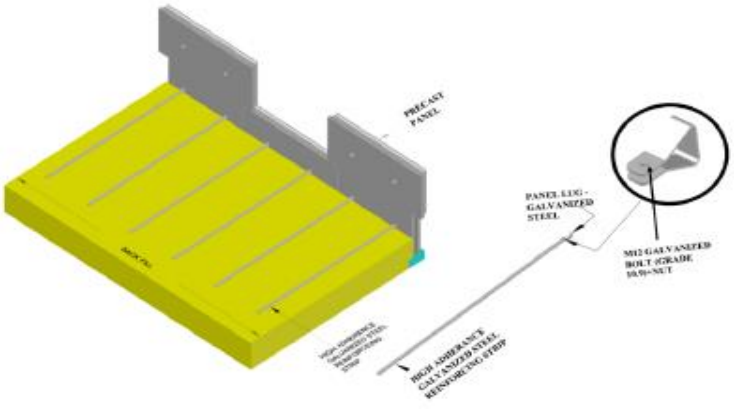
5.	Schematic of block and geogrid reinforced soil wall system	
6.	Schematic of gabion and geogrid reinforced soil wall system	
7.	Schematic of panel facing and steel strip reinforced soil wall system	

ANNEXURE-V

Procedure for Connection Test

Precast RCC Panel Connection Strength Testing for Reinforced Soil Structures

1. Scope

This document defines the methodology, setup, execution, and acceptance criteria for carrying out in-situ ultimate connection strength testing of precast RCC facing panels and soil reinforcement connection used in reinforced soil structures such as reinforced soil walls, abutments, and other retaining structures.

The procedure is applicable under simulated field conditions, to determine the ultimate tensile connection strength in accordance with IS 18591:2024.

2. Reference Standards

- **IS 18591:2024** – *Reinforced Soil Structures – Code of Practice*
    - **Clause 34.12.15** Check for Connection Strength

3. Introduction

Connection strength is a critical design parameter in reinforced soil structures, governing the load transfer mechanism between the soil reinforcement elements and the facing panels. The design connection strength is established based on:

- Analytical calculations, and
- Experimental testing results obtained under simulated field conditions.

As per IS 18591 (Clause on Connection Strength Testing), the ultimate connection strength shall be determined through testing that closely replicates actual site conditions.

This test method describes the ultimate connection strength test, including the test setup, loading system, boundary conditions, and measurement protocol, to accurately estimate the connection pull-out capacity under tensile loading.

4. Definition of Connection Strength Test

A connection strength test is an in-situ / laboratory tensile test conducted to measure the maximum force that the connection–panel interface can sustain before failure, under tensile loading induced by soil reinforcement elements.

The test captures:

- Connection pull-out or rupture,
- Panel cracking or local failure,
- Interaction and group effects when multiple connectors act together.

5. Test Setup

5.1 Panel and Connector Arrangement

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- A full row of connectors attached to a precast RCC facing panel shall be tested simultaneously.
- The preparation of panels for test set is explained below:

Figure 2 Panel reinforcement and connector placement witness

Figure 3 Concrete pouring into steel moulds

Figure 4&4: preparing concrete cube samples for testing and checking concrete slump

Figure 5: Compacting concrete using vibrator

Figure 6: Panel Ready for testing.

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Figure 7: Panel Ready for testing, placed inside the test pit.

- Reinforcement elements (straps, strips, bars, or geosynthetic connectors) shall be connected as per actual construction detailing.
- The panel shall be placed in a test pit or platform allowing free deformation.

5.2 Loading System

- Tensile load shall be applied using:
    - Hydraulic jack(s),
    - Reaction frame or deadman system,
    - Calibrated load cell.
- Load application shall be **axial and concentric** to the reinforcement elements.

5.3 Simulation of Backfill Condition

- With sand or granular medium shall be placed between the steel loading plate and the panel face, as shown in Figure 8a & 8b.
- This layer enables:
    - Realistic panel deformation,
    - Stress redistribution,
    - Interaction between adjacent connectors.

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Figure 8a and b – Connection Strength Testing Setup

6. Testing Methodology

6.1 Correct Method of Testing (Recommended)

(Refer Figure 9 – Schematic Connection Strength: All Connectors Tested Simultaneously)

- Load is applied to all connectors in a panel row at the same time.
- The sand cushion between the panel face and loading plate allows:
  - Development of a free failure envelope,
  - Accurate simulation of site stress conditions.
- Group effect and stress overlap among connectors are realistically captured.

This method complies with the intent of IS 18591 Clause on testing under representative field conditions.

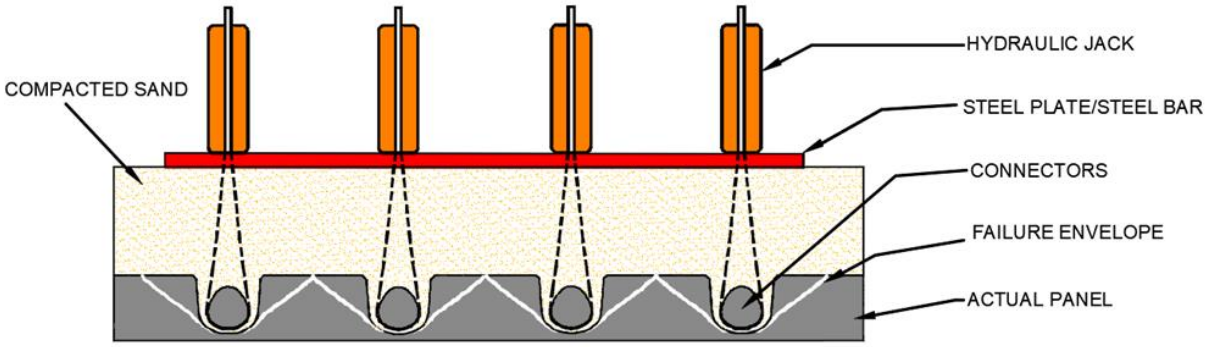

Figure 9– Schematic Connection Strength: All the Connectors Tested Simultaneously

7. Loading Procedure

1. Apply a seating load (approximately 5–10% of expected ultimate load).
2. Increase load in controlled increments (e.g., 10–15% of design load).
3. Maintain each load increment for a specified duration (e.g., 1–2 minutes).
4. Continue loading until:

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- Ultimate failure occurs, or
- Significant deformation or connector rupture is observed.

8. Observations and Measurements

- Applied load (kN)
- Load–displacement behaviour
- Mode of failure:
  - Connector rupture,
  - Pull-out,
  - Panel cracking,
  - Local crushing or yielding
- Deformation pattern of panel and connectors

9. Determination of Ultimate Connection Strength

- The ultimate connection strength shall be taken as:
  - The maximum load sustained prior to failure, or
  - Load corresponding to excessive deformation, as defined in IS 18591.
- Design connection strength shall be derived by achieving appropriate factor of safety, as specified in IS 18591 clause 34.12.15.

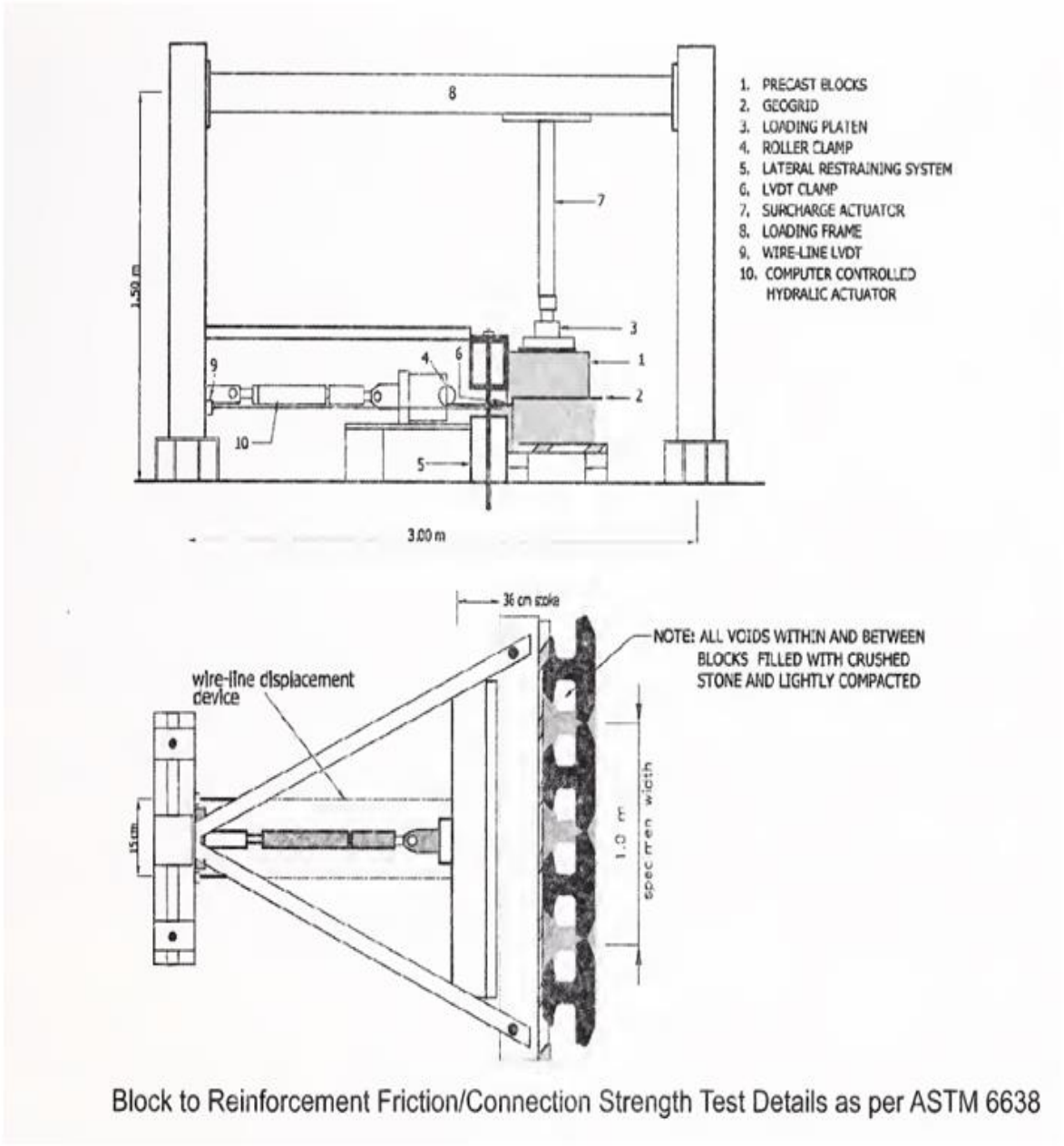
10. Reporting

The test report shall include:

- Description of panel and connector type
- Test setup photographs and schematic diagrams
- Load–displacement curves
- Failure observations
- Ultimate connection strength value
- Compliance statement with IS 18591

11. Conclusion

Accurate assessment of connection strength requires testing on actual panels under simulated site conditions with a free failure envelope. The procedure described herein ensures compliance with IS 18591 and provides reliable input for the safe and economical design of reinforced soil structures.



Block to Reinforcement Friction/Connection Strength Test Details as per ASTM 6638

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ANNEXURE-VI

Requirements of Bearing Pads

Sl. No.	Characteristics	Requirement	Method of Test
1.	Base polymer	EPDM	—
2.	Colour	Black	Visual
3.	Grade, type and class	Grade 2, Type A, Class A	ISO 4097
4.	Hardness (Sh.A)	80±5	IS 13360 (P5/S11)
5.	Tensile strength (MPa), Min	12	IS 3400 (Part 1)
6.	Elongation at break, %, Min	200	IS 3400 (Part 1)
7.	Heat ageing (70 °C for 70 h)		
	Change in hardness (points), Max	±15	IS 3400 (Part 4)
	Change in tensile, %, Max	±30	IS 3400 (Part 4)
	Change in elongation, %, Max	-50	—
8.	Compression set (70 °C for 22 h), %, Max	50	IS 3400 (P10/S1&2)
9.	Resistance to ozone (quality retention), %, Min	85	IS 3400 (Part 20)
10.	Water resistance (70 h @ 100 °C), vol change %, Max	10	IS 3400 (Part 6)
11.	Max ash content, %	8±2	IS 11720 (Part 5)

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ANNEXURE-VII

Requirements for LTDS and Creep Parameters of soil reinforcing element

The specialized technology provider shall have in-house design, supervision and audit team. The manufacturer of soil reinforcing element shall be ISO 9001:2015 certified by an internationally accredited organization and shall have inhouse computer controlled tensile testing facilities for ensuring quality of soil reinforcement and independent third-party certification as per IRC 113-2013 Annexure.

Sourcing of design, material, supervision, etc. for reinforced soil wall structure from multiple agencies shall be strictly prohibited. The specialized agency, appointed by the main contractor, must be either a manufacturer of soil reinforcing elements of reinforced soil walls or source the material from a manufacturer conforming to the following;

The manufacturer shall provide soil reinforcement reduction factors certified by an independent third-party agency as per clause 3.7 of IRC 113-2013

Consideration of Damage Factors as per IS 18591:2024 and IRC SP 102 Clause 3.5:

- The damage factor for soil reinforcement shall be evaluated based on the connection system adopted.
- If a granular drainage layer is used, the damage factor at the connection point shall be considered for the same material.

Reduction Factor	Requirement
Creep Reduction Factor	Polymeric reinforcement shall have minimum of 10000 hours creep test data and SIM test data at different temperatures to evaluate partial material factor for creep as per ISO TS 20432. Creep factor should be declared at design temperatures of 20^{o}, 30^{o} & 40^{o}.
Installation damage factor	Installation damage factor depends on the type of coating of reinforcement and size of aggregates used at site.
Durability	Durability reduction factors based on proposed backfill' s pH value, design temperature at site location & service life are also required.

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PQ Criteria for Technology Provider

The specialized technology provider shall have in-house design, supervision and audit team. The manufacturer of soil reinforcing element shall be ISO 9001:2015 certified by an internationally accredited organization and shall have NABL or GAI-LAP accredited inhouse laboratory with computer-controlled testing machines to ensure quality of all RS wall system components. The manufacturer of RS wall accessories shall be ISO 9001:2015 certified by an internationally accredited organization and shall have NABL accredited inhouse laboratory. The in-house laboratory shall be accredited for the tests for which reports are furnished by them, Independent third-party certification/test reports from accredited testing laboratories/ institutions as per IRC 113-2013 can be accepted in case of special tests that cannot be conducted at the manufacturing unit. However, the manufacturer shall have in-house test facility to conduct Quality Control (QC) testing for the RS wall system component(s) manufactured by them. For example, a drainage composite manufacturer shall have permeability and in-plane flow testing equipment and be accredited by NABL or GAI-LAP to perform these tests to monitor and perform QC testing.

- Manufacturer shall provide soil reinforcement reduction factors certified by an independent third-party agency or tested from the accredited laboratories/ institutions as per clause 3.7 of IRC 113-2013.

- The manufacturer shall declare their soil reinforcement reduction factors as per IRC SP 102

- The specialized technology provider shall produce performance certificate as a documentary proof that the proposed system to be used (type of reinforcement, facing) for the given application i.e. either MSE Wall or RS Slope (whichever is applicable), has been successfully used in India or elsewhere in Highways.

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ANNEXURE-VIII

FIELD COMPACTION TRIAL

Field Compaction Trial (also referred to as Backfill Banking Test) shall be conducted prior to commencement of backfilling works in order to establish the Banking Rule and Basis for achieving the specified degree of compaction based on Lab tests (Heavy compaction test, IS:2720 (Part-8)).

The trial shall be conducted using the same soil, construction equipment, layer thickness, moisture control method, and compaction machinery proposed to be adopted in the permanent works.

The increasing trend of density with increase in number of passes of a compactor tends to diminish gradually and a 'diminishing return stage' is reached. This will determine the type of compactor including its frequency, corresponding water contents and number of roller passes.

The approved outcome of the Field Compaction Trial shall form the basis for routine field compaction control during execution.

If fill material or procedure or equipment or roller or roller frequency is planned to be changed during execution, field compaction trial shall be conducted for each new set. Before field compaction trial, fill material shall be tested to meet the specifications to be used in RE wall. If reinforced fill and retained fill are different, separate banking tests shall be conducted for both.

Methodology for conducting field compaction trial:

1. Construct a test ramp about 20 m long, 6 m wide & 0.6 m thick (Figure 1), preferably at the construction site, over a level ground surface clear of bushes, depressions etc under nearly identical conditions.
2. Start compaction trial by placing fill at chosen moisture content within range of OMC ±2%.
3. Fix the observation points as shown in Figure 1.

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4. Collect samples around the observation points (Figure 1). Determine moisture content by any suitable standard method. Also measure levels using total station.
5. Compare the moisture content with that of the relevant desired moisture content (Step 2).
6. Wait for natural drying if moisture content is on higher side or sprinkle appropriate amount of water uniformly followed by ploughing etc. and leave for 5 to 30 minutes depending on type of soil, in case the moisture content is on lower side (Step 2).
7. Determine final moisture content once again at sampling points before rolling.
8. Roll the entire width and measure the dry density (by any standard method) of the soil around observation points after each pass. Also measure levels at observation points after each roll passage using total station. Measurement of dry density and moisture content shall be taken after removing top 5 cm layer of earth with least possible disturbance.
9. Carry out similar procedure for compaction Layer-2 and compaction Layer-3.
10. Levels during compaction process at observation points may be obtained to record settlement from uncompacted state to compacted state with number of passes.
11. From these test results, plot dry density v/s number of roller passes for each cross section and for each layer.
12. Plot all the compaction layers data in same plot and obtain average density plot.
13. From these field values, minimum no. of passes of particular roller shall be decided.
14. AE/IE shall witness all field and lab tests during field compaction trial and approve the same.
15. For RE wall fill compaction, the engineer/supervisor shall ensure thus obtained minimum number of passes of roller during compaction of each layer at all locations.

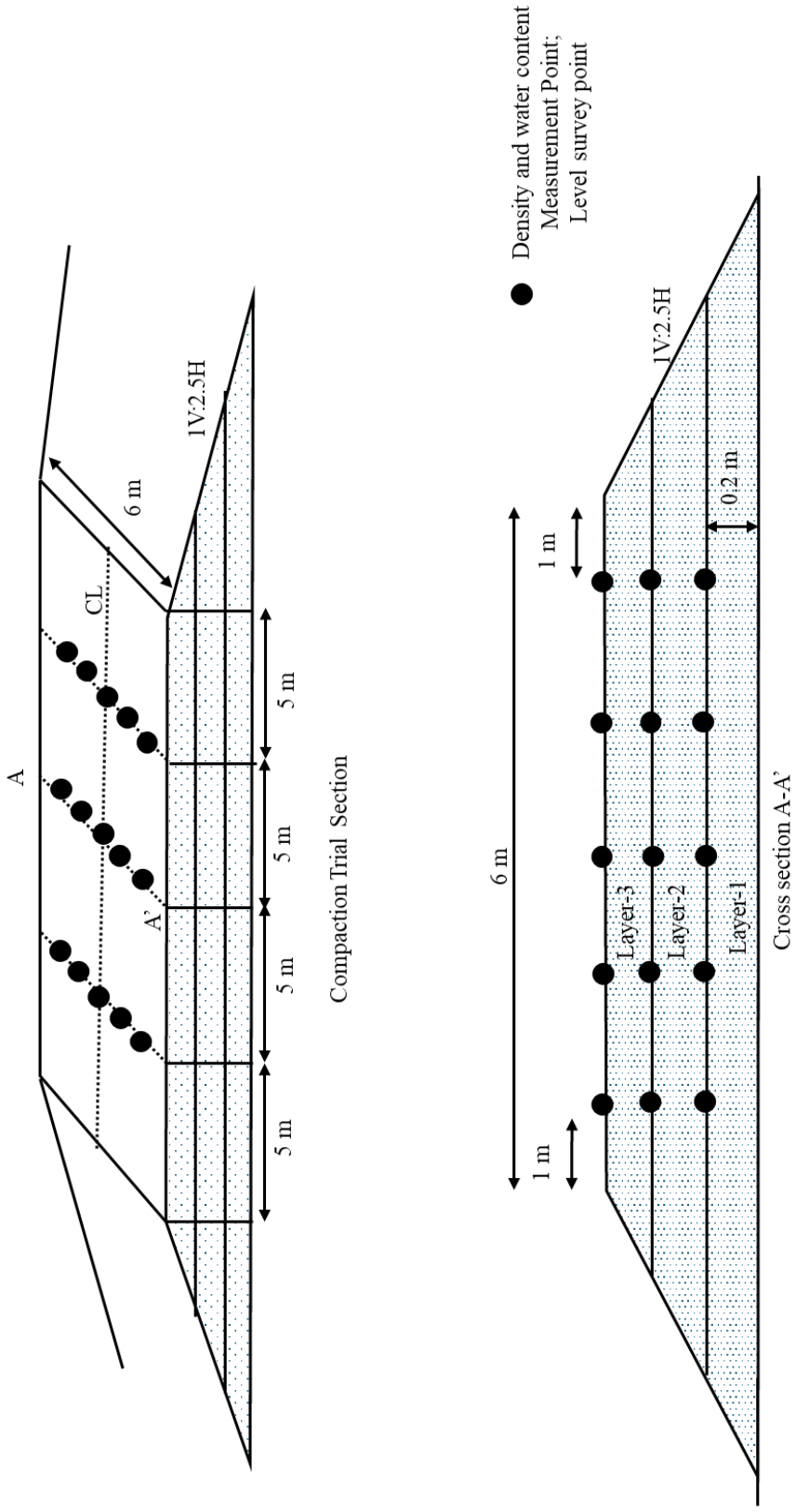

Figure 1 Schematic of Field Compaction Trial Plan

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ANNEXURE-IX

Practices for Gap Slab, Approach Slab, and Friction Slab Arrangement for Reinforced Soil (RS) Wall Approaches

1. Gap Slab:

- Construction practices for gap slabs, closing / back RS walls with column type abutments shall be provided. Only earth retaining abutments with dirt wall i/c bracket to support the approach slab shall be avoided.
- Provision of RS walls as wing walls of grade separated structures or any other structures shall be avoided. Only RCC wing walls shall be avoided.
- In case of Gap slab is unavoidable as in running project, the maximum length of gap slab should be restricted to 2m as given in point no. 3.

2. Type A: Approach Slab without Gap Slab

Applicability

- Where the horizontal gap between RS wall fascia panels and wall type abutment

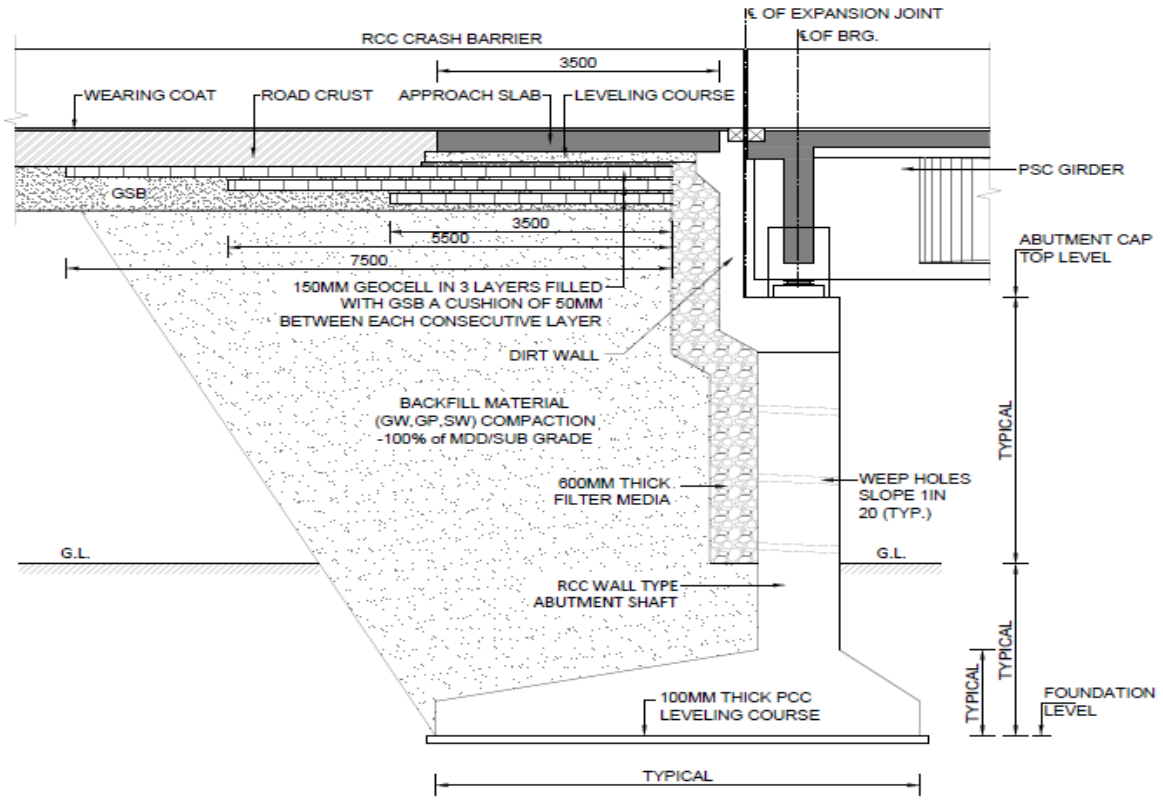

Figure 5 RS wall at approach slab location for wall type abutment

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Recommended Arrangement and design considerations

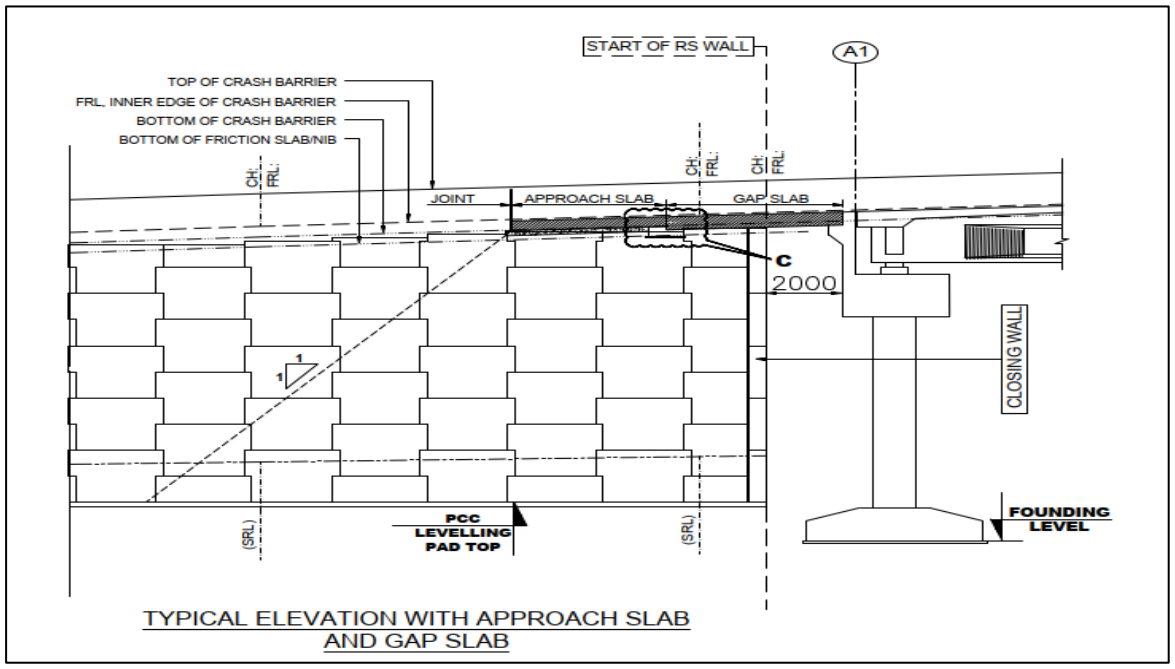
- No separate gap slab shall be provided.
- Approach slab shall rest on:
    - **150 mm Geocell in 3 layers filled with GSB** as shown in Figure 1.

.

3. Type B: Gap Slab up to 2.0 m Length

Applicability

- Where the gap between RS wall fascia panels and abutment is less than or equal to



2.0 m.

- ***Figure 2:RS wall with Gab slab arrangement***

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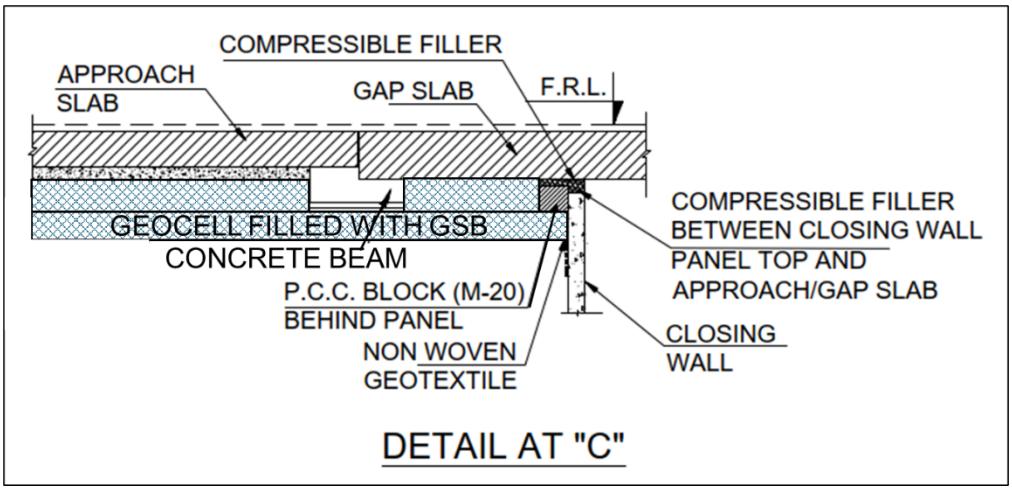

Recommended Arrangement & design consideration.

- A gap slab shall be provided.
- On the RS wall side, the slab shall rest on:
    - **150 mm Geocell in 2 layers filled with GSB** as shown in Figure 2**.**

Closing wall should be designed.

ANNEXURE-X

AGREEMENT BETWEEN CONCESSIONAIRE/CONTRACTOR AND TECHNOLOGY PROVIDER

Project: "Name of Work"

Reference: 1. Work Order & Amendments.

Definition:

First Party: ..... hereinafter referred to as the Concessionaire/Contractor

, registered office at .....

Second Party: ..... hereinafter referred to as the Technology Provider

All the above are collectively referred to hereinafter as 'Parties and individually as "Party" in this Agreement.

Purpose:

Fulfil and comply to the requirements specified in Para 4.7 Policy Circular EFile No.RW/NH-34049/01/2020-S&R (P&B) pt. (Computer No.-207229) dated 20th September 2024 issued by the Ministry of Road Transport & Highways, Government of India

Whereas, ...(Client) had awarded the work of……... (hereinafter called as Project) vide Contract No ....dated. . for the……..and subsequently ....(Concessionaire/ Contractor) had awarded the work for Design, Supply and Technical Assistance to……. (Technology Provider) vide Sub-Contract No…… dated…… for the……

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The scope of work has been defined in the Sub-Contract vide reference no…… dated…….

Both the Concessionaire/Contractor and the Technology Provider shall execute the Project as per their respective scope including the terms and conditions as defined in the Sub-Contract vide reference no……. dated……

The Technology Provider shall be responsible for the design of the……. structures. The Concessionaire/Contractor shall be liable for providing the design inputs based on which the Technology Provider shall design the ……structures and issue the construction drawings

The construction work shall be carried out by the Contractor or the Technology Provider as per the provisions of the Sub contract between the Contractor & the Technology Provider in strict conformance to the Construction Method Statements issued by the Technology Provider

The Sub Contract between the Contractor & the Technology Provider shall provide for the deputation of trained construction supervision personnel for the duration of the project. The Technology Provider shall have the full authority stop the work and escalate the matter in case of any violations related to:

1. Construction Method Statements
2. Safety
3. Drawings & Specifications
4. Quality of backfill & quality / degree of compaction
5. Any other associated quality related to installation and construction work

IN WITNESS WHEREOF the parties have here unto set their respective hands and signature, the day and the year first above written, SIGN ED AND DELIVERED BY THE

Name

On behalf of Concessionaire/ Contractor

SEAL ADDRESS

……

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…….

In Presence of:

Name:

Address

Name

On behalf of Technology Provider

SEAL ADDRESS

…….

…….

…….

In Presence of:

Name:

Address

Enclosure: Sub-Contract Agreement vide reference no……dated…….

H-25011/02/2025-P&P (C.No 262142)
Government of India
Ministry of Road Transport & Highways
(P&P Section)
Transport Bhawan, 1, Parliament Street, New Delhi-110001

dated the 12/January/2026

To,

1. DG (RD) & SS, Roads Wing, MORTH
2. The Chairman, NHAI, G-586, Sector-10, Dwarka, New Delhi-110075
3. The Managing Director, NHIDCL, PTI Building, New Delhi-110001
4. The Director General Border Roads, Seema Sadak Bhawan, Ring Road, New Delhi
5. CEO, NHLML
5. All CEs, ROs and ELOs of the Ministry of Road Transport & Highways

Subject: Modification in the Chapter related to Dispute Resolution of MCA/ Contract Document of BoT(Toll)/ HAM/ EPC Projects- reg

Sir,

I am directed to say that Ministry of Finance (MoF), vide OM No F.1/2/2024-PPD dated 03.06.2024, has issued the Guidelines for Arbitration and Mediation in Contracts of Domestic Public Procurements. In pursuance of the said Guidelines, the existing Article related to Dispute Resolution of MCA/Contract Document of BoT(Toll), HAM and EPC projects shall be replaced by the attached draft Chapter and the newly replaced Chapter shall override the existing provisions for all BoT (Toll), HAM and EPC Projects with immediate effect, except in the cases of ongoing arbitration matters which shall be concluded in accordance with the relevant provisions before this amendment.

2. The modified Chapter on Dispute Resolution is enclosed as Annexure for immediate compliance.

Yours faithfully,

Encl: as above

Digitally signed by Harleen Kaur
Date: 12-01-2026 15:14:37

(Harleen Kaur)
Deputy Secretary to the Government of India
Telephone No. 011-23718575
Email: ds-highways@gov.in

Copy to:

1. O/o Secretary (RT&H)
2. AS&FA, MORTH
3. O/o AS (H), MoRTH
4. All Additional Secretaries/Joint Secretaries in the MORTH
5. All ADGs/CEs, MoRTH

ARTICLE [XX]*

DISPUTE RESOLUTION

1 **Dispute resolution**

1.1 In the event of any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the "**Dispute**") shall, in the first instance, be attempted to be resolved amicably.

1.2 The Parties agree to use their best efforts for resolving all Disputes arising under or in respect of this Agreement promptly, equitably and in good faith, and further agree to provide each other with reasonable access during normal business hours to all non-privileged records, information and data pertaining to any Dispute.

2 **Escalation of Dispute**

In the event of any Dispute(s) between the Parties remains unresolved within 30 (thirty) days of the notice in writing referred to in Clause 1.1 or such longer period as may be mutually agreed by the Parties, either Party may refer the Dispute to Arbitration or Conciliation in accordance with the provisions of Clause 3.

3 **Arbitration, Conciliation and Adjudication of Dispute**

3.1 Any Dispute between the Parties the sum of which is of value less than Rupees 10 Crores which remains unresolved between the Parties through the mechanisms available/ prescribed in the Agreement, which has not been agreed upon/ reached settlement by the Parties, will be referred either to SAROD, (a Society registered under Society's Act, 1860 vide Registration no. S/RS/SW1049/2013) duly represented by Government/ Authority and National Highways Builders Federation (NHBF) or to India International Arbitration Centre ("IIAC").

3.1.1 The appointment of Tribunal, Code of conduct for Arbitrators and fees and expenses of SAROD/IIAC and the Arbitral Tribunal shall also be governed by the Rules of SAROD as amended from time to time or the India International Arbitration Centre Act 2019 and the regulations framed thereunder as amended from time to time. The rules of SAROD are placed at Appendix III.

3.1.2 Subject to the provisions of The Limitation Act, 1963, as amended from time to time, Arbitration may be commenced during or after the Concession Period, provided that the obligations of Authority and the Concessionaire shall not be altered by reason of the Arbitration being conducted during the Concession Period.

3.1.3 The venue of Arbitration shall be New Delhi or a place selected by governing body of SAROD or IIAC, as the case may be, and the language for all documents and communications between the Parties shall be English.

**[XX] : Relevant Article number in respective MCA/Contract documents of BOT (Toll), HAM and EPC projects*

3.1.4 Each Party shall bear its own costs and expenses incurred in connection with the arbitral proceedings.

3.1.5 The arbitrators shall make a reasoned award (the "Award"). Any Award made in any arbitration held pursuant to this Article / shall be final and binding on the Parties as from the date it is made, and the Concessionaire /Contractor and the Authority agree and undertake to carry out such Award without delay.

3.1.6 The Concessionaire/Contractor and the Authority agree that the Award may be enforced against the Concessionaire /Contractor and/or the Authority, as the case may be, and their respective assets wherever situated.

3.2 Any Dispute between the Parties, the sum of which is of value Rupees 10 Crores or above, which remains unresolved between the Parties through the mechanisms available or prescribed in the Agreement, which has not been agreed upon/ reached settlement by the Parties, will be resolved by Conciliation as per the Arbitration and Conciliation Act, 1996.

3.3 The Concessionaire/Contractor and the Authority agree that the Award or a settlement agreement may be enforced against the Concessionaire/Contractor and/or the Authority, as the case may be, and their respective assets wherever situated.

3.4 This Agreement and the rights and obligations of the Parties shall remain in full force and effect, pending the Award in any Arbitration hereunder. Further the Parties unconditionally acknowledge and agree that notwithstanding any Dispute between them, each Party shall proceed with the performance of its respective obligations, pending resolution of Dispute in accordance with this Article.

3.5 This provision relating to Conciliation under the Arbitration and Conciliation Act, 1996 shall cease to apply once the provisions relating to substitution of conciliation process by mediation are notified under Mediation Act, 2023. Thereafter "Conciliation" herein be referred to as Mediation as per the provisions of the Mediation Act 2023.

3.6 Notwithstanding anything to the contrary contained in the Agreement, it is agreed that any Dispute between the Parties the sum of which is of value equal to or above Rupees 10 Crores shall not be referred to Arbitration. It is further agreed that all declaratory disputes or non-monetary disputes shall not be referred to Arbitration. For the avoidance of doubt, it is clarified that nothing herein shall prevent the Parties from seeking resolution of such Disputes through civil courts.

NO. RW/NH-24036/28/2025-BP&SP Part-I
Government of India
Ministry of Road Transport & Highways
(BP & SP Cell)
Transport Bhawan, 1 Parliament Street, New Delhi - 110001

Date: 10th March, 2026

To,

1. The Chairman, National Highways Authority of India, G-5 7 6, Sector- 10, Dwarka, New Delhi-110075
2. The Managing Director, NHIDCL, PTI Building, New Delhi-110001
3. Principal Secretaries/Secretaries of all States/UTs Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes)
4. All Engineers-in-Chief and Chief Engineers of Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes)
5. The Director General, Border Roads, Seema Sadak Bhawan, Ring Road, New Delhi-110010
6. All CE-ROs, ROs and ELOs of the Ministry of Road Transport & Highways

Subject: Clarification regarding changes in Qualification Criteria for EPC Projects – reg.

Ref: i) Changes in Qualification Criteria for EPC Projects issued by Ministry's Letter No. RW/NH-2406/28/2025-BP&SP (Computer No. 248457)

ii) Standard RFP for EPC Projects issued by Ministry's Letter No. RW/NH-37010/4/2010/EAP(Printing) Vol.-IV dated 05.03.2019 and its subsequent Amendments.

Madam/ Sir,

Representations have been received from various Zones/ Agencies of this Ministry seeking clarification regarding technical eligibility criteria applicable where the longest span of the structure proposed in any project exceeds 60 m.

2. The reference (i) cited revised qualification criteria is reproduced as under:

*If any Major Bridge/ROB/Flyover/Tunnel is (are) part of the project, then the sole Bidder or in case the Bidder being a Joint Venture, any member of Joint Venture shall necessarily demonstrate additional experience in construction of Major Bridge/ROBs/Flyovers/Tunnel in the last **7 (seven)** financial years preceding the Bid Due Date **or till the Bid Due Date** i.e. shall have completed at least one similar Major Bridge/ROB/Flyover having length equal to or greater than:*

(a) In case, longest span of Bridge/ROB/flyover is less than or equal to 60m, no additional qualification is required:

*(b) When longest span is more than 60 m: **80% of the longest span or 100 m, whichever is less, of the structure proposed in this project and 40% of the length Major***

Bridge/ROB/Flyover or 2 km, whichever is less, of the structure proposed in this project.

3. Reference has been received on whether both the qualifying criteria regarding single span as also the total length of the bridge can be fulfilled within a single completed project or whether they may be fulfilled through one or more completed projects.

4.. The matter has been examined and with the approval of the Competent Authority, following is conveyed:-

"Both the qualification requirement are different. The requirement of 80% of longest span or 100m (whichever is less) has been sought to assess the bidder capability to undertake complex stand-alone project and capability of bidder to execute project with longer span, which may have to be designed as cable stayed or bow string/balanced cantilever etc. Further the requirement of 2km or 40% of the length of major bridge (whichever is less) has been sought to assess the scale and capability of the bidder to execute large project and ***both the requirement can be met through same or two separate projects."***

Yours faithfully

Digitally signed by JAYA PRAKASH
Date: 10-03-2026 12:09:38

(Jaya Prakash)
Under Secretary to the Govt. of India
Email: jp.kaushikal@gov.in
Tel. : 011-23327310

Copy to:

i. Sr. PPS to Secretary (RTH)
ii. PSO to DG(RD)&SS, MoRTH
iii. AS&FA, MoRTH
iv. All Joint Secretaries in MoRTH
v. All ADGs/CEs in the MoRTH
vi. Director (NIC), MoRTH for uploading on the Ministry's website and e-office

RW/NH-24036/28/2025-BP&SP (Computer No. 248457)

Government of India

Ministry of Road Transport & Highways

(Highway Section)

Transport Bhawan, 1, Parliament Street, New Delhi-110001

Date: December, 2025

To

1. The Chairman, National Highways Authority of India, G-5 7 6, Sector-10, Dwarka, New Delhi-110075
2. The Managing Director, NHIDCL, PTI Building, New Delhi-110001
3. Principal Secretaries/Secretaries of all States/UTs Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes)
4. All Engineers-in-Chief and Chief Engineers of Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes)
5. The DirectorGeneral, Border Roads, Seema Sadak Bhawan, Ring Road, New Delhi-110010
6. All CE-ROs, ROs and EL0s of the ministry of Road Transport & Highways

Subject: Modification in qualification criteria for EPC projects- reg.

Ref: Standard RFP for EPC Projects issued by Ministry's Letter No.RW/NH-37010/4/2010/EAP (Printing) Vol.-IV dated 05.03.2019 and its subsequent amendments.

Sir,

The Ministry of Road Transport & Highways has issued standard RFP for EPC contracts on 05.03.2019 and its subsequent amendments specifying the qualification criteria for selection of bidders for EPC projects.

2. In recent times, the Ministry has come across a number of catastrophic failures due to construction defects. Accordingly, the Ministry has approved certain modifications in eligibility conditions to act as a deterrent. These modifications are attached at the Annexure.

3. The relevant provisions of the standard RFP of EPC Projects stand modified accordingly. All the executing agencies of MoRTH are directed to implement the aforesaid changes with immediate effect.

4. The implementing agencies are also requested to identify major failures found out during last 02 years for notification as 'Catastrophic Failure' by the Ministry. The proposal in this regard shall be submitted to the Deputy Secretary (Highway) with approval of the concerned Agency Head by 15th January, 2026. In case of new incidents, the proposal shall be submitted within 30 days of such an incident.

Encl: As above.

Yours faithfully,

Digitally signed by Harleen Kaur
Date: 22-12-2025 11:05:01

Deputy Secretary to the Govt. of India

Copy to:

1. Sr. PPS to Secretary (RT&H)
2. PSO to DG(RD)&SS
3. AS&FA/AS(H)/AS(T), MoRTH
4. All Joint Secretaries in the MoRTH
5. All ADGs/CEs in the MoRTH
6. Director (NIC), MoRTH for uploading on the Ministry's website and e-office

Annexure

–

QUALIFICATION CRITERIA FOR EPC PROJECTS

S. No.	Clause No	Current Criteria	Draft Proposal	Remarks
1	2.2.2.10	Deleted	The Bidder including any Joint Venture member shall be deemed to be a non-eligible party, if, in any of the project(on-going/Completed) in last 2 years from the bid due date, catastrophic failure of Structure/Highway due to construction defect(s) has occurred. (Such event shall be notified by the Ministry).	Evaluation Committee shall record its finding in respect of the above in Technical evaluation.

			The Bidder is required to submit the undertaking in the proforma prescribed in Appendix-XII	

Appendix XII

Undertaking

Proforma to declare the event of Failure of catastrophic nature (Ref Clause 2.2.2.10)

I _____ undertake that **neither the lead partner nor any member of Joint Venture, in any of the project(on-going/Completed) undertaken in last 2 years, has catastrophic failure of Structure/Highway due to construction defect(s).**

2. I further undertake that the information is correct to the best of my knowledge and Authority is free to take punitive action including disqualification from the tender process and/or debarment for the period upto 2 years or as specified in RFP, in case, the information is found to be false.

(Signature)

(Name)

RW/NH-24036/28/2025-BP&SP (Computer No. 248457)
Government of India
Ministry of Road Transport & Highways
(Highway Section)
Transport Bhawan, 1, Parliament Street, New Delhi-110001

Date: 29th April, 2025

To

1. The Chairman, National Highways Authority of India, G-5 7 6, Sector-10, Dwarka, New Delhi-110075
2. The Managing Director, NHIDCL, PTI Building, New Delhi-110001
3. Principal Secretaries/Secretaries of all States/UTs Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes)
4. All Engineers-in-Chief and Chief Engineers of Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes)
5. The Director General Border Roads, Seema Sadak Bhawan, Ring Road, New Delhi-110010
6. All CE-ROs, ROs and ELOs of the Ministry of Road Transport & Highways

Subject: Modification in Qualification Criteria for EPC Projects - reg.

Ref: Standard RFP for EPC Projects issued by Ministry's Letter No.RW/NH-37010/4/2010/EAP (Printing) Vol.-IV dated 05.03.2019 and its subsequent Amendments.

Sir,

The Ministry vide letter No.RW/NH-37010/4/2010/EAP (Printing) Vol.-IV dated 05.03.2019 and its subsequent amendments has specified the qualification criteria for contractors for EPC Projects. Numerous relaxation in the qualification criteria for eligibility in case of EPC contracts were given in 2019 to promote competition.

2. However, now it has been brought to the notice of the Ministry that the said relaxation in the qualification criteria has had a detrimental effect on the quality of construction.

3. In view of the above, the Ministry has revised/modified the qualification criteria of contractors for EPC contracts. The modifications made, inter-alia, include the minimum requirements for both standard highway construction projects as well as stand alone specialized projects such as tunnels, major bridges, ROBs, flyovers etc; a higher requirement for EPC projects with bid price over Rs 100 crore; checks on sub-contracting experience and modification of the highways and core sector definition to tighten the eligibility criteria. The modifications in detail are enclosed as **Annexure**.

4. Relevant provisions of the standard RFP of EPC Projects stand modified to this effect. All the executing agencies of the Ministry are directed to implement the aforesaid changes with immediate effect.

5. This issues with the approval of Hon'ble Minister (RT&H).

Yours faithfully,

(Mayank Tyagi)
Deputy Secretary to the Govt. of India

Encl: As above

Copy to:

1. Sr. PPS to Secretary (RT&H)
2. PSO to DG(RD)&SS
3. AS&FA/AS(H)/AS(T), MoRTH
4. All Joint Secretaries in the MoRTH
5. All ADGs/CEs in the MoRTH
6. Director (NIC), MoRTH for uploading on the Ministry's website and e-office

Annexure

MODIFICATION IN THE CLAUSES OF RFP DOCUMENTS OF RFP OF EPC PROJECTS

Sr. No.	Particulars	Existing Provision	Modified Provision
1.	**Net Worth at the close of the preceding financial year**	Footnote: This amount should be **5% (five percent)** of the Estimated Project Cost of the Project for which bids are being invited.	Footnote: For projects upto Rs 100 crore No Change For projects more than Rs 100 crore : This amount should be **10% (Ten percent)** of the Estimated Cost of the Project for which bids are being invited.
2.	**Average Annual Turnover of last 5 Financial Years**	Footnote: This amount should be **15% (fifteen percent)** of the Estimated Project Cost of the Project for which bids are being invited.	Footnote: This amount should be **20% (twenty percent)** of the Estimated Project Cost of the Project for which bids are being invited.
3.	**Single Work Criteria (Similar work executed)**	Provided that at least one similar work of **20% of Estimated Project Cost [Rs.***crore (Rs.****)]** shall have been completed from the Eligible Projects in Category 1 and/or Category 3 specified in Clause 2.2.2.5. For this purpose, a project shall be considered to be completed, if more than 90% of the value of work has been completed and such completed value of work is equal to or more than **20%** of the estimated project cost. Eligible project costs shall include the following: (a) Widening/ reconstruction/ up-graduation works on NH/SH//Expressway or on any category of road taken up under CRF, ISC/EI, SARDP, LWE (b) Widening/ reconstruction/ up-gradation works on MDRs with loan assistance from multilateral agencies or on BOT basis. (c) Widening/ reconstruction/ up-gradation works of roads in Municipal Corporation limits, construction of Bypasses. (d) Construction of Stand-alone bridges, ROBs, tunnels. (e) Construction/ reconstruction of linear projects like airport runways,	Provided that at least either of the following: **i. two similar completed works costing not less than amount equal to 25% each of estimated cost.** **Or** **ii. one similar completed work costing not less than amount equals to 35% each of estimated cost** shall have been completed from the Eligible Projects in Category 1 and/or Category 3 specified in Clause 2.2.2.5. **Certificate(s) from the concerned client(s) shall be required for the same. In case the claimed project /(s) are subcontracting/ JV project in such a case Approval from Govt. Authority / Client is required(restricted to allowable sub-contracting limit/ JV share in original contract).**[D1] For this purpose, a project shall be considered to be completed, if more than 90% of the value of work has been completed and such completed value of work is equal to or more than **the above mentioned criteria in the last 5 (five) financial years preceding the Bid Due Date or till the Bid Due Date**. Eligible project

Sr. No.	Particulars	Existing Provision	Modified Provision
		railways, (construction/ reconstruction of railway tracks, yards for keeping containers etc.) metro rail and ports (including construction/re-construction of Jetties).	costs shall include the following: (a) Widening/ reconstruction/ up-graduation works on NH/SH//Expressway or on any category of road taken up under CRF, ISC/EI, SARDP, LWE (b) Widening/ reconstruction/ up-gradation works on MDRs with loan assistance from multilateral agencies or on BOT basis. (c) Widening/ reconstruction/ up-gradation works of roads in Municipal Corporation limits, construction of Bypasses. (d) Construction of Stand-alone bridges, ROBs, tunnels. (e) Construction/ reconstruction of linear projects like airport runways. (f) Viaducts of Railways/ Metro g) Container yard of ports
4.	**Additional Work Criteria (Bridge & Tunnel)**	If any Major Bridge/ROB/Flyover/Tunnel is (are) part of the project, then the sole Bidder or in case the Bidder being a Joint Venture, any member of Joint Venture shall necessarily demonstrate additional experience in construction of Major Bridge/ROBs/Flyovers/Tunnel in the last 10 (ten) financial years preceding the Bid Due Date i.e. shall have completed at least one similar Major Bridge/ROB/Flyover having span equal to or greater than: **(a) In case, longest span of Bridge/ROB/flyover is less than or equal to 60 m, no additional qualification is required.** **(b) when longest span is more than 60 m :50% of the longest span or 100 m, whichever is less, of the structure proposed in this project.**	If any Major Bridge/ROB/Flyover/Tunnel is (are) part of the project, then the sole Bidder or in case the Bidder being a Joint Venture, any member of Joint Venture shall necessarily demonstrate additional experience in construction of Major Bridge/ROBs/Flyovers/Tunnel in the last **7 (seven)** financial years preceding the Bid Due Date **or till the Bid Due Date** i.e. shall have completed at least one similar Major Bridge/ROB/Flyover having length equal to or greater than: (a) In case, longest span of Bridge/ROB/flyover is less than or equal to 60 m, no additional qualification is required. (b) when longest span is more than 60 m :**80% of the longest span or 100 m, whichever is less, of the structure proposed in this project and 40% of the length Major Bridge/ROB/Flyover or 2 km, whichever is less, of the structure proposed in this project.**

Sr. No.	Particulars	Existing Provision	Modified Provision
		and in case of tunnel, if any, shall have completed construction of atleast one tunnel consisting of single or twin tubes (including tunnel(s) for roads/Railway/Metro rail/irrigation/hydro-electric projects etc.) having atleast **(a) In case Tunnel is a part of project having length less than or equal to 200 m, then no additional qualification is required.** **(b) When length of tunnel more than 200m : 50% of the cross sectional area of proposed tunnel or two lane highway tunnel cross-sectional area, whichever is less and 20% length of the tunnel to be constructed in this project or 2km, whichever is less.**	**And** in case of tunnel, if any, shall have completed construction of atleast one tunnel consisting of single or twin tubes (including tunnel(s) for roads/Railway/Metro rail/irrigation/hydro-electric projects etc.) having at least **(a) In case Tunnel is a part of project having length less than or equal to 200 m, then no additional qualification is required.** **(b) When length of tunnel more than 200m: 80% of the cross sectional area of proposed tunnel or two lane highway tunnel cross-sectional area, whichever is less and 40% length of the tunnel to be constructed (other than cut and cover method) in this project or 2km, whichever is less.**
5.	**Stand-alone specialized projects**	(iii)For Stand-alone specialized projects: (a)Major Bridges/ROB/Flyovers projects: (a1) In case the cost of specialized project is less than or equal to Rs. 1,000 Cr: The sole Bidder or in case the Bidder being a Joint Venture, any member of Joint Venture shall have completed atleast one similar Major Bridge/ROB/Flyover project in the last 10 (ten) financial years preceding the Bid Due Date, having span equal to or greater than 50% of the longest span or 100m, whichever is less of the structure proposed in this project and also the cost of such similar project shall be atleast 20% of the Estimated Project Cost. For this purpose, a project shall be considered to be completed, if more than 90% of the value of work has been completed and such completed value of work is equal to or more than 20% of the Estimated Project Cost.	(iii)For Stand-alone specialized projects: (a)Major Bridges/ROB/Flyovers projects: The sole Bidder or in case the Bidder being a Joint Venture, Lead member of Joint Venture shall have completed atleast one similar Major Bridge/ROB/Flyover project in the last **7 (seven)** financial years preceding the Bid Due Date **or till the Bid Due Date**, having span equal to or greater than **80%** of the longest span or 100m, whichever is less of the structure proposed in this project and 40% of the length Major Bridge/ RoB/ flyover or 2 km, whichever is less and also the cost of such similar project shall be alteast **i. two similar completed works length not less than or equals to 25% each of cost of the Major Bridges/ROB/Flyovers.** **or** **ii. one similar completed work**

Sr. No.	Particulars	Existing Provision	Modified Provision
		(a2) In case the cost of specialized project is more than Rs. 1,000 Cr: The sole Bidder or in case the Bidder being a Joint Venture, any member of Joint Venture shall have completed at least one similar Major Bridge/ ROB/ Flyover project in the last 10 (ten) financial years preceding the Bid Due Date, having span equal to or greater than 50% of the longest span of the structure proposed in this project or 100m, whichever is less, and also the cost of such similar project shall be atleast **20**% of the Estimated Project Cost or Rs. 1000Cr. whichever is less. For this purpose, a project shall be considered to be completed, if more than 90% of the value of work has been completed and such completed value of work is equal to or more than 20%of the Estimated Project Cost or Rs. 1000 Cr., whichever is less.	**length not less than equals to 35% of cost of the Major Bridges/ROB/Flyovers.** For this purpose, a project shall be considered to be completed, if more than 90% of the value of work has been completed and such completed value of work is equal to or more than **the above mentioned criteria. Certificate(s) from the concerned client(s) shall be required for the same. In case the claimed project /(s) are subcontracting/ JV project in such a case Approval from Govt. Authority / Client is required (restricted to allowable sub-contracting limit/ JV share in original contract).**[D2]
6.	**Tunnel project**	(b) Tunnel project: The sole Bidder or in case the Bidder being a Joint Venture, any member of Joint Venture shall have completed atleast one tunnel project in the last 10 (ten) financial years preceding the Bid Due Date, consisting of single or twin tubes (including tunnel(s) for roads/Railway/Metro rail/irrigation/hydro-electric projects etc.) having atleast 50% of the cross-sectional area of the tunnel to be constructed or cross sectional area of 2 lane highway tunnel, whichever is less, and 20% length of the tunnel to be constructed in this project or 2 km, whichever is less and the cost of such project shall be atleast 20% of the Estimated Project Cost or Rs. 1000 Cr., whichever is less. For this purpose, a project shall be considered to be completed, if more than 90% of the value of work has been completed and such completed value of work is equal	(b) Tunnel project: The sole Bidder or in case the Bidder being a Joint Venture, Lead member of Joint Venture shall have completed atleast one tunnel project in the last 7 (seven) financial years preceding the Bid Due Date **or till the Bid Due Date,** consisting of single or twin tubes (including tunnel(s) for roads/Railway/Metro rail/irrigation/hydro-electric projects etc.) having atleast 80% of the cross-sectional area of the tunnel to be constructed **other than Cut & Cover method** or cross sectional area of 2 lane highway tunnel, whichever is less, and 40% length of the tunnel. to be constructed in this project or 2 km, whichever is less and the cost of such project shall be atleast

Sr. No.	Particulars	Existing Provision	Modified Provision
		to or more than 20%of the Estimated Project Cost or Rs. 1000 Cr., whichever is less.	**i. two similar completed works length not less than equals to 25% each of estimated cost of the tunnel.** **or** **ii. one similar completed work length not less than equals to 35% of estimated cost of the tunnel.** For this purpose, a project shall be considered to be completed, if more than 90% of the value of work has been completed and such completed value of work is equal to or more than **the above mentioned criteria**. **Certificate(s) from the concerned client(s) shall be required for the same. In case the claimed project /(s) are subcontracting/ JV project in such a case Approval from Govt. Authority / Concessionaire is required (restricted to allowable sub-contracting limit/ JV share in original contract).**
7.	**Highways sector & Core Sector definition**	(a) highways sector would be deemed to include highways, expressways, bridges, tunnels, runways, **railways (construction/re-construction of railway tracks, yards for keeping containers etc.) metro rail and ports (including construction/re-construction cost of Jetties, any other linear infrastructure including bridges etc.)**; and (b) core sector would be deemed to include civil construction cost of power sector, commercial setups (SEZs etc.), airports, industrial parks/ estates, logistic parks, pipelines, irrigation, water supply, sewerage, stadium, hospitals, hotel, smart city, warehouses/ Silos, oil and gas and real estate development. Core sector will also include the projects with the title of RIDF, PMGSY road, link road, city roads, rural road, sector/	(a) highways sector would be deemed to include highways, expressways, bridges, tunnels, runways, (Viaducts of Railways/ Metro, Container yard of ports **and** (b) core sector would be deemed to include civil construction cost of power sector, commercial setups (SEZs etc.), airports, industrial parks/ estates, logistic parks, pipelines, irrigation, water supply, sewerage, stadium, hospitals, hotel, smart city, warehouses/ Silos, oil and gas and real estate development. Core sector will also include the projects with the title of RIDF, PMGSY road, link road, city roads, rural road, sector/ municipality road, real estate projects which demonstrate road

Sr. No.	Particulars	Existing Provision	Modified Provision
		municipality road, real estate projects which demonstrate road development/ construction bridges or culverts.	development/ construction bridges or culverts, **Performance-Based Maintenance Contracting work (PBMC), O&M work, Short Term Maintenance Contract (STMC), railways (construction/re-construction of railway tracks, etc.) metro rail and ports (including construction/re-construction cost of Jetties, any other linear infrastructure including bridges etc.).**
8.	**Technical Capacity – Min Value of works to be considered**	the capital cost of the project should be more than 5% of the amount specified as the Estimated Project Cost; and receipts of less than 5% of the Estimated Project Cost	For projects upto Rs 100 crore No Change For projects more than Rs 100 crore : the capital cost[1] of the project should be more than **10%** of the amount specified as the Estimated Project Cost; and receipts[2] of less than **10%** of the Estimated Project Cost
9.	**Original of Documents**	The Lowest Bidder shall be required to submit original of documents listed below (before issuance of Letter of Acceptance (LOA) by the Authority: (a) Original Power of Attorney for signing the BID as per format at Appendix-III; (b) if applicable, Original Power of Attorney for Lead Member of Joint Venture as per the format at Appendix-IV; (c) (c) if applicable, Original Joint Bidding Agreement for Joint Venture as per the format at Appendix-V; (d) (d) Bid Security of Rs. Xx Crore (Rupees only) in the form of Insurance Surety Bond (in the format at Appendix– X issued by Insurance Company authorized by Insurance Regulatory and Development Authority of India) or Account Payee Demand Draft or Fixed Deposit Receipt or Banker's Cheque or Bank Guarantee (including e-Bank Guarantee) in the	The Lowest Bidder shall be required to submit original of documents listed below (before issuance of Letter of Acceptance (LOA) by the Authority: **(a) Appendix-IA (Letter comprising the Technical Bid).** **(b) Appendix-IB (Letter comprising the Financial BID)** **(c) Annex-V Statement of Legal Capacity** (d) Original Power of Attorney for signing the BID as per format at Appendix-III; (e) if applicable, Original Power of Attorney for Lead Member of Joint Venture as per the format at Appendix-IV; (f) if applicable, Original Joint Bidding Agreement for Joint Venture as per the format at Appendix-V; (g) Bid Security of Rs. Xx Crore (Rupees only) in the form of Insurance Surety Bond (in the format at Appendix– X issued by Insurance Company authorized by Insurance Regulatory and

[1] The actual capital cost of the project (i.e. without escalation) shall be considered for the evaluation.
[2] The actual payment receipt (i.e. without escalation) shall be considered for the evaluation.

Sr. No.	Particulars	Existing Provision	Modified Provision
		format at Appendix-II from a Scheduled bank; (e) **Deleted;** **(f) Deleted;** (g) Bidder shall comply with the provisions of NHAI/Policy Guidelines/Vigilance/2020 Policy Circular No. 5. 8 dated 29th December 2020 issued by NHAI and its subsequent amendments if any, issued by NHAI/MoRT&H (Appendix-VI) regarding Integrity Pact (IP) and the Integrity Pact (IP) duly signed by Authorised signatory shall be submitted by the Bidder with the RFP Bid & shall be part of the Contract Agreement; and (h) An undertaking from the person having PoA referred to in Sub. Clause-(a) above that they agree and abide by the Bid documents uploaded by NHAI and amendments uploaded, if any (i) Copy of experience certificates apostille at foreign origin, if any (j) Certificate regarding Compliance with Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs) as per format given in Appendix-XI shall be submitted by the Bidder with the RFP Bid duly signed by Authorised signatory & shall be part of the Contract Agreement; and (k) Proof of Registration with the Competent Authority as defined in Public Procurement Order No. F. No. 6/18/2019-PPD dated 23rd July 2020, if applicable (to be submitted by the "Bidder from a country which shares a land border with India").	Development Authority of India) or Account Payee Demand Draft or Fixed Deposit Receipt or Banker's Cheque or Bank Guarantee (including e-Bank Guarantee) in the format at Appendix-II from a Scheduled bank; (h) Bidder shall comply with the provisions of NHAI/Policy Guidelines/Vigilance/2020 Policy Circular No. 5. 8 dated 29th December 2020 issued by NHAI and its subsequent amendments if any, issued by NHAI/MoRT&H (Appendix-VI) regarding Integrity Pact (IP) and the Integrity Pact (IP) duly signed by Authorised signatory shall be submitted by the Bidder with the RFP Bid & shall be part of the Contract Agreement; and (i) An undertaking from the person having PoA referred to in Sub. Clause-(a) above that they agree and abide by the Bid documents uploaded by NHAI and amendments uploaded, if any (j) Copy of experience certificates apostille at foreign origin, if any (k) Certificate regarding Compliance with Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs) as per format given in Appendix-XI shall be submitted by the Bidder with the RFP Bid duly signed by Authorised signatory & shall be part of the Contract Agreement; and (l) Proof of Registration with the Competent Authority as defined in Public Procurement Order No. F. No. 6/18/2019-PPD dated 23rd July 2020, if applicable (to be submitted by the "Bidder from a country which shares a land border with India").
10.	**Clause 2.1.11 (c) of RFP**	Members of the Joint Venture shall nominate one member as the lead member (the "Lead Member"). Lead Member shall met at least 60% requirement of Bid Capacity, Technical and Financial Capacity, required as per	Members of the Joint Venture shall nominate one member as the lead member (the "Lead Member"). Lead Member shall met at least 60% requirement of Bid Capacity, Technical and Financial Capacity, required as per

Sr. No.	Particulars	Existing Provision	Modified Provision
		Clause 2.2.2.1, 2.2.2.2(i) & 2.2.2.3. The nomination(s) shall be supported by a Power of Attorney, as per the format at Appendix-III, signed by all the other Members of the Joint Venture. Other Member(s) shall meet at least 20% requirement of Bid Capacity, Technical and Financial Capacity required as per Clause 2.2.2.1, 2.2.2.2(i) & 2.2.2.3 and the JV as a whole shall cumulatively/collectively fulfil the 100% requirement;	Clause 2.2.2.1, 2.2.2.2(i) & 2.2.2.3. The nomination(s) shall be supported by a Power of Attorney, as per the format at Appendix-III, signed by all the other Members of the Joint Venture. Other Member(s) shall meet at least 20% requirement of Bid Capacity, Technical and Financial Capacity required as per Clause 2.2.2.1, 2.2.2.2(i) & 2.2.2.3 (except otherwise specified in RFP) and the JV as a whole shall cumulatively/collectively fulfil the 100% requirement; Provided further that, **In the case of a Joint Venture (JV), each member is required to hold a minimum of 26% (twenty six percent) in the JV.**

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Government of India

Ministry of Road Transport & Highways

(S&R (P&B/New Technology) Zone)

Transport Bhawan, 1, Parliament Street, New Delhi-110001

1970.13

Dated:18th March 2026

CIRCULAR

To

1. The Chief Secretaries of all the State Governments/ UTs.
2. The Principal Secretaries/ Secretaries of all States/ UTs Public Works Department/ Road Construction Department/ Highways Department (dealing with National Highways and other centrally sponsored schemes).
3. The Chairman, National Highways Authority of India, G-5 & 6, Sector-10, Dwarka, New Delhi-110 075.
4. The Managing Director, NHIDCL, World Trade Centre, New Delhi-110029.
5. The Director General (Border Roads), Seema Sadak Bhawan, Ring Road, New Delhi-110 010.
6. All Engineers-in-Chief and Chief Engineers of Public Works Department of States/ UTs/ Road Construction Department/ Highways Departments (dealing with National Highways and other centrally sponsored schemes).
7. The Secretary General, Indian Roads Congress.
8. The Director, IAHE, Noida, UP.
9. All CE-ROs, ROs and ELOs of the Ministry.

Subject: Quality Assurance Plan (QAP) for Precast Concrete Products in National Highways (NHs) Projects- Reg.

Ref: i) Ministry circular No. EFile No.RW/NH-34049/01/2020-S&R (B) (Computer No.-182692) dated 24.06.2025

Madam/Sir,

Ministry had issued policy circular vide under reference regarding 'Mandatory Use of Precast Concrete Components in National Highways Projects'. In continuation of the same, Quality Assurance Plan (QAP) is enclosed herewith.

2. This QAP is intended to assure the quality precast concrete products. It covers basic requirements of precast concrete plants, design, quality control of all stages of production, including raw material sourcing, manufacturing processes(fabrication/casting), products tolerances, final inspection before delivery, lifting & handling, transportation, and erection (launching/installation/jointing). Proper implementation minimizes rework, reduces lifecycle costs, and guarantees compliance with specified quality standards.

3. It is requested that the contents of the circular may be brought into the notice of all concerned for needful compliance.

4. This issues with the approval of the Competent Authority.

Bidur Kant Jha.

Yours sincerely,

Bidur Kant Jha
18.03.2026

(Bidur Kant Jha)
Director
(New Technology for Highway development)
For DG (RD) & SS

Enclosure: **(QAP) for Precast Concrete Products (13pages).**

Copy to:

1. All CEs in the Ministry of Road Transport & Highways
2. All ROs of the Ministry of Road Transport & Highways
3. All CE(NH) of PWD/R&B dealing with National Highways
4. Technical circular file of S&R (P&B) Section
5. NIC-for uploading on Ministry's website under "What's new" & "Comprehensive Compendium Circulars with CODE 1970.13.

Copy for kind information to:

1. PS to Hon'ble Minister (RT&H)
2. PS to Hon'ble MOS (RT&H)
3. Sr. PPS to Secretary (RT&H)
4. Sr. PPS to DG (RD) & SS
5. Sr. PPS/ PPS to Addl. Secretary (Road Safety)/ Addl. Secretary (RT&H & LA)
6. Sr. PPS/ PPS to AS&FA
7. Sr. PPS/ PPS to all ADGs/CEs
8. Sr. PPS/ PPS to JS (RT&MVL)/ JS (EIC) / JS (Logistics)/ JS (NHIDCL)

Quality Assurance Plan(QAP) for Precast Concrete Products

1. INTRODUCTION

Precast concrete is widely used in modern infrastructure projects for its speed of construction,consistent quality and durability. Ministry of Road Transport & Highways (MoRT&H), recognizing the benefits of the precast technology has formulated and issued the "National Highway Pre-cast Concrete Policy" in April 2022. Policy, for the first time, made provisions for mandatory usage of precast concrete elements in national highway projects was introduced under certain conditions. A follow up Circular dated 24th June 2025 was issued to further strengthen the mandate for usage of precast concrete components in all National Highways/ centrally sponsored projects costing more than ₹300 crore in civil cost. The aforesaid circular provides for mandatory uses of precast concrete products such as Box Culverts of specified sizes, Storm Water Drain cum footpath, Chute drain with dissipation chamber, Boundary wall/Toe Wall/fence, RCC Crash Barrier/RS Wall Friction Slab-cum-Crash Barrier, Kerbs/Channels and Pedestrian Railing/Median Railing.

A robust Quality Assurance (QA) and Quality Control (QC) framework in precast concrete for manufacturers is essential to eventually reap benefits of precast technology which ensures structural safety, durability and performance, alongwith improving efficiency and client satisfaction. A quality assurance plan (QAP) is a systematic program for monitoring and maintaining the quality of concrete components throughout the entire production process to ensure that all products meet project specifications, design standards and safety requirements.This QAP is intended to assure the quality precast concrete products. It covers basic requirements of precast concrete plants, design, quality control of all stages of production, including raw material sourcing, manufacturing processes(fabrication/casting),products tolerances,final inspection before delivery,lifting & handling,transportation, and erection (launching/installation/jointing). Proper implementation minimizes rework, reduces lifecycle costs, and guarantees compliance with specified quality standards.

2. STANDARDS & SPECIFICATIONS

Design, fabrication/casting and launching/installation of pre-cast concrete components will be done as per relevant IRC/BIS standards/guidelines/codes such as IRC: 112/IRC: 122/IS: 456/IS: 15916 taking further into consideration of expected handling/lifting stresses, etc. Any international guidelines such as AASHTO, FHWA (Accelerated Bridge Construction Guidelines), Japan codes, American Precast Concrete Institute (PCI), World Roads Congress, Euro/British/ French/Swiss/German, etc., may be followed in case of any gaps in IRC/BIS standards/ guidelines/codes till such time IRC/BIS guidelines are developed.

3. DESIGN & WORKING/SHOP DRAWINGS

Standard drawings of the precast concrete products should be included in Annex-I of Schedule-B/C as applicable.Concessionaire or Contractor shall prepare detailed working/shop drawings and submit for its

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approval. The primary function of precast concrete shop (erection and production) drawings is the translation of contract documents into usable information for accurate and efficient manufacturing, handling, and erection of the units. Production drawings shall be prepared to convey all pertinent information necessary for fabrication and inspection of the precast concrete products. Design & Drawings of the proposed pre-cast concrete components shall be checked & approved by the Authority Engineer (AE) / Independent Engineer (IE) of the Project. The precast concrete units shall be produced in accordance with the approved drawings. The drawings shall also clearly indicate location of handling arrangements for lifting and handling the prefabricated elements, sequence of erection with critical check points and measures to avoid stability failure during construction stage.

4. PRECAST CONCRETE PLANTS

Concessionaire/Contractor shall either establish their project specific precast concrete plants or procure from precast concrete manufacturing plants. The Concessniare/Contractor shall submit a proposal for approval of the precast concrete plants to Authority Engineer/Independent Engineer.The plant inspection shall be conducted by a team comprising representatives from IE/AE and Project Director(PD)/Regional Office (RO). Following the inspection, **the PD/RO will grant the approval** after duly satisfied with the following:

4.1 Zoned Areas

An ideal precast plant requires a robust, well-organized setup with dedicated areas for each stage of production to ensure quality, efficiency, and safety. The facility must be built around a linear production flow, from material storage to the finished product yard, with heavy-duty material handling equipment and strict quality control measures throughout. The layout must create a logical flow of production, with distinct, well-defined zones to prevent cross-contamination and facilitate movement. Key areas include:

- **Material storage**: Separate storage areas are needed for cement (in silos), fine and coarse aggregates (on paved, clean ground), and steel reinforcement bars.
- **Batching and mixing plant**: A fully automatic batching plant near the production facility ensures consistent concrete quality and reduces transport time.
- **Reinforcement yard**: A covered area for curing, bending, and assembling reinforcement cages keeps steel dry and organized.
- **Casting yard**: A large, level area with dedicated casting beds where products are formed.
- **Curing facility:** This can be an open area for water curing or an enclosed, insulated chamber for steam curing.
- **Finished product yard:** A stacking yard with a hard, level surface for storing finished products on support blocks.

4.2 Facilities and Equipment

The precast plant must be of modern standards with adequate capacity to supply large infrastructure projects. The plant facility shall be adequate for production, finish processing, handling, and storage of product. The precast concrete manufacturing plants should have the following facilities & equipment:

- **Batching Plant**: Fully automatic RMC plant for precise, high-volume production of concrete duly certified by BIS/QCI/ RCMA (Ready

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Mixed Concrete Manufacturers Association) is to be erected. The number and capacity of the batching plant commensurate with the requirement. Batching systems must conform to IS:4925 standards for accuracy.

- **Concrete Mixing, Handling and Transportation**: Plant should have availability of transit mixers, concrete distribution systems, or skip hoists for delivering concrete into moulds. Transit mixers or other transport wagons should be used to move the concrete mix from the plant to the casting beds.
- **Bar bending, cutting Machines, Rebar fabrication and cage assembly area**: Plant should have CNC (Computer Numerical Control) machines to automate the cutting and bending of steel reinforcement, ensuring precision and to produce reinforcement as per design for the precast units.
- **Water Treatment Plant / RO plant for water purification**: If the water has TDS more than 200, purified mixing water should be used.
- **Moulds Infrastructure:** Plant should have sufficient quantity of steel moulds/formworks to meet high-volume casting requirements for continuous production, aligns with project needs. Steel Moulds should be duly designed & inspected for Product Tolerances prescribed as per methodology approved in BIS 15916.
- **Curing Facilities:** Plant should have an accelerated steam curing facility for controlled application of low-pressure steam to achieve early strength gain. An alternative curing regimes (curing compounds, water curing infrastructure such as sprinkling systems to keep precast products wet, etc.) should be available as a backup to ensure quality through timely curing.The curing of the precast products can be effected by the normal methods of curing by sprinkling water and keeping the elements moist.
- **Casting:** Plant should have high-strength, durable universal casting beds. These beds can be of required dimensions/suitable size on compacted soil and pedestal beds of sufficient numbers with requisite properly designed foundations. Steel-fabricated forms with sufficient thickness and bracing to withstand the forces of concrete placement and vibration should be used. Both needle and form vibrators should be used to ensure proper compaction and prevent honeycombing in the concrete.
- **Mechanical handling equipment for lifting and transporting of precast concrete products:** The production facilities shall include adequate product handling equipment that is maintained in good working condition. Handling equipment shall be capable of stripping, moving, stacking, retrieving, and loading units without damaging the products.

  -Overhead(OH) cranes: Plant should have overhead cranes. A series of heavy-duty double-girder overhead traveling (EOT) or gantry cranes are needed to lift and move heavy products and moulds within the factory and loading areas.

  -Gantry cranes: Plant should have gantry cranes to be used for lifting and loading materials and finished

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products, especially in the storage yard.

-Specialized lifting equipment: Plant should have specialised lifting equipment Including lifting hooks and beams designed for the specific products.

-Transport wagons: If needed, transport wagons should be used for transporting finished products to the storage yard.

-Backup provisions with Fork lifts, Hydra crane etc for material movement.

- **Stacking Yard:** Plant should have covered sheds for raw material storages and covered sheds for production bays and covered stacking yard to stores finished products. There should be concrete flooring for material storages, production and casting floors.
- **Power backup and others**: The plant should have reliable power supply (and backup generators if needed) to ensure uninterrupted production, and facilities for environmental control (dust suppression, noise control) in line with ISO 14001 commitments. Plant should have Weigh bridge of suitable capacity, CCTV systems for monitoring operations and Vehicle tyre cleaning systems. For high Grade (> 60 MPa), Ice Flake manufacturing unit of suitable capacity should also be established.

4.3 MANDATORY CERTIFICATIONS

Precast factory shall have following valid certifications granted by BIS/QCI/other approved CBs:

- ISO 9001:2015 Quality Management System
- ISO 14001:2015 Environmental Management System
- ISO 45001:2018 Occupational Health & Safety Management System

Precast Concrete Factory shall have also valid products certification along with license for ISI label marking on the precast concrete components by BIS. This is applicable only for the products for which BIS does the certification. For products where BIS certification is available, the factory should possess the license to mark those precast products with the ISI mark.

4.4 MANPOWER

Plant/factory should have qualified and trained team consisting of

- **Management and administration team**:

  Factory manager.

  Project managers/coordinators

  Sales and marketing team

  HR and training

- **Technical and design team**:

  Structural engineers:

  Planning engineer

  Design and detailing managers.

  Detailers/drafters

  Checkers

- **Production and quality control team**:

  Production managers

  Supervisors/foremen

  Machine operators

  Electricians, mechanics, and welders

  Quality assurance/control (QA/QC) engineers

  Finishing workers

- **Logistics and yard operations team**:

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Logistics/dispatch supervisors

Riggers and crane operators

Inventory and warehouse staff

4.5 QUALITY CONTROL LABORATORY

Precast factory shall have well-equipped laboratory at factory itself for internal quality control. A fully equipped quality control (QC) lab is mandatory for testing raw materials (cement, aggregates), in-process concrete (slump tests), and final products (cube tests for compressive strength). Laboratory shall have ISO: 17025 "General requirements for the competence of testing and calibration laboratories" certification granted by NABL or other approved certification bodies (CBs). Each equipment shall have valid calibration certificate.The laboratory shall be manned by a Quality Manager with min 10 yrs of experience, Inspectors of Concrete, REbars, Formwork & Safety with min 3 years' experience.

4.6 THIRD PARTY QA&QC

Precast Concrete Factory shall employ a third-party PMC for QA&QC for the supervision of daily activities/testing conducted at the factory. All the tests shall be witnessed by the personnel of the PMC & recorded using digitalisation of QC Process. Pre-cast Concrete Plant shall employ a third-party testing laboratory for calibration at the pre-cast concrete facility. In addition to it, AE/IE shall do surprise checks & audit the plant & its process as and when required by Authority.

4.7 DESIGN AND ENGINEERING CAPABILITY

Precast construction requires robust design support to customize component dimensions, check structural adequacy, and detail connections. The manufacturer must have an in-house design/engineering team with qualified structural engineers to design precast elements and verify their conformity to relevant codes. The team should be capable of producing detailed shop drawings and calculation reports for each product type. At the least, there should be one senior structural engineer (with say 8-10 years' experience) leading the design unit, supported by other engineers/draftsmen proficient in precast design.

4.8 WORKER SAFETY

The factory must implement strict safety protocols for crane operation, electrical equipment, and general material handling. This includes routine inspections, personal protective equipment (PPE) for all workers, and training on safe work procedures. Features like anti-sway devices and movement sensors on cranes, barricades for crane swing radius, and clear signage throughout the facility minimize risks.

4.9 COMPLIANCE AND CERTIFICATIONS

- **Permits and licensing**: Secure all necessary regulatory approvals, including local factory licensing and environmental clearance. Consent to establish, Consent to operate, Periodic air & noise monitoring, permits as per applicable labour laws.
- **Industry certification**: Obtain and maintain a plant certification from an organization like BIS, which requires adherence to specific quality manuals.
- **Personnel training**: Establish a training program for staff to ensure they are proficient in standard operating procedures for production and quality control.

5. QUALITY CONTROL

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QC is the practical application of inspection and testing to verify that the precast concrete products meet the required quality standards before delivery and installation. The factory shall carry out Quality Control Tests on the Materials, Processes and Works to the frequency stipulated in Project's Specification with digitalisation of QC Process. All the tests prescribed in MORTH Specifications for Road & Bridge Works shall be conducted at various stages and frequencies stipulated therein, during the construction stage. Besides additional tests shall be conducted for factory manufactured materials, products and specialized items as per Section 5 of IRC:SP:112. Requirement and procedure of testing during different stages of construction are given below:

5.1 Key QC Measures

- **Pre-Production Checks**

- **Mould inspection**: Cleanliness, dimensional accuracy, alignment, and release agents.

- **Reinforcement inspection**: Placement, cover blocks and binding.

- **Concrete Production Stage QC**

- Workability test (Slump, Flow table, Vebe time).

  Concrete temperature and ambient conditions monitoring.

- Proper vibration and compaction to eliminate honeycombing.

- **Curing & Strength Monitoring**

- Controlled curing (steam/accelerated/natural) as per design.

- **Instrumentation**: Temperature probes for monitoring concrete curing, and other sensors to ensure quality standards.

- Cube compressive strength tests at 7 and 28 days.

- Non-destructive testing (NDT) like rebound hammer and ultrasonic pulse velocity, if required.

- **Dimensional & Surface Finish Checks**

- Measurement of precast element dimensions with tolerances.

- Inspection of surface finish, cracks, air voids, and defects.

- **Final Inspection & Certification**

- Load testing (if specified).

- Marking and labelling for traceability.

- Issuance of QC release certificates prior to dispatch.

- **Transportation & Erection Quality Control**

- Proper handling, lifting hooks, and transport supports to prevent cracks/damage.

- On-site inspection of received precast elements.

- Alignment, joint grouting, and connection inspection during erection.

- **Documentation & Records**

- QA/QC plans and checklists.

- Test reports (material, fresh concrete, hardened concrete).

- Non-conformance reports (NCRs) and corrective actions.

- Final Quality Dossier submission to client/consultant.

The supplier/manufacturer shall furnish its quality management plan and accurate reports of its in house testing and third party laboratory test reports to the purchaser (employer/authority/contractor). AE/IE shall

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review and approve the quality management plan.

5.2 Laboratories Facilities

- **General**: The plant shall maintain an adequately equipped laboratory or retain the services of a testing agency in which investigation and development of suitable concrete mixes may be conducted, and ongoing quality control testing may be performed. The laboratory facilities shall be in a protected area with environmental controls to ensure proper working conditions. Laboratory equipment shall be maintained in proper condition and calibrated as needed, but not less than annually. Calibration records shall be kept on file.
- **Quality Control Testing Equipment**: The plant shall have all equipment required for performing the testing procedures. Equipment shall meet the requirements of the test procedure specification.
- **Test Equipment Operating Instructions**: Operating instructions shall be obtained for all testing equipment as well as national and industry standards, for materials and testing. These instructions shall be kept in the laboratory and shall be carefully followed by all testing personnel.Compression testing machines shall be kept clean, and no attempt shall be made to use the machines beyond the rated capacity. Machines shall be capable of applying loads at the specified rate. Testing machines shall be calibrated so that the maximum error is not more than ±1% of full scale reading or ± 2% of the maximum expected test load, whichever is less. Calibration shall be performed when there is reason to question the accuracy of indicated loads, or at least annually. Calibration curves shall be available at all times and used by testing personnel.

5.3 Equipment Calibration Records

- Records for calibration of equipment shall be maintained so that the equipment operator has ready access to the records. Current and legible calibration stickers shall be attached to and prominently displayed on all equipment requiring calibration. All of the following equipment shall be calibrated a minimum of once per year unless otherwise specified. Current calibration reports shall be dated not more than one year at the end of the month from the date of the last calibration or certification.

- batch plant scales
- Water meters
- Admixture batching equipment
- Concrete compression test machines
- Portable scales
- Slump Cone
- Density (Unit weight) bucket
- Rebound hammer (if used)
- Thermometers, temperature recorders and clocks
- Three-edge bearing test machines
- Pipe and manhole measuring devices (i.e., go-no-go gages)
- Vacuum and hydrostatic testing equipment
- SCC testing equipment (if used)

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- Any other testing equipment used in the acceptance of product

Calibration of the air meter shall be intervals not to exceed three months, as per ASTM C231. Calibration of batching scales, compression testing machines and three-edge bearing testing machines shall be performed by an independent, third-party calibration company. Unless otherwise specified, all other calibrations shall be performed inhouse, by the supplier, or by an independent, third-party calibration company.

6. INSPECTION

Pre-pour and post-pour inspections to be performed in precast concrete plants shall include, but not necessarily be limited to, the following:

- All required plant testing and inspection of materials and embeds for acceptance prior to initial concrete placement and daily check testing for quality maintenance.
- Mix design for all concrete and required ingredients for concrete testing.
- Inspection of forms and new setup changes prior to placement of concrete. The plant shall prepare its own list of items to be checked as part of the pre-pour inspection, and emphasis shall be on items that cannot readily be checked after concrete placement.
- Checking of blockout position, cast-in items, position and amount of reinforcement, and any other critical tolerance items. This also includes verifying these items are properly secured during placement of concrete.
- Check forms and appurtenances for adequate maintenance by verification of tightness, dimensions, and overall general quality.
- Daily detailed inspection of batching, mixing, conveying, placing, compacting, curing, and finishing of concrete.
- Daily inspection of stripping product from the forms.
- General observation of plant, equipment, weather, and other items affecting production.
- Preparation of concrete specimens for testing and performing slump, air content,compressive strength, and other concrete tests.
- Inspection of finish to ensure that the product matches the standard established by the plant and client. Finish defects, cracking, and other problems shall be reported and a decision made as to acceptance, repairs, or required manufacturing changes. Products that are damaged are to be recorded, marked, and reinspected after being repaired.
- Check finished product against approved shop drawings and plant standards to ensure that proper finishes are on all required areas, product dimensions are correct, cast-in items are correctly located, product is properly identified and marked, and all measurements are within allowable tolerances.
- Check initial camber on at least 25% of each day’s production within 72 hours after transfer of prestress force.
- General observations of storage area for proper blocking, methods for prevention of chipping, warping, cracking, contamination, and blocking stains, or any other items that may adversely affect the quality of the product.
- Final inspection of product during loading for proper blocking and observation of problems such as chips, cracks, warpage, or other defects.

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- Inspection of products following any repair.
- Disposition of nonconforming products.

7. FINISHED PRODUCT DIMESNIONAL TOLERANCES

Product tolerances are necessary in any manufacturing process. Dimensional tolerances of the precast units as received on site should comply with those specified in the contract documents. The surface finishes of precast units when received on site should be checked for compliance with the requirements of the contract documents. Changes to the dimensions and shapes of units should be identified and assessed with regard to the overall tolerance and surface finish. The tolerances on the shapes, lines and dimensions of factory precast oncrete products shown in the drawing shall be within the limits given below:

- Deviation from specified dimensions of cross-section (width & depth i.e. thickness) - ±2mm
- Deviation from specified dimensions of Length of segment- ±5mm
- Deviation from specified spacing of reinforcement - ±10mm
- Deviation from specified nominal cover- +10mm and -0mm.

The above applicable product tolerances shall be clearly conveyed to production and quality control personnel.

8. PRODUCT IDENTIFICATION & TRACEABILITY

Precast concrete units shall be clearly marked with a unique identification as shown on the shop drawings. Identification shall be sufficient to distinguish the date of casting and trace the precast unit to associated quality control records. Each precast component dispatched should carry an identifying mark or QR/barcode for traceability.On each of the precast concrete components bar code/QR code should also be engraved for traceability of lot, other QA&QC tests, etc.

9. RECORDKEEPING

In order to establish evidence of proper manufacture and conformance with plant standards and project specifications, a system of recordkeeping shall be used that will provide full information regarding testing of materials, mix designs, production tests, and any other information specified for each project. Records shall be designed to allow minimum effort to compile. Include the date of manufacture in the product marking in order to facilitate the tracking of product and raw materials. Each precast concrete unit shall be marked on the backside or edges of the unit with the date produced and a unique identification number that can be referenced to production, erection drawings, and testing records. Unless otherwise noted herein, recordkeeping shall be the responsibility of the quality control inspection personnel. In the absence of project specification requirements or state statute, records shall be kept for a minimum of 5 years after final acceptance of the structure, or for the period of product warranty provided by the manufacturer, whichever is longer.

10. LIFTING & HANDLING EQUIPMENT

Lifting inserts used shall have minimum capacity of four times the maximum load applied or transmitted to them. Lifting hardware such as slings, lift bars, chains, hooks etc. shall have minimum capacity of five times the maximum load applied or transmitted to the lifting hardware. Handling equipment such as hoists, overhead cranes, gantries, mobile cranes,

and fork lift trucks shall be used to lift and handle products which weigh less than the rated capacity of the equipment. Inspection and maintenance records for all handling equipment must be maintained in accordance with applicable requirements.

A record of full load test on the finished product alongwith deflection shall be maintained and availble for inspection to AE/IE and the client.

All records pertaining to production/manufacturing of concrete, QA and QC, load testing, etc. shall be preserved and availble for inspection to AE/IE and the client.

11. TRANSPORTATION

Precast concrete units shall be shipped when it achieved 28.0 MPa or 80.0% of the specified compressive strength, whichever is higher. Proper devices should be used to support, secure and wedge the precast units and its edges throughout their journey . The units should be adequately secured and supported to prevent them from overturning, shifting or being damaged during transportation. Adequate non staining cushioning should be provided between the unit and any securing chains, cables or ropes to prevent localised damage.Precautions should also be taken to ensure that no undesirable stresses will be transmitted to the precast unit due to any flexing of truck or trailer. Transportation of Precast Elements should be done by flat bed Trailor (Double / Triple axle 40ft Length with proper accessories like A frame etc) from factory.

12. MANUFACTURER'S/SUPPLIER'S TEST REPORT

Manufacturers/Suppliers Test Certificate for each lot of the products shall be provided by Precast Concrete factory, which shall be submitted by the Contractor along with bills. Manufacturers must issue a Test Certificate for each lot of products, to be submitted by the contractor with billing. Certified test reports for materials not tested in-house shall be required of suppliers. These reports shall show the results of suppliers' mill or plant tests, tests by an independent testing laboratory, petrographic analysis of aggregates for concrete mixes, and other testing required by the project specifications. These reports shall state compliance with applicable specifications.

These records shall be kept for the same period of time as the other project records.

- **Concrete Records:**

Records of concrete operations and tests shall be kept so the following data will be available:

- Unit and job identification
- Production date
- Mix proportions by weight
- Mixing water corrections and/or aggregate corrections due to surface moisture
- Yardage, design and actual yield or unit weight
- Identification of production area, form, or bed
- Test specimen identification
- Concrete temperature
- Air temperature, weather conditions, if applicable, and any measures taken for cold or hot weather concreting
- Slump
- Air content
- Unit weight (fresh)
- Inspection of batching, mixing, conveying, placement, consolidation, and finishing of concrete

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- Method and duration of curing, e.g., temperature charts for accelerated curing
- Strength at stress release or stripping
- 28-day strength
- Absorption for concrete exposed to weathering
- Cylinder strength tests and air-dry unit weight for lightweight concrete
- Fresh unit weight for lightweight concrete

- **Inspection reports**

Also the precast concrete manufacturers should submit the product survellience form as given in **Annex-II**.

13. ERECTION AT SITE

Only those skilled foremen, trained workers and fitters who have been properly instructed about the safety precautions to be taken should be employed on the job.The loading , unloading & stacking at site should be done with the help of required capacity cranes. The gross weight of the precast product segment as well as rated capacity of the handling & lifting equipment should also be written.

14. SEALING OF JOINTS

Proper joint sealing are crucial to the performance of installed precast concrete products when infiltration or exfiltration are a factor in the project. Details of connecting joints of precast concrete products shall be given to an enlarged scale. As a proof of design, the plant shall maintain documentation on file showing that when assembled; the joint gap between any two segments is not greater than ¾ inch (19 mm) in any one location. The spigot of the segment is slipped inside the socket of the previously laid segment and adjusted in the correct position while erection. Joints shall be sealed with non-shrink flowable high strength cement mortar mixture of stiff consistency, which shall be rammed with a caulking tool. The excess cement mortar shall be removed, and the joint shall be cured.

Joining of Two precast Box Culvert / U Shape Drain i) Non-shrink cementitious grout material such as Sikadur31N, Ultratech power grout NS 1 & 2 or similar shall be used to join two precast element at the groove. It ensures monolithic bonding, high compressive strength, and dimensional stability under dynamic and static loads. ii) It ensures tight joints without cracks, shrinkage, or voids between precast units. iii) Rubber gasket is a flexible sealing element to ensure watertight joints between two precast box culvert segments. This gasket shall be placed in the groove provided in the element during manufacturing. To prevent infiltration/ exfiltration of water and soil through the joint. iv) The gasket is formulated to meet long-term performance requirements under dynamic and static loads. v) Each precast box culvert segment is cast with embedded steel flange plates along the four corners. During installation, high tensile bolts are used to connect the flange plates of adjoining units, forming a rigid, secure, and accurately aligned joint.

15. PROTECTION OF ERECTED PRECAST PRODUCTS

Construction machinery shall not be permitted on the top of the segment unless requisite earth cushion is proved and loads are considered in the designs.

16. RESPONSIBILITY OF CONCESSIONAIRE/CONTRACTOR

The concessionaire/contractor will remain responsible for the ultimate quality of an item produced using factory manufactured material or a finished item itself. The contractor shall therefore, exercise its

checks pursuant to its own QAP for such materials.

17. REFERENCES

- Manual for Quality Control for Plants and Production of Structural Precast Concrete Products, Fourth Edition, MNL-116-99, Precast/Prestressed Concrete Institute PCI, USA
- SoP for Checks & Control on Quality of Factory Manufactured material/products being used in NHAI Projects, NHAI Policy Circular No 10.2.43 dated 20th February 2025
- NPCA Quality Control Manual for Precast Concrete Plants, 18th Edition, February 1, 2025, USA
- IRC:122 "Guidelines for Construction of Precast Concrete Segmental Box Culverts"
- IS 15916 : 2020 "Building Design and Erection Using Prefabricated Concrete — Code of Practice" (First Revision)
- IRC:SP:112-2017 "Manual for Quality Control in Road & Bridges Works"

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Annex-II

Surveillance Proforma

PRODUCTS QUALITY SURVEILLANCE FORM

NAME OF PRODUCT:

Name and location of the Project:

Contractor		Contract to	
Manufacturer/supplier/ Source		Purchase order	Inspecting Agency
Inspection certificate	Delivery challan	Distinguishing mark	Date of manufacture /supply
Drawing Nos.			Tender specification clause
Shipping storage and other Remarks			

Sl. no	Test	Method of test	Acceptance range	Obtained value	Remarks

Inspected by: (For QA Engineer) Name: Signed: Date:

In presence of: (For Contractor) Name: Signed: Date:

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