Request For Proposal

For

Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat.
Job No. NH-141-GJ-2025-26-831

on

Engineering, Procurement & Construction (EPC) Mode

Government of India

Ministry of Road Transport & Highways (MoRT&H)

July 2026

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MINISTRY OF ROAD TRANSPORT & HIGHWAYS
Government of India

Notice Inviting Bid

BID NO. 11 EPC OF 2025-26 (**2nd Attempt)** Dated: 08.07.2026

RFP for **Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat.**

The Ministry of Road Transport & Highways, Government of India represented by Chief Engineer (NH) & Additional Secretary, Roads & Building Department, Government of Gujarat is engaged in the development of National Highways and as part of this endeavour, it has been decided to undertake **Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat.** through an Engineering, Procurement and Construction (EPC) Contract.

The Ministry of Road Transport & Highways now invites bids from eligible contractors for the following project:

State	NH No.	Name of work	Estimated cost (exclusive of GST)	Completion period	Maintenance period
Gujarat	141	**Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat.**	Rs. 78.61 Crore Including utility shifting & labour cess, excluding GST	18 (Eighteen) Months	5 Years

The complete BID document can be viewed / downloaded from official portal of CPPP website CPPP website https://eprocure.gov.in/eprocure/app and BIMS portal https://bims.gov.in/ from 09.07.2026 to 23.07.2026 (upto 1600 Hrs. IST). Bidder must submit its Financial bid and Technical Bid at https://eprocure.gov.in/eprocure/app and ~~https://bims.gov.in~~ on or before 23.07.2026 (upto 1600 hours IST). Bids received online shall be opened on 24.07.2026 (at 1600 hours IST).

Bid through any other mode shall not be entertained. However, Bid Security, POA for signing the Bid, POA for lead member of JV, if any, JBA for JV, if any, Integrity Pact, and experience certificates apostile at foreign origin, if any and other documents specified in clause 2.11.2 of RFP shall be submitted physically in original by the Lowest Bidder before issuance of Letter of Acceptance (LOA) by the Authority. However, while submitting Bid Security via Account Payee ~~demand draft~~ or Fixed Deposit Receipt or ~~Banker's Cheque~~, it is to be ensured by the Bidder that Account Payee ~~demand draft~~ or Fixed Deposit Receipt or ~~Banker's Cheque~~ are submitted physically latest within 5 working days of the Bid Due Date (upto 12:00 hours). Please note that the Authority reserves the right to accept or reject all or any of the BIDs without assigning any reason whatsoever.

Executive Engineer,
National Highway Division,
Gandhidham

Officer In-Charge On Behalf Of Ministry Of Road Transport And Highways :
Address :
Office Of The Executive Engineer,
National Highway Division,
Plot No.-1, Ward-3b,
Tagore Road,
Adipur (District : Kachchh)
Phone/ Fax : 02836-260304
e-mail : nhdgandhidham@gmail.com

DISCLAIMER

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

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

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

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

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

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

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

MINISTRY OF ROAD TRANSPORT & HIGHWAYS
Government of India

SECTION 1

INTRODUCTION

1.1 Background

1.1.1 The Ministry of Road Transport & Highways, Government of India represented by Chief Engineer (NH) & Additional Secretary, Roads & Building Department, Government of Gujarat (the **"Authority"**) is engaged in the development of National Highways and as part of this endeavour, the Authority has decided to undertake **Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat.** (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 and BIMS portal i.e. https://bims.gov.in/. Brief particulars of the Project are as follows:

Name of the National Highway	Length in Km	Estimated Project Cost (exclusive of GST) (In Rs. cr.)	No of Years for completion of work
Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat.	5.529	78.61 Including utility shifting & labour cess, excluding GST	**Construction Period: 18 Months & DLP/Maintenance Period 5 Years.**

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 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 5 years[$].

1.1.3 The estimated cost of the Project (the **"Estimated Project Cost"**) has been specified in the clause 1.1.1 above, which is exclusive of Goods and Services Tax (GST). 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. 78.61. Lakh (Rupees Seventy Eight Lakh Sixty One Thousand only (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 or Account Payee ~~Demand Draft~~ or Fixed Deposit Receipt or ~~Banker's Cheque~~ or Bank Guarantee (including E-Bank Guarantee). The Insurance Surety Bond shall be verified from the specific portal created for this purpose. The Bank Guarantee shall be transmitted through SFMS Gateway to MoRTH's Bank. The Bidders shall also submit Rs. 10,000/- (Rupees Ten thousand only) towards the cost of tender through NTRP (Non-Tax Receipt Portal) Portal (bharatkosh.gov.in) only (scanned copy of receipt / document to be submitted online on eprocure.gov.in along with the bid). The relevant details of PAO and DDO for NTRP are as follows:

Description	Details to be selected in Bharat Kosh Portal
Ministry	Road and Transport & Highways
Purpose	Sale of Tender Documents
Pay and Account Office (PAO)	034650-PAO (NH) Mumbai
Drawing and disbursing Office (DDO)	234653 Superintending Engineer (SE)

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**"), which is exclusive of Goods and Services Tax (GST). The total time allowed for completion of construction under the Agreement (the "**Construction Period**") 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 "**Defect Liability Period**") 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 fails to submit the originals Bid Security, POA for signing the Bid, POA for lead member of JV, if any, JBA for JV, if any, Integrity Pact, and experience certificates apostile at foreign origin, if any and other documents required as per clause 2.11.2 or 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.

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 **Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat**.

1.2.10 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:

(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.

1.3 Schedule of Bidding Process

The Authority shall endeavour to adhere to the following schedule:

Sl. No.	Event Description	Date
1.	Invitation of RFP (NIT)	11.03.2026
2.	Last date for receiving queries	11/06/2026 (upto 1500 Hours IST)
3.	Pre-BID meeting at venue 2.11.4 (i)	01/06/2026(at 1200 Hours IST)

4.	Authority response to queries latest by	
5.	Last date of downloading of BID Document	11.6.2026 upto 1600 Hours IST
6.	BID Due Date	11.6.2026 upto 1600 Hours IST
7.	Physical Submission of originals Bid Security, POA for signing the Bid, POA for lead member of JV, if any, JBA for JV, if any, Integrity Pact, and experience certificates apostille at foreign origin, if any, and other documents as specified in clause 2.11.2, by the Lowest Bidder.	Before issuance of Letter of Acceptance (LOA) to the Lowest Bidder by the Authority However, while submitting Bid Security via ~~Account Payee demand draft~~ or Fixed Deposit Receipt or ~~Banker's Cheque,~~ it is to be ensured by the Bidder that A~~ccount Payee demand draft~~ or Fixed Deposit Receipt or ~~Banker's Cheque~~ are submitted physically latest within 5 working days of the Bid Due Date (upto 11:00 hours).
8.	Opening of Technical BIDs	12/06/2026 at 1600 Hrs IST
9.	Declaration of eligible / qualified Bidders	Shall be notified by the Authority
10.	Opening of Financial BID	Shall be notified by the Authority
11.	Physical Submission of documents mentioned in clause 2.11.2	Shall be notified by the Authority
12.	Letter of Acceptance (LOA)	Shall be notified by the Authority
13.	Return of signed duplicate copy of LOA	Next day of issuance of LOA
14.	Validity of BID	120 days from BID Due Date
15.	Submission of Performance Security (PS) and Additional Performance Security (APS), if any	Within 30 days of receipt of LOA. (The bidder has the option to provide 50% of PS and APS, if any within 30 days of receipt of LOA and the remaining PS and APS, if any to be provided within 30 days of signing of agreement)
16.	Signing of Agreement	Within 10 days from the receipt of 50% of Performance Security and 50% of Additional Performance Security, if any.

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 authorised 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 upload Power of Attorney as per the format at Appendix-III, authorising the signatory of the BID to commit the Bidder. Lowest Bidder shall be required to submit original Power of Attorney before issuance of Letter of Acceptance (LOA) by the Authority.

2.1.6 In case the Bidder is a Joint Venture, the Members thereof should upload 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. Lowest Bidder shall be required to submit original Power of Attorney in favour of the Lead Member and original Joint Bidding Agreement before issuance of Letter of Acceptance (LOA) by the Authority.

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 meet 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 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.;

(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 uploaded 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) 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 neither be a non-performing party on the date of opening of tender nor on the date of issue of Letter of Acceptance (LoA). .

In case, any debarred/declared non-performer firm submits 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/declared non-performer firms shall be returned to them.

Debarment/ declaration as non-performer of a particular firm shall automatically extend to all its allied firms. In case of a joint venture/ consortium is debarred, all partners/ members shall stand debarred for the entire period.

The Bidder, including any Joint Venture Member,–shall be deemed to be a non-performing party if it attracts any or more of the following conditions in any of its ongoing or completed projects:

(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 of Concessionaire'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 casualties are reported (casualties include injuries to human being/animals);

(xii). Occurrence of major failure of structures/highway due to construction defect wherein no casualties are reported (casualties 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 instalment 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 & EI 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 Consortium/JV 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 Consortium/JV 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.

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 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.

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 upto 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 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.

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 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.

(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 in the format prescribed at Appendix-IX:

"I/We 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/We 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 and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority;
I/We 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.

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 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 bidder 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 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:

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 0.75 times of Estimated Project Cost i.e. **Rs. 58.96 Crore**, (Rs. Fifty Eight Crore Ninety Six Lakh Only) (the **"Threshold Technical Capacity"**).

(ii) Provided that at least either of the following:

i. two similar completed works costing not less than amount equal to 25% each of Estimated Project Cost i.e., Rs. 19.65 Crore (Rs. Nineteen Crore Sixty Five Lakh only)]

Or

ii. one similar completed work costing not less than amount equals to 35% of Estimated Project Cost i.e., [i.e. Rs.27.51 Crore (Rs. Twenty Seven Crore Fifty One Lakh only)

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).

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 projects shall include the following:

(a) Widening/reconstruction/up-gradation 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 work 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

(iii) Deleted

(iv) The updation 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 (the **"Financial Capacity"**) of Rs 3.93 Crore (Rs. Three Crore Ninety Three Lakhs Only)at the close of the preceding financial year (5% of Contract Price for project less than 100Cr).

(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. 15.72 Crore (Rs. Fifteen Crore Seventy Two Lakh Only) for the last 5 (five) financial years. (20% of Contract Price).

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 i.e. JV shall cumulatively/collectively fulfill the 100% requirement.

(ii) For requirement of 2.2.2.2 (ii), one similar work of 35% of Estimated Project cost or two similar works of 25% of Estimated Project Cost each 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

(ii) 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.

(iii) For the purpose of this RFP:

(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 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).

(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 considered for Technical Capacity 2.2.2.2 (i) but not for similar completed works 2.2.2.2 (ii) and/or 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.

(vii) 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; and[∂]

(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 3.93 Crore (Rs. Three Crore Ninety Three Lakh Only) (5% of Contract price for project less than 100Cr) shall not be reckoned as receipts for Eligible Projects. For the avoidance of doubt, construction works shall not include supply of goods or

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

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

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.

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[$] 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

[$] 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.

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

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)

The Bidder is required to submit the undertaking in the proforma prescribed in Appendix-XII..

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 familiarise 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;
(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 BID s

Section 1. Introduction
Section 2. Instructions to Bidders
Section 3. Evaluation of BIDs
Section 4. Fraud and Corrupt Practices
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
IX. Certificate regarding Compliance with Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs)
X. Surety Bond for Bid Security
XI. FORM OF SURETY BOND (For Performance Security/Additional Performance Security)
XII. Profoma to declare the event of Failure of catastrophic nature

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 endeavour 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 endeavour 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 e-Tendering Portal (https://eprocure.gov.in/eprocure/app) and BIMS portal (https://bims.gov.in/).

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. However, Bid Security, POA for signing the Bid, POA for lead member of JV, if any, JBA for JV, if any, Integrity Pact, and experience certificates apostile at foreign origin, if any shall be submitted physically in original by the Lowest Bidder (including all of its joint venture members) before issuance of Letter of Acceptance (LOA) by the Authority. However, while submitting Bid Security via Account Payee demand draft or Fixed Deposit Receipt or Banker's Cheque, it is to be ensured by the Bidder that Account Payee demand draft or Fixed Deposit Receipt or Banker's Cheque are submitted physically latest within 5 working days of the Bid Due Date (upto 11:00 hours). Lowest Bidder (including all of its Joint Venture Members) failing to submit the original documents required as per above shall be unconditionally debarred from bidding in MORTH projects for a period of 5 years.

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

2.11 Documents comprising Technical and Financial BID

2.11.1 The Bidder shall first upload on CPPP Portal i.e. MoRTH and BIMS portal 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.

The Bidder shall then apply for the RFP on the CPPP website https://eprocure.gov.in/eprocure/app and ~~BIMS portal https://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 and BIMS 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. 78.61 Lakh (Rupees Seventy Eight Lakh Sixty One 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) 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.

(g) Copy of Online receipt towards the payment of cost of Bid document of Rs. 10,000/- (Rupees Ten thousand only) in Authority's designated bank account ;

(h) Deleted;

(i) Integrity Pact as per format given in Appendix VI shall be submitted by the Bidder with the RFP Bid duly signed by Authorised signatory & shall be part of the Contract Agreement;

(h) 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 MORTH and amendments uploaded, if any;

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

(j) Copy of Memorandum and Articles of Association of the Bidder or of each member in case of Joint Venture if the Bidder/ Member of JV is a body corporate, and if a partnership then a copy of its partnership deed.

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

(l) Copy of originals of experience certificates apostile at foreign origin, if any

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

(n) Copy of Registration from 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").

Financial Bid

(q) Appendix-IB (Letter comprising the Financial Bid) shall be submitted online through e-procurement portal https://eprocure.gov.in/eprocure/app _on or before 1600 hrs IST on 11.06.2026.

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.

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 format at Appendix-V;
(g) BID Security of Rs. 78.61 Lakh (Rupees Seventy Eight Lakh Sixty One 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) 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) Integrity Pact as per format given in Appendix VI shall be submitted by the Bidder with the RFP Bid duly signed by Authorised signatory & shall be part of the Contract Agreement; and
(i) An undertaking from the person having PoA referred to in Sub. Clause-(d) above that they agree and abide by the Bid documents uploaded by MORTH and amendments uploaded, if any;
(j) if applicable, experience certificates apostille at foreign origin
(k) Certificate regarding Compliance with Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs) as per format given in Appendix-IX shall be submitted by the Bidder with the RFP Bid duly signed by Authorised signatory & shall be part of the Contract Agreement; and
(l) Copy of Registration from 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").

While submitting Bid Security via Account Payee demand draft or Fixed Deposit Receipt or Banker's Cheque, it is to be ensured by the bidder that Account Payee demand draft or Fixed Deposit Receipt or Banker's Cheque are submitted physically latest within 5 working days of the Bid Due Date (upto 11:00 hours) to the following address placed in a sealed envelope and bearing the identification "**Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat."**

Address:-
Executive Engineer, National Highway Division, Plot No. 1, Ward No.3-B, Adipur - Kutch Pin.370205, Else the bid submitted will be rejected.

2.11.3 The documents listed at clause 2.11.2 shall be required to be submitted by the Lowest Bidder before issuance of Letter of Acceptance (LOA) by the Authority. Lowest Bidders (including all of its joint venture members) failing to submit the original documents shall be unconditionally debarred from bidding in MORTH projects for a period of 5 years from the date of issue of debarment notice. These documents shall be placed in an envelope, which shall be sealed.
The envelope shall clearly bear the identification "**BID for the Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km**

06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat. on EPC mode **Project**" and shall clearly indicate the name and address of the Bidder.

2.11.4 Physical submission of documents mentioned in Clause 2.11.2 in the sealed envelope shall be addressed to the following officer and shall be submitted at the respective address:

ATTN. OF	;	B.D.Prajapati
DESIGNATION	:	Executive Engineer
ADDRESS	:	Office of the Executive Engineer, National Highway Division,, Plot No. 1, Ward No.3-B Adipur - Kutch Pin.370205
PHONE NO.	:	202836 260302 & 04
E-MAIL ADDRESS	:	**nhdgandhidham@gmail.com**

2.11.5 If the envelope is not sealed and marked as instructed above, the Authority assumes no responsibility for the misplacement of the contents of the envelope 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 portal https://eprocure.gov.in/eprocure/app ~~and BIMS portal i.e. https://bims.gov.in/~~ on or before 1200 hrs IST on *11.06.2026.* Documents listed at clause 2.11.2 of the RFP shall be physically submitted. 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.

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 Organisation / Owner of the Firm or Organisation) 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 .

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 favour 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.

2.14.1.2To 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 ~~and BIMS portal i.e. https://bims.gov.in/~~from 12.03.2026 to 11.06.2026 (upto 1600 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 i.e. https://bims.gov.in/~~ using the digital signature of authorised representative of the Bidder on or before 11.06.2026 (upto 1600 hours IST).

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 MORTH shall on-line open Technical BIDs on 12/06/2026 at 1600 hours IST, in the presence of the authorized representatives of the Bidders, who choose to attend. The MORTH 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 X) or Account Payee Demand Draft or Fixed Deposit Receipt or Banker's Cheque or Bank Guarantee (including e-Bank Guarantee) issued by nationalised 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. This Bank Guarantee (including e-Bank Guarantee) shall be transmitted through SFMS Gateway to MORTH's 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 Insurance Surety Bond or Account Payee Demand Draft or Fixed Deposit Receipt or Banker's Cheque or Bank Guarantee (including 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.

For the avoidance of doubt, bid accompanied by a Bid Security sourced through a third party shall likewise be summarily rejected as non-responsive. Furthermore, the Performance Security and/or Additional Performance Security submitted by the successful or selected bidder shall not be accepted if it is sourced from a third party.

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 2.20.5 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;

(d) In the case of Selected Bidder, if it fails within the specified/extended time limit by Authority -

(i) 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 – XI or Account Payee Demand Draft or Fixed Deposit Receipt or Banker's Cheque or an irrevocable and unconditional Bank Guarantee (including 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 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 – XI) or Account Payee Demand Draft or Fixed Deposit Receipt or Banker's Cheque or an irrevocable and unconditional Bank Guarantee (including 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) where the bid price is below 10% but not below 20% of the Estimated Project Cost/ project cost put to bid, the Additional Performance Security/ guarantee percentage shall be incremented by 0.1% for every percentage of Bid Price below 10% of the Estimated Project Cost/project cost put to bid starting at 11% with the Additional Performance Security being 0.1% and this Additional Performance Security percentage shall be applied on the Bid Price..

(ii) where the bid price is 20% or more below of the Estimated Project Cost/ project cost put to bid, the Additional Performance Security/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 Security/guarantee percentage shall be applied on the Bid Price.

(iii) The Additional Performance Security/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) This 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 below for ready reference.

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%	-	30.00	3.00%
990	29.70	1.00%	0%	-	29.70	3.00%
980	29.40	2.00%	0%	-	29.40	3.00%
970	29.10	3.00%	0%	-	29.10	3.00%
960	28.80	4.00%	0%	-	28.80	3.00%
950	28.50	5.00%	0%	-	28.50	3.00%
940	28.20	6.00%	0%	-	28.20	3.00%
930	27.90	7.00%	0%	-	27.90	3.00%
920	27.60	8.00%	0%	-	27.60	3.00%
910	27.30	9.00%	0%	-	27.30	3.00%
900	27.00	10.00%	0%	-	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%

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
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%

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 upto 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 online at 1600 hours IST on 11/06/2026, at the place specified in Clause 2.11.4 (i); and in the presence of the Bidders who choose to attend. 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, II, III, IV, V and VI (Bid Capacity format);
(b) Deleted;
(c) Technical Bid is accompanied by the BID Security as specified in Clause 1.2.4 and 2.20;
(d) The Power of Attorney is uploaded on e-procurement portal as specified in Clauses 2.1.5;
(e) Power of Attorney for Lead Member of Joint Venture and the Joint Bidding Agreement is uploaded on e-procurement portal 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) Copy of online receipt towards payment of cost of Bid document of Rs. 10,000/- (Rupees ten thousand only) in Authority's designated bank account is uploaded on e-procurement portal.;

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 notify 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 authorised 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 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 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, by next day of issuance 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;

For the avoidance of doubt, unauthorised subcontracting or subcontracting exceeding the limit prescribed in the contract shall also be deemed as an "undesirable practice". 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 endeavour 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)

To,
The Chief Engineer (NH)& AS,
Roads & Building Department,
Government of Gujarat.
Block No.14 1st floor,
New Sachivalaya Gandhinagar,
Gujarat 382010

Sub: BID for **Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat.**

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 its 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 upto 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 forth in 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. 78.61 Lakh (Rupees Seventy Eight Lakh Sixty One Thousand only to the Authority in accordance with the RFP Document.

21. The BID Security in the form of Insurance Surety Bond or Account Payee Demand Draft or Fixed Deposit Receipt or Banker's Cheque or Bank Guarantee (including e-Bank Guarantee) (Strike out whichever is not applicable) is attached.

22. The documents accompanying the Technical BID, as specified in Clause 2.11.1 of the RFP, shall be 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 Authorised 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 Chief Engineer (West Zone),
Ministry of Road Transport and Highways,
Transport Bhawan, 1, Parliament Street, New Delhi-110001

Sub: BID for **Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat.**

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 online 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
Details of Bidder

1. (a) Name:
   (b) Country of incorporation:
   (c) Address of the corporate headquarters and its branch office(s), if any, in India:
   (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 Authorised 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

Appendix IA

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

Annex-I

(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 El 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(s)
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.	

Sr. No.	Categories of Non-Performer	Name of the Project(s)
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 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 casualties are reported (casualties include injuries to human being / animals).	
xii	Occurrence of major failure of structures/highway due to construction defect wherein no casualties are reported (casualties 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 instalment 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 & EI 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 Consortium/JV Member, as the	

Sr. No.	Categories of Non-Performer	Name of the Project(s)
	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 Consortium/JV 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 authorised signatory)

For and on behalf of……..

Annex-II

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	**Project 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 ** (**)*[1] *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.*

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).*

[1]*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.*

Annex-III

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 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 2.1.11 (f) 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 back up 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[Φ]

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).*

[$] 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.

Φ 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)."

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)

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 worksΦ

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.♠

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

Φ 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

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.

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.

Appendix -IA
Annex-V

ANNEX-V
Statement of Legal Capacity

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

Ref. Date:

To,
The Chief Engineer (NH)& AS,
Roads & Building Department,
Government of Gujarat.
Block No.14 1st floor,
New Sachivalaya Gandhinagar,
Gujarat 382010

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 authorised signatory is vested with requisite powers to furnish such letter and authenticate the same.

Thanking you,

Yours faithfully,

(Signature, name and designation of the authorised 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	2024-25/2025			
2	2023-24/2024			
3	2022-23/2023			
4	2021-22/2022			
5	2020-21/2021			

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	2024-25/2025		1.00	
2	2023-24/2024		1.05	
3	2022-23/2023		1.10	
4	2021-22/2022		1.15	
5	2020-21/2021		1.20	
			Total (C)=	

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

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 2 years is as follows:

Sl. No.	Name of Project/ Work	Percentage of participation of Bidder in the project	Date of issue of LOA / Date of opening of financial bid / 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 2024-25/2025 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 #)
	Total								

Updation Factor as given below:

For Year	F.Y. / Calendar Year	Updation Factor
1	2024-25/2025	1.00
2	2023-24/2024	1.05
3	2022-23/2023	1.10
4	2021-22/2022	1.15
5	2020-21/2021	1.20

The Statement showing the value of all existing commitments, works for which the bidder has emerged as the winner of the bid and 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/ works for which the

[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.

bidder has emerged as the winner of the bid 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 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:

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, The President of India through Ministry of Road Transport & Highways, Government of India represented by the Executive Engineer National Highway Division, Gandhidham, (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 **Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat.** 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. 78.61 Lakh (Rupees Seventy Eight Lakh Sixty One Thousand 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. 78.61 Lakh (Rupees Seventy Eight Lakh Sixty One Thousand 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 unrealised.

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. 78.61 Lakh (Rupees Seventy Eight Lakh Sixty One Thousand 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 ……., 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 MoRT&H, details of which is as under:

S. No.	Particulars	Details
	Name of Beneficiary	Executive Engineer National Highway Division, Gandhidham
	Name of Bank	STATE BANK OF INDIA, GANDHIDHAM
	Account No.	10316663138
	IFSC Code	SBIN0000373

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

(Signature of the Authorised 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 **Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat**on Engineering, Procurement & Construction (EPC) Mode Project proposed or being developed by the Ministry of Road Transport & Highways, Government of India represented by Chief Engineer (NH) & Additional Secretary, Roads & Building Department, Government of Gujarat (the "Authority") including but not limited to signing and submission of all applications, BIDs and other documents and writings, participate in Pre-BID and other conferences and providing information/ responses to the Authority, representing us in all matters before the Authority, signing and execution of all contracts including the agreement and undertakings consequent to acceptance of our BID, and generally dealing with the Authority in all matters in connection with or relating to or arising out of our BID for the said Project and/ or upon award thereof to us and/or until the entering into of the EPC Contract with the Authority.

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

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

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

Witnesses:
1.
2.

Accepted
……
(Signature)
(Name, Title and Address of the Attorney)

(Notarised)
Person identified by me/ personally appeared before me/

Attested/ Authenticated*
(*Notary to specify as applicable)
(Signature Name and Address of the Notary)

Seal of the Notary
Registration No. of the Notary
Date:……

Notes:

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

APPENDIX-IV

Format for Power of Attorney for Lead Member of Joint Venture

(Refer Clause 2.1.6)

Whereas The President of India through Ministry of Road Transport & Highways, Government of India represented by Chief Engineer (NH) & Additional Secretary, Roads & Building Department, Government of Gujarat ("the Authority") has invited BIDs for the Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat. on Engineering, Procurement & Construction (EPC) Mode Project (the "Project").
Whereas, ……..., ……..., and …….. (collectively the "Joint Venture") being Members of the Joint Venture are interested in bidding for the 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 …….. (Signature) …….. (Name & Title)	For …….. (Signature) …….. (Name & Title)	For …….. (Signature) …….. (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 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 Appostille 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, Government of India represented by Chief Engineer (NH) & Additional Secretary, Roads & Building Department, Government of Gujarat (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 Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat.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 capitalised 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 organised, 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 organisational documents thereof;

(iv) violate any clearance, permit, concession, grant, license or other governmental authorisation, 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 the plain paper and submitted alongwith Technical Bid/ Tender documents for tenders having a value of Rs. 5 crore or above for Consultancy projects and Rs. 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……...2026.

BETWEEN

President of India through Ministry of Road Transport & Highways, Government of India represented by Chief Engineer (NH) & Additional Secretary, Roads & Building Department, Government of Gujarat (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 "Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat. on EPC mode" (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 for Contractor(s)/ Concessionaire(s)/ Consultant(s).

And Whereas in order to meet the purpose aforesaid, both the parties have agreed to entere 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 document 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 or 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 principals, 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.

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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 Article2, 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 Article-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 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 (hereinafter 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 Bidder/Contractor/ Concessionaire/ Consultant. 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 or any other Statutory Acts, 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 Joint Venture partner, this pact must be signed by all partners or 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 Bidder/ Contractor/ Concessionaire/ Consulting
(Office Seal)	
Place……	
Date……..…	

Witness 1:
(Name & Address) _____
_____
_____

Witness 2:
(Name & Address) _____
_____

Appendix-VII
(See Clauses 2.21)

FORM OF BANK GUARANTEE
[Performance Security/Additional Performance Security]

To
The Chief Engineer (NH)& AS,
Roads & Building Department,
Government of Gujarat.
Block No.14 1st floor,
New Sachivalaya Gandhinagar,
Gujarat 382010

WHEREAS_____[name and address of Contractor] (hereafter called the "Contractor") has undertaken, in pursuance of Letter of Acceptance (LOA) No. _____Dated_____ for Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat. on Engineering, Procurement & Construction (EPC) Mode (hereinafter called the "Contract").

AND WHEREAS the Contract requires the Contractor to furnish the 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**"[2]).

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 of Ministry of Road Transport & Highways, that the**

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

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.

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 behalf of the Bank.

10. 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.

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.

13. This guarantee shall also be operatable at our…….. Branch at ……., 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.

14. 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 MoRT&H, details of which is as under:

S. No.	Particulars	Details
	Name of Beneficiary	Executive Engineer National Highway Division, Gandhidham
	Name of Bank	STATE BANK OF INDIA, GANDHIDHAM
	Account No.	10316663138
	IFSC Code	SBIN0000373

[$]Insert date atleast 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 two years 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.

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._____

MINISTRY OF ROAD TRANSPORT & HIGHWAYS

Government of India

Dated,

To,

{Name of selected Bidder}

Subject: Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat**on Engineering, Procurement & 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 {project description}, 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.

2. 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.

3. 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.

4. 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 encashed by the Authority as per Clause 2.21 of the RFP.

Yours faithfully,

{authorized signatory}

"Accepted by

(Name of the Authorised Person)
(Name of the sole bidder/ lead partner of JV)
Seal of the bidder"

Appendix-IX
(To be on the letter head of the Bidder/ Each Member of the Joint Venture)

Certificate regarding Compliance with Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs)

The Chief Engineer (NH) & AS,
Roads & Building Department,
Government of Gujarat.
Block No.14 1st floor,
New Sachivalaya Gandhinagar,
Gujarat 382010

Sub: Bid for Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat on Engineering, Procurement & Construction (EPC) Mode.

Dear Sir,

With reference to your RFP document dated *** **$, I/we, having examined the Bidding Documents and understood their contents, hereby undertake and confirm as follows:

I/We 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 as defined in Public Procurement Order no. F.no.6/18/2019- PPD dated 23rd July 2020 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 fulfils all requirements in this regard and is eligible to be considered.

Yours faithfully,

Date:

(Signature of the Authorised signatory)

Place:

(Name and designation of the of the Authorised signatory)
Name and seal of Bidder/Each Member of Joint Venture

Notes:
{Where applicable, evidence of valid registration by the Competent Authority shall be attached}

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.

APPENDIX - X
Surety Bond for Bid Security
(Refer Clause 2.20)

S.B. No. Dated:

1. In consideration of you, The President of India through Ministry of Road Transport & Highways, Government of India represented by Chief Engineer (NH) & Additional Secretary, Roads & Building Department, Government of Gujarat (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 Upgradation to 6 lane with paved shoulder of Gandhidham -Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat on Engineering, Procurement & Construction (EPC) Mode (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 of Rs. 78.61 Lakh (Rupees Seventy Eight Lakh Sixty One Thousand 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 of Rs. 78.61 Lakh (Rupees Seventy Eight Lakh Sixty One Thousand 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 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 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 of Rs. 78.61 Lakh (Rupees Seventy Eight Lakh Sixty One Thousand 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 ….., 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)

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

To
The Chief Engineer (NH) & AS,
Roads & Building Department,
Government of Gujarat.
Block No.14 1st floor,
New Sachivalaya Gandhinagar,
Gujarat 382010

WHEREAS_____[name and address of Contractor] (hereafter called the **"Contractor"**) has undertaken, in pursuance of Letter of Acceptance (LOA) No. _____Dated_____for Upgradation to 6 lane with paved shoulder of Gandhidham - Kandla port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 lane Major bridge of Nakti Creek at km 7+170 of NH-141 in the state of Gujarat on Engineering, Procurement & Construction (EPC) Mode (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, MORT&H, 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 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 & 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.

13. This Surety Bond shall also be operatable at our …….., branch at ……, 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.

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

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

_____

SIGNED, SEALED AND DELIVERED

For and on behalf of the bank by:

under(Signature)

[∂] 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.

(Name)

(Designation)

(Code Number)

(Address)

APPENDIX-XII

Undertaking

Prosoma to declare the event of Failure of catastrophic nature (Ref Clause 2.2.2.10)

(To be on the letter head of the Bidder/ Each Member of the Joint Venture)

I undertake that neither the lead member 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.

Yours faithfully,

(Signature, name and designation of the authorised signatory)

For and on behalf of……..

Date: _____

Name and seal of Bidder/Each Member of Joint Venture

Engineering Procurement and Construction (EPC)

Agreement

For

Upgradation to 6 Lane with Paved shoulder of Gandhidham -Kandla Port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 Lane Major Bridge on Nakti Creek at km 7+170 of NH-141 in the state of Gujarat

on

EPC Mode

Government of India

Ministry of Road Transport & Highways (MoRT&H)

July 2026

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Part I

Preliminary

Engineering, Procurement and Construction Agreement

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

Between

The President of India through the Ministry of Road Transport & Highways, Government of India represented by **Chief Engineer (NH), Road and Building Department, Block-14, 1st Floor, Sardar Bhavan Sachivalaya, Gandhinagar 382016 through the Executive Engineer, National Highway Division, Gandhidham** (hereinafter referred to as the **"Authority"** which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of **One Part**;

And

<insert name of party>,[1] the selected bidder having its registered office at <insert registered office address of the party>, (hereinafter referred to as the **"Contractor"** which expression shall, unless repugnant to the context or meaning thereof, include its successors and permitted assigns) of the **Other Part**.

Whereas:

A. The Government of India entrusted the development, maintenance and management of National Highway No. 141 including the section from km 5+560 to km 14+014 [excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 Lane Major Bridge on Nakti Creek at km 7+170 (approx. 5.529 km) to the Authority;

B. The Authority resolved **Upgradation to 6 Lane with Paved shoulder of Gandhidham -Kandla Port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 Lane Major Bridge on Nakti Creek at km 7+170 of NH-141 in the state of Gujarat** on Engineering, Procurement, Construction (**"EPC"**) basis in accordance with the terms and conditions to be set forth in an agreement to be entered into.

C. The Authority accordingly invited the proposals (the **"Request for Proposals"** or **"RFP"**) from the eligible bidders as per the technical and commercial terms and conditions prescribed in the RFP for undertaking the Project.

D. After evaluation of the bids received, the Authority accepted the bid of the

.

selected bidder and issued its Letter of Acceptance No. <insert details> dated <insert date> (hereinafter called the "**LOA**") to the selected bidder for Upgradation to 6 Lane with Paved shoulder of Gandhidham -Kandla Port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 Lane Major Bridge on Nakti Creek at km 7+170 of NH-141 in the state of Gujarat on Engineering, Procurement & Construction (EPC) Mode at the Contract Price specified hereinafter, requiring the selected bidder to inter alia:

(i) to give his consent to enter into this Agreement and the enforceability of the provisions thereof, within 10 (ten) days of the date of issue of LOA;

(ii) submit Performance Security and Additional Performance Security (if any) as per RFP requirements, and

(iii) execute this Agreement within 10 (ten) days from the receipt of 50% of Performance Security and 50% of Additional Performance Security, if any.

E. The Contractor has fulfilled the requirements specified in Recital (D) above;

NOW, THEREFORE, in consideration of the foregoing and the respective covenants set forth in this Agreement, the sufficiency and adequacy of which is hereby acknowledged, the Authority hereby covenants to pay the Contractor, in consideration of the obligations specified herein, the Contract Price or such other sum as may become payable under the provisions of the Agreement at the times and in the manner specified by the Agreement and intending to be legally bound hereby, the Parties agree as follows:

Article 1

Definitions and Interpretations

1.1 Definitions

(i) The words and expressions beginning with capital letters and defined in this Agreement shall, unless the context otherwise requires, have the meaning ascribed thereto herein, and the words and expressions defined in the Schedules and used therein shall have the meaning ascribed thereto in the Schedules.

(ii) In this Agreement, the following words and expressions shall, unless repugnant to the context or meaning thereof, have the meaning hereinafter respectively assigned to them:

"**Accounting Year**" means the financial year commencing from the first day of April of any calendar year and ending on the thirty-first day of March of the next calendar year;

"**Advance Payment**" shall have the meaning set forth in Clause 19.2;

"**Affected Party**" shall have the meaning set forth in Clause 21.1;

"Affiliate" means, in relation to either Party {and/or Members}, a person who controls, is controlled by, or is under the common control with such Party {or Member} (as used in this definition, the expression "control" means, with respect to a person which is a company or corporation, the ownership, directly or indirectly, of more than 50% (fifty per cent) of the voting shares of such person, and with respect to a person which is not a company or corporation, the power to direct the management and policies of such person, whether by operation of law or by contract or otherwise);

"Agreement" means this Agreement, its Recitals, the Schedules hereto and any amendments thereto, or any supplementary agreement made in accordance with the provisions contained in this Agreement;

"Applicable Laws" means all laws, brought into force and effect by the GOI or the State Government including rules, regulations and notifications made thereunder, and judgements, decrees, injunctions, writs and orders of any court of record, applicable to this Agreement and the exercise, performance and discharge of the respective rights and obligations of the Parties hereunder, as may be in force and effect during the subsistence of this Agreement;

"Applicable Permits" means all clearances, licences, permits, authorisations, no objection certificates, consents, approvals and exemptions required to be obtained or maintained under Applicable Laws in connection with the construction, operation and maintenance of the Project Highway during the subsistence of this Agreement;

"**Appointed Date**" means the date declared by the Authority as the project commencement date with the consent of the contractor, as per the process prescribed in Article 3 and 8 of this Agreement;

"Arbitration Act" means the Arbitration and Conciliation Act, 1996, with all its subsequent amendments;

"Authority" shall have the meaning attributed thereto in the array of Parties hereinabove as set forth in the Recitals;

"Authority Default" shall have the meaning set forth in Clause 23.2;

"Authority's Engineer" shall have the meaning set forth in Clause 18.1;

"Authority Representative" means such person or persons as may be authorised in writing by the Authority to act on its behalf under this Agreement and shall include any person or persons having authority to exercise any rights or perform and fulfil any obligations of the Authority under this Agreement;

"Bank" means a bank incorporated in India and recognized by the Reserve Bank of India

"Base Rate" means the floor rate of interest announced by the State Bank of India for all its lending operations;

"Base Date" means the last date of the calendar month, which precedes the Bid Due Date by at least 28 (twenty eight) days;

"Bid" means the documents in their entirety comprised in the bid submitted by the [selected bidder/ Joint venture] in response to the Request for Proposal in accordance with the provisions thereof;

"**Bid Security**" means the bid security provided by the Contractor to the Authority in accordance with the Request for Proposal, and which is to remain in force until substituted by the Performance Security;

"Change in Law" means the occurrence of any of the following after the Base Date:

(a) the enactment of any new Indian law;

(b) the repeal, modification or re-enactment of any existing Indian law;

(c) the commencement of any Indian law which has not come into effect until the Base Date; or

(d) a change in the interpretation or application of any Indian law by a judgement of a court of record which has become final, conclusive and binding, as compared to such interpretation or application by a court of record prior to the Base Date.

"Change of Scope" shall have the meaning set forth in Article 13;

"Change of Scope Notice" shall have the meaning set forth in Clause 13.2 (i);

"Change of Scope Request" shall have the meaning set forth in Clause 13.2 (ii);

"Change of Scope Order" shall have the meaning set forth in Clause 13.2 (v);

"Completion Certificate" shall have the meaning set forth in Clause 12.2;

"Construction" shall have the meaning set forth in Clause 1.2 (f);

"Construction Period" means the period commencing from the Appointed Date and ending on the date of the Completion Certificate;

"Construction Zone" shall have the meaning set forth in Clause 8.3 (i);

"Contract Price" means the amount specified in Clause 19.1 (i);

"Contractor" shall have the meaning attributed thereto in the array of Parties hereinabove as set forth in the Recitals;

"Contractor Default" shall have the meaning set forth in Clause 23.1;

"Cure Period" means the period specified in this Agreement for curing any breach or default of any provision of this Agreement by the Party responsible for such breach or default and shall:

(a) commence from the date on which a notice is delivered by one Party to the other Party asking the latter to cure the breach or default specified in such notice;

(b) not relieve any Party from liability to pay Damages or compensation under the provisions of this Agreement; and

(c) not in any way be extended by any period of Suspension under this Agreement; provided that if the cure of any breach default by the Contractor requires any reasonable action by the Contractor that must be approved by the Authority or the Authority's Engineer hereunder, the applicable Cure Period shall be extended by the period taken by the Authority or the Authority's Engineer to accord their approval;

"Damages" shall have the meaning set forth in paragraph (w) of Clause 1.2;

"Defect" means any defect or deficiency in Construction of the Works or any part thereof, which does not conform with the Specifications and Standards, and in the case of Maintenance, means any Defect or deficiency which is specified in Schedule-E;

"Defects Liability Period" shall have the meaning set forth in Clause 17.1;

"Dispute" shall have the meaning set forth in Clause 26.1;

"Dispute Resolution Procedure" means the procedure for resolution of Disputes set forth in Article 26;

"Drawings" means all of the drawings, calculations and documents pertaining to the Project Highway as set forth in Schedule-I, and shall include 'as built' drawings of the Project Highway;

"Document" or "Documentation" means documentation in printed or written form, or in tapes, discs, drawings, computer programmes, writings, reports, photographs, films, cassettes, or expressed in any other written, electronic, audio or visual form;

"Emergency" means a condition or situation that is likely to endanger the safety or security of the individuals on or about the Project Highway, including Users thereof, or which poses an immediate threat of material damage to any of the Project Assets;

"Encumbrances" means, in relation to the Project Highway, any encumbrances such as mortgage, charge, pledge, lien, hypothecation, security interest, assignment, privilege or priority of any kind having the effect of security or other such obligations, and shall include any designation of loss to payees or beneficiaries or any similar arrangement under any insurance policy pertaining to the Project Highway, where applicable herein but excluding utilities referred to in Clause 9.1;

"EPC" means engineering, procurement and construction;

"Final Payment Certificate" shall have the meaning set forth in Clause 19.15;

"**Final Payment Statement**" shall have the meaning set forth in Clause 19.13;

"Force Majeure" or "Force Majeure Event" shall have the meaning ascribed to it in Clause 21.1;

"GAD" or "General Arrangement Drawings" shall have the meaning set forth in Clause 3.1 (iii) (b);

"GOI" or "Government" means the Government of India;

"Good Industry Practice" means the practices, methods, techniques, designs, standards, skills, diligence, efficiency, reliability and prudence which are generally and reasonably expected from a reasonably skilled and experienced contractor engaged in the same type of undertaking as envisaged under this Agreement and which would be expected to result in the performance of its obligations by the Contractor in accordance with this Agreement, Applicable Laws and Applicable Permits in reliable, safe, economical and efficient manner;

"Government Instrumentality" means any department, division or sub- division of the Government or the State Government and includes any commission, board, authority, agency or municipal and other local authority or statutory body including panchayat under the control of the Government or the State Government, as the case may be, and having jurisdiction over all or any part of the Project Highway or the performance of all or any of the services or obligations of the Contractor under or pursuant to this Agreement;

"**Handover Memorandum**" shall have the meaning set forth in Clause 8.2;

"IRC" means the Indian Roads Congress;

"Indemnified Party" means the Party entitled to the benefit of an indemnity pursuant to Article 25;

"Indemnifying Party" means the Party obligated to indemnify the other Party pursuant to Article 25;

"Indirect Political Event" shall have the meaning set forth in Clause 21.3;

"Insurance Cover" means the aggregate of the maximum sums insured under the insurance taken out by the Contractor pursuant to Article 20, and includes all insurances required to be taken out by the Contractor under Clauses 20.1 and 20.9 but not actually taken, and when used in the context of any act or event, it shall mean the aggregate of the maximum sums insured and payable or deemed to be insured and payable in relation to such act or event;

"Intellectual Property" means all patents, trademarks, service marks, logos, get-up, trade names, internet domain names, rights in designs, blue prints, programmes and manuals, drawings, copyright (including rights in computer software), database rights, semi-conductor, topography rights, utility models, rights in know-how and other intellectual property rights, in each case whether registered or unregistered and including applications for registration, and all rights or forms of protection having equivalent or similar effect anywhere in the world;

"**Interim Payment Certificate**" or "**IPC**" means the interim payment certificate issued by the Authority's Engineer for payment to the Contractor in respect of Contractor's claims for payment raised in accordance with the provisions of this Agreement;

"**Joint Venture**" means the group of entities which have come together for implementation of this Project;

"Lead Member" shall, in the case of a joint venture, mean the member of such joint venture who shall have the authority to bind the contractor and each member of the Joint venture; and shall be deemed to be the Contractor for the

purposes of this Agreement; the Lead Member shall itself undertake and perform at least 51% (fifty one per cent) of the total length of the Project Highway;

"**LOA**" or "**Letter of Acceptance**" means the letter of acceptance issued by the Authority as referred to in Recital (D);

"Maintenance" means the maintenance of the Project Highway as set forth in Article 14 for the period specified therein;

"**Maintenance Inspection Report**" shall have the meaning set forth in Clause 15.2;

"Maintenance Manual" shall have the meaning ascribed to it in Clause 10.7;

"Maintenance Programme" shall have the meaning set forth in Clause 14.3;

"Maintenance Period" shall have the meaning set forth in Clause 14.1;

"Maintenance Requirements" shall have the meaning set forth in Clause 14.2;

"Major Bridge" means a bridge having a total length of more than 60 (sixty) metres between the inner faces of the dirt walls as specified in IRC:5;

"**Manual**" shall mean the Manual of Standards and Specifications for Project Highways;

"Material Adverse Effect" means a material adverse effect of any act or event on the ability of either Party to perform any of its obligations under and in accordance with the provisions of this Agreement and which act or event causes a material financial burden or loss to either Party;

"Materials" comprise of all the supplies used by the Contractor used in the Works or for the maintenance of the Project Highway;

"Monthly Maintenance Statement shall have the meaning set forth in Clause 19.6;

"**MORTH**" means the Ministry of Road Transport and Highways or any substitute thereof dealing with Highways;

"**Non-Political Event**" shall have the meaning set forth in Clause 21.2;

"Parties" means the parties to this Agreement collectively and "Party" shall mean any of the parties to this Agreement individually;

"Performance Security" and **"Additional Performance Security"** shall have the meaning set forth in Clause 7.1;

"Plant" means the apparatus and machinery intended to form or forming part of the works of the Works;

"Political Event" shall have the meaning set forth in Clause 21.4;

"Programme" shall have the meaning set forth in Clause 10.1 (iii);

"Project" means the construction and maintenance of the Project Highway in accordance with the provisions of this Agreement, and includes all works, services and equipment relating to or in respect of the Scope of the Project;

"Project Assets" means all physical and other assets relating to (a) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road over-bridges, drainage works, traffic signals, sign boards, kilometre-stones, [toll plaza(s)], electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; and (b) Project Facilities situated on the Site;

"Project Completion Date" means the date on which the Completion Certificate is issued;

"Project Completion Schedule" means the progressive Project Milestones set forth in Schedule-J for completion of the Project Highway on or before the Scheduled Completion Date;

"Project Facilities" means all the amenities and facilities situated on the Site, as described in Schedule-C;

"**Project Highway**" means the Site comprising the Upgradation to 6 Lane with Paved shoulder of Gandhidham -Kandla Port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 Lane Major Bridge on Nakti Creek at km 7+170 of NH-141 in the state of Gujarat on Engineering, Procurement & Construction (EPC) Mode and all Project Assets, and its subsequent development and augmentation in accordance with this Agreement;

"Project Milestone" means the project milestone set forth in Schedule-J;

"Proof Consultant" shall have the meaning set forth in Clause 10.2;

"Quality Assurance Plan" or **"QAP"** shall have the meaning set forth in Clause 11.2;

"Re.", "Rs." or "Rupees" or "Indian Rupees" or "INR" means the lawful currency of the Republic of India;

"Request for Proposals" *or* **"RFP"** shall have the meaning set forth in Recital 'C';

"Retention Money" shall have the meaning set forth in Clause 7.5;

"Right of Way" means and refers to the total land required and acquired for the project, both in its width and length, together with all way leaves, easements, unrestricted access and other rights of way, howsoever described, necessary for construction and maintenance of the Project Highway in accordance with this Agreement;

"Safety Consultant" shall have the meaning set forth in Clause 10.1;

"Scheduled Completion Date" shall be the date set forth in Clause 10.3;

"Scheduled Construction Period" means the period commencing from the Appointed Date and ending on Scheduled Completion Date;

"Scope of the Project" shall have the meaning set forth in Clause 2.1;

"Section" means a part of the Project Highway;

"Site" shall have the meaning set forth in Clause 8.1;

"Specifications and Standards" means the specifications and standards relating to the quality, quantity, capacity and other requirements for the Project Highway, as set forth in Schedule-D, and any modifications thereof, or additions thereto, as included in the design and engineering for the Project Highway submitted by the Contractor to, and expressly approved by, the Authority;

"**Stage Payment Statement**" shall have the meaning set forth in Clause 19.4;

"**Structures**" means an elevated road or a flyover, as the case may be;

"Sub-contractor" means any person or persons to whom a part of the Works or the Maintenance has been subcontracted by the Contractor and the permitted legal successors in title to such person, but not an assignee to such person;

"Suspension" shall have the meaning set forth in Article 22;

"**Taking Over Certificate**" shall have the meaning set forth in Clause 14.10;

"Taxes" means any Indian taxes including GST, excise duties, customs duties, value added tax, sales tax, local taxes, cess and any impost or surcharge of like nature (whether Central, State or local) on the goods, Materials, equipment and services incorporated in and forming part of the Project Highway charged, levied or imposed by any Government Instrumentality, but excluding any interest, penalties and other sums in relation thereto imposed on any account

whatsoever. For the avoidance of doubt, Taxes shall not include taxes on corporate income;

"Termination" means the expiry or termination of this Agreement;

"Termination Notice" means the communication issued in accordance with this Agreement by one Party to the other Party terminating this Agreement;

"Termination Payment" means the amount payable by either Party to the other upon Termination in accordance with Article 23;

"Terms of Reference" or "TOR" shall have the meaning set forth in Clause 18.2;

"Tests" means the tests set forth in Schedule-K to determine the completion of Works in accordance with the provisions of this Agreement;

"Time Extension" shall have the meaning set forth in Clause 10.5;

"User" means a person who travels or intends to travel on the Project Highway or any part thereof in/on any vehicle;

"**Valuation of Unpaid works**" shall have the meaning set forth in Clause 23.5;

"Works" means all works including survey and investigation, design, engineering, procurement, construction, Plant, Materials, maintenance, temporary works and other things necessary to complete the Project Highway in accordance with this Agreement; and

"WPI" means the wholesale price index for various commodities as published by the Ministry of Commerce and Industry, GOI and shall include any index which substitutes the WPI, and any reference to WPI shall, unless the context otherwise requires, be construed as a reference to the WPI published for the period ending with the preceding month.

1.2 Interpretation

(i) In this Agreement, unless the context otherwise requires,

(a) references to any legislation or any provision thereof shall include amendment or re-enactment or consolidation of such legislation or any provision thereof so far as such amendment or re-enactment or consolidation applies or is capable of applying to any transaction entered into hereunder;

(b) references to laws of India or Indian law or regulation having the force of law shall include the laws, acts, ordinances, rules, regulations, bye laws or notifications which have the force of law in the territory of India and

as from time to time may be amended, modified, supplemented, extended or re-enacted;

(c) references to a "person" and words denoting a natural person shall be construed as a reference to any individual, firm, company, corporation, society, trust, government, state or agency of a state or any association or partnership (whether or not having separate legal personality) of two or more of the above and shall include successors and assigns;

(d) the table of contents, headings or sub-headings in this Agreement are for convenience of reference only and shall not be used in, and shall not affect, the construction or interpretation of this Agreement;

(e) the words "include" and "including" are to be construed without limitation and shall be deemed to be followed by "without limitation" or "but not limited to" whether or not they are followed by such phrases;

(f) references to "construction" or "building" include, unless the context otherwise requires, survey and investigation, design, developing, engineering, procurement, supply of plant, materials, equipment, labour, delivery, transportation, installation, processing, fabrication, testing, and commissioning of the Project Highway, including maintenance during the Construction Period, removing of defects, if any, and other activities incidental to the construction and "construct" or "build" shall be construed accordingly;

(g) references to "development" include, unless the context otherwise requires, construction, renovation, refurbishing, augmentation, up-gradation and other activities incidental thereto during the Construction Period, and "develop" shall be construed accordingly;

(h) any reference to any period of time shall mean a reference to that according to Indian standard time;

(i) any reference to day shall mean a reference to a calendar day;

(j) references to a "business day" shall be construed as a reference to a day (other than a Sunday) on which banks in Delhi are generally open for business;

(k) any reference to month shall mean a reference to a calendar month as per the Gregorian calendar;

(l) references to any date, period or Project Milestone shall mean and include such date, period or Project Milestone as may be extended pursuant to this Agreement;

(m) any reference to any period commencing "from" a specified day or date and "till" or "until" a specified day or date shall include both such days or dates; provided that if the last day of any period computed under this Agreement is not a business day, then the period shall run until the end of the next business day;

(n) the words importing singular shall include plural and vice versa;

(o) references to any gender shall include the other and the neutral gender;

(p) "lakh" means a hundred thousand (100,000) and "crore" means ten million (10,000,000);

(q) "indebtedness" shall be construed so as to include any obligation (whether incurred as principal or surety) for the payment or repayment of money, whether present or future, actual or contingent;

(r) references to the "winding-up", "dissolution", "insolvency", or "reorganisation" of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the law of the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, winding-up, reorganisation, dissolution, arrangement, protection or relief of debtors;

(s) save and except as otherwise provided in this Agreement, any reference, at any time, to any agreement, deed, instrument, licence or document of any description shall be construed as reference to that agreement, deed, instrument, licence or other document as amended, varied, supplemented, modified or suspended at the time of such reference; provided that this Clause shall not operate so as to increase liabilities or obligations of the Authority hereunder or pursuant hereto in any manner whatsoever;

(t) any agreement, consent, approval, authorisation, notice, communication, information or report required under or pursuant to this Agreement from or by any Party or the Authority's Engineer shall be valid and effective only if it is in writing under the hand of a duly authorised representative of such Party or the Authority's Engineer, as the case may be, in this behalf and not otherwise;

(u) the Schedules and Recitals to this Agreement form an integral part of this Agreement and will be in full force and effect as though they were expressly set out in the body of this Agreement;

(v) references to Recitals, Articles, Clauses, Sub-clauses or Schedules in this Agreement shall, except where the context otherwise requires, mean references to Recitals, Articles, Clauses, Sub-clauses and Schedules of or to this Agreement, and references to a Paragraph shall, subject to any contrary indication, be construed as a reference to a Paragraph of this Agreement or of the Schedule in which such reference appears;

(w) the damages payable by either Party to the other of them, as set forth in this Agreement, whether on per diem basis or otherwise, are mutually agreed genuine pre-estimated loss and damage likely to be suffered and

incurred by the Party entitled to receive the same and are not by way of penalty or liquidated damages (the "Damages"); and

(x) time shall be of the essence in the performance of the Parties' respective obligations. If any time period specified herein is extended for the reasons specified in the Agreement, such extended time shall also be of the essence.

(ii) Unless expressly provided otherwise in this Agreement, any Documentation required to be provided or furnished by the Contractor to the Authority shall be provided free of cost and in three copies, and if the Authority is required to return any such Documentation with its comments and/or approval, it shall be entitled to retain two copies thereof.

(iii) The rule of construction, if any, that a contract should be interpreted against the parties responsible for the drafting and preparation thereof, shall not apply.

(iv) Any word or expression used in this Agreement shall, unless otherwise defined or construed in this Agreement, bear its ordinary English meaning and, for these purposes, the General Clauses Act, 1897 shall not apply.

1.3 Measurements and arithmetic conventions

All measurements and calculations shall be in the metric system and calculations done to 2 (two) decimal places, with the third digit of 5 (five) or above being rounded up and below 5 (five) being rounded down.

1.4 Priority of agreements and errors/discrepancies

(i) This Agreement, and all other agreements and documents forming part of or referred to in this Agreement are to be taken as mutually explanatory and, unless otherwise expressly provided elsewhere in this Agreement, the priority of this Agreement and other documents and agreements forming part hereof or referred to herein shall, in the event of any conflict between them, be in the following order:

(a) this Agreement; and

(b) all other agreements and documents forming part hereof or referred to herein; i.e. this Agreement at (a) above shall prevail over the agreements and documents at (b).

(ii) Subject to the provisions of Clause 1.4 (i), in case of ambiguities or discrepancies within this Agreement, the following shall apply:

(a) between two or more Clauses of this Agreement, the provisions of a specific Clause relevant to the issue under consideration shall prevail over those in other Clauses;

(b) between the Clauses of this Agreement and the Schedules, the Clauses shall prevail and between Schedules and Annexes, the Schedules shall prevail;

(c) between any two Schedules, the Schedule relevant to the issue shall prevail;

(d) between the written description on the Drawings and the Specifications and Standards, the latter shall prevail;

(e) between the dimension scaled from the Drawing and its specific written dimension, the latter shall prevail; and

(f) between any value written in numerals and that in words, the latter shall prevail.

1.5 Joint and several liability

(i) If the Contractor has formed a Joint Venture of two or more persons for implementing the Project:

(a) these persons shall, without prejudice to the provisions of this Agreement or any other agreement, be deemed to be jointly and severally liable to the Authority for the performance of the Agreement; and

(b) the Contractor shall ensure that no change in the composition of the Joint Venture is effected without the prior consent of the Authority.

(ii) Without prejudice to the joint and several liability of all the members of the Joint Venture, the Lead Member shall represent all the members of the Joint Venture and shall always be liable and responsible for discharging the functions and obligations of the Contractor. The Contractor shall ensure that each member of the Joint Venture shall be bound by any decision, communication, notice, action or inaction of the Lead Member on any matter related to this Agreement and the Authority shall be entitled to rely upon any such action, decision or communication of the Lead Member. The Authority shall have the right to release payments solely to the Lead Member and shall not in any manner be responsible or be held liable for the inter se allocation of payments among members of the Joint venture.[2]

[2] This Clause 1.5 may be omitted if the Contractor is not a Joint venture. Even if the Contractor is a Joint venture, the Authority may, at its discretion, delete this provision.

Part II

Scope of Project

Article 2

Scope of the Project

2.1 Scope of the Project

Under this Agreement, the scope of the Project (the **"Scope of the Project"**) shall mean and include:

(a) construction of the Project Highway on the Site set forth in Schedule- A and as specified in Schedule-B together with provision of Project Facilities as specified in Schedule-C, and in conformity with the Specifications and Standards set forth in Schedule-D;

(b) maintenance of the Project Highway in accordance with the provisions of this Agreement and in conformity with the requirements set forth in Schedule-E; and

(c) performance and fulfilment of all other obligations of the Contractor in accordance with the provisions of this Agreement and matters incidental thereto or necessary for the performance of any or all of the obligations of the Contractor under this Agreement.

Article 3

Obligations of the Authority

3.1 Obligations of the Authority

(i) The Authority shall, at its own cost and expense, undertake, comply with and perform all its obligations set out in this Agreement or arising hereunder.

(ii) The Authority shall be responsible for the correctness of the Scope of the Project, Project Facilities, Specifications and Standards and the criteria for testing of the completed Works.

(iii) The Authority shall, upon submission of the Performance Security as per the RFP by the Contractor, shall provide to the Contractor:

(a) No less than 90% (ninety per cent) of the required Right of Way of the Construction Zone of total length of the Project Highway within a period of 30 (thirty) days from the date of this Agreement, which shall be in contiguous stretches of length not less than 5 (five) kilometre.

(b) Deleted; and

(c) all environmental clearances as required under Clause 3.3 are not required to be obtained.

(iv) Delay in providing the Right of Way or approval of GAD by railway authorities, as the case may be, in accordance with the provisions of Clause 3.1 (iii) shall entitle the Contractor to Damages in a sum calculated in accordance with the provisions of Clause 8.3 of this Agreement and Time Extension in accordance with the provisions of Clause 10.5 of this Agreement. For the avoidance of doubt, the Parties agree that the Damages for delay in approval of GAD by the railway authorities for a particular road over-bridge/ under-bridge shall be deemed to be equal to the Damages payable under the provisions of Clause 8.3 for delay in providing Right of Way for a length of 2 (two) kilometre for each such road over-bridge/ under-bridge.

(v) Notwithstanding anything to the contrary contained in this Agreement, the Parties expressly agree that the aggregate Damages payable under Clauses 3.1 (iv), 8.3 and 9.5 shall not exceed 1% (one per cent) of the Contract Price. For the avoidance of doubt, the Damages payable by the Authority under the aforesaid Clauses shall not be additive if they arise concurrently from more than one cause but relate to the same part of the Project Highway.

Both the parties agree that payment of such Damages shall be full and final settlement of all claims of the Contractor and such compensation shall be the sole remedy against

delays of the Authority and both parties further agree that the payment of Damages shall be the final cure for the Contractor against delays of the Authority, without recourse to any other payments.

(vi) The Authority agrees to provide support to the Contractor and undertakes to observe, comply with and perform, subject to and in accordance with the provisions of this Agreement and the Applicable Laws, the following:

(a) upon written request from the Contractor, and subject to the Contractor complying with Applicable Laws, provide reasonable support to the Contractor in procuring Applicable Permits required from any Government Instrumentality for implementation of the Project;

(b) upon written request from the Contractor, provide reasonable assistance to the Contractor in obtaining access to all necessary infrastructure facilities and utilities, including water and electricity at rates and on terms no less favourable than those generally available to commercial customers receiving substantially equivalent services;

(c) procure that no barriers that would have a material adverse effect on the works are erected or placed on or about the Project Highway by any Government Instrumentality or persons claiming through or under it, except for reasons of Emergency, national security, law and order or collection of inter-state taxes;

(d) not do or omit to do any act, deed or thing which may in any manner violate any provisions of this Agreement;

(e) support, cooperate with and facilitate the Contractor in the implementation of the Project in accordance with the provisions of this Agreement; and

(f) upon written request from the Contractor and subject to the provisions of Clause 4.3, provide reasonable assistance to the Contractor and any expatriate personnel of the Contractor or its Sub-contractors to obtain the applicable visas and the requisite work permits for the purposes of discharge by the Contractor or its Sub-contractors of their obligations under this Agreement and the agreements with the Sub-contractors.

3.2 Maintenance obligations prior to the Appointed Date

The Authority shall, prior to the Appointed Date, maintain the Project Highway, at its own cost and expense, so that its traffic worthiness and safety are at no time materially inferior as compared to its condition 10 (ten) days prior to the last date for submission of the Bid, and in the event of any material deterioration or damage other than normal wear and tear, undertake repair thereof. For the avoidance of doubt, the Authority shall undertake only routine maintenance prior to the Appointed Date, and it shall undertake special repairs only in the event of excessive deterioration or damage caused due to unforeseen events such as floods or earthquake.

3.3 Environmental Clearances

The Authority represents and warrants that the environmental clearances are not required to be obtained for construction of the Project. For the avoidance of doubt, the present status of environmental clearances is specified in Schedule-A.

3.4 Deemed Termination upon delay

Without prejudice to the provisions of Clauses 8.3, and subject to the provisions of Clause 7.3, the Parties expressly agree that in the event the Appointed Date does not occur, for any reason whatsoever, within 90 days of signing of the Agreement and submission of the full Performance Security by the Contractor, the Agreement shall be deemed to have been terminated. The Authority shall pay damages to the Contractor equivalent to 1% of the Contract Price (3% in case of standalone bridge projects). All other rights, privileges, claims and entitlements of the Contractor under or arising out of this Agreement shall be deemed to have been waived by, and to have ceased. The Contractor shall hand over all information in relation to the Highway, including but not limited to any data, designs, drawings, structures, information, plans, etc. prepared by them for the Highway, to the Authority.

Article 4

Obligations of the Contractor

4.1 Obligations of the Contractor

(i) Subject to and on the terms and conditions of this Agreement, the Contractor shall undertake the survey, investigation, design, engineering, procurement, construction, and maintenance of the Project Highway and observe, fulfil, comply with and perform all its obligations set out in this Agreement or arising hereunder.

(ii) The Contractor shall comply with all Applicable Laws and Applicable Permits (including renewals as required) in the performance of its obligations under this Agreement.

(iii) Subject to the provisions of Clauses 4.1 (i) and 4.1 (ii), the Contractor shall discharge its obligations in accordance with Good Industry Practice and as a reasonable and prudent person.

(iv) The Contractor shall remedy any and all loss, defects, or damage to the Project Highway from the Appointed Date until the end of the Construction Period at the Contractor's cost, save and except to the extent that any such loss, defect, or damage shall have arisen from any wilful default or neglect of the Authority.

(v) The Contractor shall remedy any and all loss, defect or damage to the Project Highway during the Defects Liability Period at the Contractor's cost to the extent that such loss, defect or damage shall have arisen out of the reasons specified in Clause 17.3.

(vi) The Contractor shall remedy any and all loss or damage to the Project Highway during the Maintenance Period at the Contractor's cost, including those stated in Clause 14.1 (ii), save and except to the extent that any such loss or damage shall have arisen on account of any wilful default or neglect of the Authority or on account of a Force Majeure Event.

(vii) The Contractor shall, at its own cost and expense, in addition to and not in derogation of its obligations elsewhere set out in this Agreement:

(a) make, or cause to be made, necessary applications to the relevant Government Instrumentalities with such particulars and details as may be required for obtaining Applicable Permits set forth in Schedule-F and obtain and keep in force and effect such Applicable Permits in conformity with the Applicable Laws;

(b) procure, as required, the appropriate proprietary rights, licences, agreements and permissions for Materials, methods, processes and systems used or incorporated into the Project Highway;

(c) make reasonable efforts to maintain harmony and good industrial relations among the personnel employed by it or its Sub-contractors in connection with the performance of its obligations under this Agreement;

(d) ensure and procure that its Sub-contractors comply with all Applicable Permits and Applicable Laws in the performance by them of any of the Contractor's obligations under this Agreement;

(e) not do or omit to do any act, deed or thing which may in any manner violate any provisions of this Agreement;

(f) support, cooperate with and facilitate the Authority in the implementation and operation of the Project in accordance with the provisions of this Agreement;

(g) ensure that the Contractor and its Sub-contractors comply with the safety and welfare measures for labour in accordance with the Applicable Laws and Good Industry Practice;

(h) keep, on Site, a copy of this Agreement, publications named in this Agreement, the Drawings, Documents relating to the Project, and Change of Scope orders and other communications given under this Agreement. The Authority's Engineer and its authorised personnel shall have the right of access to all these documents at all reasonable times;

(i) cooperate with other contractors employed by the Authority and personnel of any public authority; and

(j) not interfere unnecessarily or improperly with the convenience of the public, or the access to and use and occupation of all roads and footpaths, irrespective of whether they are public or in the possession of the Authority or of others.

(viii) The Contractor shall undertake all necessary superintendence to plan, arrange, direct, manage, inspect and test the Works. The Contractor shall provide all necessary superintendence of the Works for the proper fulfilling of the Contractor's obligations under the Agreement. Such superintendence shall be given by competent person having adequate knowledge of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents) for the satisfactory and safe execution of the Works.

(ix) The Contractor shall obtain and maintain a project related bank account operational at site where all transactions related to the payment of work will be done. The Contractor shall submit a monthly account statement and a detailed report on utilization of funds transferred to this project related bank account to

Authority's Engineer. Notwithstanding anything contrary to this agreement, the authority, in the interest and to ensure timely completion of the work, reserves the right to audit such bank accounts to ensure that there is no diversion of funds from this project specific account to any other project being implemented by the Contractor.

(x) The Contractor shall provide the documents of the Contractor specified in the Agreement, and all Contractors' personnel; Goods, consumables and other things and services, whether of a temporary or permanent nature, required in and for the execution, completion of Works and remedying defects.

(xi) The Contractor shall perform the Works in conformity with the Project requirements and other requirements and standards prescribed under or pursuant to the Agreement.

(xii) The Contractor shall carry out such work incidental and contingent to the original Scope of the Project to comply with Good Industry Practices.

(xiii) The Contractor shall maintain required staff and necessary Contractor's equipment and materials within the reach of the Site during the Defects Liability Period so that any defects arising are promptly attended.

4.2 Obligations relating to sub-contracts and any other agreements

(i) The Contractor, whether Joint Venture or sole, shall not sub-contract any Works in more than **49% (forty-nine per cent)** of the Contract Price and shall carry out Works directly under its own supervision and through its own personnel and equipment in **at least 51% (fifty-one per cent)** of the Contract Price. Further, in case the Contractor is a Joint Venture, then the Lead Member shall carry out Works directly through its own resources (men, material and machines etc.) in **at least 51% (fifty-one per cent)** of total length of the Project Highway. Provided, however, that in respect of the Works carried out directly by the Contractor, it may enter into contracts for the supply and installation of Materials, Plant, equipment, road furniture, safety devices and labour, as the case may be, for such Works. For the avoidance of doubt, the Parties agree that the Contractor may sub-divide the aforesaid length of **51% (fifty-one per cent)** in no more than 5 (five) sections of the Project Highway. The Parties further agree that all obligations and liabilities under this Agreement for the entire project Highway shall at all times remain with the Contractor.

(ii) In the event any sub-contract for Works, or the aggregate of such sub-contracts with any Sub-contractor, exceeds 5% (five percent) of the Contract Price, the Contractor shall communicate the name and particulars, including the relevant experience of the Sub-contractor, to the Authority prior to entering into any such sub-contract. The Authority shall examine the particulars of the Sub-contractor from the national security and public interest perspective and may

require the Contractor, no later than 15 (fifteen) business days from the date of receiving the communication from the Contractor, not to proceed with the sub-contract, and the Contractor shall comply therewith.

(iii) In the event any sub-contract referred to in Clause 4.2 (ii) relates to a Sub-contractor who has, over the preceding 3 (three) years, not undertaken at least one work of a similar nature with a contract value exceeding 40% (forty per cent) of the value of the sub-contract to be awarded hereunder, and received payments in respect thereof for an amount equal to at least such 40% (forty per cent), the Authority may, no later than 15 (fifteen) business days from the date of receiving the communication from the Contractor, require the Contractor not to proceed with such sub-contract, and the Contractor shall comply therewith without delay or demur.

(iv) It is expressly agreed that the Contractor shall, at all times, be responsible and liable for all its obligations under this Agreement notwithstanding anything contained in the agreements with its Sub-contractors or any other agreement that may be entered into by the Contractor, and no default under any such agreement shall excuse the Contractor from its obligations or liability under this Agreement. However, in case of non-compliance of the Contractor towards his obligations for payments to the approved Sub-contractor(s), which is likely to affect the progress of works, the authority reserves the right to intervene and direct the Contractor to release such outstanding payments to approved Sub-contractor(s) out of the payments due for the completed Works in the interest of work.

4.3 Employment of foreign nationals

The Contractor acknowledges, agrees and undertakes that employment of foreign personnel by the Contractor and/or its Sub-contractors and their sub-contractors shall be subject to grant of requisite regulatory permits and approvals including employment/ residential visas and work permits, if any required, and the obligation to apply for and obtain the same shall always rest with the Contractor. Notwithstanding anything to the contrary contained in this Agreement, refusal of or inability to obtain any such permits and approvals by the Contractor or any of its Sub-contractors or their sub-contractors shall not constitute a Force Majeure Event, and shall not in any manner excuse the Contractor from the performance and discharge it of its obligations and liabilities under this Agreement, and the Contractor's liabilities hereunder shall remain unaffected by such failure, refusal or inability.

4.4 Contractor's personnel

(i) The Contractor shall ensure that the personnel engaged by it or by its Sub-contractors in the performance of its obligations under this Agreement are at all times appropriately and adequately qualified, skilled and experienced in their

respective functions in conformity with Good Industry Practice. The Contractor will try to hire at least 10% (ten percent) trained workmen as per the National Skills Qualifications Framework. If necessary, the requisite workmen may be got trained by the Contractor at his cost through authorized training centres of the Directorate General of Training (DGT). The Contractor will organize training at project site/ sites for the trainees as and when required as per the training schedule finalized in consultation with the training centres. The trainees shall be paid stipend by the Contractor (subject to a maximum of Rs. 15,000/- per person) on the basis of minimum wages to compensate for loss of income during the training period.

(ii) The Authority's Engineer may, for reasons to be specified in writing, direct the Contractor to remove any member of the Contractor's or Sub-contractor's personnel. Provided that any such direction issued by the Authority's Engineer shall specify the reasons for the removal of such person.

(iii) The Contractor shall on receiving such a direction from the Authority's Engineer order for the removal of such person or persons with immediate effect. It shall be the duty of the Contractor to ensure that such persons are evicted from the Site within 10 (ten) days of any such direction being issued in pursuance of Clause 4.4 (ii). The Contractor shall further ensure that such persons have no further connection with the Works or Maintenance under this Agreement. The Contractor shall then appoint (or cause to be appointed) a replacement.

4.5 Advertisement on Project Highway

The Project Highway or any part thereof shall not be used in any manner to advertise any commercial product or services.

4.6 Contractor's care of the Works

The Contractor shall bear full risk in, and take full responsibility for, the care of the Works, and of the Materials, goods and equipment for incorporation therein, from the Appointed Date until the date of Completion Certificate, save and except to the extent that any such loss or damage shall have arisen from any wilful default or gross neglect of the Authority.

4.7 Electricity, water and other services

The Contractor shall be responsible for procuring of all utilities as may be required, including without limitation, adequate power, water and other services.

4.8 Unforeseeable difficulties

Except as otherwise stated in the Agreement:

(a) the Contractor accepts complete responsibility for having foreseen all difficulties and costs of successfully completing the Works;

(b) the Contract Price shall not be adjusted to take account of any unforeseen difficulties or costs; and

(c) the Scheduled Completion Date shall not be adjusted to take account of any unforeseen difficulties or costs.

4.9 Co-ordination of the Works

(i) The Contractor acknowledges that in addition to the Agreement, it is also aware of terms of the other Project contracts and other agreements the Authority has negotiated and entered into for performance of its obligations under the Agreement (copies of other contracts and other agreements are made available to the Contractor from time to time) and that the Contractor is fully aware of the consequences to the Authority which would or are likely to result from a breach by the Contractor of its obligations under the Agreement. In the event the actions of the Contractor result in the breach by the Authority of any or all of the other Project contracts and such breach imposes any liability on the Authority, the Contractor shall: (a) undertake all steps as may be possible to mitigate or neutralize the liability that has arisen, and (b) indemnify the Authority against any such liability and compensate the Authority to that extent.

(ii) The Contractor shall be responsible for the co-ordination and proper provision of the Works, including co-ordination of other Contractors or Sub-contractors for the Project. The Contractor shall co-operate with the Authority in the co-ordination of the Works with the works under the other Project contracts. The Contractor shall provide all reasonable support for carrying out their work to:

(a) any other contractors employed by the Authority;

(b) the workmen of the Authority;

(c) the workmen of any Governmental Instrumentality who may be employed in the execution of work on or near the Site; and

(d) such other persons as is required in the opinion of the Authority for successful completion of the Project.

4.10 Environmental Measures

(i) The Contractor agrees to conduct its activities in connection with the Agreement in such a manner so as to comply with the environmental requirements which includes, *inter alia*, all the conditions required to be satisfied under the environmental clearances and applicable law, and assumes full responsibility for measures which are required to be taken to ensure such compliance.

4.11 Site Data

(i) The Contractor shall be deemed to have inspected and examined the Site and its surroundings and to have satisfied himself before entering into the Agreement in all material respects including but not limited to:

(a) the form and nature of the Site (including, inter-alia, the surface and sub- surface conditions and geo-technical factors);

(b) the hydrological and climatic conditions;

(c) the extent and nature of the works already completed and Materials necessary for the execution and completion of the Works and the remedying of any defects that includes already executed part also.

(d) the suitability and the adequacy of the Site for the execution of the Works;

(e) the means of access to the Site and the accommodation the Contractor may require;

(f) arranging permits as required as per provisions of the Agreement.

(g) the requirements of operation and maintenance; and

(h) all other factors and circumstances affecting the Contractor's rights and obligations under the Agreement, the Contract Price and Time for Completion.

4.12 Sufficiency of Contract Price

The Contractor shall have satisfied itself as to the correctness and sufficiency of the Contract Price. The Contract Price shall cover all its obligations under the Agreement, in addition to all risks the Contractor has agreed to undertake under the Agreement, including those associated with the performance of its obligations under the Agreement and all things necessary for the provision of the Works in a manner satisfactory to the Authority and in accordance with this Agreement.

4.13 Clearance of the Site

During the provision of the Works, and as a pre-condition to the issue of the Taking-Over Certificate, the Contractor shall clear away and remove from the Site, all Contractor's equipment, surplus material, wreckage, rubbish and temporary Works, and shall keep the Site free from all unnecessary obstructions, and shall not store or dispose of any Contractor's equipment or surplus materials on the Site. The Contractor shall promptly clear away and remove from the Site any wreckage, rubbish or temporary Works no longer required and leave the Site and the Works in a clean and safe condition to the sole satisfaction of the Authority.

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.

Article 5

Representations and Warranties

5.1 Representations and warranties of the Contractor

(i) The Contractor represents and warrants to the Authority that:

(a) it is duly organised and validly existing under the laws of India, and has full power and authority to execute and perform its obligations under this Agreement and to carry out the transactions contemplated hereby;

(b) it has taken all necessary corporate and/or other actions under Applicable Laws to authorise the execution and delivery of this Agreement and to validly exercise its rights and perform its obligations under this Agreement;

(c) this Agreement constitutes its legal, valid and binding obligation, enforceable against it in accordance with the terms hereof, and its obligations under this Agreement will be legally valid, binding and enforceable against it in accordance with the terms hereof;

(d) it is subject to the laws of India, and hereby expressly and irrevocably waives any immunity in any jurisdiction in respect of this Agreement or matters arising thereunder including any obligation, liability or responsibility hereunder;

(e) the information furnished in the Bid, Request for Proposals or otherwise and as updated on or before the date of this Agreement is true and accurate in all respects as on the date of this Agreement;

(f) the execution, delivery and performance of this Agreement will not conflict with, or result in the breach of, or constitute a default under, or accelerate performance required by any of the terms of its memorandum and articles of association or any Applicable Laws or any covenant, contract, agreement, arrangement, understanding, decree or order to which it is a party or by which it or any of its properties or assets is bound or affected;

(g) there are no actions, suits, proceedings, or investigations pending or, to its knowledge, threatened against it at law or in equity before any court or before any other judicial, quasi-judicial or other authority, the outcome of which may result in the breach of this Agreement or which individually or in the aggregate may result in any material impairment of its ability to perform any of its obligations under this Agreement;

(h) it has no knowledge of any violation or default with respect to any order, writ, injunction or decree of any court or any legally binding order of

any Government Instrumentality which may result in any material adverse effect on its ability to perform its obligations under this Agreement and no fact or circumstance exists which may give rise to such proceedings that would adversely affect the performance of its obligations under this Agreement;

(i) it has complied with Applicable Laws in all material respects and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have a material adverse effect on its ability to perform its obligations under this Agreement;

(j) no representation or warranty by it contained herein or in any other document furnished by it to the Authority or to any Government Instrumentality in relation to Applicable Permits contains or will contain any untrue or misleading statement of material fact or omits or will omit to state a material fact necessary to make such representation or warranty not misleading;

(k) no sums, in cash or kind, have been paid or will be paid, by it or on its behalf, to any person by way of fees, commission or otherwise for securing the contract or entering into this Agreement or for influencing or attempting to influence any officer or employee of the Authority in connection therewith;

(l) nothing contained in this Agreement shall create any contractual relationship or obligation between the Authority and any Sub-contractors, designers, consultants or agents of the Contractor;

(m) it is adequately financed has the requisite knowledge, expertise, technical know-how, experience, resources, infrastructure, licenses, patents, copy rights, for designing, supplying/ procuring the goods and materials, and for providing the installation and construction services required for completing the construction of the Project Facilities; and

(ii) it represents the Authority that:

(a) it owns or has the right to use all **"Intellectual Property"** necessary to perform the contractual obligations and to carry on the Works without conflict with the right of others;

(b) All intellectual property rights necessary to perform the contractual obligations and to carry on the Works are in full force and effect and are vested in, and beneficially owned by the Contractor, and are free from encumbrances.

(c) None of the intellectual property rights is being used, claimed, or posed or attacked by any other person, nor does the use of such intellectual property rights or any part of them infringe the intellectual property rights owned or enjoyed by any third party.

(d) None of the intellectual property rights owned or used by the Contractor is the subject of any claim, opposition, attack, assertion or other arrangement of whatsoever nature which does or may impinge upon their use, validity, enforceability or ownership by the Parties, and there are no grounds or other circumstances which may give rise to the same.

(e) No licenses or registered user or other rights have been granted or agreed to be granted to any third party in respect of such intellectual property rights.

(f) No act has been done or has been omitted to be done to entitle any authority or person to cancel, forfeit or modify any intellectual property rights.

(g) The Contractor shall notify the Authority of any adverse use of the intellectual property rights or confusingly or deceptively similar to the intellectual property rights.

(h) The Contractor shall recognize the Authority's ownership and title to the intellectual property rights and shall not at any time, either directly or indirectly, put to issue the validity or ownership of the intellectual property rights and it will not do any act or thing, either directly or indirectly, which in anyway impairs the validity and ownership of the intellectual property rights.

(i) The Contractor shall, promptly execute, acknowledge and deliver all documents which are requested by Authority to record with appropriate governmental agencies and authorities the fact that the Authority has the right to the use of the said intellectual property rights.

(j) The Contractor shall not, for any reason, object to, or interfere in any way with the ownership, registration or use of the intellectual property rights by the Authority (or its licensee or assigns) for any purpose whatsoever.

(iii) The Contractor is fully aware that the Agreement is inter linked with the other Project contracts and the non-performance or deficient performance or default by the Contractor and/or any of the Contractor's personnel or Subcontractors under one among the said contracts will have bearing on the other contracts and the evaluation of the Contractor's performance under the Agreement and the Project itself.

(iv) If at any time during the Defects Liability Period any item of the Works or Project Facilities or any part thereof, do not conform to the Authority requirements and Specifications and Standards, on being so notified by the Authority, the Contractor shall promptly rectify/remedy such nonconformity to the satisfaction of the Authority solely at the Contractor's expense; failing which the Authority may reject or revoke Taking-Over Certificate, and the Authority may proceed to correct the Contractor's nonconforming Work by the most

expeditious means available, the costs of which shall be to the Contractor's account; or the Authority may retain the non-conforming Work and an equitable adjustment reducing the total Contract Price to reflect the diminished value of such non-conforming Work will be made by written amendment.

(v) In addition to the other warranties, the Contractor represents and warrants as follows:

(a) The Contractor has (or, if the technology does not currently exist, will have granted at the time of passing to The Employer) in and to the technology used in the equipment, materials, goods, Works, Contractor's documents, Drawings and Manuals (**"Technology"**) -

i. all right, title and interest free of any lien, claim or restriction; and

ii. right to grant to the Authority the right to use the Technology for the purpose of this contract, free of any lien, claim or restriction and on the terms of license as required.

(b) The Contractor has granted (or, if the technology does not currently exist, will grant at the time of passing to the Authority the property and title in and to the equipment, materials, goods, Works, spares, Contractor's documents, Drawings and Manuals in which it is used) to the Authority the right to use the Technology, free of any lien, claim or restriction.

(vi) In addition to the other Warranties, the Contractor represents and warrants as follows:

(a) No Technology contains any worm (i.e., a program that travels from one computer to another computer but does not attach itself to the operating system of the computer it enters), virus (i.e., a program that travels from one computer to another computer that attaches itself to the operating system it enters) or self-destruct capability.

(b) The Technology will not abnormally end or provide invalid or incorrect results as a result of date-dependent data.

(c) The Technology can accurately recognize, manage, accommodate, and manipulate date-dependent data, including single and multi-century formulas and leap years.

(vii) No criminal proceedings instituted against any of the employees or Directors of the Contractor.

(viii) Till date the services of the Contractor has not been terminated by any person for any breach or non-performance or negligence by the Contractor.

5.2 Representations and warranties of the Authority

The Authority represents and warrants to the Contractor that:

(a) it has full power and authority to execute, deliver and perform its obligations under this Agreement and to carry out the transactions contemplated herein and that it has taken all actions necessary to execute this Agreement, exercise its rights and perform its obligations, under this Agreement;

(b) it has taken all necessary actions under the Applicable Laws to authorise the execution, delivery and performance of this Agreement;

(c) it has the financial standing and capacity to perform its obligations under this Agreement;

(d) this Agreement constitutes a legal, valid and binding obligation enforceable against it in accordance with the terms hereof;

(e) it has no knowledge of any violation or default with respect to any order, writ, injunction or any decree of any court or any legally binding order of any Government Instrumentality which may result in any material adverse effect on the Authority's ability to perform its obligations under this Agreement;

(f) it has complied with Applicable Laws in all material respects;

(g) it has good and valid right to the Site and has the power and authority to grant the Right of Way in respect thereof to the Contractor; and

(h) it has procured Right of Way and environment clearances such that the Contractor can commence construction forthwith on 90% (ninety per cent) of the total length of the Project Highway.

5.3 Disclosure

In the event that any occurrence or circumstance comes to the attention of either Party that renders any of its aforesaid representations or warranties untrue or incorrect, such Party shall immediately notify the other Party of the same. Such notification shall not have the effect of remedying any breach of the representation or warranty that has been found to be untrue or incorrect nor shall it adversely affect or waive any obligation of either Party under this Agreement.

Article 6

Disclaimer

6.1 Disclaimer

(i) The Contractor acknowledges that prior to the execution of this Agreement, the Contractor has, after a complete and careful examination, made an independent evaluation of the Request for Proposal, Scope of the Project, Specifications and Standards of design, construction and maintenance, Site, local conditions, physical qualities of ground, subsoil and geology, traffic volumes, suitability and availability of access routes to the Site and all information provided by the Authority or obtained, procured or gathered otherwise, and has determined to its satisfaction the accuracy or otherwise thereof and the nature and extent of difficulties, risks and hazards as are likely to arise or may be faced by it in the course of performance of its obligations hereunder. Save as provided in Clause 3.1 and Clause 5.2, the Authority makes no representation whatsoever, express, implicit or otherwise, regarding the accuracy, adequacy, correctness, reliability and/or completeness of any assessment, assumptions, statement or information provided by it and the Contractor confirms that it shall have no claim whatsoever against the Authority in this regard.

(ii) The Contractor acknowledges and hereby accepts to have satisfied itself as to the correctness and sufficiency of the Contract Price.

(iii) The Contractor acknowledges and hereby accepts the risk of inadequacy, mistake or error in or relating to any of the matters set forth in Clause 6.1 (i) above and hereby acknowledges and agrees that the Authority shall not be liable for the same in any manner whatsoever to the Contractor, or any person claiming through or under any of them, and shall not lead to any adjustment of Contract Price or Scheduled Completion Date.

(iv) The Parties agree that any mistake or error in or relating to any of the matters set forth in Clause 6.1 (i) above shall not vitiate this Agreement, or render it voidable.

(v) In the event that either Party becomes aware of any mistake or error relating to any of the matters set forth in Clause 6.1 (i) above, that Party shall immediately notify the other Party, specifying the mistake or error.

(vi) Except as otherwise provided in this Agreement, all risks relating to the Project shall be borne by the Contractor; and the Authority shall not be liable in any manner for such risks or the consequences thereof.

Part III

Construction and Maintenance

Article 7

Performance Security

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, Fixed Deposit Receipt, Banker's Cheque or an irrevocable and unconditional Bank Guarantee (including 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, Fixed Deposit Receipt, Banker's Cheque or an irrevocable and unconditional Bank Guarantee (including e-Bank 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) where the bid price is below 10% but not below 20% of the Estimated Project Cost/ project cost put to bid, the Additional Performance Security/ guarantee percentage shall be incremented by 0.1% for every percentage of Bid Price below 10% of the Estimated Project Cost/project cost put to bid starting at 11% with the Additional Performance Security bid performance guarantee being 0.1% and this Additional Performance Security guarantee percentage shall be applied on the Bid Price..

(b) where the bid price is 20% or more below of the Estimated Project Cost/ project cost put to bid, the Additional Performance Security/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 Security/guarantee percentage shall be applied on the Bid Price..

(c) The Additional Performance Security/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

(d) This Additional Performance Security shall be treated as part of the Performance Security.

(e) 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 below for ready reference;

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%	-	30.00	3.00%
990	29.70	1.00%	0%	-	29.70	3.00%
980	29.40	2.00%	0%	-	29.40	3.00%
970	29.10	3.00%	0%	-	29.10	3.00%
960	28.80	4.00%	0%	-	28.80	3.00%
950	28.50	5.00%	0%	-	28.50	3.00%
940	28.20	6.00%	0%	-	28.20	3.00%
930	27.90	7.00%	0%	-	27.90	3.00%
920	27.60	8.00%	0%	-	27.60	3.00%
910	27.30	9.00%	0%	-	27.30	3.00%
900	27.00	10.00%	0%	-	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%

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
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%

(B) 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.

(ii) 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 this agreement.

(iii) 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 upto 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.

(iv) 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

7.2 Extension of Performance Security and Additional Performance Security

The Contractor may initially provide the Performance Security for a period of 2 (two) years; provided that it shall procure the extension of the validity of the Performance Security, as necessary, at least 2 (two) months prior to the date of expiry thereof. Upon the Contractor providing an extended Performance Security, the previous Performance Security shall be deemed to be released and the Authority shall return the same to the Contractor within a period of 7 (seven) business days from the date of submission of the extended Performance Security.

7.3 Appropriation of Performance Security

(i) Upon occurrence of a Contractor's Default, the Authority shall, without prejudice to its other rights and remedies hereunder or in law, be entitled to encash and appropriate the relevant amounts from the Performance Security as Damages for such Contractor's Default.

(ii) Upon such encashment and appropriation from the Performance Security, the Contractor shall, within 30 (thirty) days thereof, replenish, in case of partial appropriation, to its original level the Performance Security, and in case of appropriation of the entire Performance Security provide a fresh Performance Security, as the case may be, and the Contractor shall, within the time so granted, replenish or furnish fresh Performance Security as aforesaid failing which the Authority shall be entitled to terminate the Agreement in accordance with Article 23. Upon replenishment or furnishing of a fresh Performance Security, as the case may be, as aforesaid, the Contractor shall be entitled to an additional Cure Period of 30 (thirty) days for remedying the Contractor's Default, and in the event of the Contractor not curing its default within such Cure Period, the Authority shall be entitled to encash and appropriate such Performance Security as Damages, and to terminate this Agreement in accordance with Article 23.

7.4 Release of Performance Security

(i) The Authority shall return the Performance Security to the Contractor within 60 (sixty) days of the expiry of the Maintenance Period or the Defects Liability Period, whichever is later, under this Agreement. Notwithstanding the aforesaid, the Parties agree that the Authority shall not be obliged to release the Performance Security until all Defects identified during the Defects Liability Period have been rectified.

(ii) The Authority shall return the Additional Performance Security to the Contractor within 28 (twenty eight) days from the date of issue of Completion Certificate under Article 12 of this Agreement.

(iii) The Authority shall be liable to pay interest @ 9% (nine per cent) per annum for any delay in the return of Performance Security and Additional Performance Security, if any, beyond the period prescribed above for the period of delay.

7.5 Retention Money

(i) From every payment for Works due to the Contractor in accordance with the provisions of Clause 19.5, the Authority shall deduct **6%** (six per cent) thereof as guarantee money for performance of the obligations of the Contractor during the Construction Period (the "**Retention Money**") subject to the condition that the maximum amount of Retention Money shall not exceed 5% (five per cent) of the Contract Price.

(ii) Upon occurrence of a Contractor's Default, the Authority shall, without prejudice to its other rights and remedies hereunder or in law, be entitled to appropriate the relevant amounts from the Retention Money as Damages for such Contractor's Default.

(iii) Within 15 (fifteen) days of the date of issue of the Completion Certificate, the Authority shall refund the balance of Retention Money remaining with the Authority after adjusting the amounts appropriated under the provisions of Clause 7.5 (ii).

(iv) The Parties agree that in the event of Termination of this Agreement, the Retention Money specified in this Clause 7.5 shall be treated as if they are Performance Security and shall be reckoned as such for the purposes of Termination Payment under Clause 23.6.

Article 8

Right of Way

8.1 The Site

The site of the Project Highway (the "**Site**") shall comprise the site described in Schedule-A in respect of which the Right of Way shall be provided by the Authority to the Contractor. The Authority shall be responsible for:

(a) acquiring and providing Right of Way on the Site in accordance with the alignment finalised by the Authority, free from all encroachments and encumbrances, and free access thereto for the execution of this Agreement; and

(b) obtaining licences and permits for environment clearance for the Project Highway.

8.2 Procurement of the Site

(i) The Authority Representative, the Contractor and Authority's Engineer shall, within 10 (ten) days of the date of this Agreement, inspect the Site and prepare a detailed memorandum containing an inventory of the Site including the vacant and unencumbered land, buildings, structures, road works, trees and any other immovable property on or attached to the Site (hereinafter referred to as the "**Handover Memorandum**"). Subject to the provisions of Clause 8.2 (iii), the Handover Memorandum shall have appended thereto an appendix (the "**Appendix**") specifying in reasonable detail those parts of the Site to which vacant access and Right of Way has not been given to the Contractor along with details of hindrances in the Construction Zone. For sake of clarity the Handover Memorandum shall clearly specify the parts of Site where work can be executed. Signing of the Handover Memorandum, in three counterparts (each of which shall constitute an original), by the authorized representatives of the Authority, Contractor and Authority's Engineer shall be deemed to constitute a valid evidence of giving the Right of Way to the Contractor for discharging its obligations under and in accordance with the provisions of this Agreement and for no other purpose whatsoever.

(ii) Whenever the Authority is ready to hand over any part or parts of the Site included in the Appendix, it shall inform the Contractor, by notice, of the proposed date and time such of hand over. The Authority Representative and the Contractor shall, on the date so notified, inspect the specified parts of the Site, and prepare a memorandum containing an inventory of the vacant and unencumbered land, buildings, structures, road works, trees and any other immovable property on or attached to the Site so handed over. The signing of the memorandum, in three (3) counterparts (each of which shall constitute an

original), by the authorised representatives of the Parties shall be deemed to constitute a valid evidence of giving the relevant Right of Way to the Contractor.

If the contractor fails to join for site inspection or disputes the parts of the site available for work, the Authority's Engineer shall decide the parts of the site where work can be executed and notify to both the parties within 3 days of the proposed date of inspection. The parties agree that such notification of the Authority's Engineer as mentioned hereinabove shall be final and binding on the parties.

(iii) The Authority shall provide the Right of Way to the Contractor in respect of all land included in the Appendix by the date specified in Schedule-A for those parts of the Site referred to therein, and in the event of delay for any reason other than Force Majeure or breach of this Agreement by the Contractor, it shall pay to the Contractor, Damages in a sum calculated in accordance with Clause 8.3. The Contractor agrees that it shall not be entitled to claim any other damages on account of any such delay by the Authority.

(iv) Notwithstanding anything to the contrary contained in this Clause 8.2, the Authority shall specify the parts of the Site, if any, for which Right of Way shall be provided to the Contractor on the dates specified in Schedule-A. Such parts shall also be included in the Appendix prepared in pursuance of Clause 8.2 (i).

(v) The Authority further acknowledges and agrees that prior to the Appointed Date, it shall have procured issuance of the statutory notification under Applicable Laws for vesting of all the land comprising the Project in the Authority and has taken possession of area for Construction Zone for at least 90% (ninety per cent) of the total length of the Project Highway. The Parties also acknowledge and agree that the conditions specified in this Clause 8.2 (iii) shall not be modified or waived by either Party.

(vi) For the avoidance of doubt, the Parties expressly agree that the Appendix shall in no event contain sections of the Project Highway the cumulative length of which exceeds 10% (ten percent) of the total length of the Project Highway.

(vii) Pursuant to signing of Handover Memorandum under clause 8.2 (i), Contractor shall submit to the Authority's Engineer, a monthly land possession report till expiry of 180 (one hundred and eighty) days from Appointed Date, in respect of those parts of the site to which vacant access and right of way was not given to the contractor and included in Appendix to the memorandum signed under clause 8.2 (i), duly specifying the part of the site, if any, for which the right of way is yet to be handed over.

8.3 Damages for delay in handing over the Site

(i) In the event the Right of Way to any part of the Site is not provided by the Authority on or before the date(s) specified in Clause 8.2 for any reason other

than Force Majeure or breach of this Agreement by the Contractor, the Authority shall pay Damages to the Contractor a sum calculated in accordance with the following formula for and in respect of those parts of the Site to which the Right of Way has not been provided:

$$\text{Amount of Damages in Rs. per day per metre} = 0.05 \times C \times {}^{1}/_{L} \times {}^{1}/_{N}$$

Where,

C = the Contract Price;

L = length of the Project Highway in metres; and

N = Completion period in days (Appointed Date to Scheduled Completion Date)

In the event that any Damages are due and payable to the Contractor under the provisions of this Clause 8.3 (i) for delay in providing the Right of Way, the Contractor shall, subject to the provisions of Clause 10.5, be entitled to Time Extension equal to the period for which the Damages have become due and payable under this Clause 8.3 (i), save and except that:

(a) if any delays involve time overlaps, the overlaps shall not be additive; and

(b) such Time Extension shall be restricted only to the Works which are affected by the delay in providing the Right of Way.

For the avoidance of doubt, the Parties expressly agree that the Damages specified hereunder and the Time Extension specified in Clause 10.5 shall be restricted only to failure of the Authority to provide the Right of Way for and in respect of the "Construction Zone" which shall comprise the following components:

- Main in carriageway
- Median (for 4 lane carriageway or more)
- Paved and earthen shoulders
- Area for Structures including ROBs/RUBs.
- Safety measures including Roadside Drains and Furniture.
- A parallel working space for accommodating slopes/retaining structures etc.

(ii) Notwithstanding anything to the contrary contained in this Agreement, the Contractor expressly agrees that Works on all parts of the Site for which Right of Way of Construction Zone is granted on the Appointed Date, or with respect to the parts of the Site provided in Schedule-A, no later than the date(s) specified therein, as the case may be, shall be completed before the Scheduled

Completion Date and shall not qualify for any Time Extension under the provisions of Clause 8.3 (iii).

(iii) (a) Notwithstanding anything to the contrary contained in this Agreement, unless covered under the deemed de-scoping in terms of sub-clause 8.3 (iii) (b), the Authority may at any time withdraw any Works forming part of this Agreement, subject to such Works not exceeding an aggregate value, such value to be determined in accordance with Schedule-H, equal to 10 (ten) percent of the Contract Price.

(b) Provided that if any Works cannot be undertaken within the municipal limits of a town or within any area falling in a reserved forest or wildlife sanctuary or the stretches where vacant access and Right of Way could not be handed over, as the case may be, because the requisite clearances or approvals or affected land parcels for commencing construction of Works therein have not been given within 180 (one hundred and eighty) days of the Appointed date, the affected Works shall be deemed to be withdrawn under the provisions of this Clause 8.3 (iii) (a). Such Works shall not be computed for the purposes of the aforesaid ceiling of 10% (ten per cent) hereunder.

(c) Provided further that in case such stretches (as mentioned in Sub-Clause (b) above) can be handed over to the Contractor before the expiry of the original Scheduled Construction Period of the Project Highway, and the Contractor agrees to take up the work, the same may be allowed to be executed by him with corresponding Extension of Time, subject to the condition that the Contractor shall not be entitled to raise any claims on account of prolongation costs in this behalf.

(iv) In the event of withdrawal of Works under Clause 8.3 (iii) (a), the Contract Price shall be reduced by an amount equal to the percent of the value of the works withdrawn as mentioned in the Table below and the Contractor shall not be entitled to any other compensation or Damages for the withdrawal of Works

Value of the Works withdrawn	**Percentage of value of works to be reduced from Contract Price**
upto Rs. 100 Crore	90%
More than Rs. 100 Crore	Rs. 90 Crore plus 95% of the amount greater than Rs. 100 Crore

Provided that if any Works are withdrawn after commencement of the Construction of such works, the Authority shall pay to the Contractor 110% (one

hundred and ten per cent) of the fair value of the work done, as assessed by the Authority' Engineer.

The parties expressly agree that the value of the Works withdrawn shall be determined from the details available in Schedule-H. In the event that it is impossible to determine the value from Schedule-H, then the value shall be determined in accordance with the provisions of Clause 13.2 (iii).

8.4 Site to be free from Encumbrances

Subject to the provisions of Clause 8.2, the Site shall be made available by the Authority to the Contractor pursuant hereto free from all Encumbrances and occupations and without the Contractor being required to make any payment to the Authority because of any costs, compensation, expenses and charges for the acquisition and use of such Site for the duration of the Project Completion Schedule. For the avoidance of doubt, it is agreed that the existing rights of way, easements, privileges, liberties and appurtenances to the Site shall not be deemed to be Encumbrances. It is further agreed that, unless otherwise specified in this Agreement, the Contractor accepts and undertakes to bear any and all risks arising out of the inadequacy or physical condition of the Site.

8.5 Protection of Site from encroachments

On and after signing the memorandum and/or subsequent memorandum referred to in Clause 8.2, and until the issue of the Completion Certificate, the Contractor shall maintain a round-the-clock vigil over the Site and shall ensure and procure that no encroachment takes place thereon. During the Construction Period, the Contractor shall protect the Site from any and all occupations, encroachments or Encumbrances, and shall not place or create nor permit any Sub-contractor or other person claiming through or under the Agreement to place or create any Encumbrance or security threat over all or any part of the Site or the Project Assets, or on any rights of the Contractor therein or under this Agreement, save and except as otherwise expressly set forth in this Agreement. In the event of any encroachment or occupation on any part of the Site, the Contractor shall report such encroachment or occupation forthwith to the Authority and undertake its removal at its own cost and expenses.

8.6 Special/ temporary Right of Way

The Contractor shall bear all costs and charges for any special or temporary right of way required by it in connection with access to the Site. The Contractor shall obtain at its cost such facilities on or outside the Site as may be required by it for the purposes of the Project Highway and the performance of its obligations under this Agreement.

8.7 Access to the Authority and the Authority's Engineer

(i) The Right of Way given to the Contractor hereunder shall always be subject to the right of access of the Authority and the Authority's Engineer and their employees and agents for inspection, viewing and exercise of their rights and performance of their obligations under this Agreement.

(ii) The Contractor shall ensure, subject to all relevant safety procedures, that the Authority has un-restricted access to the Site during any emergency situation, as decided by the Authority's Engineer.

8.8 Geological and archaeological finds

It is expressly agreed that mining, geological or archaeological rights do not form part of this Agreement with the Contractor for the Works, and the Contractor hereby acknowledges that it shall not have any mining rights or interest in the underlying minerals, fossils, antiquities, structures or other remnants or things either of particular geological or archaeological interest and that such rights, interest and property on or under the Site shall vest in and belong to the Authority or the concerned Government Instrumentality. The Contractor shall take all reasonable precautions to prevent its workmen or any other person from removing or damaging such interest or property and shall inform the Authority forthwith of the discovery thereof and comply with such instructions as the concerned Government Instrumentality may reasonably give for the removal of such property. For the avoidance of doubt, it is agreed that any reasonable expenses incurred by the Contractor hereunder shall be reimbursed by the Authority. It is also agreed that the Authority shall procure that the instructions hereunder are issued by the concerned Government Instrumentality within a reasonable period.

Article 9

Utilities and Trees

9.1 Existing utilities and roads

Notwithstanding anything to the contrary contained herein, it shall be the responsibility of the Contractor to ensure that the respective entities owning the existing roads, right of way, level crossings, structures, or utilities on, under or above the Site are enabled by it to keep them in continuous satisfactory use, if necessary, by providing suitable temporary diversions with the authority of the controlling body of that road, right of way or utility.

9.2 Shifting of obstructing utilities

The Contractor shall, subject to Applicable Laws and with assistance of the Authority, undertake shifting of any utility (including electric lines, water pipes and telephone cables), to an appropriate location or alignment, if such utility or obstruction adversely affects the execution of Works or Maintenance of the Project Highway in accordance with this Agreement, as per the scope given in Schedule B and in accordance with applicable standards and specification of concerned utility owning entity. The cost of shifting of such, utilities indicated in Schedule-B is payable to the Contractor as per Schedule-H. Cost of shifting utilities not included in the Schedule-B, if any, shall be treated as Change of Scope. The Authority will provide assistance to the Contractor for obtaining the estimates for shifting of such utilities from the entity owning such electric lines, water pipes or telephone cables, as the case may be. The Contractor shall execute such utility shifting works under the supervision of utility owning agency and Authority's Engineer (AE) in accordance with the provision of Agreement. The supervision charges only shall be paid by the Authority to the Utility Owning Entity. In the event of any delay in shifting thereof, the Contractor shall be responsible for failure to perform any of its obligations hereunder if such failure is not as a direct consequence of delay on the part of the entity owning such electric lines, water pipes or telephone cables, as the case may be.

The dismantled material/scrap of existing Utility to be shifted/dismantled shall belong to the Contractor who would be free to dispose-off the dismantled material as deemed fit by them.

The work of shifting of Utilities can be taken up by the Contractor any time after signing of the Agreement.

9.3 New utilities

(i) The Contractor shall allow, subject to the permission from the Authority and such conditions as the Authority may specify, access to, and use of the Site for laying telephone lines, water pipes, electricity lines/ cables or other public utilities. Where such access or use causes any financial loss to the Contractor, it may require the user of the Site to pay compensation or damages as per Applicable Laws. For the avoidance of doubt, it is agreed that use of the Site under this Clause 9.3 shall not in any manner relieve the Contractor of its obligation to construct and maintain the Project Highway in accordance with this Agreement and any damage caused by such use shall be restored forthwith at the cost of the Authority.

(ii) The Authority may, by notice, require the Contractor to connect any adjoining road to the Project Highway, and the connecting portion thereof falling within the Site shall be constructed by the Contractor at the Authority's cost in accordance with Article 10.

(iii) The Authority may by notice require the Contractor to connect, through a paved road, any adjoining service station, hotel, motel or any other public facility or amenity to the Project Highway, whereupon the connecting portion thereof that falls within the Site shall be constructed by the Contractor on payment of the cost. The cost to be paid by the Authority to the Contractor shall be determined by the Authority's Engineer. For the avoidance of doubt, in the event such road is to be constructed for the benefit of any entity, the Authority may require such entity to make an advance deposit with the Contractor or the Authority, as the case may be, of an amount equal to the estimated cost as determined by the Authority's Engineer and such advance shall be adjusted against the cost of construction as determined by the Authority's Engineer hereunder.

(iv) In the event construction of any Works is affected by a new utility or works undertaken in accordance with this Clause 9.3, the Contractor shall be entitled to a reasonable Time Extension as determined by the Authority's Engineer.

9.4 Felling of trees

The Authority shall assist the Contractor in obtaining the Applicable Permits for felling of trees in non-forest area to be identified by the Authority for this purpose if, and only if, such trees cause a Material Adverse Effect on the construction or maintenance of the Project Highway. The Contractor shall fell these trees as per the Permits obtained. The cost of such felling shall be borne by the Authority and in the event of any delay in felling thereof for reasons beyond the control of the Contractor; it shall be excused for failure to perform any of its obligations hereunder if such failure is a direct consequence of delay in the felling of trees. The Parties hereto agree that the felled trees shall be

deemed to be owned by the Authority and shall be disposed in such manner and subject to such conditions as the Authority may in its sole discretion deem appropriate. For the avoidance of doubt, the Parties agree that if any felling of trees hereunder is in a forest area, the Applicable Permit thereof shall be procured by the Authority within the time specified in the Agreement.

9.5 Dismantling of structures

The Contractor shall at its own cost dismantle the structures in the acquired lands including those on patta lands, abadi lands, assigned lands, etc. the compensation for which, was paid by the Authority to the land owners and the lands were handed over to the Contractor as per Schedule B-I. The Contractor shall, at its own cost, dispose off the dismantled material in its sole discretion as deemed appropriate, while complying with all environmental guidelines and regulations and clear the Site for undertaking construction. In the event of any delay in dismantling of structures thereof for reasons beyond the control of the Contractor, the Contractor shall be entitled to Damages in a sum calculated in accordance with the formula specified in Clause 8.3 (i) for the period of delay, and to the Time Extension in accordance with Clause 10.5 for and in respect of the part(s) of the Works affected by such delay; provided that if the delays involve any time overlaps, the overlaps shall not be additive.

9.6 Development Period

The Contractor may commence pre-construction activities like utility shifting, boundary wall construction or any other activity assigned to the Contractor by the Authority to enable construction of the Project Highway immediately after signing of the Agreement, to the extent that such work is ready for execution. The Parties agree that these works may be taken up and completed to the extent feasible by the Contractor, before declaration of the Appointed Date, but no claim against the Authority for delay shall survive during this period and that the undertaking of these works by the Contractor shall not count towards the Scheduled Construction Period of the project which starts counting only from the Appointed Date. No construction activity of the Project Highway shall be undertaken during the development period.

Article 10

Design and Construction of the Project Highway

10.1 Obligations prior to commencement of Works

(i) Within 20 (twenty) days of the Appointed Date, the Contractor shall:

(a) appoint its representative, duly authorised to deal with the Authority in respect of all matters under or arising out of or relating to this Agreement;

(b) appoint a design director (the "**Design Director**") who will head the Contractor's design unit and shall be responsible for surveys, investigations, collection of data, and preparation of preliminary and detailed designs;

(c) undertake and perform all such acts, deeds and things as may be necessary or required before commencement of Works under and in accordance with this Agreement, the Applicable Laws and Applicable Permits; and

(d) make its own arrangements for quarrying of materials needed for the Project Highway under and in accordance with the Applicable Laws and Applicable Permits.

(ii) The Authority shall, appoint an engineer (the **"Authority's Engineer"**) before the Appointed Date to discharge the functions and duties specified in this Agreement, and shall notify to the Contractor the name, address and the date of appointment of the Authority's Engineer forthwith.

(iii) Within 30 (thirty) days of the Appointed Date, the Contractor shall submit to the Authority and the Authority's Engineer a programme (the **"Programme"**) for the Works, developed using networking techniques, for review and consent of the Engineer, giving the following details:

(a) Part I : Contractor's organisation for the Project, the general methods and arrangements for design and construction, environmental management plan, Quality Assurance Plan including design quality plan, traffic management and safety plan covering safety of users and workers during construction (including use of 'ROBOTS' for diversion and control of traffic), Contractor's key personnel and equipment.

(b) Part II : Programme for completion of all stages of construction given in Schedule-H and Project Milestones of the Works as specified in Project Completion Schedule set forth in Schedule-J. The Programme shall include:

i. the order in which the Contractor intends to carry out the Works, including the anticipated timing of design and stages of Works;

ii. the periods for reviews under Clause 10.2;

iii. the sequence and timing of inspections and tests specified in this Agreement; and

iv. the particulars for the pre-construction reviews and for any other submissions, approvals and consents specified in the Agreement.

The Contractor shall submit a revised Programme whenever the previous Programme is inconsistent with the actual progress or with the Contractor's obligations.

(c) Part III : Monthly cash flow forecast.

(iv) The Contractor shall compute, on the basis of the Drawings prepared in accordance with Clause 10.2 (iv), and provide to the Authority's Engineer, the length, area and numbers, as the case may be, in respect of the various items of work specified in Schedule-H and comprising the Scope of the Project. The Parties expressly agree that these details shall form the basis for estimating the interim payments for the Works in accordance with the provisions of Clause 19.3. For the avoidance of doubt, the sum of payments to be computed in respect of all the items of work shall not exceed the Contract Price, as may be adjusted in accordance with the provisions of this Agreement.

(v) The Contractor shall appoint a safety consultant (the **"Safety Consultant"**) to carry out a safety audit at the design stage of the Project Highway in accordance with the Applicable Laws and Good Industry Practice. The Safety Consultant shall be appointed after proposing to the Authority a panel of three (3) names of qualified and experienced firms from which the Authority may choose one (1) to be the Safety Consultant. Provided, however, that if the panel is not acceptable to the Authority and the reasons for the same are furnished to the Contractor, the Contractor shall propose to the Authority a revised panel of three (3) names from the firms empanelled as safety consultants by the Ministry of Road Transport and Highways for obtaining the consent of the Authority. The Contractor shall also obtain the consent of the Authority for the key personnel of the Safety Consultant who shall have adequate experience and qualifications in safety audit of the highway projects. The Authority shall, within 15 (fifteen) days of receiving a proposal from the Contractor hereunder, convey its decision, with reasons, to the Contractor, and if no such decision is conveyed within the said period, the Contractor may proceed with engaging of the Safety Consultant.

(vi) The safety audit pursuant to Clause 10.1 (v) shall be carried out by the Safety Consultant in respect of all such design details that have a bearing on safety of Users as well as pedestrians and animals involved in or associated with accidents. The recommendations of the Safety Consultant shall be incorporated in the design of the Project Highway and the Contractor shall forward to the

Authority's Engineer a certificate to this effect together with the recommendations of the Safety Consultant. In the event that any works required by the Safety Consultant shall fall beyond the scope of Schedule-B, Schedule-C or Schedule-D, the Contractor shall make a report thereon and seek the instructions of the Authority for Change in Scope. For the avoidance of doubt, the Safety Consultant to be engaged by the Contractor shall be independent of the design and implementation team of the Contractor.

10.2 Design and Drawings

(i) Design and Drawings shall be developed in conformity with the Specifications and Standards set forth in Schedule-D. In the event, the Contractor requires any relaxation in design standards due to restricted Right of Way in any section, the alternative design criteria for such section shall be provided for review and approval of the Authority's Engineer.

(ii) The Contractor shall appoint a proof check consultant (the **"Proof Consultant"**) after proposing to the Authority a panel of three (3) names of qualified and experienced firms from whom the Authority may choose one (1) to be the Proof Consultant. Provided, however, that if the panel is not acceptable to the Authority and the reasons for the same are furnished to the Contractor, the Contractor shall propose to the Authority a revised panel of three (3) names from the firms empanelled as proof consultants by the Ministry of Road Transport and Highways for obtaining the consent of the Authority. The Contractor shall also obtain the consent of the Authority for two (2) key personnel of the Proof Consultant who shall have adequate experience and qualifications in highways and bridges respectively. The Authority shall, within 15 (fifteen) days of receiving a proposal from the Contractor hereunder, convey its decision, with reasons, to the Contractor, and if no such decision is conveyed within the said period, the Contractor may proceed with engaging of the Proof Consultant.

(iii) The Proof Consultant shall:

(a) evolve a systems approach with the Design Director so as to minimise the time required for final designs and construction drawings; and

(b) proof check the detailed calculations, drawings and designs, which have been approved by the Design Director.

(iv) In respect of the Contractor's obligations with respect to the design and Drawings of the Project Highway as set forth in Schedule-I, the following shall apply:

(a) The Contractor shall prepare and submit, with reasonable promptness and in such sequence as is consistent with the Project Completion Schedule, three (3) copies each of the design and Drawings, duly certified by the Proof Consultant, to the Authority's Engineer for its approval.

Provided, however, that in respect of Major Bridges and Structures, the Authority's Engineer may require additional drawings for approval in accordance with Good Industry Practice.

(b) by submitting the Drawings for review and approval to the Authority's Engineer, the Contractor shall be deemed to have represented that it has determined and verified that the design and engineering, including field construction criteria related thereto, are in conformity with the Scope of the Project, the Specifications and Standards and the Applicable Laws;

The Contractor shall get Major Bridge Design and Drawings Vetted from Design Roads & Buildings Circle, Gandhinagar and the applicable charges shall have to borne by the contractor. The Contractor shall ensure that the Design - Drawing submission by the Design Consultant shall be submitted well in advance such as minimum 15 days' time shall be available for the proof checking after complete design submission;

(c) within 15 (fifteen) days of the receipt of the Drawings, the Authority's Engineer shall review the same and convey its approval/observations to the Contractor with particular reference to their conformity or otherwise with the Scope of the Project and the Specifications and Standards. Provided, however that in case of a major bridge or structure, the aforesaid period of 15 (fifteen) days may be extended up to 30 (thirty) days;

(d) if the aforesaid observations of the Authority's Engineer indicate that the Drawings are not in conformity with the Scope of the Project or the Specifications and Standards, such Drawings shall be revised by the Contractor in conformity with the provisions of this Agreement and resubmitted to the Authority's Engineer for review and approval. The Authority's Engineer shall give its observations, if any, within 10 (ten) days of receipt of the revised Drawings. In the event the Contractor fails to revise and resubmit such Drawings to the Authority's Engineer for review/approval as aforesaid, the Authority's Engineer may withhold the payment for the affected works in accordance with the provisions of Clause 19.5 (iv). If the Contractor disputes any decision, direction or determination of the Authority's Engineer hereunder, the Dispute shall be resolved in accordance with the Dispute Resolution Procedure;

(e) no review/approval and/or observation of the Authority's Engineer and/or its failure to review/approval and/or convey its observations on any Drawings shall relieve the Contractor of its obligations and liabilities under this Agreement in any manner nor shall the Authority's Engineer or the Authority be liable for the same in any manner; and if errors, omissions, ambiguities, inconsistencies, inadequacies or other Defects are found in the Drawings, they and the construction works shall be corrected at the Contractor's cost, notwithstanding any approval under this Article 10;

(f) the Contractor shall be responsible for delays in submitting the Drawing as set forth in Schedule-I caused by reason of delays in surveys and field investigations, and shall not be entitled to seek any relief in that regard from the Authority; and

(g) the Contractor warrants that its designers, including any third parties engaged by it, shall have the required experience and capability in accordance with Good Industry Practice and it shall indemnify the Authority against any damage, expense, liability, loss or claim, which the Authority might incur, sustain or be subject to arising from any breach of the Contractor's design responsibility and/or warranty set out in this Clause.

(h) the Contractor shall ensure that all the designs and drawings shall be approved from the Authority's Engineer within 90 days (ninety) from the Appointed Date.

(v) Any cost or delay in construction arising from review/approval by the Authority's Engineer shall be borne by the Contractor.

(vi) Works shall be executed in accordance with the Drawings provided by the Contractor in accordance with the provisions of this Clause 10.2 and the approval of the Authority's Engineer thereon as communicated pursuant to the provisions of sub-Clause (c) & (d) of Clause 10.2 (iv). Such Drawings shall not be amended or altered without prior written notice to the Authority's Engineer. If a Party becomes aware of an error or defect of a technical nature in the design or Drawings, that Party shall promptly give notice to the other Party of such error or defect.

(vii) Within 90 (ninety) days of the Project Completion Date, the Contractor shall furnish to the Authority and the Authority's Engineer a complete set of as- built Drawings, in 2 (two) hard copies and in micro film form or in such other medium as may be acceptable to the Authority, reflecting the Project Highway as actually designed, engineered and constructed, including an as-built survey illustrating the layout of the Project Highway and setback lines, if any, of the buildings and structures forming part of Project Facilities.

10.3 Construction of the Project Highway

(i) The Contractor shall construct the Project Highway as specified in Schedule- B and Schedule-C, and in conformity with the Specifications and Standards set forth in Schedule-D. The Contractor shall be responsible for the correct positioning of all parts of the Works, and shall rectify any error in the positions, levels, dimensions or alignment of the Works. The **540** (Five Hundred and Fortieth) day from the Appointed Date shall be the scheduled completion date (the **"Scheduled Completion Date"**) and the Contractor agrees and undertakes

that the construction shall be completed on or before the Scheduled Completion Date, including any extension thereof.

(ii) The Contractor shall construct the Project Highway in accordance with the Project Completion Schedule set forth in Schedule-J. In the event that the Contractor fails to achieve any Project Milestone or the Scheduled Completion Date within a period of 30 (thirty) days from the date set forth in Schedule-J, unless such failure has occurred due to Force Majeure or for reasons solely attributable to the Authority, it shall pay Damages to the Authority of a sum calculated at the rate of 0.05% (zero point zero five percent) of the Contract Price for delay of each day reckoned from the date specified in Schedule –J and until such Project Milestone is achieved or the Project Highway is completed; provided that if the period for any or all Project Milestones or the Scheduled Completion Date is extended in accordance with the provisions of this Agreement, the dates set forth in Schedule-J shall be deemed to be modified accordingly and the provisions of this Agreement shall apply as if Schedule-J has been amended as above; provided further that in the event the Project Highway is completed within or before the Scheduled Completion Date including any Time Extension, applicable for that work or section, the Damages paid under this Clause 10.3 (ii) shall be refunded by the Authority to the Contractor, but without any interest thereon.

The Parties agree that for determining achievement or delays in completion of the Project Milestones or the Project on the due date, the works affected due to delay in providing the site for which time extension has been granted beyond the Scheduled Completion Date will be excluded. For example on the due date to achieve the Project Milestone-I (i.e., Stage Payments of 10% (ten percent) of Contract Price on 180th (one hundred and eighty) day from the Appointed Date), if 5% (five percent) of the project length corresponding to the Project Milestone-I is not handed over or lately handed over resulting in the extension of completion of this 5% (five percent) length beyond Scheduled Completion Date, Stage Payment of 10% X 0.95 = 9.5% only is to be achieved by 180th (one hundred and eighty) day.

For the avoidance of doubt, it is agreed that recovery of Damages under this Clause 10.3 (ii) shall be without prejudice to the rights of the Authority under this Agreement including the right of Termination thereof. The Parties further agree that Time Extension hereunder shall only be reckoned for and in respect of the affected Works as specified in Clause 10.5 (ii).

(iii) The Authority shall notify the Contractor of its decision to impose Damages in pursuance with the provisions of this Clause 10.3. Provided that no deduction on account of Damages shall be effected by the Authority without notifying the Contractor of its decision to impose the Damages, and taking into consideration the representation, if any, made by the Contractor within 20 (twenty) days of such notice. The Parties expressly agree that the total amount of Damages under

Clause 10.3 (ii) shall not exceed 10% (ten percent) of the Contract Price. If the damages exceed 10% (ten percent) of the Contract Price, the Contractor shall be deemed to be in default of this agreement having no cure and the Authority shall be entitled to terminate this Agreement by issuing a Termination Notice in accordance with the provisions of Clause 23.1 (ii).

(iv) In the event that the Contractor fails to achieve the Project Completion within a period of 90 (ninety) days from the Schedule Completion Date set forth in Schedule-J, unless such failure has occurred due to Force Majeure or for reasons solely attributable to the Authority, the contractor shall be deemed to be ineligible for bidding any future projects of the Authority, both as the sole party or as one of the parties of Joint Venture/ Consortium during the period from Scheduled Completion Date to issuance of Completion Certificate. This restriction is applicable if the contract value of the delayed project is not less than Rs. 300 Crore.

10.4 Maintenance during Construction Period

(i) During the Construction Period, the Contractor shall maintain, at its cost, the existing lane(s) of the Project Highway so that the traffic worthiness and safety thereof are at no time materially inferior as compared to their condition on Appointed Date, and shall undertake the necessary repair and maintenance works for this purpose; provided that the Contractor may, at its cost, interrupt and divert the flow of traffic if such interruption and diversion is necessary for the efficient progress of Works and conforms to Good Industry Practice; provided further that such interruption and diversion shall be undertaken by the Contractor only with the prior written approval of the Authority's Engineer which approval shall not be unreasonably withheld. For the avoidance of doubt, it is agreed that the Contractor shall at all times be responsible for ensuring safe operation of the Project Highway. It is further agreed that in the event the Project includes construction of a bypass or tunnel and realignment of the existing carriageway, the Contractor shall maintain the existing highway in such sections until the new Works are open to traffic.

(ii) Notwithstanding anything to the contrary contained in this Agreement, in the event of default by the Contractor in discharging the obligations specified in Clause 10.4 (i) above, the Authority shall get these maintenance works completed in the manner recommended by the Authority's Engineer to avoid public inconvenience at the risk and cost of the Contractor in order to keep the road in traffic worthy condition.

10.5 Extension of time for completion

(i) Without prejudice to any other provision of this Agreement for and in respect of extension of time, the Contractor shall be entitled to extension of time in the Project Completion Schedule (the **"Time Extension"**) to the extent that

completion of any Project Milestone is or will be delayed by any of the following, namely:

(a) delay in providing the Right of Way of Construction Zone, environmental clearances or approval of railway authorities, specified in Clause 3.1 (iv);

(b) Change of Scope (unless an adjustment to the Scheduled Completion Date has been agreed under Article 13);

(c) occurrence of a Force Majeure Event;

(d) any delay, impediment or prevention caused by or attributable to the Authority, the Authority's personnel or the Authority's other contractors on the Site; and

(e) any other cause or delay which entitles the Contractor to Time Extension in accordance with the provisions of this Agreement.

(ii) The Contractor shall, no later than 15 (fifteen) business days from the occurrence of an event or circumstance specified in Clause 10.5 (i), inform the Authority's Engineer by notice in writing, with a copy to the Authority, stating in reasonable detail with supporting particulars, the event or circumstances giving rise to the claim for Time Extension in accordance with the provisions of this Agreement. Provided that the period of 15 (fifteen) business days shall be calculated from the date on which the Contractor became aware, or should have become aware, of the occurrence of such an event or circumstance.

Provided further that notwithstanding anything to the contrary contained in this Agreement, Time Extension shall be due and applicable only for the Works which are affected by the aforesaid events or circumstances and shall not in any manner affect the Project Completion Schedule for and in respect of the Works which are not affected hereunder.

(iii) On the failure of the Contractor to issue to the Authority's Engineer a notice in accordance with the provisions of Clause 10.5 (ii) within the time specified therein, the Contractor shall not be entitled to any Time Extension and shall forfeit its right for any such claims in future. For the avoidance of doubt, in the event of failure of the Contractor to issue notice as specified in this clause 10.5 (iii), the Authority shall be discharged from all liability in connection with the claim.

(iv) The Authority's Engineer shall, on receipt of the claim in accordance with the provisions of Clause 10.5 (ii), examine the claim expeditiously within the time frame specified herein. In the event the Authority's Engineer requires any clarifications to examine the claim, the Authority's Engineer shall seek the same within 15 (fifteen) days from the date of receiving the claim. The Contractor shall, on receipt of the communication of the Authority's Engineer requesting for clarification, furnish the same to the Authority's Engineer within 10 (ten) days

thereof. The Authority's Engineer shall, within a period of 30 (thirty) days from the date of receipt of such clarifications, forward in writing to the Contractor its determination of Time Extension.

Provided that when determining each extension of time under this Clause 10.5, the Authority's Engineer shall review previous determinations and may increase, but shall not decrease, the total Time Extension.

(v) If the event or circumstance giving rise to the notice has a continuing effect:

(a) a fully detailed claim shall be considered as interim;

(b) the Contractor shall, no later than 10 (ten) days after the close of each month, send further interim claims specifying the accumulated delay, the extension of time claimed, and such further particulars as the Authority's Engineer may reasonably require; and

(c) the Contractor shall send a final claim within 30 (thirty) days after the effect of the event or the circumstance ceases.

Upon receipt of the claim hereunder, the Authority's Engineer shall examine the same in accordance with the provisions of Clause 10.5 (iv) within a period of 30 (thirty) days of the receipt thereof

10.6 Incomplete Works

In the event the Contractor fails to complete the Works in accordance with the Project Completion Schedule, including any Time Extension granted under this Agreement, the Contractor shall endeavour to complete the balance work expeditiously and shall pay Damages to the Authority in accordance with the provisions of Clause 10.3 (ii) for delay of each day until the Works are completed in accordance with the provisions of this Agreement. Recovery of Damages under this Clause shall be without prejudice to the rights of the Authority under this Agreement including the right to termination under Clause 23.1.

10.7 Maintenance Manual

No later than 60 (sixty) days prior to the Project Completion Date, the Contractor shall, in consultation with the Authority's Engineer, evolve a maintenance manual (the **"Maintenance Manual"**) for the regular and preventive maintenance of the Project Highway in conformity with the Specifications and Standards, safety requirements and Good Industry Practice, and shall provide 5 (five) copies thereof to the Authority's Engineer. The Authority's Engineer shall review the Maintenance Manual within 15 (fifteen) days of its receipt and communicate its comments to the Contractor for necessary modifications, if any.

10.8 As-Built Records

The Contractor shall prepare, and keep up-to-date, a complete set of as built records of the execution of the Works, showing the exact as built locations, sizes and details on the

Works as executed with cross references to all relevant specifications and data sheets. These records shall be kept on the Site and shall be used exclusively for the purpose of this Sub-Clause 10.8. The Contractor shall provide 2 (two) copies of as built records to the Authority prior to the commencement of the Tests on Completion.

10.9 Contractor's Use of Authority's Documents

Intellectual property in the Authority's requirements and Specifications and Standards and all other documents and materials issued by the Authority or the Authority's Representative to the Contractor shall (as between the parties) remain the property of the Authority. The Contractor may, at its cost, copy, use and communicate any such documents for the purposes of the Contract. They shall not, without the consent of the Authority, be used, copied or communicated to a third party by the Contractor, except as necessary for the purposes of the Works under the Agreement.

Article 11

Quality Assurance, Monitoring and Supervision

11.1 Quality of Materials and workmanship

The Contractor shall ensure that the Construction, Materials and workmanship are in accordance with the requirements specified in this Agreement, Specifications and Standards and Good Industry Practice.

11.2 Quality control system

(i) The Contractor shall establish a quality control mechanism to ensure compliance with the provisions of this Agreement (the **"Quality Assurance Plan"** or **"QAP"**).

(ii) The Contractor shall, within 30 (thirty) days of the Appointed Date, submit to the Authority's Engineer its Quality Assurance Plan which shall include the following:

(a) organisation, duties and responsibilities, procedures, inspections and documentation;

(b) quality control mechanism including sampling and testing of Materials, test frequencies, standards, acceptance criteria, testing facilities, reporting, recording and interpretation of test results, approvals, check list for site activities, and proforma for testing and calibration in accordance with the Specifications for Road and Bridge Works issued by MORTH, relevant IRC specifications and Good Industry Practice; and

(c) internal quality audit system.

The Authority's Engineer shall convey its approval to the Contractor within a period of 21 (twenty-one) days of receipt of the QAP stating the modifications, if any, required, and the Contractor shall incorporate those in the QAP to the extent required for conforming with the provisions of this Clause 11.2.

(iii) The Contractor shall procure all documents, apparatus and instruments, fuel, consumables, water, electricity, labour, Materials, samples, and qualified personnel as are necessary for examining and testing the Project Assets and workmanship in accordance with the Quality Assurance Plan.

(iv) The cost of testing of Construction, Materials and workmanship under this Article 11 shall be borne by the Contractor.

11.3 Methodology

The Contractor shall, at least 15 (fifteen) days prior to the commencement of the construction, submit to the Authority's Engineer for review and consent the methodology proposed to be adopted for executing the Works, giving details of equipment to be deployed, traffic management and measures for ensuring safety. The Authority's Engineer shall complete the review and convey its consent to the Contractor within a

period of 10 (ten) days from the date of receipt of the proposed methodology from the Contractor.

11.4 Inspection and technical audit by the Authority

The Authority or any representative authorised by the Authority in this behalf may inspect and review the progress and quality of the construction of Project Highway and issue appropriate directions to the Authority's Engineer and the Contractor for taking remedial action in the event the Works are not in accordance with the provisions of this Agreement.

11.5 External technical audit

(i) At any time during construction, the Authority may appoint an external technical auditor to conduct an audit of the quality of the Works. The Auditor in the presence of the representatives of the Contractor and the Authority's Engineer shall carry out the tests and/ or collect samples for testing in the laboratory. The timing, the testing equipment and the sample size of this audit shall be as decided by the Authority. The findings of the audit, to the extent accepted by the Authority, shall be notified to the Contractor and the Authority's Engineer for taking remedial action in accordance with this Agreement.

(ii) After completion of the remedial measures by the Contractor, the Auditor shall undertake a closure audit and this process will continue till the remedial measures have brought the works into compliance with the Specifications and Standards. The Contractor shall provide all assistance as may be required by the auditor in the conduct of its audit hereunder. Notwithstanding anything contained in this Clause 11.5, the external technical audit shall not affect any obligations of the Contractor or the Authority's Engineer under this Agreement.

11.6 Inspection of construction records

The Authority shall have the right to inspect the records of the Contractor relating to the Works.

11.7 Monthly progress reports

During the Construction Period, the Contractor shall, no later than 10 (ten) days after the close of each month, furnish to the Authority and the Authority's Engineer a monthly report on progress of the Works and shall promptly give such other relevant information as may be required by the Authority's Engineer.

The Contractor agrees that reporting under this Clause 11.7 shall continue until the date of the completion of the Works. Each report shall include:

(a) an executive summary;

(b) charts showing the status of Contractor's documents, construction and manufacturing and environmental works;

(c) details of work subcontracted and the performance of Sub-contractors;

(d) for the construction of each main part of the Works, the extent of progress (both quantity and percentage of the whole), the actual or expected dates of commencement, anticipated completion date of the activity, Contractor's inspections and tests;

(e) records of manpower and Contractor's equipment on the Site; alongwith a detailed report indicating the locations and movements of all construction vehicles by way of installing a functional Global Positioning System (GPS) in each vehicle, which shall include, but not limited to the following information:

i. Real-time location data of each construction vehicle.

ii. Timestamps indicating the start and end times of vehicle movements.

iii. Mileage covered by each vehicle

The Contractor shall be responsible for ensuring the accuracy and integrity of the GPS tracking data.

(f) copies for that month of quality assurance documents, test results and certificates;

(g) safety statistics, accident data collection including details of any hazardous incidents and activities relating to environmental aspects and public relations;

(h) comparisons of actual and planned progress, with details of any aspects which may jeopardise the completion in accordance with the Agreement, and the measures being (or to be) adopted to overcome such aspects;

(i) details of any unresolved disputes or claims, in relation to the Project;

(j) details of any revision to the cash flow estimate, together with a copy of the revised cash flow estimate;

(k) status of various Applicable Permits and compliance of conditions therein;

(l) details of various royalty payment and insurances required to be taken by the Contractor; and

(m) such other reports as may be required by the Authority for enabling the Authority to comply with its obligations under the other Project contracts.

(n) details of defects by the Authority;

(o) change in emission of any sewage or effluent of any nature whatsoever, whether qualitatively or quantitatively;

(p) any Material Adverse Effect;

(q) declaration towards compliance with Applicable Laws including but not limited to environmental and labour legislations;

(r) declaration specifying compliance with all Manuals provided to the Contractor; and

(s) any change in the flow of traffic in the existing Project Highway.

11.8 Inspection

(i) The Authority's Engineer and its authorised representative shall at all reasonable times:

(a) have full access to all parts of the Site and to all places from which natural Materials are being obtained for use in the Works; and

(b) during production, manufacture and construction at the Site and at the place of production, be entitled to examine, inspect, measure and test the Materials and workmanship, and to check the progress of manufacture of Materials.

(ii) The Contractor shall give the Authority's Engineer and its authorised agents access, facilities and safety equipment for carrying out their obligations under this Agreement.

(iii) The Authority's Engineer shall submit a monthly inspection report (the "**Inspection Report**") to the Authority and the Contractor bringing out the results of inspections and the remedial action taken by the Contractor in respect of Defects or deficiencies. For the avoidance of doubt, such inspection or submission of Inspection Report by the Authority's Engineer shall not relieve or absolve the Contractor of its obligations and liabilities under this Agreement in any manner whatsoever.

11.9 Samples

The Contractor shall submit the following samples of Materials and relevant information to the Authority's Engineer for pre-construction review:

(a) manufacturer's test reports and standard samples of manufactured Materials; and

(b) samples of such other Materials as the Authority's Engineer may require.

11.10 Tests

(i) For determining that the Works conform to the Specifications and Standards, the Authority's Engineer shall require the Contractor to carry out or cause to be carried out tests, at such time and frequency and in such manner as specified in this Agreement, and in accordance with Good Industry Practice for quality assurance. The test checks by the Authority's Engineer shall comprise at least 50% (fifty percent) of the quantity or number of tests prescribed for each category or type of test for quality control by the Contractor.

(ii) In the event that results of any tests conducted under this Clause 11.10 establish any Defects or deficiencies in the Works, the Contractor shall carry out remedial measures and furnish a report to the Authority's Engineer in this behalf. The Authority's Engineer shall require the Contractor to carry out or cause to be carried out tests to determine that such remedial measures have brought the Works into compliance with the Specifications and Standards, and the procedure shall be repeated until such Works conform to the Specifications and Standards. For the avoidance of doubt, the cost of such tests and remedial measures in pursuance thereof shall be solely borne by the Contractor.

11.11 Examination of work before covering up

In respect of the work which the Authority's Engineer is entitled to examine, inspect, measure and/or test before it is covered up or put out of view or any part of the work is placed thereon, the Contractor shall give notice to the Authority's Engineer whenever any such work is ready and before it is covered up. The Authority's Engineer shall then either carry out the examination, inspection or testing without unreasonable delay, or promptly give notice to the Contractor that the Authority's Engineer does not require to do so. Provided, however, that if any work is of a continuous nature where it is not possible or prudent to keep it uncovered or incomplete, the Contractor shall notify the schedule of carrying out such work to give sufficient opportunity, not being less than 3 (three) business days' notice, to the Authority's Engineer to conduct its inspection, measurement or test while the work is continuing. Provided further that in the event the Contractor receives no response from the Authority's Engineer within a period of 3 (three) business days from the date on which the Contractor's notice hereunder is delivered to the Authority's Engineer, the Contractor shall be entitled to assume that the Authority's Engineer would not undertake the said inspection.

11.12 Rejection

If, as a result of an examination, inspection, measurement or testing, any Plant, Materials, design or workmanship is found to be defective or otherwise not in accordance with the provisions of this Agreement, the Authority's Engineer shall reject the Plant, Materials, design or workmanship by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the Defect and ensure that the rejected item complies with the requirements of this Agreement.

If the Authority's Engineer requires the Plant, Materials, design or workmanship to be retested, the tests shall be repeated under the same terms and conditions, as applicable in each case. If the rejection and retesting cause the Authority to incur any additional costs, such cost shall be recoverable by the Authority from the Contractor; and may be deducted by the Authority from any monies due to be paid to the Contractor.

11.13 Remedial work

(i) Notwithstanding any previous test or certification, the Authority's Engineer may instruct the Contractor to:

(a) remove from the Site and replace any Plant or Materials which are not in accordance with the provisions of this Agreement;

(b) remove and re-execute any work which is not in accordance with the provisions of this Agreement and the Specification and Standards; and

(c) execute any work which is urgently required for the safety of the Project Highway, whether because of an accident, unforeseeable event or otherwise; provided that in case of any work required on account of a Force Majeure Event, the provisions of Clause 21.6 shall apply.

(ii) If the Contractor fails to comply with the instructions issued by the Authority's Engineer under Clause 11.13 (i), within the time specified in the Authority's Engineer's notice or as mutually agreed, the Authority's Engineer may advise the Authority to have the work executed by another agency. The cost so incurred by the Authority for undertaking such work shall, without prejudice to the rights of the Authority to recover Damages in accordance with the provisions of this Agreement, be recoverable from the Contractor and may be deducted by the Authority from any monies due to be paid to the Contractor.

11.14 Delays during construction

Without prejudice to the provisions of Clause 10.3 (ii), in the event the Contractor does not achieve any of the Project Milestones or the Authority's Engineer shall have reasonably determined that the rate of progress of Works is such that Completion of the Project Highway is not likely to be achieved by the end of the Scheduled Completion Date, it shall notify the same to the Contractor, and the Contractor shall, within 15 (fifteen) days of such notice, by a communication inform the Authority's Engineer in reasonable detail about the steps it proposes to take to expedite progress and the period within which it shall achieve the Project Completion Date.

11.15 Quality control records and Documents

The Contractor shall hand over a copy of all its quality control records and documents to the Authority's Engineer before the Completion Certificate is issued pursuant to Clause 12.2. The Contractor shall submit Road Signage Plans to the Authority Engineer for approval at least 6 (six) months prior to expected completion of Project Highway.

11.16 Video recording

The Contractor shall carryout video recording of the Project every month since award of work till completion of construction and biannually during maintenance period.

Authority has finalized specifications/methodology for video recording and identified zone-wise agencies & rates for the same. The Contractor may use these agencies so as to ensure uniformity in data collection. Recording shall have to be done in the presence of Team Leader of Authority Engineer. Recording of previous videos and current running side by side shall be loaded on Data Lake

(https://datalakeg.nhai.gov.in/nhai) for easily capturing various developments during the month (a sample screenshot is attached herewith and also loaded on Data Lake along with a sample video for guidance) before submission of their invoice. Capturing Ortho-image for approx. 10% equivalent length of critical structures or any other specific area should be decided by the ROs/ PDs and be conveyed to the Drone Agency in the site-specific work order. Authority Engineer shall ensure that the features and quality of drone video is acceptable and video is not distorted/tampered with.

video is not distorted/tampered with.

video is not distorted/tampered with.

Authority Engineer shall analyse these drone videos and give their comments in its digital MPRs covering inter-alia but not limited to the encumbrances/lands not available, sites of COS demands, progress of project, mobilisation of plant & equipment, mobilisation of camp sites, progress on rectification of NCRs etc. along with the proposed action plan. Project Director of MORTH shall cross-check drone videos during the monthly physical inspections and notify the discrepancies noticed, if any, between drone video, on Authority Engineer comments and ground reality. The discrepancies shall be examined and addressed through joint site inspections.

As per the policy, the Network Survey Vehicle (NSV) survey needs to be carried out twice in a year on completed project. Therefore, PDs should plan biannually drone based video recording during maintenance period in such a manner so that there is no overlap and digital data of maintenance period is available in regular intervals (quarterly) through NSV and drone videography.

ere is no overlap and digital data of maintenance period is available in regular intervals (quarterly) through NSV and drone videography.

In addition, PDs/ ROs can also undertake need based drone videography as and when required.

As the drone videos/ reports will be permanent record on Data Lake and will be used as evidences during dispute resolution process before Arbitral Tribunals/ Courts including Supreme Court, the drone video shall be carried out carefully and correctly without distortions/ tampering by all parties concerned. The amount spent on recording shall be charged to Contractor to the extent covered in the agreement.

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Video Preview	#	Status	RAMS Status	Instructions to PD	CGM	State	RO	PIU	Unique Project Code	Project Name	Duration of Drone Video Survey (From)	Duration of Drone Video Survey (To)	From Chainage	To Chainage	Drone Survey Agency	Date of forwarding letter of contractor	Letter No
Preview Video 1	1	Submitted by Contractor			CGM-AP	Jharkhand	RO-Ranchi	Daltonganj	N/08008/03001/JH	4L from km 1...	28/10/2021	28/10/2021	196.8700	219.6000	Other	02/11/2021	RGHPL/20-21/NH-75/128
Preview Video 1	2	Submitted by PIU			CGM-HR	Haryana	RO-Chandigarh (HR)	Sonipat	N/05021/01001/HR	Rohtak-Panip...	27/10/2021	27/10/2021	0	80.8580	Other	02/11/2021	445
Preview Video 1	3	Submitted by PIU			CGM-DL	Haryana	RO-Delhi	Ghaziabad	N/01005/01002/HR	Eastern Perip...	25/10/2021	29/10/2021	1	22	Other	01/11/2021	1256\october
Preview Video 1	4	Submitted by PIU			CGM-HR	Haryana	RO-Chandigarh (HR)	Sonipat	N/03008/06003/HR	Gohana - So...	25/10/2021	25/10/2021	40.6010	78.8370	Other	01/11/2021	589

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Video Preview

AERIAL VIDEOGRAPHY OF 709-B (AKSHARDHAM TO EPE) PACKAGE-2
FROM 14+750KM TO 31+599KM



Video Preview	#	Status	RAMS Status	Instructions to PD	CGM	State	RO	PIU	Unique Project Code	Project Name	Duration of Drone Video Survey (From)	Duration of Drone Video Survey (To)	From Chainage	To Chainage	Drone Survey Agency	Date of forwarding letter of contractor	Letter No
Preview Video 1	6	Submitted by PIU												50.5050	Other	01/11/2021	1023
Preview Video 1	7	Submitted by PIU												42	M/s Datapkt Pvt Ltd	29/10/2021	862
Preview Video 1	8	Submitted by PIU												80.2500	Other	01/11/2021	825
Preview Video 1	9	Submitted by PIU												44.8000	Other	01/11/2021	1098
Preview Video 1	10	Submitted by PIU			CGM-BM	Uttar Pradesh	RO-Delhi	Ghaziabad	N/04040/01003/UP	DL/UP Borde...	25/10/2021	30/10/2021	14.7500	31.6000	Other	01/11/2021	1256\october

Activate Windows

11.17 Suspension of unsafe Construction Works

(i) Upon recommendation of the Authority's Engineer to this effect, the Authority may by notice require the Contractor to suspend forthwith the whole or any part of the Works if, in the reasonable opinion of the Authority's Engineer, such work threatens the safety of the Users and pedestrians.

(ii) The Contractor shall, pursuant to the notice under Clause 11.17 (i), suspend the Works or any part thereof for such time and in such manner as may be specified by the Authority and thereupon carry out remedial measures to secure the safety of suspended works, the Users and pedestrians. The Contractor may by notice require the Authority's Engineer to inspect such remedial measures forthwith and make a report to the Authority recommending whether or not the suspension hereunder may be revoked. Upon receiving the recommendations of the Authority's Engineer, the Authority shall either revoke such suspension or instruct the Contractor to carry out such other and further remedial measures as may be necessary in the reasonable opinion of the Authority, and the procedure set forth in this Clause 11.17 shall be repeated until the suspension hereunder is revoked.

(iii) Subject to the provisions of Clause 21.6, all reasonable costs incurred for maintaining and protecting the Works or part thereof during the period of suspension (the **"Preservation Costs"**), shall be borne by the Contractor; provided that if the suspension has occurred as a result of any breach of this Agreement by the Authority, the Preservation Costs shall be borne by the Authority.

(iv) If suspension of Works is for reasons not attributable to the Contractor, the Authority's Engineer shall determine any Time Extension to which the Contractor is reasonably entitled.

11.18 Staff and Labour

(i) Engagement of Staff and Labour

(a) The Contractor shall make its own arrangements for the engagement of all personnel and labour, local or otherwise, and for their payment, housing, feeding and transport.

(b) The Contractor has verified/ shall verify the identity and address of all its employees and officials related to the Works by collecting necessary documentary proof.

(c) The Contractor shall seek a self-declaration from its employees that they have not been convicted of any criminal offence by any court and if any criminal proceedings/charge-sheets have been pending/filed against

them. The Contractor shall not employ persons with criminal track record on the project. In cases where it comes to notice later that the employee concerned has concealed any such fact in his self-declaration or commits a criminal offence during the course of his employment, the Contractor shall remove such person from the project

(d) Deleted.

(e) The employees and personnel of the Contractor shall work under the supervision, control and direction of the Contractor and the Contractor shall be solely responsible for all negotiations with its employees and personnel relating to their salaries and benefits, and shall be responsible for assessments and monitoring of performance and for all disciplinary matters. All employees / personnel, executives engaged by the Contractor shall be in sole employment of the Contractor and the Contractor shall be solely responsible for their salaries, wages, statutory payments, etc and under no circumstances the personnel shall be deemed to be the employees of the Authority. Under no circumstances the Authority shall be liable for any payment or claim or compensation of any nature to the employees and personnel of the Contractor.

(ii) Returns of Labour

(a) The Contractor shall deliver to the Authority a detailed return in such form and at such intervals as the Authority may prescribe, showing the details including names, payment details and terms of appointment of the several classes of labour employed by the Contractor from time to time for the Works. The Contractor shall, in its returns certify that all dues of the workers or labour have been fully paid.

(b) The Authority is entitled to witness labour payments made or to be made by the Contractor. If the Contractor defaults in its obligations for making any payments under the labour laws, the Employer may make the relevant payments. Any sum equal to any amount paid by the Employer under this Sub-Sub-Clause shall be immediately due as a debt from the Contractor to the Employer and until payment/ set off shall carry interest at 18% per annum. For this purpose it is agreed between the parties that debt due aforesaid shall be set off immediately out the running account bills of the Contractor under this Agreement.

(iii) Persons in the Service of Others

The Contractor shall not recruit, or attempt to recruit from amongst persons in the service of the Authority.

(iv) Labour Laws

(a) The Contractor shall obtain all relevant labour registrations and comply with all relevant labour laws applying to its employees, and shall duly pay them and afford to them all their legal rights.

(b) The Contractor shall make all deductions of tax at source and all contributions to the Payment of Gratuity, Provident Fund (including Employees' contribution) and Employees' State Insurance Scheme as may be required by Applicable Laws and deposit the aforesaid contributed amount with the appropriate authority/(s).

(c) The Contractor shall require all personnel engaged in the Works to obey all Applicable Laws and regulations. The Contractor shall permit Authority to witness labour payments for the Contractors direct labour, or the Subcontractors labour. The Contractor shall ensure that all its Subcontractors strictly comply with all labour laws.

(d) Documentary evidence confirming compliance with this Sub-Clause, as may be required from time to time, shall be provided to the Employer's Representative.

(e) The Employer shall not be liable for any delay/default of the Contractor in compliance of the labour laws.

(v) Facilities for Staff and Labour

The Contractor shall provide and maintain all necessary accommodation and welfare facilities for personnel engaged for the Works. The Contractor shall not permit any personnel engaged for the Works to maintain any temporary or permanent living quarters within the structures forming part of the Works.

(vi) Health And Safety

All necessary precautions shall be taken by the Contractor to ensure the health and safety of staff and labour engaged for the Works. The Contractor shall, in collaboration with and to the requirements of the local health authorities, ensure that para-medical staff, first aid facilities, ambulance service are available on the Site at all times, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. The Contractor shall appoint a safety officer to be responsible for the safety of personnel on the Site. This safety officer shall be qualified for his work and shall have the authority to issue instructions concerning safety and take protective measures to prevent accidents. The Contractor shall maintain records and make reports concerning health, safety and welfare of personnel, and damage to property, in such manner as the Authority may reasonably require.

(vii) Contractor's Personnel

The Contractor shall employ only personnel who are appropriately qualified, skilled and experienced in their respective trades or occupations. The Authority may require the Contractor to remove any personnel engaged for the Works, who in the opinion of the Authority:

(a) has engaged in any misconduct;

(b) is incompetent or negligent in the performance of his duties;

(c) fails to conform with any provisions of the Contract;

(d) engages in any conduct which is prejudicial to safety, health, or the protection of the environment; or

(e) makes errors in the discharge of his functions.

If appropriate and required by the Employer, the Contractor shall then appoint (or cause to be appointed) a suitable replacement person.

(viii) Disorderly Conduct

The Contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst its personnel, and to preserve peace and protection of people and property in the neighbourhood of the Works.

Article 12

Completion Certificate

12.1 Tests on Completion

(i) At least 30 (thirty) days prior to the likely completion of the Project Highway, or a Section thereof, the Contractor shall notify the Authority's Engineer of its intent to subject the Project Highway or a Section thereof, to Tests. The date and time of each of the Tests shall be determined by the Authority's Engineer in consultation with the Contractor, and notified to the Authority who may designate its representative to witness the Tests. The Contractor shall either conduct the Tests as directed by the Authority's Engineer or provide such assistance as the Authority's Engineer may reasonably require for conducting the Tests. In the event of the Contractor and the Authority's Engineer failing to mutually agree on the dates for conducting the Tests, the Contractor shall fix the dates by giving not less than 10 (ten) days' notice to the Authority's Engineer.

(ii) All Tests shall be conducted in accordance with Schedule-K. The Authority's Engineer shall either conduct or observe, monitor and review the Tests conducted by the Contractor, as the case may be, and review the results of the Tests to determine compliance of the Project Highway or a Section thereof, with Specifications and Standards and if it is reasonably anticipated or determined by the Authority's Engineer during the course of any Test that the performance of the Project Highway or Section or any part thereof, does not meet the Specifications and Standards, it shall have the right to suspend or delay such Test and require the Contractor to remedy and rectify the Defect or deficiencies. Upon completion of each Test, the Authority's Engineer shall provide to the Contractor and the Authority copies of all Test data including detailed Test results. For the avoidance of doubt, it is expressly agreed that the Authority's Engineer may require the Contractor to carry out or cause to be carried out additional Tests, in accordance with Good Industry Practice, for determining the compliance of the Project Highway or Section thereof with the Specifications and Standards.

12.2 Completion Certificate

(i) Upon completion of all Works forming part of the Project Highway, and the Authority's Engineer determining the Tests to be successful and after the receipt of notarized true copies of the certificate(s) of insurance, copies of insurance policies and premium payment receipts in respect of the insurance defined in Article 20 and Schedule P of this Agreement, it shall, at the request of the

Contractor forthwith issue to the Contractor and the Authority a certificate substantially in the form set forth in Schedule-L (the "Completion Certificate").

(ii) Upon receiving the Completion Certificate, the Contractor shall remove its equipment, materials, debris and temporary works from the Site within a period of 30 (thirty) days thereof, failing which the Authority may remove or cause to be removed, such equipment, materials, debris and temporary works and recover from the Contractor an amount equal to 120% (one hundred and twenty per cent) of the actual cost of removal incurred by the Authority.

(iii) Without prejudice to the obligations of the Contractor specified in Articles 14 and 17, the property and ownership of all the completed Works forming part of the Project Highway shall vest in the Authority.

12.3 Rescheduling of Tests

If the Authority's Engineer certifies to the Authority and the Contractor that it is unable to issue the Completion Certificate, as the case may be, because of events or circumstances on account of which the Tests could not be held or had to be suspended, the Contractor shall be entitled to re-schedule the Tests and hold the same as soon as reasonably practicable.

Article 13

Change of Scope

13.1 Change of Scope

(i) The Authority may, notwithstanding anything to the contrary contained in this Agreement, require the Contractor to make modifications/ alterations to the Works ("**Change of Scope**") within a period of six months counted from the Appointed Date. Upon the Authority making its intention known to the Contractor for the specific Change of Scope, be it positive or negative, the Contractor shall submit his proposal for the said Change of Scope involving additional cost or reduction in cost. Any such Change of Scope shall be made and valued in accordance with the provisions of this Article 13.

(ii) Provided that any such Change of Scope, excluding major structures (e.g. Major Bridge/ ROB/ RUB/ Flyover/ elevated road of more than 50 m length) may be required and agreed to be executed between the parties beyond the period of six months of the Appointed Date but before expiry of 50% of the original Scheduled Construction Period of the Project Highway, subject to the condition that it shall not entail any claims (e.g. Extension of Time/ Prolongation related claims), against the Authority.

(iii) The Change of Scope shall mean the following:

(a) change in specifications of any item of Works;

(b) omission of any work from the Scope of the Project except under Clause 8.3 (iii); provided that, subject to Clause 13.5, the Authority shall not omit any Work under this Clause in order to get it executed by any other authority; and / or

(c) any additional Work, Plant, Materials or services which are not included in the Scope of the Project, including any associated Tests on completion of construction.

13.2 Procedure for Change of Scope

(i) In the event of the Authority determining that a Change of Scope is necessary, it may direct the Authority's Engineer to issue to the Contractor a notice specifying in reasonable detail the Works and services contemplated thereunder (the "**Change of Scope Notice**"). The Contractor shall submit a detailed proposal as per Clause 13.2 (iii) within 15 days from the receipt of Change of Scope Notice.

(ii) If the Contractor determines, not later than 90 days from the Appointed Date, that a Change of Scope to the Works is required, it shall prepare a proposal with relevant details as per Clause 13.2 (iii) at its own cost and shall submit to the Authority to consider such Change of Scope (the "**Change of Scope Request**").

(iii) Upon receipt of a Change of Scope Notice, the Contractor shall, with due diligence, provide to the Authority and the Authority's Engineer such information as is necessary, together with detailed proposal in support of:

(a) the impact, if any, which the Change of Scope is likely to have on the Project Completion Schedule if the works or services are required to be carried out during the Construction Period; and

(b) the options for implementing the proposed Change of Scope and the effect, if any, each such option would have on the costs and time thereof, including the following details:

i. break-up of the quantities, unit rates and cost for different items of work; and

ii. proposed design for the Change of Scope;

iii. proposed modifications, if any, to the Project Completion Schedule of the Project Highway.

For the avoidance of doubt, the Parties expressly agree that, subject to the provisions of Clause 13.4 (ii), the Contract Price shall be increased or decreased, as the case may be, on account of any such Change of Scope.

(iv) The parties agree that costs and time for implementation of the proposed Change of Scope shall be determined as per the following:

(a) For works where Schedule of Rates (SOR) of concerned circle of State's Public Works Department are applicable at the Base Date are available, the same shall be applicable for determination of costs. In case of non-availability of Schedule of Rates at the Base Date, the available Schedule of Rates shall be applied by updating the same based on WPI. In case the Contract Price is lower/ higher than the Estimated Project Cost as per RFP, then the SOR rates shall be reduced/ increased in the same proportion accordingly.

(b) For item of Works not included in Schedule of Rates as mentioned in sub-para (a) of Clause 13.2 (iv) above, the cost of same shall be derived on the basis of MORTH Standard Data Book and the Authority's Engineer shall determine the prevailing market rates and discount the same considering WPI to achieve the prevailing rate at the Base Date, and for any item in respect of which MORTH Standard Data Book does not provide the requisite details, the Authority's Engineer shall determine the rate in accordance with Good Industry Practice.

For the avoidance of doubt, in case the cost as determined by the Contractor and the Authority reveals a difference of more than 10% (ten per cent), the cost as determined by the Authority shall be considered as final and binding on the Contractor.

(c) The design charges shall be considered only for new works or items (i.e. the Works or items not similar to the works or items in the original scope) @ 1% (one per cent) of cost of such new works or items.

(d) The costs of existing works or items, which are being changed/ omitted shall also be valued as per above procedure and only net cost shall be considered.

(e) The reasonable time for completion of works to be taken under Change of Scope shall be determined by the Authority's Engineer on the basis of Good Industry Practice and if such time exceeds the Scheduled Completion Date, the issue of Completion Certificate shall not be affected or delayed on account of construction of Change of Scope items/ works remaining incomplete on the date of Tests.

(v) Upon consideration of the detailed proposal submitted by the Contractor under the Clause 13.2 (iii), the Authority, within 15 (fifteen) days of receipt of such proposal, may in its sole discretion either accept such Change of Scope with modifications, if any, and initiate proceedings thereof in accordance with this Article 13 or reject the proposal and inform the Contractor of its decision and shall issue an order (the **"Change of Scope Order"**) requiring the Contractor to proceed with the performance thereof.

For the avoidance of doubt, the Parties agree that the Contractor shall not undertake any Change of Scope without the express consent of the Authority, save and except any works necessary for meeting any Emergency, that too with verbal approval of Authority which shall be confirmed in writing in next 3 (three) days. In the event that the Parties are unable to agree, the Authority may:

(a) issue a Change of Scope Order requiring the Contractor to proceed with the performance thereof at the rates and conditions approved by the Authority till the matter is resolved in accordance with Article 26;

or

(b) proceed in accordance with Clause 13.5.

(vi) The provisions of this Agreement, insofar as they relate to Works and Tests, shall apply *mutatis mutandis* to the Works undertaken by the Contractor under this Article 13.

13.3 Payment for Change of Scope

Payment for Change of Scope shall be made in accordance with the payment schedule specified in the Change of Scope Order.

13.4 Restrictions on Change of Scope

(i) No Change of Scope shall be executed unless the Authority has issued the Change of Scope Order save and except any Works necessary for meeting any Emergency.

(ii) The total value of all Change of Scope Orders shall not exceed 10% (ten per cent) of the Contract Price.

(iii) Notwithstanding anything to the contrary in this Article 13, if any change is necessitated because of any default of the Contractor in the performance of its obligations under this Agreement, the same shall not be deemed to be Change of Scope, and shall not result in any adjustment of the Contract Price or the Project Completion Schedule.

13.5 Power of the Authority to undertake Works

(i) In the event the Parties are unable to agree to the proposed Change of Scope Orders in accordance with Clause 13.2, the Authority may, after giving notice to the Contractor and considering its reply thereto, award such Works or services to any person or agency on the basis of open competitive bidding. It is also agreed that the Contractor shall provide assistance and cooperation to the person or agency who undertakes the works or services hereunder. The Contractor shall not be responsible for rectification of any Defects, but the Contractor shall carry out maintenance of such works after completion of Defect Liability Period of work by other person or agency during the remaining period of this agreement without any extra payment.

(ii) The Works undertaken in accordance with this Clause 13.5 shall conform to the Specifications and Standards and shall be carried out in a manner that minimises the disruption in operation of the Project Highway. The provisions of this Agreement, insofar as they relate to Works and Tests, shall apply *mutatis mutandis* to the Works carried out under this Clause 13.5.

Article 14

Maintenance

14.1 Maintenance obligations of the Contractor

(i) The Contractor shall maintain the Project Highway for a period of 5 (five) years, corresponding to the Defects Liability Period, commencing from the date of the Completion Certificate (the "**Maintenance Period**"). For the performance of its Maintenance obligations, the Contractor shall be paid:

(a) For flexible pavement with **5 years** Maintenance Period including structures: no maintenance charges shall be paid for the first year; 0.50%of the Contract Price each for the second, third and fourth year; and 1% of the Contract Price for the fifth year

(b) ~~For rigid pavement with 10 years Maintenance Period including structures: 0.25% of the Contract Price each for the first, second and third year, 0.5% of the Contract Price each for fourth, fifth, sixth and seventh year, and 0.75% of the Contract Price each for eighth, ninth and tenth year.~~

(c) ~~For flexible perpetual pavement with 10 years maintenance period including structures: no maintenance charges shall be paid for the first year; 0.5% of the Contract Price each for the second, third and fourth year; 0.75% of the Contract Price each for the subsequent years till laying of the renewal layer or end of maintenance period, whichever is earlier. The requirement for the renewal layer shall be worked out based on the survey and investigation of the existing pavement and the cost of such renewal works shall be made separately to the Contractor based on the principles defined under clause 13.2(iii). After laying of the renewal layer, the Contractor shall be paid @ 0.5% of the original Contract Price each for the remaining years till the end of maintenance period.~~

(d) ~~For stand-alone Bridge/ Tunnel works: the contractor shall be paid @ 0.25% of the Contract Price each for the first five years and @ 0.50% of the Contract Price each for the remaining period of five years.~~

Above amount for the performance of Contractors' Maintenance obligations shall be, inclusive of all taxes (except GST which shall be payable at applicable rates). The amount payable for maintenance shall be adjusted to reflect any increase or decrease arising out of variation in WPI to be determined in accordance with the provisions of Clause 19.12. It is further agreed that the Contract Price hereunder shall be reckoned with reference to the amount specified in Clause 19.1 (i), which shall be adjusted to the extent of Change of Scope and the works withdrawn under the provisions of Clause 8.3 (iii), but shall not include any price adjustments in pursuance of Clause 19.10.

(ii) During the Maintenance Period, the Authority shall provide to the Contractor access to the Site for Maintenance in accordance with this Agreement. The obligations of the Contractor hereunder shall include:

(a) permitting safe, smooth and uninterrupted flow of traffic on the Project Highway;

(b) undertaking routine maintenance including prompt repairs of potholes, cracks, joints, drains, embankments, structures, pavement markings, lighting, road signs and other traffic control devices. For the avoidance of doubt, the electricity charges for operation of electrical infrastructure installed along the project length, except the infrastructure being used by the Contractor for its own use, shall be borne by the Authority;

(c) undertaking repairs to structures;

(d) informing the Authority of any unauthorised use of the Project Highway;

(e) informing the Authority of any encroachments on the Project Highway; and

(f) operation and maintenance of all communication, patrolling, and administrative systems necessary for the efficient maintenance of the Project Highway in accordance with the provisions of this Agreement.

(iii) In respect of any Defect or deficiency not specified in Schedule-E, the Contractor shall, at its own cost, undertake repair or rectification in accordance with Good Industry Practice, save and except to the extent that such Defect or deficiency shall have arisen on account of any wilful default or neglect of the Authority or a Force Majeure Event.

(iv) The Contractor shall remove promptly from the Project Highway any waste materials (including hazardous materials and waste water), rubbish and other debris (including, without limitation, accident debris) and keep the Project Highway in a clean, tidy and orderly condition, and in conformity with the Applicable Laws, Applicable Permits and Good Industry Practice.

14.2 Maintenance Requirements

The Contractor shall ensure and procure that at all times during the Maintenance Period, the Project Highway conforms to the maintenance requirements set forth in Schedule-E (the **"Maintenance Requirements"**).

14.3 Maintenance Programme

(i) The Contractor shall prepare a monthly maintenance programme (the **"Maintenance Programme"**) in consultation with the Authority's Engineer and submit the same to the Authority's Engineer not later than 10 (ten) days prior to the commencement of the month in which the Maintenance is to be carried out.

For this purpose a joint monthly inspection by the Contractor and the Authority's Engineer shall be undertaken. The Maintenance Programme shall contain the following:

(a) The condition of the road in the format prescribed by the Authority's Engineer;

(b) the proposed maintenance Works; and

(c) deployment of resources for maintenance Works.

14.4 Safety, vehicle breakdowns and accidents

(i) The Contractor shall ensure safe conditions for the Users, and in the event of unsafe conditions, lane closures, diversions, vehicle breakdowns and accidents, it shall follow the relevant operating procedures for removal of obstruction and debris without delay. Such procedures shall conform to the provisions of this Agreement, Applicable Laws, Applicable Permits and Good Industry Practice.

(ii) The Contractor shall maintain and operate a round-the-clock vehicle rescue post with 1 (one) mobile crane having the capacity to lift a truck with a Gross Vehicle Weight of 30,000 (thirty thousand) kilograms; and such post shall be located at Nil the Contractor shall promptly remove any damaged vehicles and debris from the Project Highway to enable safe movement of traffic and shall report all accidents to the police forthwith.

14.5 Lane closure

(i) The Contractor shall not close any lane of the Project Highway for undertaking maintenance works except with the prior written approval of the Authority's Engineer. Such approval shall be sought by the Contractor through a written request to be made at least 10 (ten) days before the proposed closure of lane and shall be accompanied by particulars thereof. Within 5 (five) business days of receiving such request, the Authority's Engineer shall grant permission with such modifications as it may deem necessary and a copy of such permission shall be sent to the Authority.

(ii) Upon receiving the permission pursuant to Clause 14.5 (i), the Contractor shall be entitled to close the designated lane for the period specified therein, and for all lane closures extending a continuous period of 48 (forty-eight) hours, the Contractor shall, in the event of any delay in re-opening such lane, for every stretch of 250 (two hundred and fifty) metres, or part thereof, pay Damages to the Authority calculated at the rate of 0.1% (zero point one per cent) of the monthly maintenance payment for each day of delay until the lane has been re-opened for traffic. In the event of any delay in re-opening such lanes or in the event of emergency decommissioning and closure to traffic of the whole or any part of the Project Highway due to failure of the Contractor, the Contractor

shall pay damages to the Authority at double the above rate, without prejudice the rights of the Authority under this Agreement including Termination thereof.

14.6 Reduction of payment for non-performance of Maintenance obligations

(i) In the event that the Contractor fails to repair or rectify any Defect or deficiency set forth in Schedule-E within the period specified therein, it shall be deemed as failure of performance of Maintenance obligations by the Contractor and the Authority shall be entitled to effect reduction in monthly lump sum payment for maintenance in accordance with Clause 19.7 and Schedule-M, without prejudice to the rights of the Authority under this Agreement, including Termination thereof.

(ii) If the nature and extent of any Defect justifies more time for its repair or rectification than the time specified in Schedule-E, the Contractor shall be entitled to additional time in conformity with Good Industry Practice. Such additional time shall be determined by the Authority's Engineer and conveyed to the Contractor and the Authority with reasons thereof.

14.7 Authority's right to take remedial measures

In the event the Contractor does not maintain and/or repair the Project Highway or any part thereof in conformity with the Maintenance Requirements, the Maintenance Manual or the Maintenance Programme, as the case may be, and fails to commence remedial works within 15 (fifteen) days of receipt of the Maintenance Inspection Report under Clause 15.2 or a notice in this behalf from the Authority or the Authority's Engineer, as the case may be, the Authority shall, without prejudice to its rights under this Agreement including Termination thereof, be entitled to undertake such remedial measures at the cost of the Contractor, and to recover its cost from the Contractor. In addition to recovery of the aforesaid cost, a sum equal to 20% (twenty per cent) of such cost shall be paid by the Contractor to the Authority as Damages.

14.8 Restoration of loss or damage to Project Highway

Save and except as otherwise expressly provided in this Agreement, in the event that the Project Highway or any part thereof suffers any loss or damage during the Maintenance from any cause attributable to the Contractor, the Contractor shall, at its cost and expense, rectify and remedy such loss or damage forthwith so that the Project Highway conforms to the provisions of this Agreement.

14.9 Overriding powers of the Authority

(i) If in the reasonable opinion of the Authority, the Contractor is in material breach of its obligations under this Agreement and, in particular, the Maintenance Requirements, and such breach is causing or likely to cause material hardship or danger to the Users and pedestrians, the Authority may, without prejudice to any of its rights under this Agreement including Termination thereof, by notice

require the Contractor to take reasonable measures immediately for rectifying or removing such hardship or danger, as the case may be.

(ii) In the event that the Contractor, upon notice under Clause 14.9 (i), fails to rectify or remove any hardship or danger within a reasonable period, the Authority may exercise overriding powers under this Clause 14.9 (ii) and take over the performance of any or all the obligations of the Contractor to the extent deemed necessary by it for rectifying or removing such hardship or danger; provided that the exercise of such overriding powers by the Authority shall be of no greater scope and of no longer duration than is reasonably required hereunder; provided further that any costs and expenses incurred by the Authority in discharge of its obligations hereunder shall be recovered by the Authority from the Contractor, and the Authority shall be entitled to deduct any such costs and expenses incurred from the payments due to the Contractor under Clause 19.7 for the performance of its Maintenance obligations.

(iii) In the event of a national emergency, civil commotion or any other circumstances specified in Clause 21.3, the Authority may take over the performance of any or all the obligations of the Contractor to the extent deemed necessary by it, and exercise such control over the Project Highway or give such directions to the Contractor as may be deemed necessary; provided that the exercise of such overriding powers by the Authority shall be of no greater scope and of no longer duration than is reasonably required in the circumstances which caused the exercise of such overriding power by the Authority. For the avoidance of doubt, it is agreed that the consequences of such action shall be dealt in accordance with the provisions of Article 21. It is also agreed that the Contractor shall comply with such instructions as the Authority may issue in pursuance of the provisions of this Clause 14.9 (iii), and shall provide assistance and cooperation to the Authority, on a best effort basis, for performance of its obligations hereunder.

14.10 Taking over Certificate

The Maintenance Requirements set forth in Schedule-E having been duly carried out, Maintenance Period as set forth in Clause 14.1 (i) having been expired and Authority's Engineer determining the Tests on Completion of Maintenance to be successful in accordance with Schedule-Q, the Authority will issue Taking Over Certificate to the Contractor substantially in the format set forth in Schedule-R.

Article 15

Supervision and Monitoring during Maintenance

15.1 Inspection by the Contractor

(i) The Authority's Engineer shall undertake regular inspections to evaluate continuously the compliance with the Maintenance Requirements.

(ii) The Contractor shall carry out a detailed pre-monsoon inspection of all bridges, culverts and drainage system in accordance with the guidelines contained in IRC: SP35. Report of this inspection together with details of proposed maintenance works as required shall be conveyed to the Authority's Engineer forthwith. The Contractor shall complete the proposed maintenance works before the onset of the monsoon and send a compliance report to the Authority's Engineer. Post monsoon inspection shall be undertaken by the Contractor and the inspection report together with details of any damages observed and proposed action to remedy the same shall be conveyed to the Authority's Engineer forthwith.

15.2 Inspection and payments

(i) The Authority's Engineer may inspect the Project Highway at any time, but at least once every month, to ensure compliance with the Maintenance Requirements. It shall make a report of such inspection (**"Maintenance Inspection Report"**) stating in reasonable detail the Defects or deficiencies, if any, with particular reference to the Maintenance Requirements, the Maintenance Manual, and the Maintenance Programme, and send a copy thereof to the Authority and the Contractor within 10 (ten) days of such inspection.

(ii) After the Contractor submits to the Authority's Engineer the Monthly Maintenance Statement for the Project Highway pursuant to Clause 19.6, the Authority's Engineer shall carry out an inspection within 10 (ten) days to certify the amount payable to the Contractor. The Authority's Engineer shall inform the Contractor of its intention to carry out the inspection at least 3 (three) business days in advance of such inspection. The Contractor shall assist the Authority's Engineer in verifying compliance with the Maintenance Requirements.

(iii) For each case of non-compliance of Maintenance Requirements as specified in the inspection report of the Authority's Engineer, the Authority's Engineer shall calculate the amount of reduction in payment in accordance with the formula specified in Schedule-M.

(iv) Any deduction made on account of non-compliance will not be paid subsequently even after establishing the compliance thereof. Such deductions will continue to be made every month until the compliance is procured.

15.3 Tests

For determining that the Project Highway conforms to the Maintenance Requirements, the Authority's Engineer shall require the Contractor to carry out, or cause to be carried out, Tests specified by it in accordance with Good Industry Practice. The Contractor shall, with due diligence, carry out or cause to be carried out all such Tests in accordance with the instructions of the Authority's Engineer and furnish the results of such Tests forthwith to the Authority' Engineer.

At any time during Maintenance Period, the Authority may appoint an external technical auditor to conduct an audit of the quality of the Works. The Auditor in the presence of the representatives of the Contractor and the Authority's Engineer shall carry out the Tests and/ or collect samples for testing in the laboratory. The timing, the testing equipment and the sample size of this audit shall be as decided by the Authority. The findings of the audit, to the extent accepted by the Authority, shall be notified to the Contractor and the Authority's Engineer for taking remedial measures. After completion of the remedial measures by the Contractor, the auditor shall undertake a closure audit and this process will continue till the remedial measures have brought the maintenance works into compliance with the Specifications and Standards. The Contractor shall provide all assistance as may be required by the auditor in the conduct of its audit hereunder. Notwithstanding anything contained in this Clause 15.3, the external technical audit shall not affect any obligations of the Contractor or the Authority's Engineer under this Agreement.

15.4 Reports of unusual occurrence

The Contractor shall, during the Maintenance Period, prior to the close of each day, send to the Authority and the Authority's Engineer, by facsimile or e- mail, a report stating accidents and unusual occurrences on the Project Highway relating to the safety and security of the Users and Project Highway. A monthly summary of such reports shall also be sent within 3 (three) business days of the closing of month. For the purposes of this Clause 15.4, accidents and unusual occurrences on the Project Highway shall include:

(a) accident, death or severe injury to any person;

(b) damaged or dislodged fixed equipment;

(c) flooding of Project Highway; and

(d) any other unusual occurrence.

Article 16

Traffic Regulation

16.1 Traffic regulation by the Contractor

(i) The Contractor shall take all the required measures and make arrangements for the safety of Users during the Construction and Maintenance of the Project Highway or a Section thereof in accordance with the provisions of MORTH Specifications. It shall provide, erect and maintain all such barricades, signs, markings, flags, and lights as may be required by Good Industry Practice for the safety of the traffic passing through the Section under construction or maintenance.

(ii) All works shall be carried out in a manner creating least interference to traffic passing through the Project Highway or a Section thereof. In sections where construction or maintenance Works on the carriageway are taken up, the Contractor shall ensure that proper passage is provided for the traffic. Where it is not possible or safe to allow traffic on part width of the carriageway, a temporary diversion of proper specifications shall be constructed by the Contractor at its own cost. 'ROBOTS' may be used for diversion and control of traffic during Construction. The Contractor shall take prior approval of the Authority's Engineer for any proposed arrangement for traffic regulation during Construction and Maintenance, which approval shall not be unreasonably withheld.

Article 17

Defects Liability

17.1 Defects Liability Period

(i) The Contractor shall be responsible for all the Defects and deficiencies, except usual wear and tear in the Project Highway or any Section thereof, till the expiry of a period of commencing from the date of Completion Certificate (the **"Defects Liability Period"**) as specified below:

(a) 5 (five) years from the date of completion in case of a road being constructed with flexible pavement;

(b) ~~10 (ten) years from the date of completion in case of road being constructed with rigid pavement;~~

(c) ~~10 (ten) years from the date of completion in case of road being constructed with flexible pavement using perpetual design;~~

(d) ~~10 (ten) years from the date of completion in case of all stand-alone structures, e.g. Major Bridges/ and Tunnels;~~

(e) ~~10 (ten) years from the date of completion for the stretches where new technology/ material has been/ is proposed to be used.~~

(f) ~~3 (three) years from the date of completion for stretches requiring renewal of Bituminous Concrete (BC) layer through either using hot-in-place recycling of the entire BC layer or providing a fresh layer of BC with 40mm thickness.~~

(g) ~~3 (three) years from the date of completion for stretches requiring improvement to riding quality, in cases other than those mentioned in para (f) above, through laying a layer of BM/DBM and BC.~~

The Defects Liability Period shall commence from the date of the Completion Certificate. For the avoidance of any doubt, any repairs or restoration because of usual wear or tear in the Project Highway or any Section thereof shall form a part of the Maintenance obligations of the Contractor as specified in Article 14.

17.2 Remedying Defects

Save and except as provided in Clause 14.1 (iii), the Contractor shall repair or rectify all Defects and deficiencies observed by the Authority or Authority's Engineer during the Defects Liability Period within a period of 15 (fifteen) days from the date of notice issued by the Authority or Authority's Engineer in this behalf, or within such reasonable period as may be determined by the Authority or Authority's Engineer at the request of the Contractor, in accordance with Good Industry Practice.

17.3 Cost of remedying Defects

Any repair or rectification undertaken in accordance with the provisions of Clause 17.2, including any additional testing, shall be carried out by the Contractor at its own risk and cost, to the extent that such rectification or repair is attributable to:

(a) the design of the Project;

(b) Plant, Materials or workmanship not being in accordance with this Agreement and the Specifications and Standards;

(c) improper maintenance during construction of the Project Highway by the Contractor; and/ or

(d) failure by the Contractor to comply with any other obligation under this Agreement.

17.4 Contractor's failure to rectify Defects

If the Contractor fails to repair or rectify such Defect or deficiency within the period specified in Clause 17.2, the Authority shall be entitled to get the same repaired, rectified or remedied at the Contractor's cost to make the Project Highway conform to the Specifications and Standards and the provisions of this Agreement. All costs consequent thereon shall, after due consultation with the Authority and the Contractor, be determined by the Authority's Engineer. The cost so determined and an amount equal to 20% (twenty percent) of the cost as Damages shall be recoverable by the Authority from the Contractor and may be deducted by the Authority from any monies due to the Contractor.

17.5 Extension of Defects Liability Period

The Defects Liability Period shall be deemed to be extended till the identified Defects under Clause 17.2 have been remedied or rectified.

Article 18

Authority's Engineer

18.1 Appointment of the Authority's Engineer

(i) The Authority shall appoint a firm of Consulting Engineers or a Project Monitoring Committee (PMC) substantially in accordance with the selection criteria set forth in Schedule-N, to be the engineer under this Agreement (the "**Authority's Engineer**"). In unavoidable circumstances, Authority may appoint an officer to act as Authority's Engineer until appointment of a Consulting Engineering firm/ Supervision Consultant/ PMC.

(ii) The officer in-charge of the Authority [e.g. Executive Engineer, National Highway Division, Gandhidham (Shall be act as a Authority Engineer) & Deputy Executive Engineer, National Highway Sub Division, Gandhidham (Shall be act as a Assistant Authority Engineer)] is responsible for the overall supervision and monitoring of the execution of project as the representative of the owner of the project. The Authority's Engineer is appointed to assist the Authority for carrying out the functions as detailed under clause 18.2. As such, an officer of the Authority is vested with all such powers and responsibilities as are enjoined upon the Authority's Engineer and is fully competent to issue any instructions for proper monitoring and supervision of the project, either by himself or through the Authority's Engineer. Instructions issued by the concerned officer of the Authority shall have the same effect as that of the Authority's Engineer in terms of this Agreement. Wherever such concerned officer issues any instructions or notice to the Contractor, he shall endorse a copy thereof to the Authority's Engineer.

(iii) The Authority's Engineer should be appointed within 10 days from the date of this Agreement or before declaration of Appointed Date, whichever is earlier. The Authority shall notify the appointment or replacement of the Authority's Engineer to the Contractor.

(iv) The staff of the Authority's Engineer shall include suitably qualified engineers and other professionals who are competent to assist the Authority's Engineer to carry out its duties.

18.2 Duties and authority of the Authority's Engineer

(i) The Authority's Engineer shall perform the duties and exercise the authority in accordance with the provisions of this Agreement and substantially in accordance with the terms of reference (**"Terms of Reference" or "TOR")** set forth in Annexure-I of Schedule N, but subject to obtaining prior written approval of the Authority before determining:

(a) any Time Extension;

(b) any additional cost to be paid by the Authority to the Contractor;

(c) the Termination Payment;

(d) issuance of Completion Certificate; or

(e) any other matter which is not specified in (a), (b), (c) or (d) above and which creates financial liability on either Party.

(ii) No decision or communication of the Authority's Engineer shall be effective or valid unless it is accompanied by an attested true copy of the approval of the Authority for and in respect of any matter specified in Clause 18.2 (i).

(iii) The Authority's Engineer shall submit regular periodic reports, at least once every month, to the Authority in respect of its duties and functions under this Agreement. Such reports shall be submitted by the Authority's Engineer within 10 (ten) days of the beginning of every month. For the avoidance of doubt, the Authority's Engineer shall include in its report, compliance of the recommendations of the Safety Consultant.

18.3 Delegation by the Authority's Engineer

(i) The Authority's Engineer may, by order in writing, delegate any of his duties and responsibilities to suitably qualified and experienced personnel who are accountable to Authority's Engineer, or may revoke any such delegation, under intimation to the Authority and the Contractor. Provided, however, that the Authority's Engineer shall be responsible and liable for all actions and omissions of such personnel.

(ii) Any failure of the Authority's Engineer to disapprove any work, Plant or Materials shall not constitute approval, and shall, therefore, not prejudice the right of the Authority to reject the work, Plant or Materials, which is not in accordance with the provisions of this Agreement and the Specifications and Standards.

(iii) Notwithstanding anything stated in Clause 18.3 (i) above, the Authority's Engineer shall not delegate the authority to refer any matter for the Authority's prior approval wherever required in accordance with the provisions of Clause 18.2.

18.4 Instructions of the Authority's Engineer

(i) The Authority's Engineer may issue instructions for remedying any Defect(s) to the Contractor. The Contractor shall take such instructions from the Authority's Engineer, or from an assistant to whom appropriate authority has been delegated under Clause 18.3.

(ii) The instructions issued by the Authority's Engineer shall be in writing. However, if the Authority's Engineer issues any oral instructions to the Contractor, it shall

confirm the oral instructions in writing within 2 (two) working days of issuing them.

(iii) In case the Contractor does not receive the confirmation of the oral instructions within the time specified in Clause 18.4 (ii), the Contractor shall seek the written confirmation of the oral instructions from the Authority's Engineer. The Contractor shall obtain acknowledgement from the Authority's Engineer of the communication seeking written confirmation. In case of failure of the Authority's Engineer or its delegated assistant to reply to the Contractor within 2 (two) days of the receipt of the communication from the Contractor, the Contractor may not carry out the instructions.

(iv) In case of any dispute on any of the instructions issued by the delegated assistant, the Contractor may refer the dispute to the Authority's Engineer, who shall then confirm, reverse or vary the instructions within 3 (three) business days of the dispute being referred.

18.5 Determination by the Authority's Engineer

(i) The Authority's Engineer shall consult with each Party in an endeavour to reach agreement wherever this Agreement provides for the determination of any matter by the Authority's Engineer. If such agreement is not achieved, the Authority's Engineer shall make a fair determination in accordance with this Agreement having due regard to all relevant circumstances. The Authority's Engineer shall give notice to both the Parties of each agreement or determination, with supporting particulars.

(ii) Each Party shall give effect to each agreement or determination made by the Authority's Engineer in accordance with the provisions of this Agreement. Provided, however, that if any Party disputes any instruction, decision, direction or determination of the Authority's Engineer, the Dispute shall be resolved in accordance with the Dispute Resolution Procedure.

18.6 Remuneration of the Authority's Engineer

The remuneration, costs and expenses of the Authority's Engineer shall be paid by the Authority.

18.7 Termination of the Authority's Engineer

(i) The Authority may, in its discretion, replace the Authority's Engineer at any time. However, the Authority shall ensure that alternative arrangements for appointment of another Authority's Engineer or designation of its own officer as the Authority Engineer for the intervening period are made simultaneously.

(ii) If the Contractor has reasons to believe that the Authority's Engineer is not discharging its duties and functions in accordance with the provisions of this

Agreement, it may make a written representation to the Authority and seek termination of the appointment of the Authority's Engineer. Upon receipt of such representation, the Authority shall hold a tripartite meeting with the Contractor and the Authority's Engineer and make best efforts for an amicable resolution of the representation. In the event that the appointment of the Authority's Engineer is terminated hereunder, the Authority shall appoint forthwith another Authority's Engineer in accordance with Clause 18.1 and 18.7 (i).

Part IV

Financial Covenants

Article 19

Payments

19.1 Contract Price

(i) The Authority shall make payments to the Contractor for the Works on the basis of the lump sum price accepted by the Authority in consideration of the obligations specified in this Agreement for an amount of INR … … … … (INR … … … … … … … … …) (the "**Contract Price**"), which shall be subject to adjustments in accordance with the provisions of this Agreement. For the avoidance of doubt, the Parties expressly agree that the Contract Price shall not include the cost of Maintenance and Goods and Services Tax (GST), the cost of maintenance shall be paid separately in accordance with the provisions of Clause 19.7 and GST shall be payable at the applicable rates. The Parties further agree that save and except as provided in this Agreement, the Contract Price shall be valid and effective until issue of Completion Certificate.

(ii) The Contract Price includes all duties, taxes (excluding GST, which shall be payable at the applicable rates), royalty, cess, charges, and fees that may be levied in accordance with the laws and regulations in force as on the Base Date on the Contractor's equipment, Plant, Materials and supplies acquired for the purpose of this Agreement and on the services performed under this Agreement. Nothing in this Agreement shall relieve the Contractor from its responsibility to pay any tax including any tax that may be levied in India on profits made by it in respect of this Agreement. The Contract Price also includes the cost of shifting of obstructing Utilities (including all centages as applicable by the Utility owning department except supervision charges) as given in clause 9.2 and Schedule B.

(iii) The Contract Price shall not be adjusted for any change in costs stated in Clause 19.1 (ii) above, except as stated in Clauses 19.10 and 19.17.

(iv) The Contract Price shall not be adjusted to take account of any unforeseen difficulties or costs, unless otherwise provided for in this Agreement.

(v) Unless otherwise stated in this Agreement, the Contract Price covers all the Contractor's obligations for the Works under this Agreement and all things necessary for the Construction and the remedying of any Defects in the Project Highway.

(vi) All payments under this Agreement shall be made in Indian Rupees.

19.2 Advance Payment

(i) The Authority shall make an interest-bearing advance payment (the **"Advance Payment"**) @ **"Bank Rate[3] + 3%"**, equal to 10 % (ten percent) of the Contract Price, exclusively for mobilisation expenses. The Advance Payment for mobilisation expenses shall be made in two instalments each equal to 5% (five percent) of the Contract Price. The second 5% (five percent) mobilization advance would be released after submission of utilization certificate by the Contractor for the first 5% (five per cent) advance already released earlier.

(ii) In addition to above, the Authority shall make an additional interest-bearing Advance Payment against newly purchased key Construction equipment required for the works as per agreed Construction programme and brought to the site, if so requested by the Contractor subject to the same terms and conditions specified for Advance Payment for mobilisation expenses in this Agreement. The maximum of such advance shall be 5% (five per cent) of the Contract Price against e-Bank Guarantee Bank Guarantee (including e-Bank Guarantee) or Insurance Surety Bond. This advance shall be further subject to the condition that:

(a) such new equipment are considered by the Authority's Engineer to be necessary for the works and

(b) these new equipment should be procured in the name of Contractor and is verified by Authority's Engineer to have been brought to site.

The Advance Payment for mobilization expenses and for acquisition of key new Construction equipment would be deemed as interest bearing advance at the applicable interest rate (@"Bank rate + 3%"), to be compounded annually on a reducing balance basis. The interest would be recovered along with the recovery of mobilization Advance Payment as per provision laid down for the mobilization advance recovery.

(iii) The Contractor may apply to the Authority for the first instalment of the Advance Payment at any time after the Appointed Date, along with an irrevocable and unconditional Bank guarantee (including e-Bank Guarantee) from a Bank or Insurance Surety Bond from Insurance Company for an amount equivalent to 110% (one hundred and ten per cent) of such instalment, substantially in the form provided at Annex-III of Schedule-G, to remain effective till the complete and full repayment thereof.

(iv) At any time, after 60 (sixty) days from the Appointed Date, the Contractor may apply to the Authority for the second instalment of the Advance Payment along with an irrevocable and unconditional Bank guarantee (including e-Bank Guarantee) from a Bank or Insurance Surety Bond from Insurance Company for an

[3] Bank Rate shall be as declared by Reserve Bank of India (RBI)

amount equivalent to 110% (one hundred and ten per cent) of such instalment, substantially in the form provided at Annex-III of Schedule-G, to remain effective till the complete and full repayment thereof.

The Contractor has the option of splitting the Bank Guarantee (including e-Bank Guarantee) or Insurance Surety Bond against Advance Payment for mobilization expenses into parts, each not less than 2.75% (two point seven five per cent) of the Contract Price. Each part of the guarantee or Insurance Surety Bond shall remain effective till full repayment of such part advance corresponding to this bank guarantee. Such part of Bank Guarantee (including e-Bank Guarantee) or Insurance Surety Bond shall be returned to the Contractor on recovery under the Agreement of the full amount of such part guarantee within 30 (thirty) days of the said recovery.

(v) The Advance Payment shall be paid by the Authority to the Contractor within 15 (fifteen) days of the receipt of its respective requests in accordance with the provisions of this Clause 19.2.

(vi) The Advance Payment shall be repaid through percentage deductions from the stage payments determined by the Authority's Engineer in accordance with Clause 19.5, as follows:

(a) deductions shall commence in the first Stage Payment Statement;

(b) deductions shall be made at the rate of 15% (fifteen percent) of each Stage Payment Statement until such time as the advance payment has been repaid; provided that the advance payment shall be completely repaid prior to the time when 80% (eighty percent) of the Schedule Construction Period is over;

(c) if total certified stage payments (excluding the Advance Payment and deductions and repayments of retention) does not exceed 20% (twenty percent) of the Contract Price within 50% of the Scheduled Construction Period from the Appointed Date then the Advance Payment including interest shall be recovered by encashment of the Bank Guarantee (including e-Bank Guarantee) or Insurance Surety Bond for the Advance Payment.

(vii) If the Advance Payment has not been fully repaid prior to Termination under Clause 21.7 or Article 23, as the case may be, the whole of the balance then outstanding shall immediately become due and payable by the Contractor to the Authority. Without prejudice to the provisions of Clause 19.2 (vi), in the event of Termination for Contractor Default, the Advance Payment shall be deemed to carry interest @ **"Bank Rate+5%"** per annum from the date of Advance Payment to the date of recovery by encashment of the Bank Guarantee (including e-bank guarantee) or Insurance Surety Bond from Insurance Company for the Advance

Payment. For the avoidance of doubt, the aforesaid interest shall be payable on the unrecovered balance.

19.3 Procedure for estimating the payment for the Works

(i) The Authority shall make interim payments to the Contractor as certified by the Authority's Engineer on completion of a stage, in a length, number or area as specified and valued in accordance with the proportion of the Contract Price assigned to each item and its stage in Schedule-H.

(ii) The Contractor shall base its claim for interim payment for the stages completed till the end of the month for which the payment is claimed, valued in accordance with Clause 19.3 (i), supported with necessary particulars and documents in accordance with this Agreement.

(iii) Any reduction in the Contract Price arising out of Change of Scope or the works withdrawn under Clause 8.3 shall not affect the amounts payable for the items or stage payments thereof which are not affected by such Change of Scope or withdrawal. For avoidance of doubt and by way of illustration, the Parties agree that if the amount assigned to Major Bridges is reduced from Rs. 100 crore to Rs. 80 crore owing to Change of Scope or withdrawal of work, the reduction in payment shall be restricted to relevant payments for Major Bridges only and the payment due in respect of all other stage payments under the item Major Bridges shall not be affected in any manner. The Parties further agree that the adjustments arising out of the aforesaid modifications shall be carried out in a manner that the impact of such modifications is restricted to the said Change of Scope or withdrawal, as the case may be, and does not alter the payments due for and in respect of items or stage payments which do not form part of such Change of Scope or withdrawal.

19.4 Stage Payment Statement for Works

The Contractor shall submit a statement (the **"Stage Payment Statement")**, in 3 (three) copies, by the 7th (seventh) day of the month to the Authority's Engineer in the form set forth in Schedule-O, showing the amount calculated in accordance with Clause 19.3 to which the Contractor considers himself entitled for completed stage(s) of the Works. The Stage Payment Statement shall be accompanied with the progress reports and any other supporting documents. The Contractor shall not submit any claim for payment of incomplete stages of work.

19.5 Stage Payment for Works

(i) Within 10 (ten) days of receipt of the Stage Payment Statement from the Contractor pursuant to Clause 19.4, the Authority's Engineer shall broadly determine the amount due to the Contractor and recommend the release of 90 (ninety) percent of the amount so determined as part payment against the Stage Payment Statement, pending issue of the Interim Payment Certificate by the

Authority's Engineer. Within 10 (ten) days of the receipt of recommendation of the Authority's Engineer, the Authority shall make electronic payment directly to the Contractor's bank account.

(ii) Within 15 (fifteen) days of the receipt of the Stage Payment Statement referred to in Clause 19.4, the Authority's Engineer shall determine and shall deliver to the Authority and the Contractor an IPC certifying the amount due and payable to the Contractor, after adjusting the payments already released to the Contractor against the said statement. For the avoidance of doubt, the Parties agree that the IPC shall specify all the amounts that have been deducted from the Stage Payment Statement and the reasons therefor.

(iii) In cases where there is a difference of opinion as to the value of any stage, the Authority's Engineer's view shall prevail and interim payments shall be made to the Contractor on this basis; provided that the foregoing shall be without prejudice to the Contractor's right to raise a Dispute.

(iv) The Authority's Engineer may, for reasons to be recorded, withhold from payment:

(a) the estimated value of work or obligation that the Contractor has failed to perform in accordance with this Agreement and the Authority's Engineer had notified the Contractor; and

(b) the estimated cost of rectification of work done being not in accordance with this Agreement.

(v) Payment by the Authority shall not be deemed to indicate the Authority's acceptance, approval, consent or satisfaction with the work done.

19.6 Monthly Maintenance Statement of the Project Highway

(i) The Contractor shall submit to the Authority's Engineer a monthly maintenance statement (**"Monthly Maintenance Statement")** in 3 (three) copies by the 7th (seventh) day of each month in the format set forth in Schedule-O for the Maintenance of the Project Highway during the previous month.

(ii) The monthly lump sum amount payable for Maintenance shall be 1/12th (one-twelfth) of the annual cost of Maintenance as specified in Clause 14.1 (i).

19.7 Payment for Maintenance of the Project Highway

(i) Within 15 (fifteen) days of receipt of the Monthly Maintenance Statement from the Contractor pursuant to Clause 19.6, the Authority's Engineer shall verify the Contractor's monthly maintenance statement and certify the amount to be paid to the Contractor taking into account:

(a) Compliance with the Maintenance Requirements; and

(b) reduction for non-compliance with the Maintenance Requirement in accordance with Clause 19.7 (ii).

The Authority's Engineer shall deliver to the Authority an IPC approving or amending the monthly maintenance statement to reflect the amount due to the Contractor in accordance with this Agreement.

(ii) Maintenance shall be measured in units of one kilometre each; provided, however, that payment thereof shall be made in fixed monthly amounts in accordance with this Agreement. If the Maintenance Requirements set forth in Schedule-E are not met, reduction in payments shall be made in accordance with the provisions of Schedule-M. The reductions for non-compliance with the Maintenance Requirements shall be applied on the basis of monthly inspections by the Authority's Engineer.

(iii) The deduction made on account of non-compliance with the Maintenance Requirements shall not be subsequently considered for payment after the compliance is achieved by repair or rectification.

(iv) The Authority shall pay to the Contractor every quarter any amount due under any IPC under this Clause 19.7. The payment shall be made no later than 30 (thirty) days from the date of submission of the last IPC for the relevant quarter.

19.8 Payment of Damages

(i) The Contractor may claim Damages due and payable to it in accordance with the provisions of this Agreement.

(ii) The Authority's Engineer shall issue the IPC within 15 (fifteen) days of the receipt of the claim under Clause 19.8 (i), after making adjustments in accordance with the provisions of this Agreement. The Authority shall pay to the Contractor the amount due under any IPC within a period of 30 (thirty) days from the date of the submission of the claim under this Clause 19.8. In the event of the failure of the Authority to make payment to the Contractor within the specified time, the Authority shall be liable to pay to the Contractor interest thereon and the provisions of Clause 19.9 shall apply *mutatis mutandis* thereto.

19.9 Time of payment and interest

(i) The Authority shall pay to the Contractor any amount due under any payment certificate issued by the Authority's Engineer in accordance with the provisions of this Article 19, or in accordance with any other clause of this Agreement as follows:

(a) payment shall be made no later than 30 (thirty) days from the date of submission of the Stage Payment Statement by the Contractor to the Authority's Engineer for certification in accordance with the provisions of Clause 19.4 for an IPC; provided that, in the event the IPC is not issued

by the Authority's Engineer within the aforesaid period of 30 (thirty) days, the Authority shall pay the amount shown in the Contractor's Stage Payment Statement and any discrepancy therein shall be added to, or deducted from, the next payment certificate issued to the Contractor; and

(b) payment shall be made no later than 30 (thirty) days from the date of submission of the Final Payment Certificate for Works along with the discharge submitted to the Authority's Engineer in accordance with the provisions of Clause 19.15 for certification.

(ii) In the event of the failure of the Authority to make payment to the Contractor within the time period stated in this Clause 19.9, the Authority shall be liable to pay to the Contractor interest @ Bank Rate + 3% per annum, on all sums remaining unpaid from the date on which the same should have been paid, calculated in accordance with the provisions of sub-Clauses (a) and (b) of Clause 19.9 (i) and till the date of actual payment.

19.10 Price adjustment for the Works

(i) ~~The amounts payable to the Contractor for Works shall be adjusted in accordance with the provisions of this Clause 19.10~~

(ii) ~~Subject to the provisions of Clause 19.10 (iii), the amounts payable to the Contractor for Works, shall be adjusted in the IPC issued by the Authority's Engineer for the increase or decrease in the index cost of inputs for the Works, by the addition or subtraction of the amounts determined by the formulae prescribed in Clause 19.10 (iv).~~

(iii) ~~To the extent that full compensation for any increase or decrease in costs to the Contractor is not covered by the provisions of this or other Clauses in this Agreement, the costs and prices payable under this Agreement shall be deemed to include the amounts required to cover the contingency of such other increase or decrease of costs and prices.~~

(iv) ~~The Contract Price shall be adjusted for increase or decrease in rates and price of labour, cement, steel, Plant, machinery and spares, bitumen, fuel and lubricants, and other material inputs in accordance with the principles, procedures and formulae specified below:~~

(a) ~~Price adjustment shall be applied on completion of the specified stage of the respective item of work in accordance with Schedule-H;~~

(b) ~~Adjustment for each item of work/stage shall be made separately;~~

(c) ~~The following expressions and meanings are assigned to the value of the work done:~~

RW= Value of work done for the completion of a stage under the following items of Schedule-H:

i. Road works; and

ii. Other works

BR = Value of work done for the completion of a stage under the items Major Bridges and Structures (Schedule-H)

(d) Price adjustment for changes in cost shall be paid in accordance with the following formulae:

(i) $$VRW = 0.85RW \times [PL \times \frac{L_I - L_0}{L_0} + PA \times \frac{A_I - A_0}{A_0} + PF \times \frac{F_I - F_0}{F_0} + PB \times \frac{B_I - B_0}{B_0} + PM \times \frac{M_I - M_0}{M_0} + PC \times \frac{C_I - C_0}{C_0} + PS \times \frac{S_I - S_0}{S_0}]$$

(ii) $$VBR = 0.85BR \times [PL \times \frac{L_I - L_0}{L_0} + PA \times \frac{A_I - A_0}{A_0} + PF \times \frac{F_I - F_0}{F_0} + PM \times \frac{M_I - M_0}{M_0} + PC \times \frac{C_I - C_0}{C_0} + PS \times \frac{S_I - S_0}{S_0}]$$

Where,

VRW = Increase or decrease in the cost of road works/other works during the period under consideration due to changes in the rates for relevant components as stated in sub-paragraph (e).

VBR = Increase or decrease in the cost of Major Bridges and Structures during the period under consideration due to changes in the rates for relevant components as stated in sub-paragraph (e).

PB, PC, PL, PM, and PS are the percentages of bitumen, cement, labour, other materials, and steel/components (including strands and cables) respectively for the relevant item as stated in sub-paragraph (e).

PA is the percentage of Plant, machinery and spares component for the relevant item as stated in sub-paragraph (e).

PF is the percentage of fuel and lubricants for the relevant items as stated in sub-paragraph (e).

A_0 = The wholesale price index as published by the Ministry of Commerce & Industry, Government of India (hereinafter called "WPI") for "Manufacture of machinery for mining, quarrying and construction" for the month of the Base Date.

A_I = The WPI for construction machinery for the month three months prior to the month to which the IPC relates.

~~B_O = The official retail price of bitumen at the nearest refinery at Koyali] on the Base Date.~~

~~B_t = The official retail price of bitumen at nearest refinery at Koyali, on the first day of the month three months prior to the month to which the IPC relates.~~

~~C_O = The WPI for Ordinary Portland Cement for the month of the Base Date.~~

~~C_t = The WPI for Ordinary Portland Cement for the month three months prior to the month to which the IPC relates.~~

~~F_O = The official retail price of high speed diesel (HSD) oil at the existing consumer pumps of Indian Oil Corporation ("IOC") in the State of Gujarat on the Base Date.~~

~~F_t = The official retail price of HSD at the existing consumer pumps of IOC in the State of Gujarat on the first day of the month three months prior to the month to which the IPC relates.~~

~~L_O = The consumer price index for industrial workers for the circle Ahmedabad in the State of Gujarat, published by Labour Bureau, Ministry of Labour, Government of India, (hereinafter called "CPI") for the month of the Base Date.~~

~~L_t = The CPI for the month three months prior to the month to which the IPC relates.~~

~~M_O = The WPI for all commodities for the month of the Base Date.~~

~~M_t = The WPI for all commodities for the month three months prior to the month to which the IPC relates.~~

~~S_O = The WPI for Mild Steel -Long Products for the month of the Base Date.~~

~~S_t = The WPI for Mild Steel -Long Products for the month three months prior to the month to which the IPC relates.~~

(e) ~~The following percentages shall govern the price adjustment of the Contract Price:~~

Component	Item				
	Road Works				Major Bridges and Structures
	Earthwork, Granular work, and Other works	Bituminous work	Cement Concrete Pavement	Culverts, minor bridges and other structures	
Labour (PL)	20%	20%	20%	15%	15%
Cement (PC)	5%	Nil	20%	15%	15%
Steel (PS)	Nil	Nil	Nil	15%	20%
Bitumen (PB)	Nil	15%	Nil	Nil	Nil
Fuel and lubricants (PF)	10%	10%	10%	10%	10%
Other Materials (PM)	50%	40%	35%	30%	25%
Plant, machinery and spares. (PA)	15%	15%	15%	15%	15%
Total	100%	100%	100%	100%	100%

19.11 Restrictions on price adjustment

Price adjustment shall be due and payable only in respect of the stages of Works for which the Stage Payment Statement has been submitted by the Contractor no later than 30 (thirty) days from the date of the applicable Project Milestone or the Scheduled Completion Date, as the case may be, including any Time Extension granted therefor in accordance with the provisions of this Agreement. For the avoidance of doubt, in the event of submission of any Stage Payment Statement after the period specified herein, price adjustment shall be applicable until the date of the respective Project Milestone or the Scheduled Completion Date, as the case may be.

19.12 Price adjustment for Maintenance of Project Highway

Lump sum payment for Maintenance shall be adjusted every quarter for changes in rates and prices of various inputs in accordance with the formula given below:

$$V = P \times \frac{W_I - W_0}{W_0}$$

Where

V= Increase or decrease in the quarterly lump sum payment

P= Quarterly lump sum payment due to the Contractor after adjusting any reduction in payment for non-compliance of the Maintenance Requirements

W_0= The wholesale price index (all commodities) for the month of the Base Date.

W_I= The wholesale price index (all commodities) for the first day of the quarter under consideration for determining the price adjustment.

19.13 Final Payment Statement

(i) Within 60 (sixty) days after receiving the Completion Certificate under Clause 12.2, the Contractor shall submit to the Authority's Engineer for consideration 6 (six) copies of a Final Payment Statement (the **"Final Payment Statement"**) for Works, with supporting documents showing in detail, in the form prescribed by the Authority's Engineer:

(a) the summary of Contractor's Stage Payment claims for Works as submitted in accordance with Clause 19.4;

(b) the amounts received from the Authority against each claim; and

(c) any further sums which the Contractor considers due to it from the Authority.

If the Authority's Engineer disagrees with or cannot verify any part of the Final Payment Statement, the Contractor shall submit such further information as the Authority's Engineer may reasonably require. The Authority's Engineer shall deliver to the Authority:

i. an IPC for those parts of the Final Payment Statement which are not in dispute, along with a list of disputed items which shall then be settled in accordance with the provisions of Article 26; or

ii. a Final Payment Certificate in accordance with Clause 19.15 if there are no disputed items.

(ii) If the Authority's Engineer does not prescribe the form referred to in Clause 19.13 (i) within 15 (fifteen) of the date of issue of the Completion Certificate, the Contractor shall submit the statement in such form as it deems fit.

19.14 Discharge

Upon submission of the Final Payment Statement for Works under Clause 19.13, the Contractor shall give to the Authority, with a copy to the Authority's Engineer, a written discharge confirming that the total of the Final Payment Statement represents full and final settlement of all monies due to the Contractor in respect of this Agreement for all the Works arising out of this Agreement, except for any monies due to either Party on account of any Defect. Provided that such discharge shall become effective only after the payment due has been made in accordance with the Final Payment Certificate issued pursuant to Clause 19.15.

19.15 Final Payment Certificate

(i) Within 30 (thirty) days after receipt of the Final Payment Statement for Works under Clause 19.13, and the written discharge under Clause 19.14, and there being no disputed items of claim, the Authority's Engineer shall deliver to the

Authority, with a copy to the Contractor, a final payment certificate (the **"Final Payment Certificate")** stating the amount which, in the opinion of the Authority's Engineer, is finally due under this Agreement or otherwise. For the avoidance of doubt, before issuing the Final Payment Certificate, the Authority's Engineer shall ascertain from the Authority all amounts previously paid by the Authority and for all sums to which the Authority is entitled, the balance, if any, due from the Authority to the Contractor or from the Contractor to the Authority, as the case may be.

(ii) The Authority shall, in accordance with the provisions of Clause 19.9, pay to the Contractor the amount which is stated as being finally due in the Final Payment Certificate.

19.16 Final payment statement for Maintenance

(i) Within 30 (thirty) days after completion of the Maintenance Period, the Contractor shall submit to the Authority's Engineer 6 (six) copies of the final payment statement for Maintenance of the Project Highway, with supporting documents showing the details set forth below in the form prescribed by the Authority's Engineer:

(a) the total amount claimed in accordance with clause 19.7 (i) and

(b) any sums which the Contractor considers to be due to it, with supporting documents.

(ii) The Authority's Engineer shall certify final payment within 30 (thirty) days of the receipt of the final payment statement of Maintenance under Clause 19.16 (i), segregating the items of amount payable from the items of amount disallowed. The Authority shall make payment on the basis of the final payment authorised by the Authority's Engineer within a period of 30 (thirty) days of the receipt of the Final Payment Statement from the Authority's Engineer.

(iii) If the Authority's Engineer does not prescribe the form within 15 (fifteen) days of the date of issue of the Completion Certificate, the Contractor shall submit the statement in such form as it deems fit.

19.17 Change in law

(i) If as a result of Change in Law, the Contractor suffers any additional costs in the execution of the Works or in relation to the performance of its other obligations under this Agreement, the Contractor shall, within 15 (fifteen) days from the date it becomes reasonably aware of such addition in cost, notify the Authority with a copy to the Authority's Engineer of such additional cost due to Change in Law.

(ii) If as a result of Change in Law, the Contractor benefits from any reduction in costs for the execution of this Agreement or in accordance with the provisions of this Agreement, either Party shall, within 15 (fifteen) days from the date it becomes reasonably aware of such reduction in cost, notify the other Party with a copy to the Authority's Engineer of such reduction in cost due to Change in Law.

(iii) The Authority's Engineer shall, within 15 (fifteen) days from the date of receipt of the notice from the Contractor or the Authority, determine any addition or reduction to the Contract Price, as the case may be, due to the Change in Law.

19.18 Correction of Interim Payment Certificates

The Authority's Engineer may by an Interim Payment Certificate make any correction or modification in any previous Interim Payment Certificate issued by the Authority's Engineer.

19.19 Authority's claims

If the Authority considers itself to be entitled to any payment from the Contractor under any Clause of this Agreement, it shall give notice and particulars to the Contractor 20 (twenty) days before making the recovery from any amount due to the Contractor, and shall take into consideration the representation, if any, made by the Contractor in this behalf, before making such recovery.

19.20 Bonus for early completion

In the event that the Project Completion Date occurs prior to the Scheduled Completion Date, the Contractor shall be entitled to receive a payment of bonus equivalent to 0.03% (zero point zero three per cent) of the Contract Price for each day by which the Project Completion Date precedes the Scheduled Completion Date, but subject to a maximum of 5% (five per cent) of the Contract Price. Provided, however, that the payment of bonus, if any, shall be made only after the issue of the Completion Certificate. For the avoidance of the doubt, the Parties agree that for the purpose of determining the bonus payable hereunder, the works shall always be deemed to be as specified in this Contract Agreement but excluding the works deemed to be deleted from the scope of work under clause 8.3 of this Contract Agreement and the Contract Price shall always be deemed to be the amount specified in Clause 19.1 (i) after excluding the Contract Price of the Works deemed to be deleted from the Scope of Work under clause 8.3 of this Contract Agreement, and shall exclude any revision thereof for any reason. The Parties also agree that bonus shall be payable only if each work for which Time Extension has been granted is completed within respective Extended Time.

Article 20

Insurance

20.1 Insurance for Works and Maintenance

(i) The Contractor shall effect and maintain at its own cost the insurances specified in Schedule-P and as per the requirements under the Applicable Laws.

(ii) Subject to the provisions of Clause 21.6, the Authority and the Contractor shall, in accordance with its obligations as provided for in this Agreement, be liable to bear the cost of any loss or damage that does not fall within the scope of this Article 20 or cannot be recovered from the insurers.

(iii) Subject to the exceptions specified in Clause 20.1 (iv) below, the Contractor shall, save and except as provided for in this Agreement, fully indemnify, hold harmless and defend the Authority from and against any and all losses, damages, costs, charges and/or claims with respect to:

(a) the death of or injury to any person; or

(b) the loss of or damage to any property (other than the Works);

that may arise out of or in consequence of any breach by the Contractor of this Agreement during the execution of the Works or the remedying of any Defects therein.

(iv) Notwithstanding anything stated above in Clause 20.1 (iii), the Authority shall fully indemnify the Contractor from and against any and all losses, damages, costs, charges, proceedings and/or claims arising out of or with respect to:

(a) the use or occupation of land or any part thereof by the Authority;

(b) the right of the Authority to execute the Works, or any part thereof, on, over, under, in or through any land;

(c) the damage to property which is the unavoidable result of the execution and completion of the Works, or the remedying of any Defects therein, in accordance with this Agreement; and

(d) the death of or injury to persons or loss of or damage to property resulting from any act or neglect of the Authority, its agents, servants or other contractors, not being employed by the Contractor.

Provided that, in the event of any injury or damage as a result of the contributory negligence of the Contractor, the Authority shall be liable to indemnify the Contractor from and against any and all losses, damages, costs, charges, proceedings and/or claims to the extent as may be proportionately determined to be the liability of the Authority, its servants or agents or other contractors not associated with the Contractor in such injury or damage.

(v) Without prejudice to the obligations of the Parties as specified under Clauses 20.1 (iii) and 20.1 (iv), the Contractor shall maintain or effect such third party insurances as may be required under the Applicable Laws.

(vi) The Contractor shall provide to the Authority, within 30 days of the Appointed Date, evidence of professional liability insurance maintained by its Design Director and/or consultants to cover the risk of professional negligence in the design of Works. The professional liability coverage shall be for a sum of not less than [3% (three per cent)] of the Contract Price and shall be maintained until the end of the Defects Liability Period.

20.2 Notice to the Authority

No later than 15 (fifteen) days after the date of this Agreement, the Contractor shall by notice furnish to the Authority, in reasonable detail, information in respect of the insurances that it proposes to effect and maintain in accordance with this Article 20. Within 15 (fifteen) days of receipt of such notice, the Authority may require the Contractor to effect and maintain such other insurances as may be necessary pursuant hereto, and in the event of any difference or disagreement relating to any such insurance, the Dispute Resolution Procedure shall apply.

20.3 Evidence of Insurance Cover

(i) All insurances obtained by the Contractor in accordance with this Article 20 shall be maintained with insurers on terms consistent with Good Industry Practice. Within 10 (ten) days from the Appointed Date, the Contractor shall furnish to the Authority notarised true copies of the certificate(s) of insurance, copies of insurance policies and premia payment receipts in respect of such insurance, and no such insurance shall be cancelled, modified, or allowed to expire or lapse until the expiration of at least 45 (forty-five) days after notice of such proposed cancellation, modification or non-renewal has been delivered by the Contractor to the Authority. The Contractor shall act in accordance with the directions of the Authority. Provided that the Contractor shall produce to the Authority the insurance policies in force and the receipts for payment of the current premia.

(ii) The Contractor shall ensure the adequacy of the insurances at all times in accordance with the provisions of this Agreement.

20.4 Remedy for failure to insure

If the Contractor shall fail to effect and keep in force all insurances for which it is responsible pursuant hereto, the Authority shall have the option to either keep in force any such insurances, and pay such premia and recover the costs thereof from the Contractor, or in the event of computation of a Termination Payment, treat an amount equal to the Insurance Cover as deemed to have been received by the Contractor.

20.5 Waiver of subrogation

All insurance policies in respect of the insurance obtained by the Contractor pursuant to this Article 20 shall include a waiver of any and all rights of subrogation or recovery of the insurers thereunder against, inter alia, the Authority, and its assigns, successors, undertakings and their subsidiaries, Affiliates, employees, insurers and underwriters, and of any right of the insurers to any set-off or counterclaim or any other deduction, whether by attachment or otherwise, in respect of any liability of any such person insured under any such policy or in any way connected with any loss, liability or obligation covered by such policies of insurance.

20.6 Contractor's waiver

The Contractor hereby further releases, assigns and waives any and all rights of subrogation or recovery against, inter alia, the Authority and its assigns, undertakings and their subsidiaries, Affiliates, employees, successors, insurers and underwriters, which the Contractor may otherwise have or acquire in or from or in any way connected with any loss, liability or obligation covered by policies of insurance maintained or required to be maintained by the Contractor pursuant to this Agreement (other than third party liability insurance policies) or because of deductible clauses in or inadequacy of limits of any such policies of insurance.

20.7 Cross liabilities

Any such insurance maintained or effected in pursuance of this Article 20 shall include a cross-liability clause such that the insurance shall apply to the Contractor and to the Authority as separately insured.

20.8 Accident or injury to workmen

Notwithstanding anything stated in this Agreement, it is hereby expressly agreed between the Parties that the Authority shall not be liable for or in respect of any damages or compensation payable to any workman or other person in the employment of the Contractor or Sub-contractor, save and except as for death or injury resulting from any act, omission or wilful default of the Authority, its agents or servants. The Contractor shall indemnify and keep indemnified the Authority from and against all such claims, proceedings, damages, costs, charges, and expenses whatsoever in respect of the above save and except for those acts, omissions or wilful defaults for which the Authority shall be liable.

20.9 Insurance against accident to workmen

The Contractor shall effect and maintain during the Agreement such insurances as may be required to insure the Contractor's personnel and any other persons employed by it on the Project Highway from and against any liability incurred in pursuance of this Article 20. Provided that for the purposes of this Clause 20.9, the Contractor's personnel/any person employed by the Contractor shall include the Sub-contractor and its personnel. It is further provided that, in respect of any persons employed by any Sub-contractor, the Contractor's obligations to insure as aforesaid under this Clause 20.9 shall be discharged if the Sub-contractor shall have insured against any liability in respect of such persons in

such manner that the Authority is indemnified under the policy. The Contractor shall require such Sub-contractor to produce before the Authority, when required, such policy of insurance and the receipt for payment of the current premium within 10 (ten) days of such demand being made by the Authority.

20.10 Application of insurance proceeds

The proceeds from all insurance claims, except for life and injury, shall be applied for any necessary repair, reconstruction, reinstatement, replacement, improvement, delivery or installation of the Project Highway and the provisions of this Agreement in respect of construction of works shall apply *mutatis mutandis* to the works undertaken out of the proceeds of insurance.

20.11 Compliance with policy conditions

Each Party hereby expressly agrees to fully indemnify the other Party from and against all losses and claims arising from its failure to comply with conditions imposed by the insurance policies effected in accordance with this Agreement.

20.12 General Requirements of Insurance Policies

The Contractor must:

(a) immediately deposit copies of the policies or certificates of any insurance which it is required to effect under the Contract, together with receipts for the premiums;

(b) effect all insurances for which the Contractor is responsible with an insurer approved by the Authority;

(c) make no material changes to the terms of any insurance without the Authority's approval;

(d) in all respects comply with any conditions stipulated in the insurance policies which the Contractor is required to effect under the Agreement or which the Authority has effected in relation to the Facility and notified to the Contractor; and shall provide all assistance to the Authority in the application for, and finalization of, such comprehensive insurance package;

(e) regardless of the extent of settlement of claims by the underwriters or the time taken for settlement of claims, the Contractor shall make good any loss, or damage at its own cost promptly;

(f) provide all assistance to the Authority in the application for, and finalization of, such comprehensive insurance package;

(g) pay the Contractor's share of the insurance premiums for insurance premiums allocated under such comprehensive insurance package policy to the insurances directly to the insurance provider promptly on demand. In case the Contractor fails to make such payment in time, the Authority

may elect to pay the Contractor's share and adjust it against amounts payable to the Contractor under this Agreement;

(h) in the case of occurrence of any event leading to an insurance claim, promptly follow the procedures specified by the insurance provider, and provide full cooperation and access to the insurance provider or its representative, to settle the claim expeditiously;

(i) require all the Sub-Contractors providing equipment and materials or services to the Contractor or the Authority to obtain, maintain and keep in force during the time in which they are involved in the performance of the Works hereunder insurance coverage consistent with the Contractor's insurance obligations hereunder and the Contractor shall also be responsible for fulfillment of this requirement; and

(j) the required insurance coverage and the Contractor's obligations-referred to shall in no way affect or limit the Contractor's liability with respect to its performance of the Works. Nothing in this Section shall limit or relieve the Contractor of its liabilities and obligations under this Agreement.

Part V

Force Majeure and Termination

Article 21

Force Majeure

21.1 Force Majeure

As used in this Agreement, the expression "**Force Majeure**" or "**Force Majeure Event**" shall mean occurrence in India of any or all of Non-Political Event, Indirect Political Event and Political Event, as defined in Clauses 21.2, 21.3 and 21.4 respectively, if it affects the performance by the Party claiming the benefit of Force Majeure (the "**Affected Party**") of its obligations under this Agreement and which act or event (i) is beyond the reasonable control of the Affected Party, and (ii) the Affected Party could not have prevented or overcome by exercise of due diligence and following Good Industry Practice, and (iii) has Material Adverse Effect on the Affected Party.

21.2 Non-Political Event

A Non-Political Event shall mean one or more of the following acts or events:

(a) act of God, epidemic, extremely adverse weather conditions, lightning, earthquake, landslide, cyclone, flood, volcanic eruption, chemical or radioactive contamination or ionising radiation, fire or explosion (to the extent of contamination or radiation or fire or explosion originating from a source external to the Site);

(b) strikes or boycotts (other than those involving the Contractor, Sub-contractors or their respective employees/ representatives, or attributable to any act or omission of any of them) interrupting supplies and services to the Project Highway for a continuous period of 24 (twenty-four) hours and an aggregate period exceeding 10 (ten) days in an Accounting Year, and not being an Indirect Political Event set forth in Clause 21.3;

(c) any failure or delay of a Sub-contractor but only to the extent caused by another Non-Political Event;

(d) any judgement or order of any court of competent jurisdiction or statutory authority made against the Contractor in any proceedings for reasons other than (i) failure of the Contractor to comply with any Applicable Law or Applicable Permit, or (ii) on account of breach of any Applicable Law or Applicable Permit or of any contract, or (iii) enforcement of this Agreement, or (iv) exercise of any of its rights under this Agreement by the Authority;

(e) the discovery of geological conditions, toxic contamination or archaeological remains on the Site that could not reasonably have been expected to be discovered through a site inspection; or

(f) any event or circumstances of a nature analogous to any of the foregoing.

21.3 Indirect Political Event

An Indirect Political Event shall mean one or more of the following acts or events:

(a) an act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, riot, insurrection, terrorist or military action, civil commotion or politically motivated sabotage;

(b) industry-wide or State-wide strikes or industrial action for a continuous period of 24 (twenty-four) hours and exceeding an aggregate period of 10 (ten) days in an Accounting Year;

(c) any civil commotion, boycott or political agitation which prevents construction of the Project Highway by the Contractor for an aggregate period exceeding 10 (ten) days in an Accounting Year;

(d) any failure or delay of a Sub-contractor to the extent caused by any Indirect Political Event;

(e) any Indirect Political Event that causes a Non-Political Event; or

(f) any event or circumstances of a nature analogous to any of the foregoing.

21.4 Political Event

A Political Event shall mean one or more of the following acts or events by or on account of any Government Instrumentality:

(a) Change in Law, only if consequences thereof cannot be dealt with under and in accordance with the provisions of Clause 19.17;

(b) compulsory acquisition in national interest or expropriation of any Project Assets or rights of the Contractor or of the Sub-Contractors;

(c) unlawful or unauthorised or without jurisdiction revocation of, or refusal to renew or grant without valid cause, any clearance, licence, permit, authorisation, no objection certificate, consent, approval or exemption required by the Contractor or any of the Sub-contractors to perform their respective obligations under this Agreement; provided that such delay, modification, denial, refusal or revocation did not result from the Contractor's or any Sub-contractor's inability or failure to comply with any condition relating to grant, maintenance or renewal of such clearance, licence, authorisation, no objection certificate, exemption, consent, approval or permit;

(d) any failure or delay of a Sub-contractor but only to the extent caused by another Political Event; or

(e) any event or circumstances of a nature analogous to any of the foregoing.

21.5 Duty to report Force Majeure Event

(i) Upon occurrence of a Force Majeure Event, the Affected Party shall by notice report such occurrence to the other Party forthwith. Any notice pursuant hereto shall include full particulars of:

(a) the nature and extent of each Force Majeure Event which is the subject of any claim for relief under this Article 21 with evidence in support thereof;

(b) the estimated duration and the effect or probable effect which such Force Majeure Event is having or will have on the Affected Party's performance of its obligations under this Agreement;

(c) the measures which the Affected Party is taking or proposes to take for alleviating the impact of such Force Majeure Event; and

(d) any other information relevant to the Affected Party's claim.

(ii) The Affected Party shall not be entitled to any relief for or in respect of a Force Majeure Event unless it shall have notified the other Party of the occurrence of the Force Majeure Event as soon as reasonably practicable, and in any event no later than 10 (ten) days after the Affected Party knew, or ought reasonably to have known, of its occurrence, and shall have given particulars of the probable material effect that the Force Majeure Event is likely to have on the performance of its obligations under this Agreement.

(iii) For so long as the Affected Party continues to claim to be materially affected by such Force Majeure Event, it shall provide the other Party with regular (and not less than weekly) reports containing information as required by Clause 21.5 (i), and such other information as the other Party may reasonably request the Affected Party to provide.

21.6 Effect of Force Majeure Event on the Agreement

(i) Upon the occurrence of any Force Majeure after the Appointed Date, the costs incurred and attributable to such event and directly relating to this Agreement (the "**Force Majeure costs**") shall be allocated and paid as follows:

(a) upon occurrence of a Non-Political Event, the Parties shall bear their respective Force Majeure costs and neither Party shall be required to pay to the other Party any costs thereof;

(b) upon occurrence of an Indirect Political Event, all Force Majeure costs attributable to such Indirect Political Event, and not exceeding the Insurance Cover for such Indirect Political Event, shall be borne by the Contractor, and to the extent Force Majeure costs exceed such Insurance Cover, one half of such excess amount shall be reimbursed by the Authority to the Contractor for the Force Majeure events; and

(c) upon occurrence of a Political Event, all Force Majeure costs attributable to such Political Event shall be reimbursed by the Authority to the Contractor.

(d) For the avoidance of doubt, Force Majeure costs may include costs directly attributable to the Force Majeure Event, but shall not include debt repayment obligations, if any, of the Contractor.

(ii) Save and except as expressly provided in this Article 21, neither Party shall be liable in any manner whatsoever to the other Party in respect of any loss, damage, cost, expense, claims, demands and proceedings relating to or arising out of occurrence or existence of any Force Majeure Event or exercise of any right pursuant hereto.

(iii) Upon the occurrence of any Force Majeure Event during the Construction Period, the Project Completion Schedule for and in respect of the affected Works shall be extended on a day for day basis for such period as performance of the Contractor's obligations is affected on account of the Force Majeure Event or its subsisting effects.

21.7 Termination Notice for Force Majeure Event

(i) If a Force Majeure Event subsists for a period of 60 (sixty) days or more within a continuous period of 120 (one hundred and twenty) days, either Party may in its discretion terminate this Agreement by issuing a Termination Notice to the other Party without being liable in any manner whatsoever, save as provided in this Article 21, and upon issue of such Termination Notice, this Agreement shall, notwithstanding anything to the contrary contained herein, stand terminated forthwith; provided that before issuing such Termination Notice, the Party intending to issue the Termination Notice shall inform the other Party of such intention and grant 15 (fifteen) days' time to make a representation, and may after the expiry of such 15 (fifteen) days period, whether or not it is in receipt of such representation, in its sole discretion issue the Termination Notice.

21.8 Termination Payment for Force Majeure Event

(i) In the event of this Agreement being terminated on account of a Non-Political Event, the Termination Payment shall be an amount equal to the sum payable under Clause 23.5.

Provided that in the event Termination occurs during the Maintenance Period, the Authority's Engineer shall only determine the value of Works associated with Maintenance.

(ii) If Termination is on account of an Indirect Political Event, the Termination Payment shall include:

(a) any sums due and payable under Clause 23.5; and

(b) the reasonable cost, as determined by the Authority's Engineer, of the Plant and Materials procured by the Contractor and transferred to the Authority for use in Construction or Maintenance, only if such Plant and Materials are in conformity with the Specifications and Standards;

Provided that in the event Termination occurs during the Maintenance Period, the Authority's Engineer shall only determine the value of Works associated with Maintenance.

(iii) If Termination is on account of a Political Event, the Authority shall make a Termination Payment to the Contractor in an amount that would be payable under Clause 23.6 (ii) as if it were an Authority Default.

21.9 Dispute resolution

In the event that the Parties are unable to agree in good faith about the occurrence or existence of a Force Majeure Event, such Dispute shall be finally settled in accordance with the Dispute Resolution Procedure; provided that the burden of proof as to the occurrence or existence of such Force Majeure Event shall be upon the Party claiming relief and/ or excuse on account of such Force Majeure Event.

21.10 Excuse from performance of obligations

If the Affected Party is rendered wholly or partially unable to perform its obligations under this Agreement because of a Force Majeure Event, it shall be excused from performance of such of its obligations to the extent it is unable to perform on account of such Force Majeure Event; provided that:

(a) the suspension of performance shall be of no greater scope and of no longer duration than is reasonably required by the Force Majeure Event;

(b) the Affected Party shall make all reasonable efforts to mitigate or limit damage to the other Party arising out of or as a result of the existence or occurrence of such Force Majeure Event and to cure the same with due diligence; and

(c) when the Affected Party is able to resume performance of its obligations under this Agreement, it shall give to the other Party notice to that effect and shall promptly resume performance of its obligations hereunder.

Article 22

Suspension of Contractor's Rights

22.1 Suspension upon Contractor Default

Upon occurrence of a Contractor Default, the Authority shall be entitled, without prejudice to its other rights and remedies under this Agreement including its rights of Termination hereunder, to (i) suspend carrying out of the Works or Maintenance or any part thereof, and (ii) carry out such Works or Maintenance itself or authorise any other person to exercise or perform the same on its behalf during such suspension (the "**Suspension**"). Suspension hereunder shall be effective forthwith upon issue of notice by the Authority to the Contractor and may extend up to a period not exceeding 90 (ninety) days from the date of issue of such notice.

22.2 Authority to act on behalf of Contractor

During the period of Suspension hereunder, all rights and liabilities vested in the Contractor in accordance with the provisions of this Agreement shall continue to vest therein and all things done or actions taken, including expenditure incurred by the Authority for discharging the obligations of the Contractor under and in accordance with this Agreement shall be deemed to have been done or taken for and on behalf of the Contractor and the Contractor undertakes to indemnify the Authority for all costs incurred during such period. The Contractor hereby licences and sub-licences respectively, the Authority or any other person authorised by it under Clause 22.1 to use during Suspension, all Intellectual Property belonging to or licensed to the Contractor with respect to the Project Highway and its design, engineering, construction and maintenance, and which is used or created by the Contractor in performing its obligations under the Agreement.

22.3 Revocation of Suspension

(i) In the event that the Authority shall have rectified or removed the cause of Suspension within a period not exceeding 60 (sixty) days from the date of Suspension, it shall revoke the Suspension forthwith and restore all rights of the Contractor under this Agreement. For the avoidance of doubt, the Parties expressly agree that the Authority may, in its discretion, revoke the Suspension at any time, whether or not the cause of Suspension has been rectified or removed hereunder.

(ii) Upon the Contractor having cured the Contractor Default within a period not exceeding 60 (sixty) days from the date of Suspension, the Authority shall revoke the Suspension forthwith and restore all rights of the Contractor under this Agreement.

22.4 Termination

(i) At any time during the period of Suspension under this Article 22, the Contractor may by notice require the Authority to revoke the Suspension and issue a

Termination Notice. The Authority shall, within 15 (fifteen) days of receipt of such notice, terminate this Agreement under and in accordance with Article 23.

(ii) Notwithstanding anything to the contrary contained in this Agreement, in the event that Suspension is not revoked within 90 (ninety) days from the date of Suspension hereunder, the Agreement shall, upon expiry of the aforesaid period, be deemed to have been terminated by mutual agreement of the Parties and all the provisions of this Agreement shall apply, *mutatis mutandis*, to such Termination as if a Termination Notice had been issued by the Authority upon occurrence of a Contractor Default.

Article 23

Termination

23.1 Termination for Contractor Default

(i) Save as otherwise provided in this Agreement, in the event that any of the defaults specified below shall have occurred, and the Contractor fails to cure the default within the Cure Period set forth below, or where no Cure Period is specified, then within a Cure Period of 60 (sixty) days, the Contractor shall be deemed to be in default of this Agreement (the "**Contractor Default**"), unless the default has occurred solely as a result of any breach of this Agreement by the Authority or due to Force Majeure. The defaults referred to herein shall include:

(a) the Contractor fails to provide, extend or replenish, as the case may be, the Performance Security in accordance with this Agreement;

(b) after the replenishment or furnishing of fresh Performance Security in accordance with Clause 7.3, the Contractor fails to cure, within a Cure Period of 30 (thirty) days, the Contractor Default for which the whole or part of the Performance Security was appropriated;

(c) the Contractor does not achieve the latest outstanding Project Milestone due in accordance with the provisions of Schedule-J, subject to any Time Extension, and continues to be in default for 45 (forty five) days;

(d) the Contractor abandons or manifests intention to abandon the construction or Maintenance of the Project Highway without the prior written consent of the Authority;

(e) the Contractor fails to proceed with the Works in accordance with the provisions of Clause 10.1 or stops Works and/or the Maintenance for 30 (thirty) days without reflecting the same in the current programme and such stoppage has not been authorised by the Authority's Engineer;

(f) the Project Completion Date does not occur within the period specified in Schedule-J for the Scheduled Completion Date, or any extension thereof;

(g) the Contractor fails to rectify any Defect, the non-rectification of which shall have a Material Adverse Effect on the Project, within the time specified in this Agreement or as directed by the Authority's Engineer;

(h) the Contractor subcontracts the Works or any part thereof in violation of this Agreement or assigns any part of the Works or the Maintenance without the prior approval of the Authority;

(i) the Contractor creates any Encumbrance in breach of this Agreement;

(j) an execution levied on any of the assets of the Contractor has caused a Material Adverse Effect;

(k) the Contractor is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for the Contractor or for the whole or material part of its assets that has a material bearing on the Project;

(l) the Contractor has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the Authority, a Material Adverse Effect;

(m) a resolution for winding up or insolvency of the Contractor is passed, or any petition for winding up or insolvency of the Contractor is admitted by a court of competent jurisdiction and a provisional liquidator or receiver or interim resolution professional, as the case may be, is appointed and such order has not been set aside within 90 (ninety) days of the date thereof or the Contractor is ordered to be wound up by court except for the purpose of amalgamation or reconstruction; provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of the Contractor are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of the Contractor under this Agreement; and provided that:

i. the amalgamated or reconstructed entity has the capability and experience necessary for the performance of its obligations under this Agreement; and

ii. the amalgamated or reconstructed entity has the financial standing to perform its obligations under this Agreement and has a credit worthiness at least as good as that of the Contractor as at the Appointed Date;

(n) any representation or warranty of the Contractor herein contained which is, as of the date hereof, found to be false or the Contractor is at any time hereafter found to be in breach or non-compliance thereof;

(o) the Contractor submits to the Authority any statement, notice or other document, in written or electronic form, which has a material effect on the Authority's rights, obligations or interests and which is false in material particulars;

(p) the Contractor has failed to fulfil any obligation, for which failure Termination has been specified in this Agreement; or

(q) the Contractor commits a default in complying with any other provision of this Agreement if such a default causes a Material Adverse Effect on the Project or on the Authority.

(r) gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward:

i. for doing or forbearing to do any action in relation to the Contract, or

ii. for showing or forbearing to show favour or disfavour to any person in relation to the Contract,

or if any of the Contractor's personnel, agents or subcontractors gives or offers to give (directly or indirectly) to any person any such inducement or reward as is described in this sub-paragraph (s). However, lawful inducements and rewards to Contractor's Personnel shall not entitle termination.

(ii) Without prejudice to any other rights or remedies which the Authority may have under this Agreement, upon occurrence of a Contractor Default, the Authority shall be entitled to terminate this Agreement by issuing a Termination Notice to the Contractor; provided that before issuing the Termination Notice, the Authority shall by a notice inform the Contractor of its intention to issue such Termination Notice and grant 15 (fifteen) days to the Contractor to make a representation, and may after the expiry of such 15 (fifteen) days, whether or not it is in receipt of such representation, issue the Termination Notice.

(iii) The following shall apply in respect of cure of any of the defaults and/ or breaches of the Agreement:

(a) The Cure Period shall commence from the date of the notice by the Authority to the Contractor asking the latter to cure the breach or default specified in such notice;

(b) The Cure Period provided in the Agreement shall not relieve the Contractor from liability for Damages caused by its breach or default;

(c) The Cure Period shall not in any way be extended by any period of suspension under the Agreement;

(d) If the cure of any breach by the Contractor requires any reasonable action by the Contractor that must be approved by the Authority hereunder the applicable Cure Period (and any liability of the Contractor for damages incurred) shall be extended by the period taken by the Authority to accord its required approval.

(iv) After termination of this Agreement for Contractor Default, the Authority may complete the Works and/or arrange for any other entities to do so. The Authority and these entities may then use any Materials, Plant and equipment, Contractor's documents and other design documents made by or on behalf of the Contractor.

23.2 Termination for Authority Default

(i) In the event that any of the defaults specified below shall have occurred, and the Authority fails to cure such default within a Cure Period of 90 (ninety) days or such longer period as has been expressly provided in this Agreement, the Authority shall be deemed to be in default of this Agreement (the "**Authority Default**") unless the default has occurred as a result of any breach of this

Agreement by the Contractor or due to Force Majeure. The defaults referred to herein shall include:

(a) the Authority commits a material default in complying with any of the provisions of this Agreement and such default has a Material Adverse Effect on the Contractor;

(b) the Authority has failed to make payment of any amount due and payable to the Contractor within the period specified in this Agreement;

(c) the Authority has failed to provide, within a period of 180 (one hundred and eighty) days from the Appointed Date, the environmental clearances required for construction of the Project Highway;

(d) the Authority becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with its creditors, or carries on business under a receiver, trustee or manager for the benefit of its creditors, or if any act is done or event occurs which (under Applicable Laws) has a similar effect;

(e) the Authority repudiates this Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by this Agreement;

(f) the Authority's Engineer fails to issue the relevant Interim Payment Certificate within 60 (sixty) days after receiving a statement and supporting documents; or

(g) the whole work is suspended by Authority beyond 120 (one hundred twenty) days for any reason which is not attributed to the Contractor.

(ii) Without prejudice to any other right or remedy which the Contractor may have under this Agreement, upon occurrence of an Authority Default, the Contractor shall be entitled to terminate this Agreement by issuing a Termination Notice to the Authority; provided that before issuing the Termination Notice, the Contractor shall by a notice inform the Authority of its intention to issue the Termination Notice and grant 15 (fifteen) days to the Authority to make a representation, and may after the expiry of such 15 (fifteen) days, whether or not it is in receipt of such representation, issue the Termination Notice.

If on the consideration of the Authority's representation or otherwise, the contractor does not issue the Termination Notice on such 15th (fifteenth) day and prefers to continue with the project, it is deemed that the cause of action of the Termination Notice has been condoned by the Contractor and he would be deemed to have waived any claim and forfeited any right to any other remedy on that count or in relation to such action or omission.

23.3 Termination for Authority's convenience

Notwithstanding anything stated hereinabove, the Authority may terminate this Agreement for convenience. The termination shall take effect 30 (thirty) days from the date of notice provided to the Contractor.

23.4 Requirements after Termination

Upon Termination of this Agreement in accordance with the terms of this Article 23, the Contractor shall comply with and conform to the following:

(a) deliver all relevant records, reports, Intellectual Property and other licences pertaining to the Works, Maintenance, other design documents;

(b) transfer and/or deliver all Applicable Permits to the extent permissible under Applicable Laws; and

(c) vacate the Site within 15 (fifteen) days.

23.5 Valuation of Unpaid Works

(i) Within a period of 45 (forty-five) days after Termination under Clause 23.1, 23.2 or 23.3, as the case may be, has taken effect, the Authority's Engineer shall proceed in accordance with Clause 18.5 to determine as follows the valuation of unpaid Works (the **"Valuation of Unpaid Works"**):

(a) value of the completed stage of the Works, less payments already made;

(b) reasonable value of the partially completed stages of works as on the date of Termination, only if such works conform with the Specifications and Standards; and

(c) value of Maintenance, if any, for completed months, less payments already made, and shall adjust from the sum thereof (i) any other amounts payable or recoverable, as the case may be, in accordance with the provisions of this Agreement; and (ii) all taxes due to be deducted at source.

(ii) The Valuation of Unpaid Works shall be communicated to the Authority, with a copy to the Contractor, within a period of 30 (thirty) days from the date of Termination.

23.6 Termination Payment

(i) Upon Termination on account of Contractor's Default under Clause 23.1, the Authority shall:

(a) encash and appropriate the Performance Security, Additional Performance Security if any and Retention Money, or in the event the Contractor has failed to replenish or extend the Performance Security

and Additional Performance Security if any, claim the amount stipulated in Clause 7.1, as agreed pre-determined compensation to the Authority for any losses, delays and cost of completing the Works and Maintenance, if any;

(b) encash and appropriate the Bank Guarantee, if any, for and in respect of the outstanding Advance Payment and interest thereon; and

(c) pay to the Contractor, by way of Termination Payment, an amount equivalent to the Valuation of Unpaid Works after adjusting any other sums payable or recoverable, as the case may be, in accordance with the provisions of this Agreement.

(ii) Upon Termination on account of an Authority Default under Clause 23.2 or for Authority's convenience under Clause 23.3, the Authority shall:

(a) return the Performance Security, Additional Performance Security and Retention Money forthwith;

(b) encash and appropriate the bank guarantee, if any, for and in respect of the outstanding Advance Payment; and

(c) pay to the Contractor, by way of Termination Payment, an amount equal to:

i. Valuation of Unpaid Works;

ii. the reasonable cost of temporary works, as determined by the Authority's Engineer; and

iii. 10% (ten per cent) of the cost of the Works and Maintenance that are not commenced or not completed,

and shall adjust from the sum thereof (i) any other amounts payable or recoverable, as the case may be, in accordance with the provisions of this Agreement, and (ii) all taxes due to be deducted at source.

(iii) Termination Payment shall become due and payable to the Contractor within 30 (thirty) days of a demand being made by the Contractor to the Authority with the necessary particulars, and in the event of any delay, the Authority shall pay interest at Bank Rate + 3% per annum, on the amount of Termination Payment remaining unpaid; provided that such delay shall not exceed 90 (ninety) days. For the avoidance of doubt, it is expressly agreed that Termination Payment shall constitute full discharge by the Authority of its payment obligations in respect thereof hereunder.

(iv) The Contractor expressly agrees that Termination Payment under this Article 23 shall constitute a full and final settlement of all claims of the Contractor on account of Termination of this Agreement and that it shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

23.7 Other rights and obligations of the Parties

Upon Termination for any reason whatsoever:

(a) property and ownership in all Materials, Plant and Works and the Project Highway shall, as between the Contractor and the Authority, vest in the Authority in whole; provided that the foregoing shall be without prejudice to Clause 23.6;

(b) risk of loss or damage to any Materials, Plant or Works and the care and custody thereof shall pass from the Contractor to the Authority; and

(c) the Authority shall be entitled to restrain the Contractor and any person claiming through or under the Agreement from entering upon the Site or any part of the Project, which have not been vested in the Authority in accordance with the provisions of this Agreement.

23.8 Survival of rights

Notwithstanding anything to the contrary contained in this Agreement any Termination pursuant to the provisions of this Agreement shall be without prejudice to the accrued rights of either Party including its right to claim and recover money damages, insurance proceeds, security deposits, and other rights and remedies, which it may have in law or Agreement. All rights and obligations of either Party under this Agreement, including Termination Payments, shall survive the Termination to the extent such survival is necessary for giving effect to such rights and obligations.

23.9 Foreclosure with mutual consent

(i) Without prejudice to any provision of this Agreement, the Authority and Contractor may foreclose this Agreement by mutual consent in circumstances which does not constitute either party's default without any liability or consequential future liability for either party.

(ii) Should a Party intend to foreclose this Agreement by mutual consent, the intending Party shall issue a notice to the other Party and upon issuance of such notice, the other Party may within 15 days from receipt of such notice either agree to such foreclosure or raise objection(s) to the same by intimating either of the two possible positions to the intending Party in writing.

(iii) In either case of the other Party agreeing to the proposed foreclosure or otherwise, the Parties may negotiate the proposed foreclosure and sign a Supplementary Agreement for foreclosure to the main Contract Agreement within 30 (thirty) days of the date agreeing by both Parties. Foreclosure shall not come into effect unless and otherwise Supplementary Agreement is signed.

(iv) Any attempt or endeavor for foreclosure by mutual agreement shall be without prejudice to the rights and obligations of the Parties herein and the factum of

such an attempt or exercise shall not stop either of the Parties from discharging their contractual obligations under this Agreement.

(v) For the avoidance of doubt, it is clarified that such foreclosure will be without prejudice to the Contractor and shall not affect the Contractor in any way if it wishes to bid in future projects of the Authority.

Part VI

Other Provisions

Article 24

Assignment and Charges

24.1 Restrictions on assignment and charges

This Agreement shall not be assigned by the Contractor to any person, save and except with the prior consent in writing of the Authority, which consent the Authority shall be entitled to decline without assigning any reason.

24.2 Hypothecation of Materials or Plant

Notwithstanding the provisions of Clause 24.1, the Contractor may pledge or hypothecate to its lenders, any Materials or Plant prior to their incorporation in the Works. Further, the Contractor may, by written notice to the Authority, assign its right to receive payments under this Agreement either absolutely or by way of charge, to any person providing financing to the Contractor in connection with the performance of the Contractor's obligations under this Agreement. The Contractor acknowledges that any such assignment by the Contractor shall not relieve the Contractor from any obligations, duty or responsibility under this Agreement.

Article 25

Liability and Indemnity

25.1 General indemnity

(i) The Contractor will indemnify, defend, save and hold harmless the Authority and its officers, servants, agents, Government Instrumentalities and Government owned and/or controlled entities/enterprises, (the **"Authority Indemnified Persons"**) against any and all suits, proceedings, actions, demands and third party claims for any loss, damage, cost and expense of whatever kind and nature, whether arising out of any breach by the Contractor of any of its obligations under this Agreement or from any negligence under the Agreement, including any errors or deficiencies in the design documents, or tort or on any other ground whatsoever, except to the extent that any such suits, proceedings, actions, demands and claims have arisen due to any negligent act or omission, or breach or default of this Agreement on the part of the Authority Indemnified Persons.

25.2 Indemnity by the Contractor

(i) Without limiting the generality of Clause 25.1, the Contractor shall fully indemnify, hold harmless and defend the Authority and the Authority Indemnified Persons from and against any and all loss and/or damages arising out of or with respect to:

(a) failure of the Contractor to comply with Applicable Laws and Applicable Permits;

(b) payment of taxes required to be made by the Contractor in respect of the income or other taxes of the Sub-contractors, suppliers and representatives; or

(c) non-payment of amounts due because of Materials or services furnished to the Contractor or any of its Sub-contractors which are payable by the Contractor or any of its Sub-contractors.

(ii) Without limiting the generality of the provisions of this Article 25, the Contractor shall fully indemnify, hold harmless and defend the Authority Indemnified Persons from and against any and all suits, proceedings, actions, claims, demands, liabilities and damages which the Authority Indemnified Persons may hereafter suffer, or pay by reason of any demands, claims, suits or proceedings arising out of claims of infringement of any domestic or foreign patent rights, copyrights or other intellectual property, proprietary or confidentiality rights with respect to any materials, information, design or process used by the Contractor or by the Sub-contractors in performing the Contractor's obligations or in any way incorporated in or related to the Project. If in any such suit, action, claim or proceedings, a temporary restraint order or preliminary injunction is granted, the Contractor shall make every reasonable effort, by giving a satisfactory bond or otherwise, to secure the revocation or suspension of the injunction or restraint order. If, in any such suit, action, claim

or proceedings, the Project Highway, or any part thereof or comprised therein, is held to constitute an infringement and its use is permanently enjoined, the Contractor shall promptly make every reasonable effort to secure for the Authority a licence, at no cost to the Authority, authorising continued use of the infringing work. If the Contractor is unable to secure such licence within a reasonable time, the Contractor shall, at its own expense, and without impairing the Specifications and Standards, either replace the affected work, or part, or process thereof with non-infringing work or part or process or modify the same so that it becomes non-infringing.

25.3 Notice and contest of claims

In the event that either Party receives a claim or demand from a third party in respect of which it is entitled to the benefit of an indemnity under this Article 25 (the "**Indemnified Party**") it shall notify the other Party (the "**Indemnifying Party**") within 15 (fifteen) days of receipt of the claim or demand and shall not settle or pay the claim without the prior approval of the Indemnifying Party, which approval shall not be unreasonably withheld or delayed. If the Indemnifying Party wishes to contest or dispute the claim or demand, it may conduct the proceedings in the name of the Indemnified Party, subject to the Indemnified Party being secured against any costs involved, to its reasonable satisfaction.

25.4 Defence of claims

(i) The Indemnified Party shall have the right, but not the obligation, to contest, defend and litigate any claim, action, suit or proceeding by any third party alleged or asserted against such Party in respect of, resulting from, related to or arising out of any matter for which it is entitled to be indemnified hereunder, and reasonable costs and expenses thereof shall be indemnified by the Indemnifying Party. If the Indemnifying Party acknowledges in writing its obligation to indemnify the Indemnified Party in respect of loss to the full extent provided by this Article 25, the Indemnifying Party shall be entitled, at its option, to assume and control the defence of such claim, action, suit or proceeding, liabilities, payments and obligations at its expense and through the counsel of its choice; provided it gives prompt notice of its intention to do so to the Indemnified Party and reimburses the Indemnified Party for the reasonable cost and expenses incurred by the Indemnified Party prior to the assumption by the Indemnifying Party of such defence. The Indemnifying Party shall not be entitled to settle or compromise any claim, demand, action, suit or proceeding without the prior written consent of the Indemnified Party, unless the Indemnifying Party provides such security to the Indemnified Party as shall be reasonably required by the Indemnified Party to secure the loss to be indemnified hereunder to the extent so compromised or settled.

(ii) If the Indemnifying Party has exercised its rights under Clause 25.3, the Indemnified Party shall not be entitled to settle or compromise any claim, action, suit or proceeding without the prior written consent of the Indemnifying Party (which consent shall not be unreasonably withheld or delayed).

(iii) If the Indemnifying Party exercises its rights under Clause 25.3, the Indemnified Party shall nevertheless have the right to employ its own counsel, and such counsel may participate in such action, but the fees and expenses of such

counsel shall be at the expense of the Indemnified Party, when and as incurred, unless:

(a) the employment of counsel by such party has been authorised in writing by the Indemnifying Party; or

(b) the Indemnified Party shall have reasonably concluded that there may be a conflict of interest between the Indemnifying Party and the Indemnified Party in the conduct of the defence of such action; or

(c) the Indemnifying Party shall not, in fact, have employed independent counsel reasonably satisfactory to the Indemnified Party, to assume the defence of such action and shall have been so notified by the Indemnified Party; or

(d) the Indemnified Party shall have reasonably concluded and specifically notified the Indemnifying Party either:

i. that there may be specific defences available to it which are different from or additional to those available to the Indemnifying Party; or

ii. that such claim, action, suit or proceeding involves or could have a material adverse effect upon it beyond the scope of this Agreement:

Provided that if Sub-clauses (b), (c) or (d) of this Clause 25.4 (iii) shall be applicable, the counsel for the Indemnified Party shall have the right to direct the defence of such claim, demand, action, suit or proceeding on behalf of the Indemnified Party, and the reasonable fees and disbursements of such counsel shall constitute legal or other expenses hereunder.

25.5 Survival on Termination

The provisions of this Article 25 shall survive Termination.

Article 26

Dispute Resolution

26.1 Dispute Resolution

(i) 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.

(ii) 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.

26.2 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 26.1(i) 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 26.3.

26.3 Arbitration, Conciliation and Adjudication of Dispute

26.3.1 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").

(i) 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.

(ii) Subject to the provisions of The Limitation Act, 1963, as amended from time to time, Arbitration may be commenced during or after the Contract Period, provided that the obligations of Authority and the Contractor shall not be altered by reason of the Arbitration being conducted during the Contract Period.

(iii) 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.

(iv) Each Party shall bear its own costs and expenses incurred in connection with the arbitral proceedings.

(v) 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 Contractor and the Authority agree and undertake to carry out such Award without delay.

(vi) The Contractor and the Authority agree that the Award may be enforced against the Contractor and/or the Authority, as the case may be, and their respective assets wherever situated.

26.3.2 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.

26.3.3 The Contractor and the Authority agree that the Award or a settlement agreement may be enforced against the Contractor and/or the Authority, as the case may be, and their respective assets wherever situated.

26.3.4 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.

26.3.5 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.

26.3.6 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.

Article 27

Miscellaneous

27.1 Governing law and jurisdiction

This Agreement shall be construed and interpreted in accordance with and governed by the laws of India, and the courts at Delhi shall have exclusive jurisdiction over matters arising out of or relating to this Agreement.

27.2 Waiver of immunity

Each Party unconditionally and irrevocably:

(a) agrees that the execution, delivery and performance by it of this Agreement constitute commercial acts done and performed for commercial purpose;

(b) agrees that, should any proceedings be brought against it or its assets, property or revenues in any jurisdiction in relation to this Agreement or any transaction contemplated by this Agreement, no immunity (whether by reason of sovereignty or otherwise) from such proceedings shall be claimed by or on behalf of the Party with respect to its assets;

(c) waives any right of immunity which it or its assets, property or revenues now has, may acquire in the future or which may be attributed to it in any jurisdiction; and

(d) consents generally in respect of the enforcement of any judgement or award against it in any such proceedings to the giving of any relief or the issue of any process in any jurisdiction in connection with such proceedings (including the making, enforcement or execution against it or in respect of any assets, property or revenues whatsoever irrespective of their use or intended use of any order or judgement that may be made or given in connection therewith).

27.3 Delayed payments

The Parties hereto agree that payments due from one Party to the other Party under the provisions of this Agreement shall be made within the period set forth therein, and if no such period is specified, within 30 (thirty) days of receiving a demand along with the necessary particulars. In the event of delay beyond such period, the defaulting Party shall pay interest for the period of delay calculated at a rate equal to Base Rate plus 2 (two) percent, calculated at quarterly rests, and recovery thereof shall be without prejudice to the rights of the Parties under this Agreement including Termination thereof.

27.4 Waiver

(i) Waiver, including partial or conditional waiver, by either Party of any default by the other Party in the observance and performance of any provision of or obligations under this Agreement:-

(a) shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions of or obligations under this Agreement;

(b) shall not be effective unless it is in writing and executed by a duly authorised representative of the Party; and

(c) shall not affect the validity or enforceability of this Agreement in any manner.

(ii) Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation thereunder nor time or other indulgence granted by a Party to the other Party shall be treated or deemed as waiver of such breach or acceptance of any variation or the relinquishment of any such right hereunder.

27.5 Liability for review of Documents and Drawings

Except to the extent expressly provided in this Agreement:

(a) no review, comment or approval by the Authority or the Authority's Engineer of any Document or Drawing submitted by the Contractor nor any observation or inspection of the construction, or maintenance of the Project Highway nor the failure to review, approve, comment, observe or inspect hereunder shall relieve or absolve the Contractor from its obligations, duties and liabilities under this Agreement, the Applicable Laws and Applicable Permits; and

(b) the Authority shall not be liable to the Contractor by reason of any review, comment, approval, observation or inspection referred to in Sub-clause (a) above.

27.6 Exclusion of implied warranties etc.

This Agreement expressly excludes any warranty, condition or other undertaking implied at law or by custom or otherwise arising out of any other agreement between the Parties or any representation by either Party not contained in a binding legal agreement executed by both Parties.

27.7 Survival

(i) Termination shall:

(a) not relieve the Contractor or the Authority, as the case may be, of any obligations hereunder which expressly or by implication survive Termination hereof; and

(b) except as otherwise provided in any provision of this Agreement expressly limiting the liability of either Party, not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of, or caused by, acts or omissions of such Party prior to the effectiveness of such Termination or arising out of such Termination.

(ii) All obligations surviving Termination shall only survive for a period of 3 (three) years following the date of such Termination.

27.8 Entire Agreement

This Agreement and the Schedules together constitute a complete and exclusive statement of the terms of the agreement between the Parties on the subject hereof, and no amendment or modification hereto shall be valid and effective unless such modification or amendment is agreed to in writing by the Parties and duly executed by persons especially empowered in this behalf by the respective Parties. All prior written or oral understandings, offers or other communications of every kind pertaining to this Agreement are abrogated and withdrawn. For the avoidance of doubt, the Parties hereto agree that any obligations of the Contractor arising from the Request for Proposals, shall be deemed to form part of this Agreement and treated as such.

27.9 Severability

If for any reason whatever, any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties will negotiate in good faith with a view to agreeing to one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable to such invalid, illegal or unenforceable provision. Failure to agree upon any such provisions shall not be subject to the Dispute Resolution Procedure set forth under this Agreement or otherwise.

27.10 No partnership

This Agreement shall not be interpreted or construed to create an association, joint venture or partnership between the Parties, or to impose any partnership obligation or liability upon either Party, and neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

27.11 Third parties

This Agreement is intended solely for the benefit of the Parties and their respective successors and permitted assigns, and nothing in this Agreement shall be construed to create any duty to, standard of care with reference to, or any liability to, any person not a Party to this Agreement.

27.12 Successors and assigns

This Agreement shall be binding upon, and inure to the benefit of the Parties and their respective successors and permitted assigns.

27.13 Notices

Unless the law requires to follow the specified mode of communication only as prescribed therein, any notice or other communication to be given by one contracting Party to the other Party under or in connection with the matters contemplated by this Agreement shall be in writing and shall:

(a) in the case of the Contractor, be given by facsimile or e-mail and by letter delivered by hand to the address given and marked for attention of the person set out below or to such other person as the Contractor may from time to time designate by notice to the Authority; provided that

notices or other communications to be given to an address outside New Delhi may, if they are subsequently confirmed by sending a copy thereof by registered acknowledgement due, air mail or by courier, be sent by facsimile or e-mail to the person as the Contractor may from time to time designate by notice to the Authority;

{Attention:

Designation:

Address:

Fax No.

E-mail;}

(b) in the case of the Authority, be given by facsimile or e-mail and by letter delivered by hand and be addressed to the Chairman of the Authority with a copy delivered to the Authority Representative or such other person as the Authority may from time to time designate by notice to the Contractor; provided that if the Contractor does not have an office in New Delhi it may send such notice by facsimile or e-mail and by registered acknowledgement due, air mail or by courier; and

{Attention:

Designation:

Address:

Fax No.

E-mail;} and

(c) any notice or communication by a Party to the other Party, given in accordance herewith, shall be deemed to have been delivered when in the normal course of post it ought to have been delivered and in all other cases, it shall be deemed to have been delivered on the actual date and time of delivery; provided that in the case of facsimile or e- mail, it shall be deemed to have been delivered on the working day following the date of its delivery.

27.14 Language

All notices required to be given by one Party to the other Party and all other communications, Documentation and proceedings which are in any way relevant to this Agreement shall be in writing and in English language.

27.15 Counterparts

This Agreement may be executed in two counterparts, each of which, when executed and delivered, shall constitute an original of this Agreement.

27.16 Confidentiality

The Parties shall treat the details of this Agreement as private and confidential, except to the extent necessary to carry out obligations under it or to comply with Applicable Laws. The Contractor shall not publish, permit to be published, or disclose any particulars of

the Works in any trade or technical paper or elsewhere without the previous agreement of the Authority.

27.17 Copyright and Intellectual Property rights

(i) As between the Parties, the Contractor shall retain the copyright and other Intellectual Property rights in the Contractor's documents and other design documents made by (or on behalf of) the Contractor. The Contractor shall be deemed (by signing this Agreement) to give to the Authority a non-terminable transferable non-exclusive royalty-free licence to copy, use and communicate the Contractor's documents, including making and using modifications of them. This licence shall:

(a) apply throughout the actual or intended working life (whichever is longer) of the relevant parts of the Works;

(b) entitle any person in proper possession of the relevant part of the Works to copy, use and communicate the Contractor's documents for the purposes of completing, operating, maintaining, altering, adjusting, repairing and demolishing the Works; and

(c) in the case of Contractor's documents which are in the form of computer programs and other software, permit their use on any computer on the Site and other places as envisaged by this Agreement, including replacements of any computers supplied by the Contractor.

(ii) The Contractor's documents and other design documents made by (or on behalf of) the Contractor shall not, without the Contractor's consent, be used, copied or communicated to a third party by (or on behalf of) the Authority for purposes other than those permitted under this Clause 27.17.

(iii) As between the Parties, the Authority shall retain the copyright and other intellectual property rights in this Agreement and other documents made by (or on behalf of) the Authority. The Contractor may, at its cost, copy, use, and obtain communication of these documents for the purposes of this Agreement. They shall not, without the Authority's consent, be copied, used or communicated to a third party by the Contractor, except as necessary for the purposes of the contract.

27.18 Limitation of Liability

(i) Neither Party shall be liable to the other Party for loss of use of any Works, loss of profit, loss of any contract or for any indirect or consequential loss or damage which may be suffered by the other Party in connection with this Agreement, save and except as provided under Articles 23 and 25.

(ii) The total liability of one Party to the other Party under and in accordance with the provisions of this Agreement, save and except as provided in Articles 23 and 25, shall not exceed the Contract Price. For the avoidance of doubt, this Clause shall not limit the liability in any case of fraud, deliberate default or reckless misconduct by the defaulting Party.

27.19 Care and Supply of Documents

(i) Each of the Contractor's documents shall be in the custody and care of the Contractor, unless and until taken over by the Authority. Unless otherwise stated in the Agreement, the Contractor shall supply to the Authority 2 (two) copies of the each of the Contractor's documents.

(ii) The Contractor shall keep, on the Site, a copy of the Agreement, publication named in the Authority's requirements, the Contractor's documents, and variations and other communications given under the Agreement. The Authority's personnel shall have the right of access to all these documents at all reasonable times.

(iii) If a Party becomes aware of an error or defect of a technical nature in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other party of such error or defect.

27.20 Authority's Use of Contractor's Documents.

(i) As between the Parties, the Contractor shall retain the copyright and other Intellectual Property rights in the Contractor's Documents and other design documents made by (or on behalf of) the Contractor.

(ii) The Contractor hereby gives to the Authority a non-terminable transferable nonexclusive royalty-free license to copy, use and communicate the Contractor's Documents, including making and using modifications of them. This license shall:

(a) apply through out the actual or intended working life (whichever is longer) of the relevant parts of the Works,

(b) entitle any person in proper possession of the relevant part of the Works to copy, use and communicate the Contractor's Documents for the purposes of completing, operating, maintaining, altering, adjusting, repairing and demolishing the Works, and

(c) in the case of Contractor's Documents which are in the form of computer programs and other software, permit their use on any computer on the Site and other places as envisaged by the Contractor, including replacements of any computers supplied by the Contractor.

(iii) The Contractor's Documents and other design documents made by or on behalf of the Contractor shall not, without the Contractor's consent, be used, copied or communicated to a third party by (or on behalf of) the Authority for purposes other than those permitted under this Sub-Clause.

27.21 Contractor's Use of Authority's Documents

As between the Parties, the Authority shall retain the copyright and other intellectual property rights in the Authority's requirements and other Documents made by (or on behalf of) the Authority. The Contractor may, at its cost copy, use, and obtain communication of these documents for the purpose of the Agreement. They shall not without the Authority's consent, be copied, used or

communicating to a third party by the Contractor, except as necessary for the purposes of the Agreement.

27.22 Access to the Site by Others

The Contractor shall, at all times, afford access to the Site to the authorized representatives of the Authority, the Authority's Engineer and anyone else authorized by the Authority to access the site and to the persons duly authorized by any Governmental Agency having jurisdiction over the Project, including those concerned with safety, security or environmental protection to inspect the Project Highway and to investigate any matter within their authority and upon reasonable notice, the Contractor shall provide to such persons reasonable assistance necessary to carry out their respective duties and functions with minimum disruption to the construction, operation and maintenance of the Project Highway consistent with the purpose for which such persons have gained such access to the Site.

27.23 Term

This Agreement shall come into force and effect from the date first hereinabove written and shall remain in force and effect till the Termination Date i.e. the Parties perform all their respective obligations or is terminated by any of the Parties for the reasons and in the manner provided for in the Agreement.

27.24 Amendments

The Agreement may not be supplemented, amended, modified or changed except by an instrument in writing signed by the Contractor and the Authority and expressed to be a supplement, modification or change to the Agreement.

27.25 Representation and Bribes

The Contractor represents and warrants to the Authority that:

(a) No representation or warranty by the Contractor contained herein or in any other document furnished by it to the Authority, or to any Governmental Instrumentality in relation to Applicable Permits contains or will contain any untrue statement of material fact or omits or will omit to state a material fact necessary to make such representation or warranty not misleading; and

(b) It warrants that no sums, in cash or kind, have been paid or will be paid by or on behalf of the Contractor, to any person by way of fees, commission or otherwise for securing or entering into the Contractor for influencing or attempting to influence any officer or employee of the Authority or GOI in connection therewith.

27.26 No Agency

The Agreement does not constitute either Party as the agent, partner or legal representative of the other for any purposes whatsoever, and neither Party shall have any express or implied right or authority to assume or to create any obligation or responsibility on behalf of or in the name of the other Party.

IN WITNESS WHEREOF THE PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DAY, MONTH AND YEAR FIRST ABOVE WRITTEN.

SIGNED, SEALED AND	SIGNED, SEALED AND
DELIVERED	DELIVERED
For and on behalf of	For and on behalf of
[THE AUTHORITY] by:	[THE CONTRACTOR] by:
(Signature)	(Signature)
(Name)	(Name)
(Designation)	(Designation)
In the presence 1.	
2.	

{COUNTERSIGNED and accepted by:

Name and Particulars of other members of the Consortium}

Schedules

Schedule-A

(See Clause 2.1 and 8.1)

SITE OF THE PROJECT

1 The Site

(i) Site of the Upgradation to 6 Lane with Paved shoulder of Gandhidham -Kandla Port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 Lane Major Bridge on Nakti Creek at km 7+170 of NH-141 in the state of Gujarat Project Highway shall include the land, buildings, Structures and road works as described in Annex-I of this Schedule-A.

(ii) The dates of handing over the Right of Way to the Contractor are specified in Annex-II of this Schedule-A.

(iii) An inventory of the Site including the land, buildings, Structures, road works, trees and any other immovable property on, or attached to, the Site shall be prepared jointly by the Authority Representative and the Contractor, and such inventory shall form part of the memorandum referred to in Clause 8.2 (i) of this Agreement.

(iv) The alignment plans of the Project Highway are specified in Annex-III. In the case of sections where no modification in the existing alignment of the Project Highway is contemplated, the alignment plan has not been provided. Alignment plans have only been given for sections where the existing alignment is proposed to be upgraded. The proposed profile of the Project Highways shall be followed by the contractor with minimum FRL as indicated in the alignment plan. The contractor, however, improve/upgrade the Road Profile as indicated in Annexure-III based on site/design requirement.

(v) The status of the environment clearances obtained or awaited is given in Annex-IV.

Annex - I

(Schedule-A)

Site

1. The Site

The Site of the Upgradation to 6 Lane with Paved shoulder of Gandhidham -Kandla Port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 Lane Major Bridge on Nakti Creek at km 7+170 of NH-141 in the state of Gujarat Project Highway comprises the section of National Highway 141 (Free Trade Zone – Kandala Port Road) commencing from km 5+560 km to km 14+014 km in the State of Gujarat. The land, carriageway and structures comprising the Site are described below.



2. Land

The site of the Project Highway comprises the land described below:

Sl. No.	Chainage (Km)		Length (m)	Right of Way (m)	Remarks
	From	To			
1	05+560	05+885	325	60	-
2	05+885	06+870	985	60	NOT IN SCOPE
4	6+870	7+350	480	60	Follow Plan Profile of Nakti Bridge provided separately
5	07+350	09+795	2445	60	-
6	09+795	11+735	1940	60	NOT IN SCOPE
7	11+735	14+014	2279	60	-
Total Project Highway Length (m)			**5529**		

3. Carriageway

The present carriageway of the Project Highway is [Four Lane with paved Shoulder]. The type of the existing pavement is [flexible].

Sl. No.	Existing Chainage (Km)		Length (m)	Existing Lane Configuration
	From	To		
1	05+560	05+885	325	Four Lane with Paved Shoulder
2	06+870	07+000	130	Four Lane with Paved Shoulder
3	07+000	07+290	290	Diversion Roads for proposed Nakti Bridge Location
4	07+290	09+795	2505	Four Lane with Paved Shoulder
5	11+735	12+470	735	Four Lane with Paved Shoulder
6	12+470	13+880	1410	Four Lane with Paved Shoulder with RHS side Service Road
7	13+880	14+014	134	Six Lane with Paved shoulder with both side Service Road (merging length)

4. Major Bridges

The site includes the Major Bridges as described below: -

Sl. No.	Existing Chainage (Km)	Type of Structure			No. of Spans with Span Length (m)	Width (m)
		Foundation	Sub-Structure	Super structure		
Nil						

Details of Existing Diversion Road at Nakti Bridge Location

Sl. No.	Location of Diversion Road		RHS/LHS or Both Sides	Length (m)
	From (Km.)	To (Km.)		
1	7+020	7+263	LHS	243
2	7+045	7+302	RHS	257

5. Road over-bridges (ROB)/ Road under-bridges (RUB)

The Site includes the following ROB (road over railway line)/RUB (road under railway line):

Sl. No.	Existing Chainage (Km)	Type of Structure	No. of Spans	Carriageway Width (In m)
Nil				

6. Grade separators

The Site includes the following grade separators:

Sl. No.	Existing Chainage (Km)	Type of Structure	No. of Spans	Carriageway Width (In m)
Nil				

7. Minor Bridges

The site includes the Minor Bridges as described below: -

Sl. No.	Existing Chainage (Km)	Type of Structure			No of Spans with Span Length (m)	Width (m)
		Founda-tion	Sub Structure	Super Structure		
Nil						

8. Railway level crossings

The Site includes the following railway level crossings

Nil

9. Underpasses (vehicular, non-vehicular)

Nil

10. Culverts

The Site has the following culverts:

Sl. No.	Existing Chainage (km)	Type of Culvert	Span / Opening with Span Length (m)	Width (m)
Nil				

11. Bus bays and Truck Lay byes

The total number of bus byes and truck lay byes on the Project Highway is noted below:

a) No. of Bus bays on LHS (Bus waiting shelter) = Nil

b) No. of Bus bays on RHS (Bus waiting shelter) = Nil

c) No. of Truck lay-byes = Nil

12. Road Side Drains

The list of existing RCC drain is as below:

SI. No.	Location		Side	Type
	From	To		
1	12+470	13+880	RHS side	RCC Drain
2	13+940	13+990	LHS side	RCC Drain

13. Major junctions

The details of major junctions are as follows:

S. No.	Existing Chainage (km)	Side	At grade/ Separated	Category of Cross road

1	8+560	RHS	At Grade	VR

(NH: National Highway, SH: State Highway, MDR: Major District Road, ODR: Other District Road, VR: Village Road)

14. Minor Junctions

The details of the minor junctions are as follows:

Sl. No.	Existing Chainage (km)	Side (Left / Right)	Type
1	5+525	RHS	T -Junction
2	5+640	RHS	T -Junction
3	5+800	RHS	T -Junction
4	7+270	LHS	T -Junction
5	8+560	RHS	T -Junction
6	12+155	RHS	T -Junction
7	12+310	LHS	T -Junction
8	12+590	RHS	T -Junction
9	12+955	LHS	T -Junction
10	13+120	RHS	T -Junction
11	13+270	LHS	T -Junction
12	13+330	LHS	T -Junction
13	13+650	RHS	T -Junction

15. Bypasses

The details of the existing road sections proposed to be bypassed are as follows:

Nil

16. Other structures

Nil

17. *Utilities*

Details of existing utility works are as given in **Annex- V.**

Annex – V

(Schedule-A)

UTILITY

1. Electrical Utility

(i) List of Esisting electric poles needs to be shifted are as below:

Sr. No.	Chainage	Utility	Distance from Centre Line (m)	Side	
1	5+692.88	EPOLE	17.1	LHS	-
2	5+723	EPOLE	17.3	LHS	-
3	7+295	EPOLE	12.0	-	RHS
4	7+300	EPOLE	0.7	LHS	-
5	8+580	EPOLE	0.6	-	RHS
6	12+071	EPOLE	14.1	LHS	-
7	12+072	EPOLE	14.7	LHS	-
8	12+145.47	EPOLE	15.0	LHS	-
9	12+224.50	EPOLE	13.5	LHS	-
10	12+263.10	EPOLE	13.5	LHS	-
11	12+732	EPOLE	18.6	-	RHS
12	12+732.17	EPOLE	1.0	LHS	-
13	12+984	EPOLE	0.6	LHS	-
14	12+985	EPOLE	16.0	-	RHS
15	13+030	EPOLE	17.4	-	RHS
16	13+072	EPOLE	19.2	-	RHS
17	13+108	EPOLE	20.0	-	RHS

(ii) List of existing Transformers needs to be shifted

Sr. No.	Chainage	Utility	Distance from CL (m)	Side

Sr. No.	Chainage	Utility	Distance from CL (m)	Side	
1	8+602	TRANSFORMER	0.6	-	RHS
2	12+084	TRANSFORMER	14.1	LHS	
3	12+111	TRANSFORMER	14.3	LHS	
4	12+292.60	TRANSFORMER	14.3	LHS	
5	12+316.86	TRANSFORMER	14.5	LHS	

(iii) List of existing OFC stones / line needs to be shifted

Sr. No.	Chainage	Utility	Distance from CL (m)	Side	
1	5+610.82	OFC	19.8	LHS	-
2	5+674.72	OFC	16.8	LHS	-
3	5+854.87	OFC	18.1	LHS	-
4	6+948.11	OFC	14.9	LHS	-
5	7+326	OFC	13.8	LHS	-
6	7+362	OFC	14.4	LHS	-
7	7+488.57	OFC	13.5	LHS	-
8	7+559.23	OFC	14.5	LHS	-
9	7+627.14	OFC	13.6	LHS	-
10	7+715.42	OFC	13.4	LHS	-
11	7+721.85	OFC	10.6	LHS	-
		OFC	11.1		
		OFC	12.4		
		OFC	13.4		
		OFC	14.0		
12	7+870	OFC	13.5	LHS	-
13	7+952.53	OFC	13.4	LHS	-
14	8+037.66	OFC	13.5	LHS	-
15	8+108.30	OFC	13.4	LHS	-
16	8+178.66	OFC	14.5	LHS	-
17	8+264.68	OFC	14.5	LHS	-
18	8+338.21	OFC	14.0	LHS	-

Sr. No.	Chainage	Utility	Distance from CL (m)	Side	
19	8+421.06	OFC	14.1	LHS	-
20	8+493.22	OFC	14.2	LHS	-
21	8+551.54	OFC	15.2	LHS	-
22	8+647.42	OFC	15.6	LHS	-
23	8+711	OFC	14.1	LHS	-
24	8+829	OFC	13.9	LHS	-
25	8+874.82	OFC	13.7	LHS	-
26	8+918.72	OFC	14.3	LHS	-
27	8+953.60	OFC	14.23	LHS	-
28	9+045	OFC	13.3	LHS	-
29	9+100	OFC	13.4	LHS	-
30	9+145	OFC	13.5	LHS	-
31	9+200	OFC	14.3	LHS	-
32	9+265	OFC	13.0	LHS	-
33	9+332	OFC	12.5	LHS	-
34	9+387.81	OFC	13.0	LHS	-
35	9+460	OFC	12.9	LHS	-
		OFC	13.0		
36	9+511	OFC	13.0	LHS	-
37	9+628	OFC	15.8	LHS	-
38	9+678	OFC	16.3	LHS	-
39	11+760	OFC	17.6	LHS	-
40	11+811	OFC	15.0	LHS	-
41	11+914	OFC	13.0	LHS	-
		OFC	13.5		
42	12+117.77	OFC	13.0	LHS	-
43	12+221	OFC	12.0	LHS	-
44	12+314.20	OFC	15.1	LHS	-
45	12+358.51	OFC	16.2	LHS	-
46	12+463.23	OFC	13.5	LHS	-

Sr. No.	Chainage	Utility	Distance from CL (m)	Side	
47	12+500	OFC	13.9	LHS	-
48	12+566.79	OFC	14.0	LHS	-

2. Public Health utilities (Water/Sewage Pipe Lines)

Nil

3. Any Other Line

Nil

Annex- II

(As per Clause 8.3 (i))

(Schedule-A)

Dates for providing Right of Way of Construction Zone

The dates on which the Authority shall provide Right of Way of Construction Zone to the Contractor on different stretches of the Site are stated below:

Sl. No	Design Chainage		Design Length	Width (m)	Date of providing Right of Way*
	From (km)	To (km)	(km)	Full Right of Way Available (m)	
1	05+560	05+885	0.325	60	On Appointed Date
2	06+870	07+350	0.480	60	On Appointed Date (Nakti Bridge)
3	07+350	09+795	2.445	60	On Appointed Date
4	11+735	14+014	2.279	60	On Appointed Date

***The dates specified herein shall in no case be beyond 150 (one hundred and fifty) days after the Appointed Date**

Annex – III

(Schedule-A)

Alignment Plans

The existing alignment of the Project Highway shall be modified in the following sections as per the alignment plan indicated below:

(i) The alignment of the Project Highway is enclosed in alignment plan. Finished road level indicated in the alignment plan shall be followed by the contractor as minimum FRL. In any case, the finished road level of the project highway shall not be less than those indicated in the alignment plan. The contractor shall, however, improve/upgrade the Road profile as indicated in Annex-III based on site/design requirement.

(ii) Traffic Signage plan of the Project Highway showing numbers & location of traffic signs is enclosed. The contractor shall, however, improve/upgrade upon the traffic signage plan as indicated in Annex-III based on site/design requirement as per IRC: SP: 99 & IRC: 67.

Annex – IV

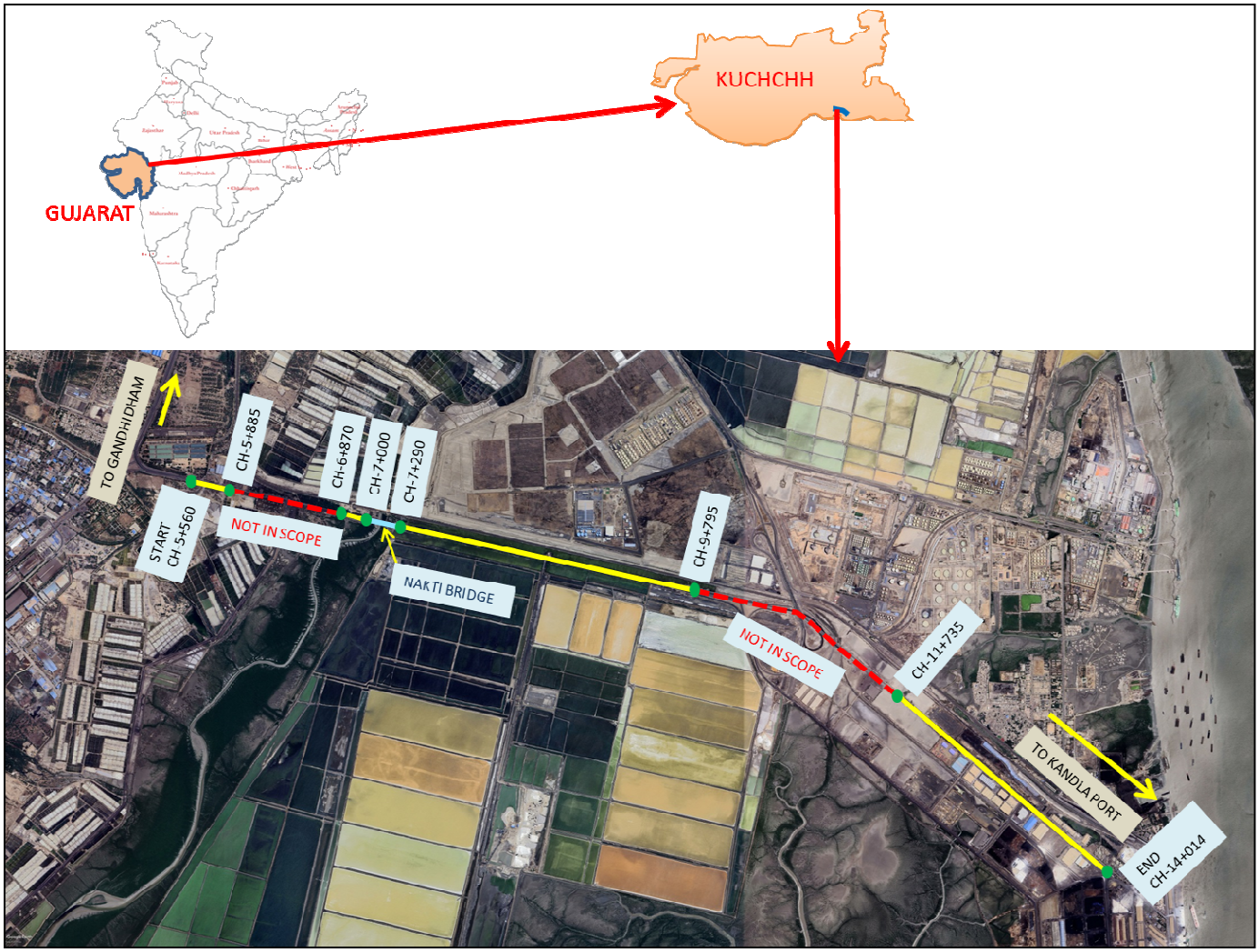
(Schedule-A)

Environment Clearances

As per notification F. No. 21-270/2008-IA.III dated 22nd August 2013, proposed project involves Widening and upgradation of NH-141 (F.T. Zone - Kandla Port Road) to 6-Lanning from existing 4-Lane From Ch. 5+560 to Ch. 14+535 in the state of Gujarat (less than 100 km). As a result, **Environmental clearance will not be required from MoEF &CC**.

Appendix –I Index Map of Project Highway

(Schedule-A)



Schedule - B

(See Clause 2.1)

DEVELOPMENT OF THE PROJECT HIGHWAY

1 Development of the Project Highway

Development of the Project Highway shall include design and construction of the Project Highway as described in this Schedule-B and in Schedule-C. The Project Highway Constitutes "Upgradation to 6 Lane with Paved shoulder of Gandhidham - Kandla Port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 Lane Major Bridge on Nakti Creek at km 7+170 of NH-141 in the state of Gujarat."

2 Six Lane with paved shoulder

Six lane with Paved Shoulder shall include construction of the project Highway as described in Annex-I of this Schedule-B and in Schedule-C.

3 Specifications and Standards

The Project Highway shall be designed and constructed in conformity with the Specifications and Standards specified in Annex-I of Schedule-D.

Annex – I

(Schedule-B)

Description of Upgradation to 6 Lane with Paved shoulder of Gandhidham -Kandla Port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 Lane Major Bridge on Nakti Creek at km 7+170 of NH-141 in the state of Gujarat.

1. Widening of the Existing Highway

1.1 The Project Highway shall follow the existing alignment unless otherwise specified by the Authority and shown in the alignment plans specified in Annex-III of Schedule-A. Geometric deficiencies, if any, in the existing horizontal and vertical profiles shall be corrected as per the prescribed standards for plain terrain to the extent land is available.

1.2 Width of Carriageway

a) Six Lanning with paved shoulder of the existing carriageway shall be undertaken. The paved carriageway shall be 10.5 m wide with 0.5m shyness at median side with 1.5 m paved shoulder on both sides in accordance with the typical cross sections drawings in this Section. (2x0.5m (Shyness) + 2x10.50m (carriageway) + 2x1.5m (Paved shoulder) = 25m paved carriageway width)

Provided that in the following areas, the width of the carriageway shall be as specified in the following table:

Sl. No.	Built-up Stretch (Township)	Design Chainage (km)		Carriageway Width (m)
		From	To	
Nil				

b) Except as otherwise provided in this Agreement, the width of the paved carriageway and cross-sectional features shall conform to paragraph 1 above.

1.3 Design Chainage corresponding to Existing Chainage

Kilometre stones are existing at start and end point of the project highway. It is called the “Existing Chainage”. During topography survey with Total Station, observations are made to these Km stones and after finalization of alignment by improving the existing geometry the chainage has been referred to “Design Chainage”. The relationship between the “Existing Chainage” and the “Design Chainage” as per field surveys of the location of existing Km stones using the total station for the “Project Highway” is given below.

Sl. No.	Existing Chainage (Km)	Design Chainage (Km)
1.	5+560	5+560
2.	14+014	14+014

2. Geometric Design and General Features

2.1 General

Geometric design and general features of the Project Highway shall be in accordance with section 2 of the Manual (IRC: SP:87-2019).

2.2 Design Speed

The design speed shall be the minimum design speed of 100 Km per hr for plain/rolling terrain.

2.3 Improvement of the Existing Road Geometrics

In the sections, where improvement of the existing road geometrics to the prescribed standards is not possible, the existing road geometrics shall be improved to the extent possible within the given right of way and proper road signs and safety measures shall be provided:

In the following stretches, the existing road geometrics shall be improved:

Sl. No.	Design Chainage		Type of Deficiency	Remarks
	From (Km)	To (Km)		
Nil				

2.4 Right of Way

The proposed Right of Way shall be 60m except the location mentioned in the table below where extra land acquisition is to be done due to realignment.

Sl. No.	Design Chainage (In km)		Proposed ROW Width*	Remarks
	From	To	(in meters)	
Nil				

** Except for junction improvement towards cross road where in PROW shall be as per design.*

2.5 Type of Shoulders

a) The Type and width of shoulder shall be provided as detailed in the table below: -

Sl. No.	Design Chainage (Km)		Fully paved shoulders/ footpaths (m)
	From	To	
1	5+560	5+885	1.5m wide paved shoulder with 2.0 m wide earthen

			shoulder as per MoRTH circular dated 4th June,2024
2	6+870	7+350	1.5m wide paved shoulder (Follow section of Nakti Bridge provided separately)
3	7+350	9+795	1.5m wide paved shoulder with 2.0 m wide earthen shoulder as per MoRTH circular dated 4th June,2024
4	11+735	13+880	
5	13+880	14+014	Existing Six lane Road with Service Road will be retained

b) Design and specifications of paved shoulders and granular material shall conform to the requirements specified in IRC: SP:87-2019 (Manual for 6-lanning).

2.6 Median

The existing median width shall remain unchanged. A new median kerb shall be installed for the entire length of project highway.

2.7 Lateral and Vertical Clearance at Overpasses/ Underpass/Flyover

2.7.1 Lateral and vertical clearances at underpasses / Flyovers and provision of guardrails/crash barriers shall be as per paragraph 2.11 of the Manuals.

2.7.2 Lateral clearance: The width of the opening at the underpasses/Fly overs shall be as follows:

Sl. No.	Location (Design Chainage)		Span Arrangement c/c of expansion joint (m)	Remarks
	From (Km)	To (Km)		
Nil				

2.7.3 Lateral and Vertical clearances at over shall be as per paragraph 2.12 of the Manual.

2.7.4 Lateral clearance: The width of the opening at the overpasses shall be as follows:

Sl. No.	Location (Design Chainage)		Span/ Opening (m)	Remarks
	From (Km)	To (Km)		
Nil				

2.8 Service Roads

2.8.1 Existing Service roads shall be overlayed at the locations and for the lengths indicated below:

Details of Service Road

Sl. No.	Location of Service Road (Design Chainage)		RHS/LHS or Both Sides	Net Design Length (Km.)
	From (Km.)	To (Km.)		
1	12+470	13+880	RHS	1.410
2	13+880	14+014	Both	0.268

2.8.2 Existing diversion roads shall be maintained by the Contractor during the construction period in accordance with the provisions of IRC:82-2023, IRC: SP:55–2014, IRC:67, and relevant clauses of MoRTH Specifications for Road & Bridge Works, including provisions related to traffic safety, road markings, and temporary works, at the locations and for the lengths indicated below.

Details of Existing Diversion Road

Sl. No.	Location of Diversion Road		RHS/LHS or Both Sides	Length (m)
	From (Km.)	To (Km.)		
1	7+020	7+263	LHS	243
2	7+045	7+302	RHS	257

2.9 Grade Separated Structures

2.9.1 Grade separated structures shall be provided as per paragraph 2.14 of the Manual. The requisite particulars are given below:

S. No.	Location of structure (km)	Length (m)	Number and Length of Spans (m)	Approach Gradient	Remarks
Nil					

2.9.2 In the case of grade separated structures, the type of structure and the level of the Project Highway and the cross roads shall be as follows:

Sl. No.	Location (Design Chainage)	Type of Structure Length	Cross road at			Remarks
			Existing level	Raised Level	Lowered Level	
Nil						

2.10 Cattle and Pedestrian Underpass / Overpass

Cattle and pedestrian underpass/ overpass shall be constructed as follows:

Sl. No.	Location	Span	Type of crossing
Nil			

2.11 Typical Cross-sections of the Project Highway

Typical cross sections along with different types of cross-sections required to be developed in different segments of the project highway are as indicated in IRC: SP:87-2019 (Manual for 6 lanning) and MoRTH circular dated 4th June,2024.

Indicative TCS and TCS Schedule has been given in **Appendix BI.**

3. Intersections and Grade Separators

All intersections and grade separators shall be as per Section 3 of IRC: SP:87-2019 (Manual for 6-lanning). Existing Intersections which are deficient shall be improved to the prescribed standards.

Properly designed intersections shall be provided at the locations and of the types and features given in the tables below:

(a) At-grade Intersections

Major Intersections

Sl. No.	Location of Intersection (Design Chainage)	Type of Intersection	Other Features
1	8+560	T	Hanuman Temple Junction

Minor Junctions

Sl. No.	Existing Chainage (km)	Side (Left / Right)	Type
1	5+525	RHS	T
2	5+640	RHS	T
3	5+800	RHS	T
4	7+270	LHS	T
5	8+560	RHS	T
6	12+155	RHS	T
7	12+310	LHS	T
8	12+590	RHS	T
9	12+955	LHS	T
10	13+120	RHS	T
11	13+270	LHS	T
12	13+330	LHS	T
13	13+650	RHS	T

Note: All junctions shall be improved as per IRC: SP: 87-2019 and Ministry's Type Design for Intersection on National Highways within the available RoW. The length of improvement of side roads at these Major and Minor junctions shall be as per Ministry's Type Design for at grade intersections.

(b) Grade Separated Intersection without Ramps

S. No.	Location (Design Chainage)	Salient features	Minimum length of viaduct to be provided	Road to be carried over / under the structures
Nil				

4. Road Embankment and Cut Section

4.1 Widening and improvement of the existing road embankment/cuttings and construction of new road embankment / cuttings shall conform to the standards and specifications given in Section 4 of the applicable Manual and the specified cross sectional details. Deficiencies in the plan and profile of the existing road shall be corrected.

Slope Protection to Embankment

The embankment slope shall be properly compacted and maintained at a standard 2:1 gradient in accordance with the manual. As shown in the Typical Cross Sections (TCS), stretches exposed to sea backwater on the embankment side shall be protected with **M15 grade concrete lining.** In all other stretches, the earthen embankment slope shall be provided with turfing for adequate protection.

4.2 Raising of the Existing Road

The existing road shall be raised in the following sections:

Sl. No.	From (Proposed in Km)	To (Proposed in Km)	Design Length (in Km)
1	8+300	9+795	1.495

Note: The above raising of road is with regards to drainage issue however raising of road due to geometric improvement should be done as indicated in plan and profile drawings.

5. Pavement Design

5.1 Pavement design shall be carried out in accordance with Section 5 of the IRC: SP 87-2019 Manual IRC Relevant Codes and International Standards.

5.2 Type of Pavement

Type of pavement shall be flexible pavement.

5.3 Design Requirements

Pavement design shall be as per paragraph 5.4, 5.9 and 5.10 of IRC: SP 87-2019.

5.3.1 Design Period and strategy

Flexible pavement for new pavement shall be designed for a minimum design period of **20** years and effective CBR of sub grade more than as **6%** and also in accordance with provisions of the relevant manual. Stage construction shall not be permitted.

5.3.2 Design Traffic

Notwithstanding anything to the contrary contained in this Agreement or the Manual, the Contractor shall design the flexible pavement for minimum design traffic in million standard axles as tabulated below:

Sr. No.	Design Chainage (Km)		Minimum Design Traffic in MSA for Main Carriageway	Type of Pavement
	From	To		

1	5+560	14+014	**150**	Flexible Pavement

Sr. No.	Design Chainage (Km)		Minimum Design Traffic in MSA for Service /Slip Roads*	Type of Pavement
	From	To		
1	12+470	13+880	**20**	Flexible Pavement
2	13+880	14+014		

*As per Ministry's Circular No. RW/NH-33044/33/2025-S&R (P&B) (Computer No. 254799) dated 03.11.2025

5.3.3 Main Carriage way

Flexible Pavement for Main Carriageway for entire length shall be designed for actual design traffic as per Manual or for **150 MSA** whichever is more, for a minimum design period of **20 years**. The **effective CBR** of subgrade shall not be considered more than **6%** for design purpose for entire Project Highway.

Based on design requirements and to meet the intended functional requirement, the **minimum thickness** of the respective pavement layers shall be as under: -

Main Carriageway (widening) Pavement Crust:

S. No.	Pavement Layer	Effective CBR	Minimum Crust Layer thickness (mm)
1	Bituminous Wearing Course	**6.00%**	**50**
2	Bituminous Base/ Binder Course		**160**
3	Non-Bituminous Base Course		**260**
4	Sub-Base Course		**250**
5	Subgrade		**500**

Main Carriageway Overlay (Km 8+300 to km 9+795 as per TCS-3A) Pavement Crust:

S. No.	Pavement Layer	Effective CBR	Minimum Crust Layer thickness (mm)
1	Bituminous Wearing Course	**6.00%**	**50**
2	Bituminous Base/ Binder Course		**160**
3	Non-Bituminous Base Course		**260**

Main Carriageway (Overlay as per TCS-1,3,4,5) Pavement Crust:

S. No.	Pavement Layer	Effective CBR	Minimum Crust Layer thickness (mm)
1	Bituminous Wearing Course	**6.00%**	**50**
2	Bituminous Base/ Binder Course		**Profile Correction with DBM**

Service Road (Overlay as per TCS-4) Pavement Crust:

S. No.	Pavement Layer	Effective CBR	Minimum Crust Layer thickness (mm)
1	Bituminous Wearing Course	**6.00%**	**50**

Nakti Bridge Approach Pavement Crust (km 6+870 to km 7+125 & km 7+220 to km 7+350):

S. No.	Pavement Layer	Effective CBR	Minimum Crust Layer thickness (mm)
1	Bituminous Wearing Course	**6.00%**	**50**
2	Bituminous Base/ Binder Course		**160**
3	Non-Bituminous Base Course		**260**
4	Sub-Base Course		**250**
5	Subgrade		**500**

Nakti Bridge Deck Portion (km 7+125 to km 7+220):

S. No.	Pavement Layer	Minimum Crust Layer thickness (mm)
1	Mastic Asphalt	**25**
2	Bituminous Wearing Course	**40**

Note: The Pavement crust as shown in the table above shall be adopted as the minimum unless otherwise directed by Engineer in Charge.

Note: (i) The pavement crust composition for widening/new construction shall be designed in accordance with latest guidelines of IRC 37-2018, Manual and in consultation with Engineer in Charge.

(ii) The pavement crust composition for overlay shall be designed in accordance with latest guidelines of IRC 115:2014, Manual and in consultation with Engineer in Charge.

(iii) Wherever an existing service road is provided, as indicated in the Typical Cross Sections (TCS), a **50 mm** bituminous overlay shall be executed, including profile correction with **DBM**, strictly in accordance with the specifications and as directed by the Engineer in Charge.

5.4 Reconstruction of Stretches

The following stretches of the existing road shall be reconstructed.

SI. No.	Design Chainage (km.)		Remarks
	From	To	
1.	8+300	9+795	Reconstruction of Existing 4-Lane from Non-Bituminous Sub Base/Base Course

Sl. No.	Design Chainage (km.)		Remarks
	From	To	
			onwards.

6. Roadside Drainage

Drainage system including surface and subsurface drains for the Project Highway shall be provided as per Section 6 of IRC: SP:87-2019 (Manual for 6-lanning).

(i) RCC Drain:

RCC Covered drain has provided as detailed below:

Sl. No.	Design Chainage (km.)		Length (m)	Side	Reconstruction/Retain
	From	To			
1	12+470	13+880	1410	RHS side	Reconstruction of RCC drain due to widening of Existing Carriageway
2	13+940	13+990	50	LHS side	Retain Existing RCC Drain with Cleaning

Note: Reinforcement for retaining walls/toe walls shall be treated with Fusion Bonded Epoxy Coating (FBEC) as an anti-corrosive measure, in accordance with the relevant IS and IRC specifications.

7. Design of Structures

7.1 General

7.1.1 All bridges, culverts and structures shall be designed and constructed in accordance with Section 7 of IRC: SP:87-2019 (Manual for 6-lanning) and shall conform to the cross-sectional features and other details specified therein.

7.1.2 Major Bridges:

Sl. No.	Bridge / Structure at Km	Type of Proposed Deck	New Span Arrangement*	Width of carriageway and cross-sectional features
1	7+170	PSC cast in situ Box Girder	**1 x 45 m + 1 x 50m = 95m**	The overall width of the bridge is designed to be 2 decks of **16.40 m**, each deck comprising of 13.0 m carriageway, 1x1.50 m footpath, 1x 0.40 m RCC railing at the end and 2 x 0.45 m rigid crash barriers between footpath and carriageway.

***The minimum span length of the bridge shall be 30 m, and no deviation in the bridge length shall be permitted under any circumstances.**

Stainless Steel Reinforcement shall be used for **Major bridge works** as the structure lies within 15 km from the sea/creek, in accordance with Ministry's Circular No. RW/NH-34049/03/2020-S&R (B) dated 22.01.2021 and relevant IRC / IS specifications.

7.1.2 Minor Bridges:

Sl. No.	Bridge / Structure at Km	Width of carriageway and cross-sectional features
Nil		

7.1.3 The following structures shall be provided with footpaths:

Sl. No.	Location (Design Chainage - km)	Remarks
Nil		

7.1.4 The following are low-level bridges:

S. No.	Existing (Km)	Design (km)	Remarks
Nil			

7.1.5 Utility services to be carried over the structures

The following structures shall be designed to carry utility services specified in the table below:

S. No.	Bridge at km	Utility service to be carried	Remarks
Nil			

7.1.6 Cross-section of the new culverts and bridges at deck level for the Project Highway shall conform to the typical cross-sections given in Section 7 of the Manual.

7.2 Culverts

7.2.1 Cross-section of the culverts for the Project Highway shall conform to the typical cross-sections given in Section 7 of the Manual.

7.2.2 Reconstruction of Existing Culverts:

The existing culverts at the following locations shall be re-constructed as new culverts:

Sl. No.	Proposed Chainage (km)	Existing Type	Existing Size	Proposed Type	New Proposed Size	Proposal for existing
Nil						

7.2.3 Widening of Existing Culverts

All existing culverts which are not to be reconstructed shall be widened to the roadway width of the Project Highway as per the typical cross section given in section 7 of the Manual. Repairs and strengthening of existing structures where required shall be carried out.

Sl. No.	Proposed Chainage (km)	Existing Type	Existing Size	Proposed Type	New Proposed Size	Proposal for existing
Nil						

7.2.4 Additional new culverts shall be constructed as per particulars given in the table below:

Sl. No.	Proposed Chainage (km)	Existing Type	Existing Size	Proposed Type	New Proposed Size	Proposal for existing
1.	7+780	--NA--	--NA--	Pipe Culvert	1 X 1.2 m	New Construction
2.	8+300	--NA--	--NA--	Pipe Culvert	1 X 1.2 m	New Construction
3.	8+760	--NA--	--NA--	Pipe Culvert	1 X 1.2 m	New Construction
4.	9+400	--NA--	--NA--	Pipe Culvert	1 X 1.2 m	New Construction

Note: Reinforcement for retaining walls/toe walls shall be treated with Fusion Bonded Epoxy Coating (FBEC) as an anti-corrosive measure, in accordance with the relevant IS and IRC specifications.

7.2.5 Repairs / replacements of railing / parapets, flooring and protection works of the existing culverts shall be undertaken as follows:

Sl. No.	Location (km.)	Type of repair required
Nil		

7.2.6 Floor protection works shall be as specified in the relevant IRC Codes and Specifications.

7.3 Bridges

7.3.1 Existing bridges to be re-constructed/widened:

IA. The existing major bridges at the following locations shall be re-constructed as new structures:

SI. No.	Design Chainage (km)	Type (Proposed)	Type of Proposed Deck	New Span Arrangement	Proposal	Remarks
Nil						

IB. The existing minor bridges at the following locations shall be re-constructed as new structures:

SI. No	Design Chainage (km)	Type (Proposed)	Type of Proposed Deck	New Span Arrangement	Proposal	Remarks

SI. No	Design Chainage (km)	Type (Proposed)	Type of Proposed Deck	New Span Arrangement	Proposal	Remarks
Nil						

IIA. The following narrow major bridges shall be widened:

Sl.No	Design Chainage (km)	Type (Proposed)	Type of Proposed Deck	New Span Arrangement	Proposal	Remarks
Nil						

IIB. The following narrow minor bridges shall be widened:

Sl. No	Design Chainage (km)	Type (Proposed)	Type of Proposed Deck	New Span Arrangement	Proposal	Remarks
Nil						

7.3.2 Additional New Bridges

A. New major bridges at the following locations on the Project Highway shall be constructed.

Sl. No.	Design Chainage (km)	Type (Proposed)	Type of Proposed Deck	New Span Arrangement	Proposal	Remarks
1	7+170	Major Bridge	PSC cast in situ Box Girder	**1 x 45 m + 1 x 50 m =95m**	New Construction	6 Lane

Note: i) All major bridges shall be designed and constructed in accordance with Section 7 of IRC: SP:87-2019 (Manual for 6-lanning) and shall conform to the cross-sectional features and other details specified therein.

ii) The merging of approaches of the major bridge with the adjacent sections shall be carried out in accordance with IRC: SP:87-2019. Any additional length arising due to such merging shall not be treated as a change of scope.

iii) Stainless Steel Reinforcement shall be used for **major bridge** works as the structure lies within 15 km from the sea/creek, in accordance with Ministry's Circular No. RW/NH-34049/03/2020-S&R (B) dated 22.01.2021 and relevant IRC / IS specifications.

B. New minor bridges at the following locations on the Project Highway shall be constructed.

Sl. No.	Design Chainage (km)	Type (Proposed)	Type of Proposed Deck	New Span Arrangement	Proposal	Remarks
Nil						

7.3.3 The railings of existing bridges shall be replaced by crash barriers at the following locations:

Sl. No.	Location at km	Remarks
Nil		

7.3.4 Repairs/replacements of railing/parapets of the existing bridges shall be undertaken as follows:

Sl. No.	Location (km.)	Remarks
Nil		

Note: Refer Appendix B-II for details on repairs required.

7.3.5 Drainage System for Bridge Decks

An effective drainage system for bridge decks shall be provided as specified in paragraph 7.21 of the Manual.

7.3.6 Structures in Marine Environment

Sl. No.	Design Chainage (km)	Type (Proposed)	Type of Proposed Deck	New Span Arrangement*	Proposal	Remarks
1	7+170	Major Bridge	PSC cast in situ Box Girder	**1 x 45 m + 1 x 50 m =95m**	New Construction	6 Lane

Note: Stainless Steel Reinforcement shall be used for Major **bridge works** as the structure lies within 15 km from the sea/creek, in accordance with Ministry's Circular No. RW/NH-34049/03/2020-S&R (B) dated 22.01.2021 and relevant IRC / IS specifications.

***The minimum span length of the bridge shall be 30 m, and no deviation in the bridge length shall be permitted under any circumstances.**

Sl. No.	Proposed Chainage (km)	Proposed Type	New Proposed Size	Proposal
1	7+780	Pipe Culvert	1 X 1.2 m	New Construction
2	8+300	Pipe Culvert	1 X 1.2 m	New Construction
3	8+760	Pipe Culvert	1 X 1.2 m	New Construction
4	9+400	Pipe Culvert	1 X 1.2 m	New Construction

Note: Reinforcement for retaining walls/toe walls shall be treated with Fusion Bonded Epoxy Coating (FBEC) as an anti-corrosive measure, in accordance with the relevant IS and IRC specifications.

7.4 Rail-road bridges

7.4.1 Design, construction and detailing of ROB/RUB shall be as specified in Section 7 of the Manual.

7.4.2 Road over bridges (road over rail) shall be provided at the following location.

Road Over Bridges

Sl. No.	Location of Level Crossing (Km)	Length of Bridge (m)
Nil		

7.4.3 Road under bridges (road under railway line) shall be provided at the following level crossings.

Road Under Bridges

Sl. No.	Location of level crossing	Number and length of span
Nil		

7.5 Grade Separated Structures

The grade separated structures shall be provided at the locations and of the type and length specified in paragraphs 2.9 and 3 of this Annex-I.

7.6 Repairs and strengthening of structures

The existing structures to be repaired / strengthened, and the nature and extent of repairs / strengthening required are given below:

A – Bridges

Sl. No.	Location of bridge (km)	Nature and extent of repairs/strengthening to be carried out
Nil		

B – ROB / RUB

Sl. No.	Location of structure (km)	Nature and extent of repairs/strengthening to be carried out
Nil		

C – Overpasses/Underpasses and other structures

Sl. No.	Location of structure (km)	Nature and extent of repairs/strengthening to be carried out
NIL		

8. Traffic Control Devices and Road Safety Works

a) Traffic control devices and road safety works shall be provided in accordance with provision of relevant Manual.

b) Specifications of the reflective sheeting: Prismatic Grade sheeting **type-XI.**

c) Reflective pavement markers (Road Studs) for the entire project.

d) Road Delineators for entire project as per provision of relevant Manual.

e) Highway Lighting for entire project as per provision of relevant Manual.

f) Road signs include roadside signs, overhead signs and curb mounted signs as per provision of relevant Manual for the entire project highway including Main Carriageway, Service Road, Cross Road, Major at-grade Junction and Minor at-grade Junction.

g) Road markings as per provision of relevant Manual for the entire project highway including Main Carriageway, Service Road, Cross Road, at-grade Major Junction and at-grade Minor Junction like centre line, edge line and transverse marking.

h) Rambler Strips are to be provided on cross road at Junction locations as per Manual. h. Solar Blinker are to be provided at Junctions both side as per Manual.

i) Reflective stickers on side trees, Structures, Crash Barrier and other vulnerable locations as per Manual.

j) Hazard Marker is to be provided on either side of structures as per Manual.

k) Thrie Beam Crash Barrier shall be provided at the following locations:

Sl. No.	Chainage (Km)		Minimum Length (In Meter)	Location - Side (LHS/RHS/BHS)	Remark
	From	To			
1	05+560	05+885	650	Shoulder - BHS	
2	06+870	7+350	770	Shoulder - BHS	Excluding 95m bridge length
4	07+350	08+300	1900	Shoulder - BHS	
5	08+300	09+795	2990	Shoulder - BHS	
6	11+735	12+470	1470	Shoulder - BHS	
7	12+470	13+880	2820	Shoulder - BHS	
Total			**10600**		

9. Roadside Furniture

Roadside furniture shall be provided in accordance with the provisions of relevant Manual.

a) Road Furniture:

Sr.No,.	Road Furniture Name	Minimum Quantity
1	Km stone including 5th Km	Min.12 No. for the entire Project Highway.
2	200m stone	Min. 42 No. for the entire Project Highway
3	Road Stud - Highway	Min. 6310 No. for the entire Project Highway
4	Road Studs – Bridge	Min. 225 No. for the Nakti Bridge at Km.7+170
5	Road Boundary Stone	Min. 156 No. for the entire Project Highway.
6	Delineators	Min. 512 No. for the entire Project Highway
7	Road Marking	Min. 5720 Sqm For the entire Project Highway
8	Kerbs	Min.10100m for the entire Project Highway

Note: A Detailed Road signage Plan shall be prepared by the EPC Contractor as per Ministry's guidelines vide Circular no. RT-25035/07/2023-RS (Part) (221534) dated 24.12.2024 and IRC:67.

b) Overhead traffic signs:

- Overhead Gantry signs: 3 nos.

Sl. No.	Design Chainage (km.)	LHS/RHS
	From	
1	5+560	RHS
2	9+795	LHS
3	11+735	RHS

c) MS Railing: MS Railing for separation of main carriageway and the service road along the urban sections given below and at the locations as suggested in Schedule D.

Design Chainage		Design Length (Km.)	Side	Name of Urban Area
From (Km.)	To (Km.)			
Nil				

d) Retaining /Toe Wall Locations

Toe walls with safety barriers shall be provided at the following locations:

Sl. No.	Design Chainage (km.)		Minimum Length (m)	LHS/RHS or Both Sides
	From	To		
1	7+350	8+300	1900	Both sides
2	8+300	9+795	2990	Both sides
3	11+735	12+470	1470	Both sides
4	12+470	13+880	1410	LHS
Total			**7770**	

Note:

a. Reinforcement for retaining walls/toe walls shall be treated with Fusion Bonded Epoxy Coating (FBEC) as an anti-corrosive measure, in accordance with the relevant IS and IRC specifications.

b. Filter Media as per Ministry's specifications shall be provided behind Toe Wall/Retaining Wall along with weep holes with suitable spacing to ensure proper drainage in this stretch falling in creek area.

c. The entire cross-sectional elements shall be accommodated in the proposed ROW. If required, suitable height retaining structures shall be provided to accommodate the highway cross sections within the proposed ROW.Any increase in the length to and

height specified or referred in this Clause of Schedule -B shall not constitute a Change of Scope.

10. Compulsory Afforestation: NIL

11. Hazardous Locations:

Sl. No.	Design Chainage (km.)		LHS/RHS
	From	To	
Nil			

12. Special Requirements for Hill Roads

The stone masonry Retaining wall will be provided in the following locations

Sl. No.	Design Chainage (km.)		LHS/RHS
	From	To	
Nil			

13. Change of Scope

The length of Structures and bridges specified hereinabove shall be treated as an approximate assessment. The actual lengths as required on the basis of detailed investigations shall be determined by the Contractor in accordance with the Specifications and Standards. Any variations in the lengths specified in this Schedule-B shall not constitute a Change of Scope, save and except any variations in the length arising out of a Change of Scope expressly undertaken in accordance with the provisions of Article 13.

14. Special Instructions for Bidder:

1. The project display boards on development activities of the work shall be made as per guidelines issued vide Ministry's letter no. RW/NH-33044/10/2002-S&R (R) dated 26th May, 2003.

2. For Maintenance of proper record of the execution of the work Photography/ Videography shall be taken by the agency before, during and after execution if work and a digital copy of the same may be submitted to competent Authority.

3. The guidelines for road safety vide Ministry's letter no. RW/NH-33072/04/2004-S&R(R), dated: 27/04/2010 shall be followed.

4. The guidelines for implementation of supervisory Control and Data Acquisition (SCADA) System vide Government of Gujarat Road and Building department circular No: MCN/102015/20/H dated:19/02/2021 shall be followed.

5. Bitumen shall be heated in boilers and heating in drums on open fire shall not be permitted in any case. Spraying of bitumen emulsion shall be done only with the

mechanical sprayer and premixing of bitumen and stone aggregate should be done only in proper mechanical mixture/ hot mix plant.

5. 10% testing shall be done in R&B department approved NABL Laboratory and 10% testing shall be in GERI, Government engineering/ polytechnic college and circular of Government of Gujarat Road and building department circular No: - PRCH/102007/28/C Date 17/05/2019 shall be follow.

7. Bitumen shall be used of manufactured by Indian refineries such as IOCL, BPCL, HPCL etc.only.

8. For BC, modified bitumen (using Polymer/crumbed rubber/natural rubber) or VG-40 grade of bitumen has to be used. Similarly, for BC and DBM also, anti-stripping agent is to be used with **VG-40 grade bitumen**. For both BC & DBM, hydrated lime/cement filler shall be used.

9. The tack coats shall be provided with bitumen emulsion, complying with the requirements of clause No. 503 and 502 of Ministry's specifications for road & bridge works, 5th revision, respectively. Further, the prime coat shall be provided @1 kg/sqm. Instead of 0.6 kg/sqm.

10. The road markings may be provided as per IRC: 35, 2015. The work of road marking with stipulated paint (thermoplastic) shall be done as per Cl. 803 of Ministry's latest specifications and IRC: 35-2015 and in accordance with Ministry's Circular no. RT-25035/07/2023-RS (Part) (221534) dated 24.12.2024.

11. Collection of material on the roadside should be so planned that it would commensurate with the physical progress of work and collected materials should not cause any hindrance to the traffic. It must be ensured that the contractor arranges for separate land for storage of road construction material and machinery and these shall not be allowed to be stacked on roadside.

12. Work shall be executed as per Ministry's Specifications for road and Bridge Works (Fifth Revision -2013) and instruction issued by Ministry time to time.

13. Traffic management and road safety during the construction period provisions of IRC: SP 55:2014 shall be followed and the same shall be done as per instructions contained in the relevant Ministry's specification/circular/guideline.

14. The length and alignment of the approach road indicated in the General Arrangement Drawings (GADs) of the major bridge may vary depending on the actual site conditions. However, any variation in quantity arising from an increase in approach road length beyond the minimum length specified in Schedule-B shall not be considered as a change of scope, and no additional claim on this account shall be entertained.

15. Seismic Zone-VI (as per latest code provisions) shall be considered for all designing of bridges/structures/culverts etc.

16. The anti-carbonation coating to all concrete surfaces exposed to atmosphere shall be applied.

17. Portland Slag Cement / Sulphate Resistance Cement shall be used for the foundation work as per the site requirement.

18. The contractor shall submit at the time of each IPC & at the time of final bill, original invoice/Gate pass of approved bitumen, Emulsion, Cement, Steel, aggregates, Sand, Soil, GSB material Admixtures etc. used in project highway. All test results, material consumption statements along with details of Royalty payment for each of construction material w.r.t work done of that particular IPC.

19. The contractor shall have to maintain day to day raw & manufactured material consumption register & Plant site and Paver Site work register of bitumen mix quantity (MT) as per IRC SP:112 & R & B Department-GOG good industrial practice.

20. FRL of the Major bridge as well as Road Shall not be less than as specified in the TCS and GAD.

21. Necessary proper maintenance as and when required to make Diversion Road traffic worthy and fully operational all the season at least up to completion and opening of the Bridge for smooth traffic diversion is under the scope of the contract at the cost of the contractor. (For avoidance of doubt, restoration work for all type of damages to keep the Diversion Road fully operational for smooth traffic movement during all the season up to completion of the original bridge work in all respect is solely attributable to EPC agency at his own cost).

22. The Contractor shall be allowed to use any of the available/new/alternative material and technology in terms of circular no. RW/NH-33044/18/2020-S&R (P&B) dated 14.12.2020 and Schedule-B shall be designed to allow for use of any technology by the bidders.

Appendix B-I

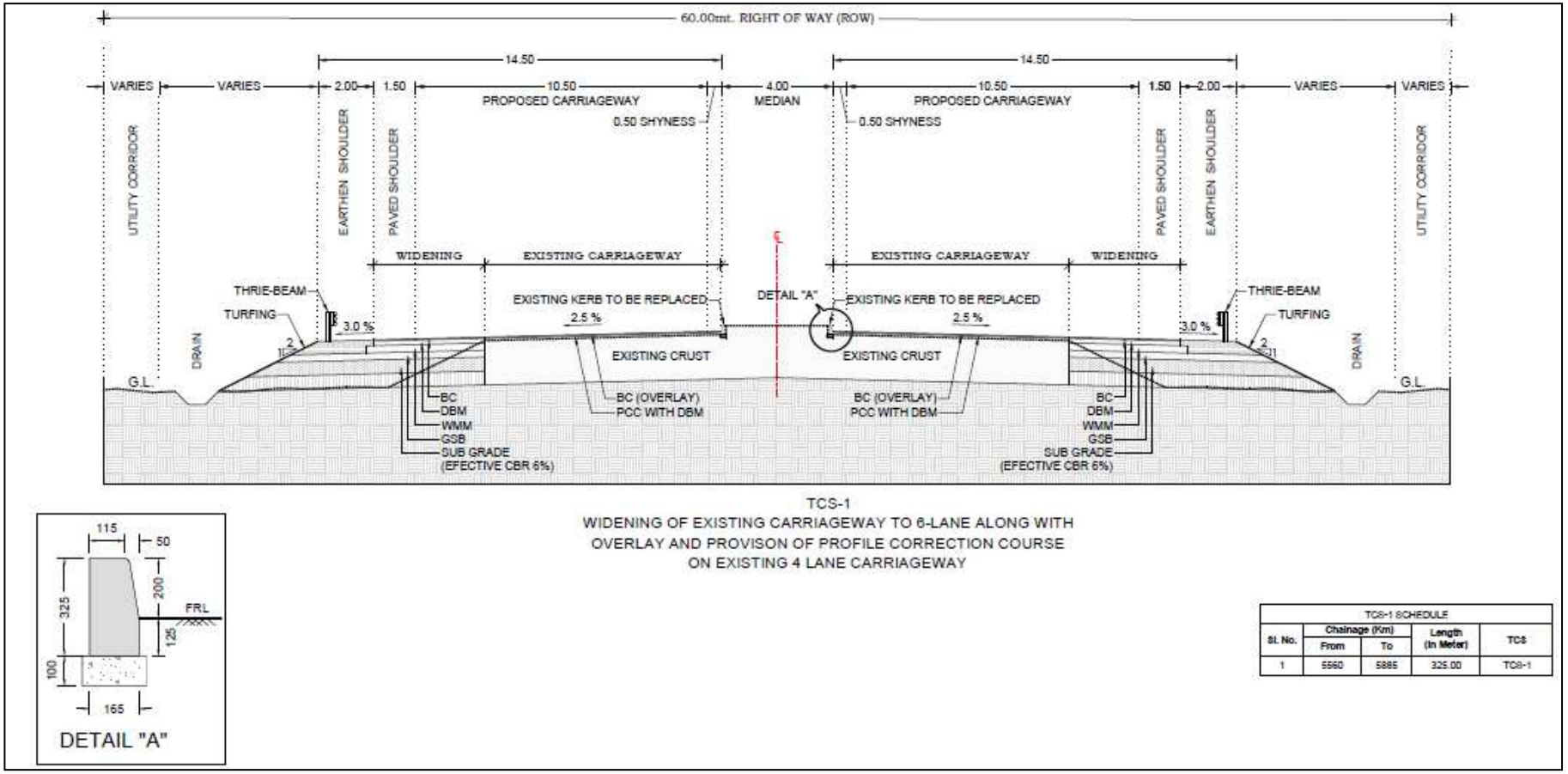
1. Typical Cross Sections

Following Typical Cross Sections are enclosed. Start and end of the stretches (Chainages) applicable for each type of cross sections are indicated in the Table below.

Applicable Stretches of Typical Cross-section

Sl. No.	Chainage (Km)		Length	TCS	TCS Name
	From	To	(Meter)		
1	05+560	05+885	325	TCS-1	Widening of Existing Carriageway to 6-Lane along with overlay and provision of profile correction course on existing 4 lane carriageway
2	05+885	06+870	985	-	**Not in Scope as ROB is in Under Construction**
3	06+870	07+125	255	Nakti Bridge Approach TCS	Six Lane approaches to Nakti Bridge (New Construction)
4	07+125	07+220	95	Nakti bridge deck portion	6-Lane Bridge
5	07+220	07+350	130	Nakti Bridge Approach TCS	Six Lane approaches to Nakti Bridge (New Construction)
6	07+350	08+300	950	TCS-3	Widening of Existing carriageway to 6-lanes along with overlay and provision of profile correction course on existing 4 lane carriageway and CC Lining on both side embankment slope
7	08+300	09+795	1495	TCS-3A	Widening of existing carriageway to 6-lanes along with reconstruction of existing 4- Lane carriageway from WMM onwards and CC Lining on both side embankment slope
8	09+795	11+735	1940	-	**Not in Scope as existing Interchange shall be retained**

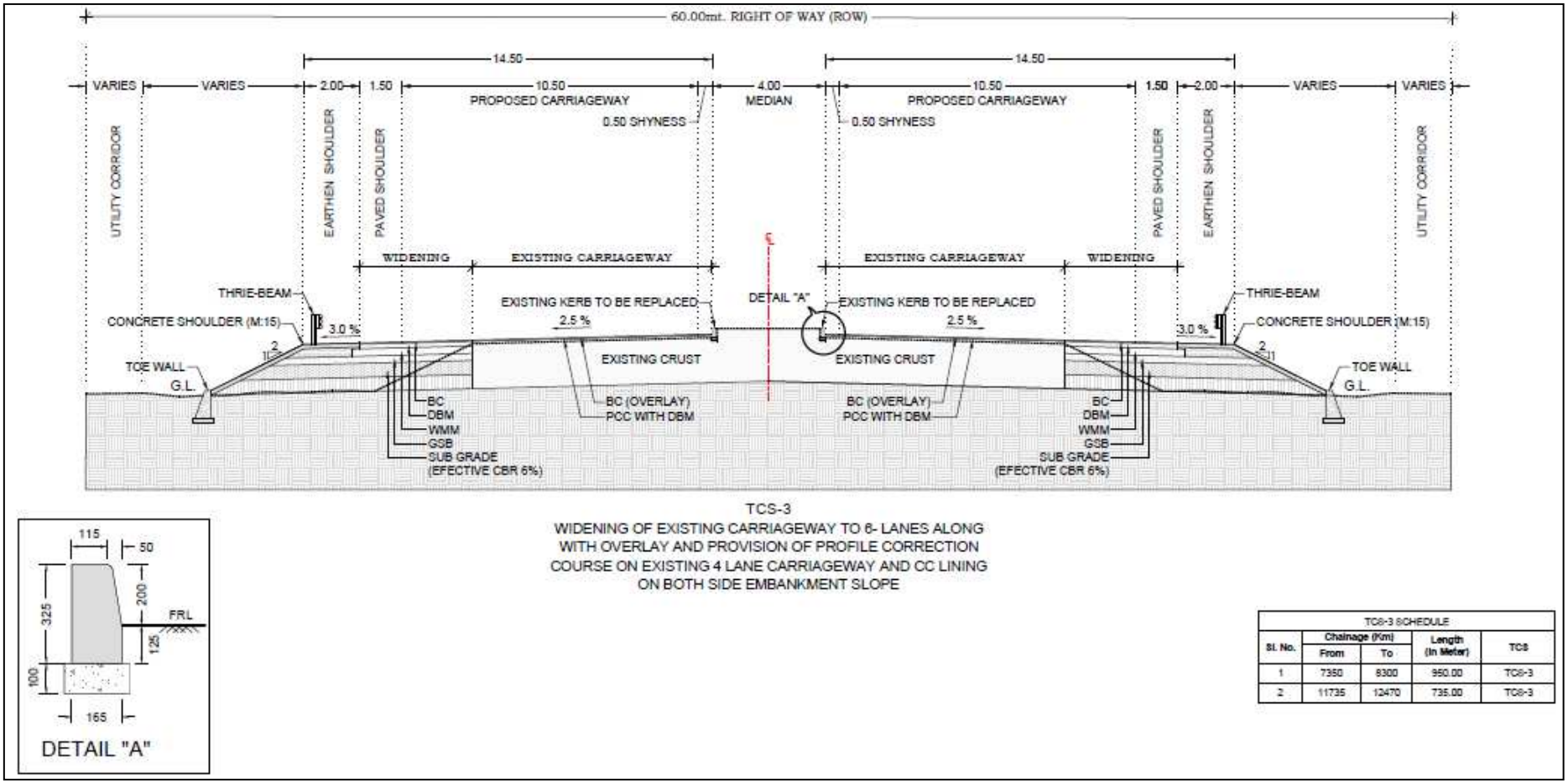
Sl. No.	Chainage (Km)		Length	TCS	TCS Name
	From	To	(Meter)		
9	11+735	12+470	735	TCS-3	Widening of existing carriageway to 6-lanes along with overlay and provision of profile correction course on existing 4 Lane carriageway and CC Lining on both side embankment slope
10	12+470	13+880	1410	TCS-4	Widening of existing carriageway to 6- lanes along with overlay and provision of profile correction course on existing 4 Lane carriageway; CC Lining on LHS Embankment Slope and overlay on RHS Existing Service Road
11	13+880	14+014	134	TCS-5	Overlay over Existing Six Lane Carriageway and both Side existing Service Road
Total Project Highway Length			**5529**	**Note: The Total Project Highway Length is excluding ROB and Interchange length.**	



TCS-1
WIDENING OF EXISTING CARRIAGEWAY TO 6-LANE ALONG WITH OVERLAY AND PROVISON OF PROFILE CORRECTION COURSE ON EXISTING 4 LANE CARRIAGEWAY

TCS-1 SCHEDULE

Sl. No.	Chainage (Km)		Length (In Meter)	TCS
	From	To		
1	5560	5885	325.00	TCS-1

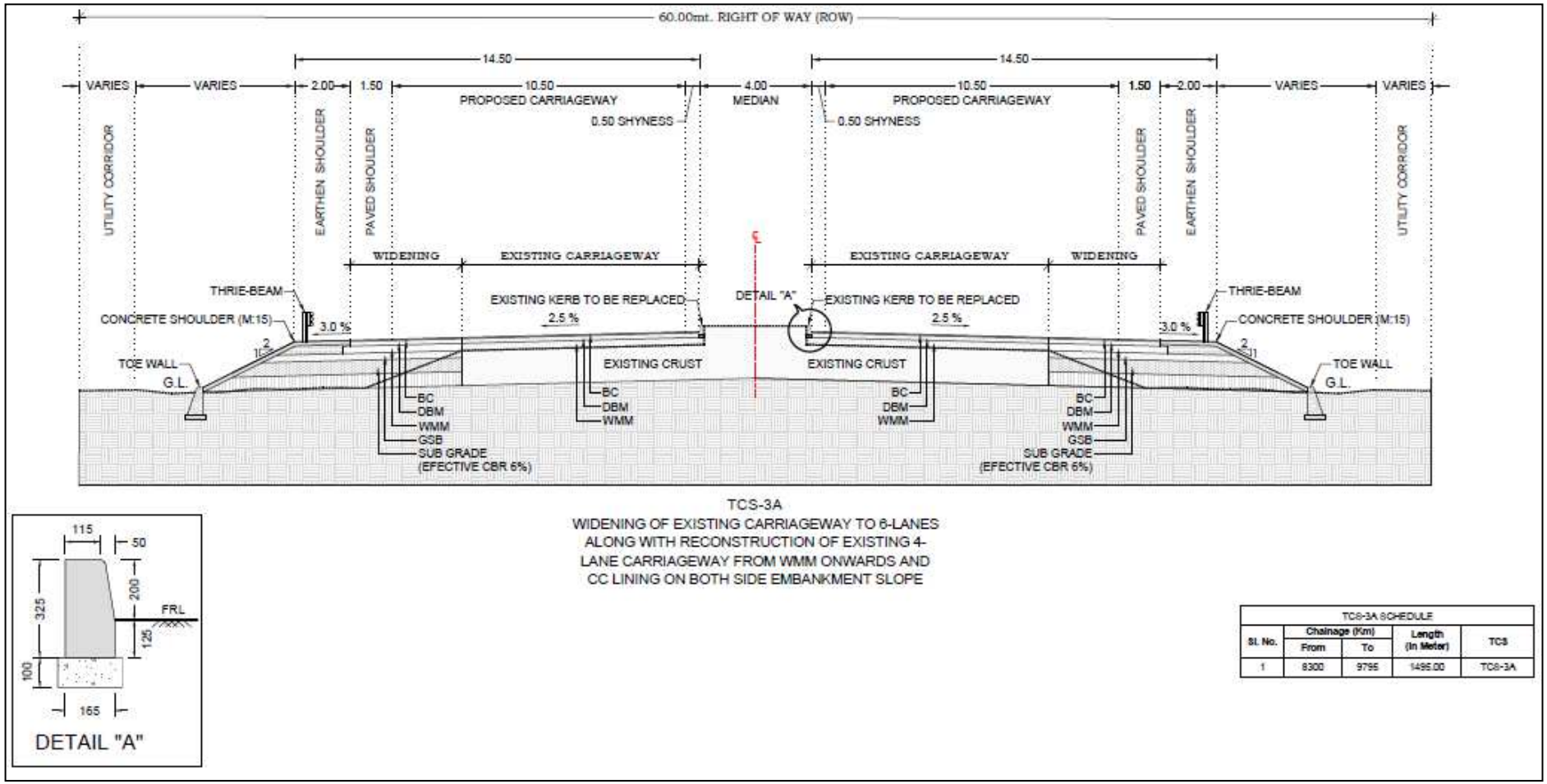


TCS-3

WIDENING OF EXISTING CARRIAGEWAY TO 6- LANES ALONG WITH OVERLAY AND PROVISION OF PROFILE CORRECTION COURSE ON EXISTING 4 LANE CARRIAGEWAY AND CC LINING ON BOTH SIDE EMBANKMENT SLOPE

TCS-3 SCHEDULE

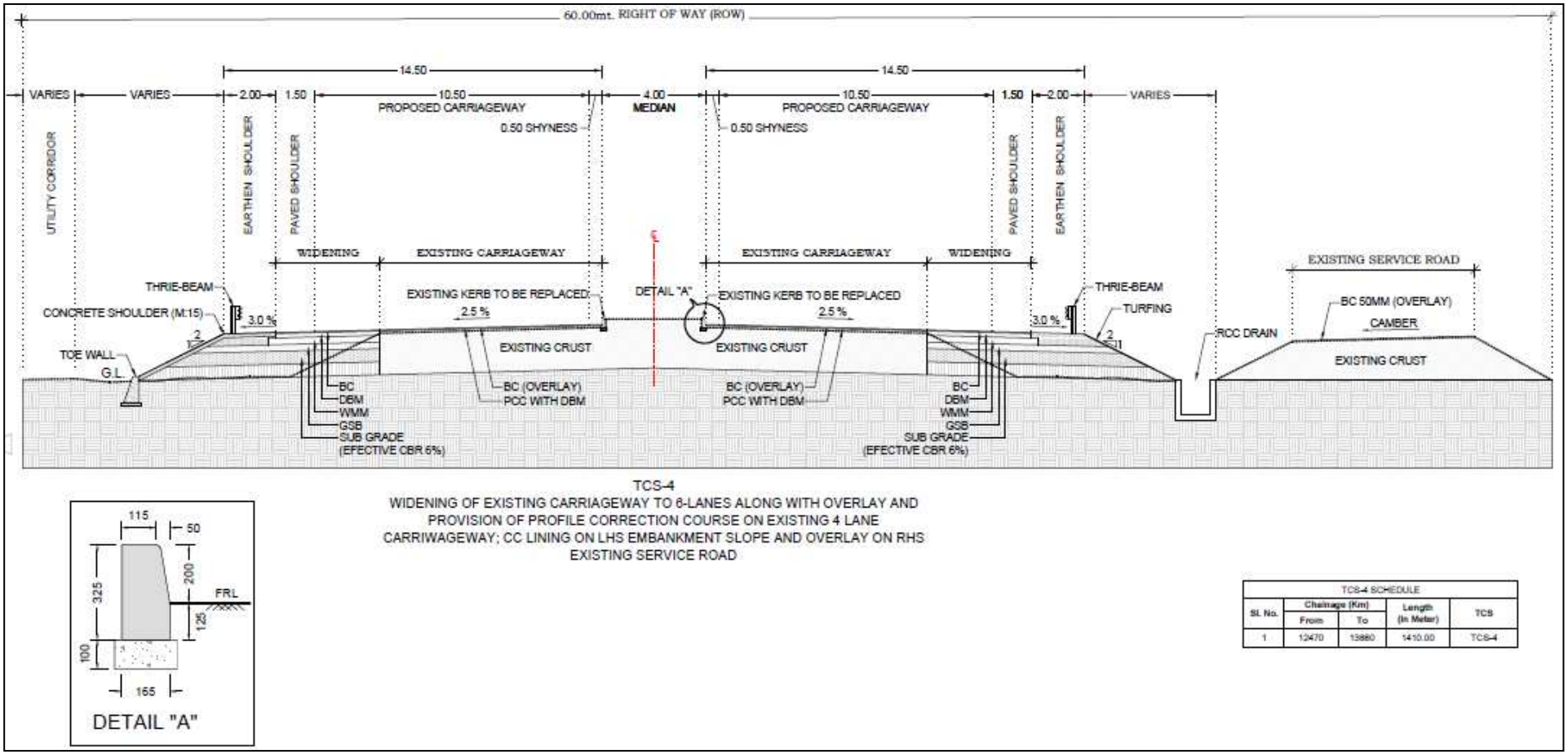
Sl. No.	Chainage (Km)		Length (In Meter)	TCS
	From	To		
1	7350	8300	950.00	TCS-3
2	11735	12470	735.00	TCS-3



TCS-3A

WIDENING OF EXISTING CARRIAGEWAY TO 6-LANES ALONG WITH RECONSTRUCTION OF EXISTING 4-LANE CARRIAGEWAY FROM WMM ONWARDS AND CC LINING ON BOTH SIDE EMBANKMENT SLOPE

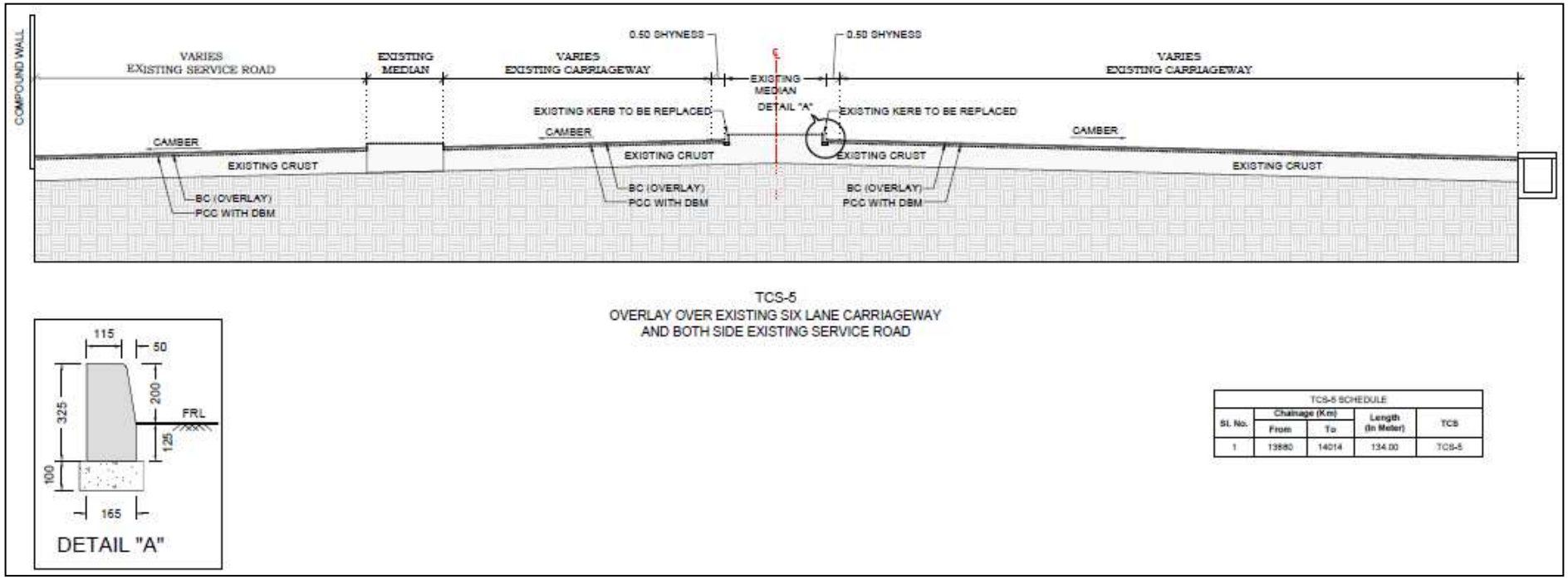
TCS-3A SCHEDULE				
Sl. No.	Chainage (Km)		Length (In Meter)	TCS
	From	To		
1	8300	9795	1495.00	TCS-3A



TCS-4
WIDENING OF EXISTING CARRIAGEWAY TO 6-LANES ALONG WITH OVERLAY AND PROVISION OF PROFILE CORRECTION COURSE ON EXISTING 4 LANE CARRIWAGEWAY; CC LINING ON LHS EMBANKMENT SLOPE AND OVERLAY ON RHS EXISTING SERVICE ROAD

TCS-4 SCHEDULE

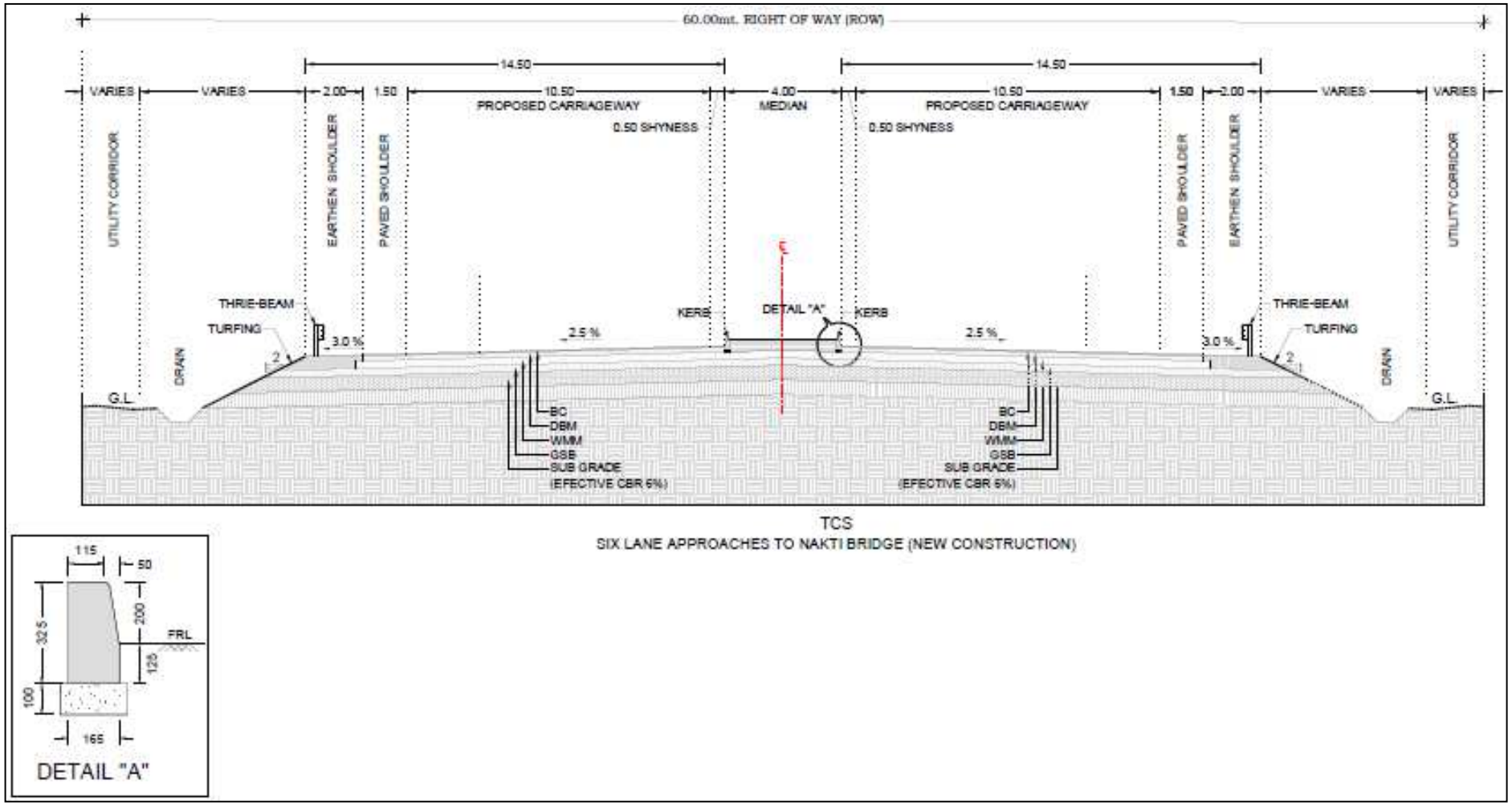
Sl. No.	Chainage (Km)		Length (In Meter)	TCS
	From	To		
1	12470	13880	1410.00	TCS-4



TCS-5
OVERLAY OVER EXISTING SIX LANE CARRIAGEWAY
AND BOTH SIDE EXISTING SERVICE ROAD

TCS-5 SCHEDULE

Sl. No.	Chainage (Km)		Length (In Meter)	TCS
	From	To		
1	13880	14014	134.00	TCS-5


60.00mt. RIGHT OF WAY (ROW)
14.50
14.50
VARIES
VARIES
2.00
1.50
10.50
PROPOSED CARRIAGEWAY
0.50 SHYNESS
4.00
MEDIAN
10.50
PROPOSED CARRIAGEWAY
0.50 SHYNESS
1.50
2.00
VARIES
VARIES
UTILITY CORRIDOR
EARTHEN SHOULDER
PAVED SHOULDER
PAVED SHOULDER
EARTHEN SHOULDER
UTILITY CORRIDOR
THRIE-BEAM
TURFING
DRAIN
G.L
3.0 %
2.5 %
KERB
DETAIL "A"
KERB
2.5 %
3.0 %
THRIE-BEAM
TURFING
DRAIN
G.L
BC
DBM
WMM
GSB
SUB GRADE
(EFECTIVE CBR 6%)
BC
DBM
WMM
GSB
SUB GRADE
(EFECTIVE CBR 6%)
TCS
SIX LANE APPROACHES TO NAKTI BRIDGE (NEW CONSTRUCTION)
115
50
325
200
FRL
125
100
165
DETAIL "A"

Annex – II

(Schedule-B)

(Schedule B-1)

1. The shifting of utilities and felling of trees shall be carried out by the Contractor. The cost of the same shall be borne by the Contractor. The details of utilities are as follows:

Sr. No	Type of Utility	Unit	Quantity	Location/stretch (LHS/RHS)
A	Electrical Utilities		As per **Annex – V** *(Schedule-A)*	As per **Annex – V** *(Schedule-A)*
A1	Electrical Poles	Nos.		
A2	Electrical cables	meters		
A3	Transformers	Nos.		
B	Water/Sewage pipeline			
B1	Sewage	meters		
B2	Water supply	meters		
C	Felling of Tress	Nos.	----NIL----	----NIL----

Note I:

a. A The type/spacing/size/specifications of poles/towers/lines/cables to be used in shifting work shall be as per the guidelines of Utility Owning Department and it is to be agreed solely between the Contractor and the Utility Owning Department. No change of scope shall be admissible and no cost shall be paid for using different type/ spacing/ size/ specifications in shifted work in comparison to those in the existing work or for making any overhead crossings to underground as per requirement of Utility Owning Department and/or construction of project highway. The Contractor shall carry out joint inspection with Utility Owning Department and get the estimates from Utility Owning Department. The assistance of the Authority is limited to giving forwarding letter on the proposal of Contractor to Utility Owning Department whenever asked by the Contractor. The decision/approval of Utility owning Department shall be binding on the Contractor.

b. The **supervision charges** at the rates/charges applicable of the Utility Owning Department shall be paid directly by the Authority to the Utility owning Department as and when Contractor furnishes demand of Utility Owning Department along with a copy of estimated cost given by the letter.

c. The dismantled material /scrap of existing Utility to be shifted/dismantled shall belong to the Contractor who would be free to dispose-off the dismantled material as deemed fit by them unless the Contractor is required to deposit the dismantled material to Utility Owning Department as per the norms and practice and, in that case the amount of credit for dismantled material may be availed by the Contractor as pers the estimate agreed between them.

d. The utilities shall be handed over after shifting work is completed to Utility Owning Department to their entire satisfaction. The maintenance liability shall rest with the Utility Owning Department after handing over process is complete as far as utility shifting works are concerned.

e. No Change of Scope Shall be eligible or no cost shall be paid for using different type numbers/spacing/size/specification in shifted work of utilities.

f. Utility Service Duct/ Corridor: Two-meter wide strip of land at the extreme edge of ROW shall be kept for accommodating utilities, both over as well as underground. Provisions contained in IRC:98 shall be followed to accommodate utility services in built-up areas of Project Highway. Utility ducts in the form of 600 mm diameter NP-4 Pipe across the Project Highway at a spacing of 0.50 km shall be provided for crossing of underground utilities.

•••

Schedule - C

(See Clause 2.1)

PROJECT FACILITIES

1 Project Facilities

The Contractor shall construct the Project Facilities in accordance with the provisions of this Agreement. Such Project Facilities shall include:

a) roadside furniture;

b) pedestrian facilities;

c) Others to be specified

2 Project Facilities for Six –Laning

Project Facilities forming Six –Laning to be completed on or before the Project Completion Date have been described in Annex-I of this Schedule-C.

Annex - I

(Schedule-C)

Project Facilities for Six Laning

1 Project Facilities

The Contractor shall construct the Project Facilities described in this Annex-I to form Six–Lane Project Highway. The Project Facilities shall include:

(a) roadside furniture;

(b) pedestrian facilities;

2 Description of Project Facilities

Each of the Project Facilities is described below showing:

S. No.	Project Facility	Location	Design Requirement	Other Essential Details
1.	Roadside Furniture	The roadside furniture shall be as per Section 9 of IRC SP 87 2019 which includes		
i	Traffic Signs	Entire Project Highway	As per Schedule D	
ii	Pavement Markings	Entire Project Highway	As per Schedule D	
iii	Solar LED Traffic Blinkers	Entire Project Highway	As per Schedule D	
iv	Thrie-beam Crash barrier	As Mentioned in Schedule B	As per Schedule D	
v	Delineators	As Mentioned in Schedule B	As per Schedule D	
vi	Boundary stones	As Mentioned in Schedule B	As per Schedule D	
vii	Hectometer / Kilometer stones	As Mentioned in Schedule B	As per Schedule D	
viii	Highway Lighting	Entire Project Highway	As per Schedule D	
2.	Pedestrian Facilities	The pedestrian facilities shall include the provision of the; • Pedestrian Crossings: Provide pedestrian crossing facilities on intersections.	As per Schedule D	

S. No.	Project Facility	Location	Design Requirement	Other Essential Details
3	Others	**1. One Computer Operator Cum office assistant for the office of Executive Engineer, National Highway Division, Gandhidham. *** **2. Vehicle****		

*** Computer operator cum office assistant: -**

The Contractor shall provide one ccomputer operator cum office to National Highway Subdivision, Gandhidham on or before the starting of site activities or within 15 days from the date of order by the Authority as indicated in project facilities table above. The computer operator cum office assistant shall be provided till the successful completion of Defect Liability Period for the complete work. The contractor should depute the person as per the qualification: The person shall be completed graduation along with frequent in typing in computer with preferably 2(two) years' experience & should have basic knowledge of MS office. The computer operator cum office assistant shall be provided day and night as required by the Authority. In respect of all worker employed directly and indirectly on the work, the contractor at his own risk & cost will have to arrange the safety provision to comply with statutory regulation and safety codes. The minimum rates of the wages as per the minimum wage Act 1948 and as per the notification of the Labour and Employment Department (Gujarat state) time to time for the computer operator cum office assistant shall be fully paid by the contactor. In case the "person" (Computer operator cum office assistant) who suffer or die total or partial disablement because of an accident while on work, the compensation will be fully paid by the contractor if person eligible to get compensation. In the event of any person who being absent on work, the Contractor shall provide substitute person immediately within 2 days. If the Contractor at any time fails to provide Computer operator cum office assistant (that the Contractor failed to provide) shall be debited Rs. 500/- per day to the Contractor's IPC as penalty.

**** Vehicle: -**

The Contractor shall provide vehicle **New TOP Model Bolero** to National Highway Division, Gandhidham on or before the starting of site activities or within 15 days from the date of Work order by the Authority. The vehicle shall be provided and maintained till the successful completion of Contract Duration. The vehicle shall be replaced with a new vehicle after a maximum run of 2,00,000 km or 2.5 years whichever is earlier. All necessary taxes for operating the vehicle shall be fully paid and all necessary papers shall be provided as required by prevailing Motor Vehicle Act with comprehensive insurance cover for the vehicle. The vehicle shall be provided day and night as required by the Authority. The Contractor shall also make available driver having valid license at such times and for such duration as instructed by the Authority. The vehicle shall be maintained in a smooth-running condition. All expenses required for keeping the vehicle in smooth running condition such as fuel, lubrication oil and other consumables, necessary service and maintenance, driver, repairs and replacement etc. are to be met by the Contractor. In the event of any vehicle being off the road for maintenance or on account of breakdown, the Contractor shall provide substitute vehicle immediately. If the Contractor at any time fails to provide vehicle (that the Contractor failed to provide) shall be debited Rs. 2000/- per day to the Contractor's IPC as penalty.

3. Highway Patrol

Nil

4. Ambulances

Nil

5. Cranes

Nil

• • •

Schedule - D

(See Clause 2.1)

SPECIFICATIONS AND STANDARDS

1. Construction

The Contractor shall comply with the Specifications and Standards set forth in Annex-I of this Schedule-D for construction of the Project Highway:

2. Design Standards

The Project Highway including Project Facilities shall conform to design requirements set out in the following documents:

- Manual of Standards and Specifications for Six Laning of Highways published by the Indian Roads Congress-IRC: SP: 87-2019.
- MoRT&H Specification (Fifth revision)
- Road Marking IRC: 35-2015
- Traffic sign boards IRC: 67-2012
- KM Stone IRC: 8-1980 referred to herein as the Manual
- Rout marker sign IRC: 79-2019
- Traffic safety barriers IRC: 119-2015
- Traffic Management in work zones IRC: SP: 55-2014
- IRC: 88-2019 (Manual for road safety Audit)
- Manual for Quality Control in Road & Bridge Works IRC: SP: 112-2017.
- IRC:78-2014
- IRC:112–2020
- IRC:SP:41–1994
- IRC:SP:112–2017
- IRC:SP:118–2019.
- IS 456:2000

- Reinforcement for retaining walls, toe walls, and RCC drains and culverts shall be treated with Fusion Bonded Epoxy Coating (**FBEC**) as an anti-corrosive measure, in accordance with the relevant IS and IRC specifications.
- The major bridge lies within 15 km from the sea or creek; use of Stainless-Steel reinforcement shall be used for Nakti Bridge in accordance with Ministry's Circular no. RW/NH-34049/03/2020-S&R (B) dated 22.01.2021.

Annex – I

(Schedule-D)

Specifications and Standards for Six-Laning

1 Specifications and Standards

All Materials, works and construction operations shall conform to the Manual of Standards and Specifications for Six-Lane Highways (IRC:SP:87-2019) published by IRC (referred to as "Manuals" in this Schedule) and MORTH Specifications for Road and Bridge Works. Where the specification for a work is not given, Good Industry Practice shall be adopted to the satisfaction of the Engineer in charge.

2 Deviations from the Specifications and Standards

2.1 Notwithstanding anything to the contrary contained in the Paragraph 1 above, the following Specifications and Standards shall apply to the Project Highway, and for purposes of this Agreement, aforesaid Specifications and Standards shall be deemed to be amended to the extent set forth below:

Deviations from the Manual

S. No.	Item	Description of Deviation	Clause reference
1	Paved Shoulder	Earthen shoulder has been decreased upto 1.50m instead of 2.5m based on MoRTH circular dated 4th June 2024	2.6 of IRC:SP 87-2019
2	Earthen Shoulder	Earthen shoulder has been increased upto 2.0m instead of 1.5m based on MoRTH circular dated 4th June 2024	2.6 of IRC:SP 87-2019
3	Typical Cross Section 1,3,3A,4,5	The median width shall remain unchanged, while the width of the paved and earthen shoulders shall be in accordance with the MoRTH circular dated 4th June 2024.	2.17 of IRC:SP 87-2019
4	Auxiliary/Shelter Lane	Auxiliary/Shelter Lane has not provided at any median opening location	2.17 of IRC:SP 87-2019

3. Special conditions for construction of structures

3.1 For all the foundations, cement shall be Portland slag cement.

3.2 The concrete grade for all the culverts shall be used as per "extreme" condition based on the latest IRC code. The grades specified in GADs are normally based on the above conditions and need to be followed.

3.3 The bridge lies within 15 km from the sea or creek; use of Stainless-Steel reinforcement shall be used for Nakti Bridge in accordance with Ministry's Circular no. RW/NH-34049/03/2020-S&R (B) dated 22.01.2021.

3.4 Reinforcement for retaining walls, toe walls, and RCC drains and culverts shall be treated with Fusion Bonded Epoxy Coating (**FBEC**) as an anti-corrosive measure, in accordance with the relevant IS and IRC specifications.

Filter Media as per Ministry's specifications shall be provided behind Toe Wall/Retaining Wall along with weep holes with suitable spacing to ensure proper drainage in this stretch falling in creek area.

3.5 Seismic Zone – **VI** (as per latest codal provisions) is considered for all designing of culverts etc.

Schedule - E

(See Clauses 2.1 and 14.2)

Maintenance Requirements

1. Maintenance Requirements

(i) The Contractor shall, at all times maintain the Project Highway in accordance with the provisions of this Agreement, Applicable Laws and Applicable Permits.

(ii) The Contractor shall repair or rectify any Defect or deficiency set forth in Paragraph 2 of this Schedule-E within the time limit specified therein and any failure in this behalf shall constitute non-fulfilment of the Maintenance obligations by the Contractor. Upon occurrence of any breach hereunder, the Authority shall be entitled to effect reduction in monthly lump sum payment as set forth in Clause 14.6 of this Agreement, without prejudice to the rights of the Authority under this Agreement, including Termination thereof.

(iii) All Materials, works and construction operations shall conform to the MORTH Specifications for Road and Bridge Works, and the relevant IRC publications. Where the specifications for a work are not given, Good Industry Practice shall be adopted.

[Specify all the relevant documents]

2. Repair/rectification of Defects and deficiencies

The obligations of the Contractor in respect of Maintenance Requirements shall include repair and rectification of the Defects and deficiencies specified in Annex - I of this Schedule-E within the time limit set forth therein.

3. Other Defects and deficiencies

In respect of any Defect or deficiency not specified in Annex - I of this Schedule-E, the Authority's Engineer may, in conformity with Good Industry Practice, specify the permissible limit of deviation or deterioration with reference to the Specifications and Standards, and any deviation or deterioration beyond the permissible limit shall be repaired or rectified by the Contractor within the time limit specified by the Authority's Engineer.

4. Extension of time limit

Notwithstanding anything to the contrary specified in this Schedule-E, if the nature and extent of any Defect or deficiency justifies more time for its repair or rectification than the time specified herein, the Contractor shall be entitled to additional time in conformity with Good Industry Practice. Such additional time shall be determined by the Authority's Engineer and conveyed to the Contractor and the Authority with reasons thereof.

5. Emergency repairs/restoration

Notwithstanding anything to the contrary contained in this Schedule-E, if any Defect, deficiency or deterioration in the Project Highway poses a hazard to safety or risk of damage to property, the Contractor shall promptly take all reasonable measures for eliminating or minimizing such danger.

6. Daily inspection by the Contractor

The Contractor shall, through its engineer, undertake a daily visual inspection of the Project Highway and maintain a record thereof in a register to be kept in such form and manner as the Authority's Engineer may specify. Such record shall be kept in safe custody of the Contractor and shall be open to inspection by the Authority and the Authority's Engineer at any time during office hours.

7. Pre-monsoon inspection / Post-monsoon inspection

The Contractor shall carry out a detailed pre-monsoon inspection of all bridges, culverts and drainage system before 1st June every year in accordance with the guidelines contained in IRC: SP35. Report of this inspection together with details of proposed maintenance works as required on the basis of this inspection shall be sent to the Authority's Engineer before the 10th June every year. The Contractor shall complete the required repairs before the onset of the monsoon and send to the Authority's Engineer a compliance report. Post monsoon inspection shall be done by the 30th September and the inspection report together with details of any damages observed and proposed action to remedy the same shall be sent to the Authority's Engineer.

8. Repairs on account of natural calamities

All damages occurring to the Project Highway on account of a Force Majeure Event or wilful default or neglect of the Authority shall be undertaken by the Authority at its own cost. The Authority may instruct the Contractor to undertake the repairs at the rates agreed between the Parties.

Annex - I

(Schedule-E)

Repair/rectification of Defects and deficiencies

The Contractor shall repair and rectify the Defects and deficiencies specified in this Annex-I of Schedule-E within the time limit set forth in the table below.

Table -1: Maintenance Criteria for Pavements:

Asset Type	Performance Parameter	Level of Service (LOS)		Frequency of Inspection	Tools/Equipment	Standards and References for Inspection and Data Analysis	Time limit for Rectification/ Repair	Maintenance Specifications
		Desirable	Acceptable					
Flexible Pavement (Pavement of MCW, Service Road,	Potholes	Nil	< 0.1 % of area and subject to limit of 10 mm in	Daily	Length Measurement Unit like Scale, Tape, odometer etc.	IRC 82: 2023 and Distress Identification Manual for Long Term Pavement Performance Program, FHWA 2003 (http://www.tfhrc.com/pavement/lttp/reports/03031/)	24-48 hours	MORT&H Specification 3004.2

Asset Type	Performance Parameter	Level of Service (LOS)		Frequency of Inspection	Tools/Equipment	Standards and References for Inspection and Data Analysis	Time limit for Rectification/ Repair	Maintenance Specifications
		Desirable	Acceptable					
approaches of Grade structure, approaches of connecting roads, slip roads, lay byes etc. as applicable)			depth					
	Cracking	Nil	< 5 % subject to limit of 0.5 sqm for any 50 m length	Daily			7-15 days	MORT&H Specification 3004.3
	Rutting	Nil	< 5 mm	Daily	Straight Edge		15 -30 days	MORT&H Specification 3004.2
	Corrugations and	Nil	< 0.1 % of area	Daily	Length Measuremen		2-7 days	IRC:82-2023

Asset Type	Performance Parameter	Level of Service (LOS)		Frequency of Inspection	Tools/Equipment	Standards and References for Inspection and Data Analysis	Time limit for Rectification/ Repair	Maintenance Specifications
		Desirable	Acceptable					
	Shoving				t Unit like Scale, Tape, odometer etc.			
	Bleeding	Nil	< 1 % of area	Daily			3-7 days	MORT&H Specification 3004.4
	Ravelling / Stripping	Nil	< 1 % of area	Daily			7-15 days	IRC:82-2023 read with IRC SP 81
	Edge Deformation/ Breaking	Nil	< 1 m for any 100 m section and width <	Daily			7- 15 days	IRC:82-2023

Asset Type	Performance Parameter	Level of Service (LOS)		Frequency of Inspection	Tools/Equipment	Standards and References for Inspection and Data Analysis	Time limit for Rectification/ Repair	Maintenance Specifications
		Desirable	Acceptable					
			0.1 m at any location, restricted to 30 cm from the edge					
	Roughness BI	2000 mm/km	2400 mm/km	Bi-Annually	Class I Profilometer SCRIM (Sideway-force	Class I Profilometer : ASTM E950 (98) :2004 –Standard Test Method for measuring Longitudinal Profile of Travelled Surfaces with Accelerometer Established Inertial Profiling Reference ASTM E1656 -94: 2000- Standard Guide for Classification of Automatic	180 days	IRC:82-2023
	Skid Number	60SN	50SN	Bi-Annually			180 days	BS: 7941-1: 2006

Asset Type	Performance Parameter	Level of Service (LOS)		Frequency of Inspection	Tools/Equipment	Standards and References for Inspection and Data Analysis	Time limit for Rectification/ Repair	Maintenance Specifications
		Desirable	Acceptable					
	Pavement Condition Index	3	2.1	Bi-Annually	Coefficient Routine Investigation Machine or equivalent)	Pavement Condition Survey Equipment	180 days	IRC:82-2023
	Other Pavement Distresses			Bi-Annually			2-7 days	IRC:82-2023
	Deflection / Remaining Life			Annually	Falling Weight Deflectometer	IRC 115: 2014	180 days	IRC:115-2014
Rigid Pavement	Roughness BI	2200mm/km	2400mm/km	Bi-Annually	Class I Profilometer	ASTM E950 (98) :2004 and ASTM E1656 - 94: 2000	180 days	IRC:SP:83-2018

<table>
<tr><th rowspan="2">Asset Type</th><th rowspan="2">Performance Parameter</th><th colspan="2">Level of Service (LOS)</th><th>Frequency of Inspection</th><th>Tools/Equipment</th><th>Standards and References for Inspection and Data Analysis</th><th>Time limit for Rectification/ Repair</th><th>Maintenance Specifications</th></tr>
<tr><th>Desirable</th><th>Acceptable</th><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="2">(Pavement of MCW, Service Road, Grade structure, approaches of connecting roads, slip roads, lay byes etc. as applicable)</td><td>Skid</td><td colspan="2">Skid Resistance no. at different speed of vehicles
<table><tr><th>Minimum SN</th><th>Traffic Speed (Km/h)</th></tr><tr><td>36</td><td>50</td></tr><tr><td>33</td><td>65</td></tr><tr><td>32</td><td>80</td></tr></table></td><td>Bi-Annually</td><td>SCRIM

(Sideway-force Coefficient Routine Investigation Machine or equivalent)</td><td>IRC:SP:83-2018</td><td>180 days</td><td>IRC:SP:83-2018</td></tr>
</table>

Asset Type	Performance Parameter	Level of Service (LOS)		Frequency of Inspection	Tools/Equipment	Standards and References for Inspection and Data Analysis	Time limit for Rectification/ Repair	Maintenance Specifications
		Desirable	Acceptable					
		31	95					
		31	110					
Embankment/ Slope	Edge drop at shoulders	Nil	40mm	Daily	Length Measurement Unit like Scale, Tape, odometer etc.	IRC	7-15 days	MORT&H Specification 408.4
	Slope of camber/cross fall	Nil	<2% variation in prescribed slope of camber/cross	Daily			7-15 days	MORT&H Specification 408.4

Asset Type	Performance Parameter	Level of Service (LOS)		Frequency of Inspection	Tools/Equipment	Standards and References for Inspection and Data Analysis	Time limit for Rectification/ Repair	Maintenance Specifications
		Desirable	Acceptable					
			fall					
	Embankment Slopes	Nil	<15 % variation in prescribe side slope	Daily			7-15 days	MORT&H Specification 408.4
	Embankment Protection	Nil	Nil	Daily	NA		7-15 days	MORT&H Specification
	Rain Cuts/ Gullies in slope	Nil	Nil	Daily Specially During	NA		7-15 days	MORT&H Specification

Asset Type	Performance Parameter	Level of Service (LOS)		Frequency of Inspection	Tools/Equipment	Standards and References for Inspection and Data Analysis	Time limit for Rectification/ Repair	Maintenance Specifications
		Desirable	Acceptable					
				Rainy Season				

In addition to the above performance criterion, the contractor shall strictly maintain the rigid pavements as per requirements in the following table

Table -2: **Maintenance Criteria for Rigid Pavements:**

S.No.	Type of Distress	Measured Parameter	Degree of Severity	Assessment Rating	Repair Action	
					For the case d < D/2	For the case d > D/2
CRACKING						
1	**Single Discrete Cracks Not intersecting with any joint**	w = width of crack L = length of crack d = depth of crack D = depth of slab	0	Nil, not discernible	No Action	Not applicable
			1	w < 0.2 mm. hair cracks		
			2	w = 0.2 - 0.5 mm, discernible from slow-moving car	Seal without delay	Seal, and stitch if L > lm. Within 7days
			3	w = 0.5 - 1.5 mm, discernible from fast-moving car		

S.No.	Type of Distress	Measured Parameter	Degree of Severity	Assessment Rating	Repair Action	
					For the case d < D/2	**For the case d > D/2**
			4	w = 1.5 - 3.0 mm	Seal, and stitch if L > 1 m. Within 7 days	Staple or Dowel Bar Retrofit, FDR for affected portion. Within 15days
			5	w > 3 mm.		
2	**Single Transverse (or Diagonal) Crack intersecting with one or more joints**	w = width of crack L = length of crack d = depth of crack D = depth of slab	0	Nil, not discernible	No Action	
			1	w < 0.2 mm, hair cracks	Route and seal with epoxy. Within 7 days	Staple or Dowel Bar Retrofit. Within 15days
			2	w = 0.2 - 0.5 mm, discernible from slow vehicle		
			3	w = 0.5 - 3.0 mm, discernible from fast vehicle	Route, seal and stitch, if L > 1 m. Within 7 days	

S.No.	Type of Distress	Measured Parameter	Degree of Severity	Assessment Rating	Repair Action	
					For the case d < D/2	**For the case d > D/2**
			4	w = 3.0 - 6.0 mm	Dowel Bar Retrofit. Within 15 days	Full Depth Repair Dismantle and reconstruct affected. Portion with norms and specifications - See Para 5.5 & 9.2 Within 15days
			5	w > 6 mm, usually associated with spalling, and/or slab rocking under traffic	Not Applicable, as it may be full depth	
3	**Single Longitudinal Crack intersecting with one or more joints**	w = width of crack L = length of crack d = depth of crack D = depth of slab	0	Nil, not discernible	No Action	
			1	w < 0.5 mm, discernable from slow moving vehicle	Seal with epoxy, if L > 1 m. Within 7 days	Staple or dowel bar retrofit. Within 15days

S.No.	Type of Distress	Measured Parameter	Degree of Severity	Assessment Rating	Repair Action	
					For the case d < D/2	For the case d > D/2
			2	w = 0.5 - 3.0 mm, discernible from fast vehicle	Route seal and stitch, if L > l m. Within 15 days	-
			3	w = 3.0 - 6.0 mm	Staple, if L > 1 m. Within 15 days	Partial Depth Repair with stapling. Within 15 days
			4	w = 6.0 - 12.0 mm, usually associated with spalling	Not Applicable, as it may be full depth	
			5	w > 12 mm, usually associated with spalling, and/or slab rocking under traffic		Full Depth Repair Dismantle and reconstruct affected portion as per norms and specifications - See Para 5.6.4

S.No.	Type of Distress	Measured Parameter	Degree of Severity	Assessment Rating	Repair Action	
					For the case d < D/2	For the case d > D/2
						Within 15 days
4	**Multiple Cracks intersecting with one or more joints**	**w = width of crack**	0	Nil, not discernible	No Action	-
			1	w < 0.2 mm, hair cracks	Seal, and stitch if L > l m.	
			2	w = 0.2 - 0.5 mm. discernible from slow vehicle	Within 15 days	
			3	w = 0.5 - 3.0 mm, discernible from fast vehicle	Full depth repair within 15 days	Dismantle, Reinstate subbase, Reconstruct whole slab as per specifications within 30 days
			4	w = 3.0 - 6.0 mm panel broken into 2 or 3 pieces		
			5	w > 6 mm and/or panel broken into more than 4 pieces		

S.No.	Type of Distress	Measured Parameter	Degree of Severity	Assessment Rating	Repair Action	
					For the case d < D/2	For the case d > D/2
5	**Corner Break**	w = width of crack L = length of crack	0	Nil, not discernible	No Action	-
			1	w < 0.5 mm; only 1 corner broken	Seal with low viscosity epoxy to secure broken parts Within 7 days	Seal with epoxy seal with epoxy Within 7days
			2	w < 1.5 mm; L < 0.6 m, only one corner broken		
			3	w < 1.5 mm; L < 0.6 m, two corners broken	Partial Depth (Refer Figure 8.3 of IRC:SP: 83-2008) Within 15 days	Full depth repair
			4	w > 1.5 mm; L > 0.6 m or three corners broken		
				ree or four corners broken		Reinstate sub-base, and reconstruct the slab as per norms and specifications

S.No.	Type of Distress	Measured Parameter	Degree of Severity	Assessment Rating	Repair Action	
					For the case d < D/2	For the case d > D/2
			5			within 30days
6	**Punchout (Applicable to Continuous Reinforced Concrete Pavement (CRCP) only)**	w = width of crack L = length (m/m2)	0	Nil, not discernible		No Action
			1	w < 0.5 mm; L < 3 m/m^2	Not Applicable, as it may be full depth	Seal with low viscosity epoxy to secure broken parts.
			2	either w > 0.5 mm or L < 3 m/m^2		
			3	w > 1.5 mm and L < 3 m/m^2		Within 15days

S.No.	Type of Distress	Measured Parameter	Degree of Severity	Assessment Rating	Repair Action	
					For the case d < D/2	For the case d > D/2
			4	w > 3 mm, L < 3 m/m^2 and deformation		Full depth repair - Cut out and replace damaged area taking care not to damage reinforcement. Within 30days
			5	w > 3 mm, L > 3 m/m^2 and deformation		
Surface Defects						
7	Ravelling or Honeycomb type surface	r = area damaged surface/total surface of slab (%) h = maximum depth of damage	0	Nil, not discernible	**Short Term** No action.	**Long Term** Not Applicable
			1	r < 2 %	Local repair of areas	

S.No.	Type of Distress	Measured Parameter	Degree of Severity	Assessment Rating	Repair Action	
					For the case d < D/2	**For the case d > D/2**
			2	r = 2 - 10 %	damaged and liable to be damaged. Within 15 days	
			3	r = 10-25%	Bonded Inlay, 2 or 3 slabs if	
			4	r = 25 - 50 %	affecting. Within 30 days	
			5	r > 50% and h > 25 mm	Reconstruct slabs, 4 or more slabs if affecting. Within 30 days	
8	**Scaling**	r = damaged	0	Nil, not discernible	**Short Term**	**Long Term**

S.No.	Type of Distress	Measured Parameter	Degree of Severity	Assessment Rating	Repair Action	
					For the case d < D/2	For the case d > D/2
		surface/total surface of slab (%) h = maximum depth of damage			No action.	Not Applicable
			1	r < **2 %**	Local repair of areas damaged and liable to be damaged. Within 7days	
			2	r = 2 - 10 %		
			3	r = 10 - 20%	Bonded Inlay within 15 days	
			4	r = 20 - 30 %		
			5	r > 30 % and h > 25 mm	Reconstruct slab within 30 days	

S.No.	Type of Distress	Measured Parameter	Degree of Severity	Assessment Rating	Repair Action	
					For the case d < D/2	For the case d > D/2
9	**Polished Surface/Glazing**	t = texture depth, sand patch test	0		No action.	Not Applicable
			1	t > 1 mm		
			2 '	t = 1 - 0.6 mm	Monitor rate of deterioration	
			3	t = 0.6 - 0.3 mm		
			4	t = 0.3 - 0.1 mm		
			5	t < 0.1 mm	Diamond Grinding if affecting 50% or more slabs in a continuous stretch of minimum	

S.No.	Type of Distress	Measured Parameter	Degree of Severity	Assessment Rating	Repair Action	
					For the case d < D/2	For the case d > D/2
					5 km. Within 30 days	
10	**Popout (Small Hole), Pothole Refer Para 8.4**	n = number/m^2 d = diameter h = maximum depth	0	d < 50 mm; h < 25 mm; n < 1 per 5 m^2	No action.	Not Applicable
			1	d = 50 - 100 mm; h < 50 mm; n < 1 per 5 m^2	Partial depth repair 65 mm deep. Within 15 days	
			2	d = 50 - 100 mm; h > 50 mm; n < 1 per 5 m^2		
			3	d = 100 - 300 mm; h < 100 mm n < 1 per 5 m^2	Partial depth repair 110mm i.e.10 mm more than the depth	
			4	d = 100 - 300 mm; h > 100 mm; n < 1 per 5 m^2		

S.No.	Type of Distress	Measured Parameter	Degree of Severity	Assessment Rating	Repair Action	
					For the case d < D/2	For the case d > D/2
					of the hole. Within 30 days	
			5	d > 300 mm; h > 100 mm: n > 1 per 5 m^2	Full depth repair. Within 30 days	

Joint Defects						
11	**Joint Seal Defects**	loss or damage L = Length as % total joint length	0	Difficult to discern.	**Short Term** No action.	**Long Term** Not Applicable
			1	Discernible, L< 25% but of little immediate consequence with regard to ingress of water or trapping incompressible material.	Clean joint, inspect later.	
			3	Notable. L > 25% insufficient protection against ingress of water and trapping incompressible material.	Clean and reapply sealant in selected locations. Within 7 days	
			5	Severe; w > 3 mm negligible protection	Clean, widen and reseal the joint.	

				against ingress of water and trapping incompressible material.	Within 7 days	
12	**Spalling of Joints**	w = width on either side of the joint L = length of spalled portion (as % joint length)	0	Nil, not discernible	No action.	Not Applicable
			1	w < 10 mm	Apply low viscosity epoxy resin/ mortar in cracked portion.	
			2	w = 10 - 20 mm, L < 25%	Within 7 days	
			3	w = 20 - 40 mm, L > 25%	Partial Depth Repair. Within 15 days	
			4	w = 40 - 80 mm, L > 25%	30 - 50 mm deep, h = w + 20% of w, within 30 days	
			5	w > 80 mm, and L > 25%	50 - 100 mm deep repair. H = w + 20% of w. Within 30 days	

13	**Faulting (or Stepping) in Cracks or Joints**	f = difference of level	0	not discernible, < 1 mm	No action.	No action.
			1	f < 3 mm		
			2	f = 3 - 6 mm	Determine cause and observe, take action for diamond grinding	Replace the slab as appropriate. Within 30days
			3	f = 6 - 12 mm	Diamond Grinding	
			4	f= 12 - 18 mm	Raise sunken slab.	Replace the slab as appropriate. Within 30days
			5	f> 18 mm	Strengthen subgrade and sub-base by grouting and raising sunken slab	
14	**Blowup or Buckling**	h = vertical displacement from normal profile	0	Nil, not discernible	**Short Term**	**Long Term**
			1	h < 6 mm	No Action	

			2	h = 6 - 12 mm	Install Signs to Warn Traffic within 7 days	
			3	h = 12 - 25 mm		
			4	h > 25 mm	Full Depth Repair. Within 30 days	
			5	shattered slabs, ie 4 or more pieces	Replace broken slabs. Within 30 days	
15	**Depression**	h = negative vertical displacement from normal profile L =length	0	Not discernible, h < 5 mm	No action.	Not Applicable
			1	h = 5 - 15 mm		
			2	h = 15-30 mm, Nos <20% joints	Install Signs to Warn Traffic within 7 days	
			3	h = 30 - 50 mm		

			4	h > 50 mm or > 20% joints	Strengthen subgrade. Reinstate pavement at normal level if L < 20 m. Within 30 days	
			5	h > 100 mm		
16	**Heave**	h = positive vertical displacement from normal profile. L = length	0	Not discernible. h < 5 mm	**Short Term**	**Long Term**
					No action.	scrabble
			1	h = 5 - 15 mm	Follow up.	
			2	h = 15 - 30 mm, Nos <20% joints	Install Signs to Warn Traffic within 7 days	
			3	h = 30 - 50 mm		
			4	h > 50 mm or > 20% joints	Stabilise subgrade. Reinstate pavement at normal level if length < 20 m. Within 30 days	
			5	h > 100 mm		

17	**Bump**	h = vertical displacement from normal profile	0	h < 4 mm	No action	
			1	h = 4 - 7 mm	Grind, in case of new construction within 7 days	Construction Limit for New Construction.
			3	h = 7 - 15 mm	Grind, in case of ongoing Maintenance within 15 days	Replace in case of new construction. Within 30days
			5	h > 15 mm	Full Depth Repair. Within 30 days	Full Depth Repair. Within 30days
18	**Lane to Shoulder Dropoff**	f = difference of level	0	Nil, not discernible < 3mm	**Short Term**	**Long Term**
					No action.	
			1	f = 3 - 10 mm	Spot repair of shoulder within 7 days	
			2	f = 10 - 25 mm		

			3	f = 25 - 50 mm		
			4	f = 50 - 75 mm	Fill up shoulder within 7 dayss	For any 100 m stretch Reconstruct shoulder, if affecting 25% or more of stretch. Within 30days
			5	f > 75 mm		
Drainage						
19	**Pumping**	quantity of fines and water expelled through open joints and cracks Nos	0	not discernible	No Action	
			1 to 2	slight/ occasional Nos < 10%	Repair cracks and joints Without delay.	Inspect and repair sub-drainage at distressed sections and upstream.
			3 to 4	appreciable/ Frequent 10 - 25%	Lift or jack slab within 30 days.	
		Nos/100 m stretch	5	abundant, crack development > 25%	Repair distressed pavement sections. Strengthen subgrade	

					and subbase. Replace slab. Within 30 days	
20	**Ponding**	Ponding on slabs due to blockage of drains	0-2	No discernible problem	No action.	
			3 to 4	Blockages observed in drains, but water flowing	Clean drains etc within 7 days, Follow up	Action required to stop water damaging foundation within 30 days.
			5	Ponding, accumulation of water observed	-do-	

Table -3: Maintenance Criteria for Safety Related Items and Other Furniture Items:

<table>
<tr><th>Asset Type</th><th>Performance Parameter</th><th>Level of Service (LOS)</th><th>Frequency of Measurement</th><th>Testing Method</th><th>Recommended Remedial measures</th><th>Time limit for Rectification</th><th>Specifications and Standards</th></tr>
<tr><td>Highway</td><td>Availability of Safe Sight Distance</td><td>As per IRC SP :84-2019, a minimum of safe stopping sight distance shall be available throughout.
<table><tr><th>Design Speed, kmph</th><th>Desirable Minimum Sight Distance (m)</th><th>Safe Stopping Sight Distance (m)</th></tr><tr><td>100</td><td>360</td><td>180</td></tr><tr><td>80</td><td>260</td><td>130</td></tr></table></td><td>Monthly</td><td>Manual Measurements with Odometer along with video/ image backup</td><td colspan="2">Removal of obstruction within 24 hours, in case of sight line affected by temporary objects such as trees, temporary encroachments.

In case of permanent structure or design deficiency:
Removal of obstruction/improvement of deficiency at the earliest
Speed Restriction boards and suitable traffic calming measures such as transverse bar marking, blinkers, etc. shall be applied during the period of rectification.</td><td>IRC:SP 84-2019</td></tr>
</table>

<table>
<tr><th>Asset Type</th><th>Performance Parameter</th><th>Level of Service (LOS)</th><th>Frequency of Measurement</th><th>Testing Method</th><th>Recommended Remedial measures</th><th>Time limit for Rectification</th><th>Specifications and Standards</th></tr>
<tr><td rowspan="3">Pavement Marking</td><td>Wear</td><td><70% of marking remaining</td><td>Bi-Annually</td><td>Visual Assessment as per Annexure-F of IRC:35-2015</td><td>Re - painting</td><td>Cat-1 Defect – within 24 hours
Cat-2 Defect - within 2 months</td><td>IRC:35-2015</td></tr>
<tr><td>Day time Visibility</td><td>During expected life Service Time
Cement Road - 130mcd/m^2/lux
Bituminous Road - 100mcd/m^2/lux</td><td>Monthly</td><td>As per Annexure-D of IRC:35-2015</td><td>Re - painting</td><td>Cat-1 Defect – within 24 hours
Cat-2 Defect – within 2 months</td><td>IRC:35-2015</td></tr>
<tr><td>Night Time Visibility</td><td><u>Initial and Minimum Performance for Dry Retro reflectivity during night time:</u>
<table>
<tr><th>Design Speed</th><th colspan="2">(RL) Retro Reflectivity (mcd/m^2/lux)</th></tr>
<tr><td></td><td>Initial (7 days)</td><td>Minimum Threshold level (TL) & warranty period required up to 2 years</td></tr>
</table></td><td>Bi-Annually</td><td>As per Annexure-E of IRC:35-2015</td><td>Re - painting</td><td>Cat-1 Defect – within 24 hours
Cat-2 Defect – within 2 months</td><td>IRC:35-2015</td></tr>
</table>

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
		Up to 65 | 200 | 80 65 - 100 | 250 | 120 Above 100 | 350 | 150 <u>Initial and Minimum Performance for Night Visibility under wet condition (Retro reflectivity):</u> Initial 7 days Retro reflectivity: 100 mcd/m^2/lux Minimum Threshold Level: 50 mcd/m^2/lux					
	Skid Resistance	Initial and Minimum performance for Skid Resistance: Initial (7days): 55BPN Min. Threshold: 44BPN *Note: shall be considered under urban/city traffic condition encompassing the locations like pedestrian crossings, bus bay, bus stop, cycle track intersection delineation, transverse bar markings etc	Bi-Annually	As per Annexure-G of IRC:35-2015		Within 24 hours	IRC:35-2015
Road Signs	Shape and Position	Shape and Position as per IRC:67-2022. Signboard should be clearly visible	Daily	Visual with video/image backup	Improvement of shape, in case if shape is	48 hours in case of Mandatory	IRC:67-2022

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
		for the design speed of the section.			damaged. Relocation as per requirement	Signs, Cautionary and Informatory Signs (Single and Dual post signs) 15 Days in case of Gantry/Cantilever Sign boards	
	Retro reflectivity	As per specifications in IRC:67-2022	Bi-Annually	Testing of each signboard using Retro Reflectivity Measuring Device. In accordance with ASTM D 4956-09.	Change of signboard	48 hours in case of Mandatory Signs, Cautionary and Informatory Signs (Single and Dual post signs) 1 Month in case of Gantry/Cantilever Sign boards	RC:67-2022
Kerb	Kerb Height	As per IRC 86:2018depending upon type of Kerb	Bi-Annually	Use of distance measuring tape	Raising Kerb Height	Within 1 Month	RC 86:2018
	Kerb Painting	Functionality: Functioning of Kerb painting as intended	Daily	Visual with video/image	Kerb Repainting	Within 7-days	RC 35:2015

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
				backup			
Other Road Furniture	Reflective Pavement Markers (Road Studs)	Numbers and Functionality as per specifications in IRC:SP:84-2019 and IRC:35-2015, unless specified in Schedule-B.	Daily	Counting	New Installation	Within 2 months	IRC:SP:84-2019, IRC:35-2015
	Pedestrian Guardrail	Functionality: Functioning of guardrail as intended	Daily	Visual with video/image backup	Rectification	Within 15 days	IRC:SP:84-2019
	Traffic Safety Barriers	Functionality: Functioning of Safety Barriers as intended	Daily	Visual with video/image backup	Rectification	Within 7 days	IRC:SP:84-2019, IRC:119-2015
	End Treatment of Traffic Safety Barriers	Functionality: Functioning of End Treatment as intended	Daily	Visual with video/image backup	Rectification	Within 7 days	IRC:SP:84-2019, IRC:119-2015
	Attenuators	Functionality: Functioning of Attenuators as intended	Daily	Visual with video/image backup	Rectification	Within 7 days	IRC:SP-:84-2019, IRC:119-2015
	Guard Posts and Delineators	Functionality: Functioning of Guard Posts and Delineators as intended	Daily	Visual with video/image backup	Rectification	Within 15 days	IRC: 79 - 2019
	Overhead Sign Structure	Overhead sign structure shall be structurally adequate	Daily	Visual with video/image backup	Rectification	Within 15 days	IRC:67-2022

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
	Traffic Blinkers	Functionality: Functioning of Traffic Blinkers as intended	Daily	Visual with video/image backup	Rectification	Within 7 days	IRC:SP:84-2019
Highway Lighting System	Highway Lights	Illumination: Minimum 40 Lux illumination on the road surface	Daily	The illumination level shall be measured with luxmeter	Improvement in Lighting System	24 hours	IRC:SP:84-2019
		No major failure in the lighting system	Daily	-	Rectification of failure	24 hours	IRC:SP:84-2019
		No minor failure in the lighting system	Monthly	-	Rectification of failure	8 hours	IRC:SP:84-2019
	Toll Plaza Canopy Lights	Minimum 40 Lux illumination on the road surface	Daily	The illumination level shall be measured with luxmeter	Improvement in Lighting System	24 hours	IRC:SP:84-2019
		No major/minor failure in the lighting system	Daily	-	Rectification of failure	8 hours	IRC:SP:84-2019

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
Trees and Plantation including median plantation	Obstruction in a minimum head-room of 5.5 m above carriageway or obstruction in visibility of road signs	No obstruction due to trees	Monthly	Visual with video/image backup	Removal of trees	Immediate	IRC:SP:84-2019
	Deterioration in health of trees and bushes	Health of plantation shall be as per requirement of specifications & instructions issued by Authority from time to time	Daily	Visual with video/image backup	Timely watering and treatment. Or Replacement of Trees and Bushes.	Within 90 days	IRC:SP:84-2019
	Vegetation affecting sight line and road structures	Sight line shall be free from obstruction by vegetation	Daily	Visual with video/image backup	Removal of Trees	Immediate	IRC:SP 84-2019
Rest Areas	Cleaning of toilets	-	Daily	-	-	Every 4 hours	
	Defects in electrical,	-	Daily	-	Rectification	24 hours	

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
	water and sanitary installations						
Other Project Facilities and Approach roads	Damage or deterioration in Approach Roads, pedestrian facilities, truck lay-bys, bus-bays, bus- shelters, cattle crossings, Traffic Aid Posts, Medical Aid Posts and other works		Daily	-	Rectification	15 days	IRC:SP 84-2019

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
Pipe/box/slab culverts	Free waterway/ unobstructed flow section	85% of culvert normal flow area to available.	2 times in a year (before and after rainy season)	Inspection by Bridge Engineer as per IRC SP: 35-2024 and recording of depth of silting and area of vegetation.	Cleaning silt up soils and debris in culvert barrel after rainy season, removal of bushes and vegetation, U/s of barrel, under barrel and D/s of barrel before rainy season.	15 days before onset of monsoon and within 30 days after end of rainy season.	IRC 5-2015, IRC SP:40-2019 and IRC SP:13-2022
	Leak-proof expansion joints if any	No leakage through expansion joints	Bi-Annually	Physical inspection of expansion joints as per IRC SP: 35-2024 if any, for leakage strains on walls at joints.	Fixing with sealant suitably	30 days or before onset of rains whichever comes earlier	IRC SP:40-2019 and IRC SP:69-2011
	Structurally sound	Spalling of concrete not more than 0.25 sqm	Bi-Annually	Detailed inspection of all components of culvert as per IRC SP:35-2024 and recording the defects	Repairs to spalling, cracking, delamination, rusting shall be followed as per IRC:SP:40-2019.	15 days	IRC SP 40-2019 and MORTH Specifications clause 2800
		Delamination of concrete not more than 0.25 sq.m.					

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
		Cracks wider than 0.3 mm not more than 1m aggregate length					
	Protection works in good condition	Damaged of rough stone apron or bank revetment not more than 3 sqm, damage to solid apron (concrete apron) not more than 1 sqm	2 times in a year (before and after rainy season)	Condition survey as per IRC SP:35-2024	Repairs to damaged aprons and pitching	30 days after defect observation or 2 weeks before onset of rainy season whichever is earlier.	IRC: SP 40-2019and IRC:SP:13-2004.
Bridges including ROBs Flyover etc. as applicable	Riding quality or user comfort	No pothole in wearing coat on bridge deck	Daily	Visual inspection as per IRC SP:35-2024	Repairs to BC or wearing coat	15 days	MORT&H Specification 2811

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
Bridge -Super Structure	Bumps	No bump at expansion joint	Daily	Visual inspection as per IRC SP:35-2024	Repairs to BC on either side of expansion joints, profile correction course on approach slab in case of settlement to approach embankment	15 days	MORT&H Specification 3004.2 & 2811.
	User safety (condition of crash barrier and guard rail)	No damaged or missing stretch of crash barrier or pedestrian hand railing	Daily	Visual inspection and detailed condition survey as per IRC SP: 35-2024.	Repairs and replacement of safety barriers as the case may be	3days	IRC: 5-2015, IRC SP: 84-2019 and IRC SP: 40-2019.
	Rusted reinforcement	Not more than 0.25 sq.m	Bi-Annually	Detailed condition survey as per IRC SP: 35-2024 using Mobile Bridge Inspection Unit	All the corroded reinforcement shall need to be thoroughly cleaned from rusting and applied with anti-corrosive coating before carrying out the repairs to affected concrete portion with epoxy mortar / concrete.	15 days	IRC SP: 40-2019 and MORTH Specification 1600.
	Spalling of concrete	Not more than 0.50 sq.m					
	Delamination	Not more than 0.50 sq.m					

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
	Cracks wider than 0.30 mm	Not more than 1m total length	Bi-Annually	Detailed condition survey as per IRC SP: 35-2024 using Mobile Bridge Inspection Unit	Grouting with epoxy mortar, investigating causes for cracks development and carry out necessary rehabilitation.	48 Hours	IRC SP: 40-2019 and MORTH Specification 2800.
	Rainwater seepage through deck slab	Leakage - nil	Quarterly	Detailed condition survey as per IRC SP: 35-2024 using Mobile Bridge Inspection Unit	Grouting of deck slab at leakage areas, waterproofing, repairs to drainage spouts	1 months	MORTH specifications 2600 & 2700.
	Deflection due to permanent loads and live loads	Within design limits.	Once in every 10 years for spans more than 40 m	Load test method	Carry out major rehabilitation works on bridge to retain original design loads capacity	6 months	IRC SP: 51-2015.

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
	Vibrations in bridge deck due to moving trucks	Frequency of vibrations shall not be more than 5 Hz	Once in every 5 years for spans more than 30m and every 10 years for spans between 15 to 30 m	Laser displacement sensors or laser vibro-meters	Strengthening of super structure	4 months	AASHTO LRFD specifications
	Leakage in Expansion joints	No damage to elastomeric sealant compound in strip seal expansion joint, no leakage of rain water through expansion joint in case of buried and asphalt plug and copper strip joint.	Bi-Annually	Detailed condition survey as per IRC SP:35-2024 using Mobile Bridge Inspection Unit	Replace of seal in expansion joint	15 days	MORTH specifications 2600 and IRC SP: 40-2019.

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
	Debris and dust in strip seal expansion joint	No dust or debris in expansion joint gap.	Monthly	Detailed condition survey as per IRC SP:35-2024 using Mobile Bridge Inspection Unit	Cleaning of expansion joint gaps thoroughly	3 days	MORTH specifications 2600 and IRC SP: 40-2019.
	Drainage spouts	No down take pipe missing/broken below soffit of the deck slab. No silt, debris, clogging of drainage spout collection chamber.	Monthly	Detailed condition survey as per IRC SP: 35-2024 using Mobile Bridge Inspection Unit	Cleaning of drainage spouts thoroughly. Replacement of missing/broken down take pipes with a minimum pipe extension of 500mm below soffit of slab. Providing sealant around the drainage spout if any leakages observed.	3 days	MORTH specification 2700.

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
Bridge-substructure	Cracks/spalling of concrete/ rusted steel	No cracks, spalling of concrete and rusted steel	Bi-Annually	Detailed condition survey as per IRC SP: 35-2024 using Mobile Bridge Inspection Unit	All the corroded reinforcement shall need to be thoroughly cleaned from rusting and applied with anti-corrosive coating before carrying out repairs to substructure by grouting/guniting and micro concreting depending on type of defect noticed	30 days	IRC SP: 40-2019 and MORTH specification 2800.
	Bearings	Delamination of bearing reinforcement not more than 5%, cracking or tearing of rubber not more than 2 locations per side, no rupture of reinforcement or rubber	Bi-Annually	Detailed condition survey as per IRC SP: 35-2024 using Mobile Bridge Inspection Unit	In case of failure of even one bearing on any pier/abutment, all the bearings on that pier/abutment shall be replaced, in order to get uniform load transfer on to bearings.	3 months	MORTH specification 2810 and IRC SP: 40-199.

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
Bridge Foundations	Scouring around foundations	Scouring shall not be lower than maximum scour level for the bridge	Bi-Annually	Condition survey and visual inspection as per IRC SP:35-2024 using Mobile Bridge Inspection Unit. In case of doubt, use Underwater camera for inspection of deep wells in major Rivers.	Suitable protection works around pier/abutment	1 month	IRC SP: 40-2019, IRC 83-2014, MORTH specification 2500
	Protection works in good condition	Damaged of rough stone apron or bank revetment not more than 3 sq.m, damage to solid apron (concrete apron) not more than 1 sq.m	2 times in a year (before and after rainy season)	Condition survey as per IRC SP:35-2024	Repairs to damaged aprons and pitching.	30 days after defect observation or 2 weeks before onset of rainy season whichever	IRC: SP 40-2019and IRC:SP:13-2022.

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
						is earlier.	
Note: Any Structure during the entire contract period which is found that does not complies with all requirements of this Table will be prepared, rehabilitated or even reconstructed under the scope of the contractor.							

Table 4: Maintenance Criteria for Structures and Culverts:

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
Pipe/box/slab culverts	Free waterway/unobstructed flow section	85% of culvert normal flow area to	2 times in a year (before and after	Inspection by Bridge Engineer as per IRC SP:	Cleaning silt up soils and debris in culvert barrel after rainy	15 days before onset of monsoon	IRC 5-2015, IRC SP:40-2019 and IRC

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
		available.	rainy season)	35-2024 and recording of depth of silting and area of vegetation.	season, removal of bushes and vegetation, U/s of barrel, under barrel and D/s of barrel before rainy season.	and within 30 days after end of rainy season.	SP:13-2022
	Leak-proof expansion joints if any	No leakage through expansion joints	Bi-Annually	Physical inspection of expansion joints as per per IRC SP: 35-2024 if any, for leakage strains on walls at joints.	Fixing with sealant suitably	30 days or before onset of rains whichever comes earlier	IRC SP:40-2019 and IRC SP:69-2011
	Structurally sound	Spalling of	Bi-Annually	Detailed	Repairs to	15 days	IRC SP:40-

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
		concrete not more than 0.25 sqm		inspection of all components of culvert as per IRC SP: 35-2024 and recording the defects	spalling, cracking, delamination, rusting shall be followed as per IRC SP:40-2019 .		2019 and MORTH Specifications clause 2800
		Delamination of concrete not more than 0.25 sq.m.					
		Cracks wider than 0.3 mm not more than 1m aggregate length					
	Protection works in	Damaged of	2 times in a	Condition	Repairs to	30 days	IRC SP:40-

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
	good condition	rough stone apron or bank revetment not more than 3 sqm, damage to solid apron (concrete apron) not more than 1 sqm	year (before and after rainy season)	survey as per IRC SP: 35-2024	damaged aprons and pitching	after defect observation or 2 weeks before onset of rainy season whichever is earlier.	2019 and IRC SP:13-2022
Bridge - Super Structure	Bumps	No bump at expansion joint	Daily	Visual inspection as per IRC SP: 35-2024	Repairs to BC on either side of expansion joints, profile correction course on approach slab in case of settlement to	15 days	MORT&H Specification 3004.2 & 2811.

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
					approach embankment		
	User safety (condition of crash barrier and guard rail)	No damaged or missing stretch of crash barrier or pedestrian hand railing	Daily	Visual inspection and detailed condition survey as per IRC SP: 35-2024 .	Repairs and replacement of safety barriers as the case may be	3days	IRC 5-2015, IRC SP: 84-2019 and IRC SP:40-2019 .
	Rusted reinforcement	Not more than 0.25 sq.m	Bi-Annually	Detailed condition survey as per IRC SP: 35-2024 using Mobile Bridge Inspection Unit	All the corroded reinforcement shall need to be thoroughly cleaned from rusting and applied with anti-corrosive coating before carrying out the	15 days	IRC SP:40-2019 and MORTH Specification 1600.

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
					repairs to affected concrete portion with epoxy mortar / concrete.		
	Spalling of concrete	Not more than 0.50 sq.m					
	Delamination	Not more than 0.50 sq.m					
	Cracks wider than 0.30 mm	Not more than 1m total length	Bi-Annually	Detailed condition survey as per IRC SP: 35-2024 using Mobile Bridge Inspection	Grouting with epoxy mortar, investigating causes for cracks development and carry out necessary	48 Hours	IRC SP:40-2019 and MORTH Specification 2800.

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
				Unit	rehabilitation.		
	Rainwater seepage through deck slab	Leakage - nil	Quarterly	Detailed condition survey as per IRC SP: 35-2024 using Mobile Bridge Inspection Unit	Grouting of deck slab at leakage areas, waterproofing, repairs to drainage spouts	1 months	MORTH specifications 2600 & 2700.
	Deflection due to permanent loads and live loads	Within design limits.	Once in every 10 years for spans more than 40 m	Load test method	Carry out major rehabilitation works on bridge to retain original design	6 months	IRC SP: 51-2015.

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
					loads capacity		
	Vibrations in bridge deck due to moving trucks	Frequency of vibrations shall not be more than 5 Hz	Once in every 5 years for spans more than 30m and every 10 years for spans between 15 to 30 m	Laser displacement sensors or laser vibro-meters	Strengthening of super structure	4 months	AASHTO LRFD specifications
	Leakage in Expansion joints	No damage to elastomeric sealant compound in strip seal expansion joint, no leakage of rain	Bi-Annually	Detailed condition survey as per IRC SP: 35-2024using Mobile Bridge	Replace of seal in expansion joint	15 days	MORTH specifications 2600 and IRC SP:40-2019 .

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
		water through expansion joint in case of buried and asphalt plug and copper strip joint.		Inspection Unit			
	Debris and dust in strip seal expansion joint	No dust or debris in expansion joint gap.	Monthly	Detailed condition survey as per IRC SP: 35-2024 using Mobile Bridge Inspection Unit	Cleaning of expansion joint gaps thoroughly	3 days	MORTH specifications 2600 and IRC SP:40-2019.
	Drainage spouts	No down take pipe missing/broke	Monthly	Detailed condition survey as	Cleaning of drainage spouts thoroughly.	3 days	MORTH specification 2700.

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
		n below soffit of the deck slab. No silt, debris, clogging of drainage spout collection chamber.		per IRC SP: 35-2024 using Mobile Bridge Inspection Unit	Replacement of missing/broken down take pipes with a minimum pipe extension of 500mm below soffit of slab. Providing sealant around the drainage spout if any leakages observed.		
Bridge-substructure	Cracks/spalling of concrete/rusted steel	No cracks, spalling of concrete and rusted steel	Bi-Annually	Detailed condition survey as per IRC SP: 35-2024 using Mobile Bridge Inspection	All the corroded reinforcement shall need to be thoroughly cleaned from rusting and applied with anti-corrosive	30 days	IRC SP:40-2019and MORTH specification 2800.

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
				Unit	coating before carrying out repairs to substructure by grouting/gunitin g and micro concreting depending on type of defect noticed		
	Bearings	Delamination of bearing reinforcement not more than 5%, cracking or tearing of rubber not more than 2 locations per side, no rupture of	Bi-Annually	Detailed condition survey as per IRC SP: 35-2024 using Mobile Bridge Inspection Unit	In case of failure of even one bearing on any pier/abutment, all the bearings on that pier/abutment shall be replaced, in order to get uniform load	3 months	MORTH specification 2810 and IRC SP:40-2019.

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
		reinforcement or rubber			transfer on to bearings.		
Bridge Foundations	Scouring around foundations	Scouring shall not be lower than maximum scour level for the bridge	Bi-Annually	Condition survey and visual inspection as per IRC SP: 35-2024using Mobile Bridge Inspection Unit. In case of doubt, use Underwater camera for inspection of deep wells in major	Suitable protection works around pier/abutment	1 month	IRC SP:40-2019, IRC 83-2019, MORTH specification 2500

Asset Type	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
				Rivers.			
	Protection works in good condition	Damaged of rough stone apron or bank revetment not more than 3 sq.m, damage to solid apron (concrete apron) not more than 1 sq.m	2 times in a year (before and after rainy season)	Condition survey as per IRC SP: 35-2024	Repairs to damaged aprons and pitching.	30 days after defect observation or 2 weeks before onset of rainy season whichever is earlier.	IRC SP:40-2019and IRC SP:13-2022.
Note: Any Structure during the entire contract period which is found that does not complies with all requirements of this Table will be prepared, rehabilitated or even reconstructed under the scope of the contractor.							

Table 5: Maintenance Criteria for Hill Roads

In addition to above, for hill roads the following provisions for maintenance is also to done.

Hill Roads		
(i)	Damage to Retaining wall/ Breast wall	7 (Seven) days
(ii)	Landslides requiring clearance	12 (Twelve) hours
(iii)	Snow requiring clearance	24 (Twenty Four) hours

Note: For all tables 1 to 5 above, latest BIS & IRC standards (even those not indicated herewith) along with MoRTH specifications shall be binding for all maintenance activities.

A. Flexible Pavement

Nature of Defect or deficiency		Time limit for repair/ rectification
(b)	**Granular earth shoulders, side slopes, drains and culverts**	
(i)	Variation by more than 1 % in the prescribed slope of camber/cross fall (shall not be less than the camber on the main carriageway)	7 (seven) days
(ii)	Edge drop at shoulders exceeding 40 mm	7 (seven) days
(iii)	Variation by more than 15% in the prescribed side (embankment) slopes	30 (thirty) days
(iv)	Rain cuts/gullies in slope	7 (seven) days
(v)	Damage to or silting of culverts and side drains	7 (seven) days
(vi)	Desilting of drains in urban/semi- urban areas	24 (twenty four) hours
(vii)	Railing, parapets, crash barriers	7 (seven) days (Restore immediately if causing safety hazard)
(c)	**Road side furniture including road sign and pavement marking**	
(i)	Damage to shape or position, poor visibility or loss of retro- reflectivity	48 (forty eight) hours
(ii)	Painting of km stone, railing, parapets, crash barriers	As and when required/ Once every year
(iii)	Damaged/missing signs road requiring replacement	7 (seven) days
(iv)	Damage to road mark ups	7 (seven) days
(d)	**Road lighting**	
(i)	Any major failure of the system	24 (twenty four) hours
(ii)	Faults and minor failures	8 (eight) hours
(e)	**Trees and plantation**	

Nature of Defect or deficiency		Time limit for repair/ rectification
(i)	Obstruction in a minimum head- room of 5 m above carriageway or obstruction in visibility of road signs	24 (twenty four)hours
(ii)	Removal of fallen trees from carriageway	4 (four) hours
(iii)	Deterioration in health of trees and bushes	Timely watering and treatment
(iv)	Trees and bushes requiring replacement	30 (thirty) days
(v)	Removal of vegetation affecting sight line and road structures	15 (fifteen) days
(f) Rest area		
(i)	Cleaning of toilets	Every 4 (four) hours
(ii)	Defects in electrical, water and sanitary installations	24 (twenty four) hours
(g) [Toll Plaza]		
(h)	**Other Project Facilities and Approach roads**	
(i)	Damage in approach roads, pedestrian facilities, truck lay- byes, bus-bays, bus-shelters, cattle crossings, Traffic Aid Posts, Medical Aid Posts, Rain Water Harvesting/Artificial Recharge Unit and service roads	15 (fifteen) days
(ii)	Damaged vehicles or debris on the road	4 (four) hours
(iii)	Malfunctioning of the mobile crane	4 (four) hours
Bridges		
(a) Superstructure		

Nature of Defect or deficiency		Time limit for repair/ rectification
(i)	Any damage, cracks, spalling/ scaling Temporary measures Permanent measures	within 48 (forty eight) hours within 15 (fifteen) days or as specified by the Authority's Engineer
(b)	**Foundations**	
(i)	Scouring and/or cavitation	15 (fifteen) days
(c)	**Piers, abutments, return walls and wing walls**	
(i)	Cracks and damages including settlement and tilting, spalling, scaling	30 (thirty) days
(d)	**Bearings (metallic) of bridges**	
(i)	Deformation, damages, tilting or shifting of bearings	15 (fifteen) days Greasing of metallic bearings once in a year
(e)	**Joints**	
(i)	Malfunctioning of joints	15 (fifteen) days
(f)	**Other items**	
(i)	Deforming of pads in elastomeric bearings	7 (seven) days
(ii)	Gathering of dirt in bearings and joints; or clogging of spouts, weep holes and vent-holes	3 (three) days
(iii)	Damage or deterioration in kerbs, parapets, handrails and crash barriers	3 (three) days (immediately within 24 hours if posing danger to safety)
(iv)	Rain-cuts or erosion of banks of the side slopes of approaches	7 (seven) days
(v)	Damage to wearing coat	15 (fifteen) days
(vi)	Damage or deterioration in approach slabs, pitching, apron, toes, floor or guide bunds	30 (thirty) days

Nature of Defect or deficiency		Time limit for repair/ rectification
(vii)	Growth of vegetation affecting the structure or obstructing the waterway	15 (fifteen) days
(g)	**Hill Roads**	
(i)	Damage to retaining wall/breast wall	7 (seven) days
(ii)	Landslides requiring clearance	12 (twelve) hours
(iii)	Snow requiring clearance	24 (twenty four) hours

[Note: Where necessary, the Authority may modify the time limit for repair/rectification, or add to the nature of Defect or deficiency before issuing the bidding document, with the approval of the competent authority.]

Schedule - F

(See Clause 4.1 (vii)(a))

Applicable Permits

1. Applicable Permits

(i) The Contractor shall obtain, as required under the Applicable Laws, the following Applicable Permits:

(a) Permission of the State Government for extraction of boulders from quarry;

(b) Permission of Village Panchayats and Pollution Control Board for installation of crushers;

(c) Licence for use of explosives;

(d) Permission of the State Government for drawing water from river/reservoir;

(e) Licence from inspector of factories or other competent Authority for setting up batching plant;

(f) Clearance of Pollution Control Board for setting up batching plant;

(g) Clearance of Village Panchayats and Pollution Control Board for setting up asphalt plant;

(h) Permission of Village Panchayats and State Government for borrow earth; and

(i) Any other permits or clearances required under Applicable Laws.

(ii) Applicable Permits, as required, relating to environmental protection and conservation shall have been procured by the Authority in accordance with the provisions of this Agreement.

Schedule – G

(See Clauses 7.1 and 19.2)

Annex-I

(See Clause 7.1)

Form of Bank Guarantee

Performance Security/Additional Performance Security]

The Executive Engineer
National Highway Division,
Plot No.1, Ward-3B,
Tagore Road, Adipur.

_____

WHEREAS:

(A) _____[name and address of contractor] (hereinafter called the "**Contractor**") and The Ministry of Road Transport & Highways, Government of India represented by the Chief Engineer(NH) & Addl. Secy., R&B Department, 1st Floor, Block No. 14, Sardar Bhawan, Sachivalaya, Gandhinagar, Gujarat-382010 through the **Executive Engineer, National Highway Division, Gandhidham** (hereinafter called the **"Authority"**) have entered into an agreement (hereinafter called the "**Agreement**") for the **Upgradation to 6 Lane with Paved shoulder of Gandhidham -Kandla Port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 Lane Major Bridge on Nakti Creek at km 7+170 of NH-141 in the state of Gujarat** on Engineering, Procurement and Construction (the "**EPC**") basis, subject to and in accordance with the provisions of the Agreement

(B) The Agreement requires the Contractor to furnish a Performance Security for due and faithful performance of its obligations, under and in accordance with the Agreement, during the {Construction Period/ Defects Liability Period and Maintenance Period} (as defined in the Agreement) in a sum of Rs….. cr. (Rupees ……..…… crore) (the "**Guarantee Amount**").

(C) 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 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 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 in the 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 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 Agreement 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.

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 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 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 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 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 behalf of the Bank.

10. 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 authorised 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 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

[$] Insert date being 2 (two) years from the date of issuance of this Guarantee (in accordance with Clause 7.2 of the Agreement).

it is released earlier by the Authority pursuant to the provisions of the Agreement.

12. This guarantee shall also be operatable at our…… …….. Branch at Gandhinagar, Gujarat, 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.

13. 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 MORT&H, details of which is as under:

S. No.	Particulars	Details
	Name of Beneficiary	Executive Engineer National Highway Division, Gandhidham.
	Name of Bank	STATE BANK OF INDIA, GANDHIDHAM
	Account No.	10316663138
	IFSC Code	SBIN0000373

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)

NOTES:

(i) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.

(ii) The address, telephone number and other details of the head office of the Bank as well as of issuing branch should be mentioned on the covering letter of issuing branch.

Annex - II

(Schedule - G)

(See Clause 19.2)

Form for Guarantee for Advance Payment

The Executive Engineer,
National Highway Division, Gandhidham,
Plot No.1, Ward-3B,
Adipur.

WHEREAS:

(A) .....[name and address of contractor] (hereinafter called the "**Contractor**") has executed an agreement (hereinafter called the "**Agreement**") with the Chief Engineer(NH) & Addl. Secy., R&B Department, 1st Floor, Block No. 14, Sardar Bhawan, Sachivalaya, Gandhinagar, Gujarat-382010 **through the Executive Engineer National Highway Division, Gandhidham** (hereinafter called the "**Authority**") for the Upgradation to 6 Lane with Paved shoulder of Gandhidham -Kandla Port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 Lane Major Bridge on Nakti Creek at km 7+170 of NH-141 in the state of Gujarat on Engineering, Procurement and Construction (the "**EPC**") basis, subject to and in accordance with the provisions of the Agreement

(B) In accordance with Clause 19.2 of the Agreement, the Authority shall make to the Contractor an interest bearing @*Bank Rate + 3%* advance payment (herein after called "**Advance Payment**") equal to 10% (ten per cent) of the Contract Price; and that the Advance Payment shall be made in two installments subject to the Contractor furnishing an irrevocable and unconditional guarantee by a scheduled bank for an amount equivalent to 110% (one hundred and ten percent) of such installment to remain effective till the complete and full repayment of the installment of the Advance Payment as security for compliance with its obligations in accordance with the Agreement. The amount of {first/second} installment of the Advance Payment is Rs. ------ cr. (Rupees ------ crore) and the amount of this Guarantee is Rs. ------- cr. (Rupees ------ crore) (the **"Guarantee Amount")**[$]**.**

(C) We, ... through our branch at ..... (the "**Bank**") have agreed to furnish this bank guarantee (*hereinafter called the* "**Guarantee**") for the Guarantee Amount.

[$] The Guarantee Amount should be equivalent to 110% of the value of the applicable instalment.

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 repayment on time of the aforesaid instalment of the Advance Payment 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 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 in the Ministry of Road Transport & Highways, that the Contractor has committed default in the due and faithful performance of all or any of its obligations for the repayment of the instalment of the Advance Payment under and in accordance with the Agreement 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 Agreement 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.

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 Advance Payment or to extend the time or period of its repayment 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 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 Advance Payment.

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 on or before the aforesaid date, 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 behalf of the Bank.

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

12. This guarantee shall also be operatable at our…….. Branch at Gandhidham, Gujarat, 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

[$] Insert a date being 90 (ninety) days after the end of one year from the date of payment of the Advance payment to the Contractor (in accordance with Clause 19.2 of the Agreement).

thereunder claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.

13. 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 MORTH, details of which is as under:

S. No.	Particulars	Details
1.	Name of Beneficiary	Executive Engineer National Highway Division, Gandhidham
2.	Name of Bank	STATE BANK OF INDIA, GANDHIDHAM
3.	Account No.	10316663138
4.	IFSC Code	SBIN0000373

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)

NOTES:

(i) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.

(ii) The address, telephone number and other details of the head office of the Bank as well as of issuing branch should be mentioned on the covering letter of issuing branch.

SCHEDULE-G (Annex-III)

(See Clauses 7.1)

FORM OF SURETY BOND

[Performance Security/Additional Performance Security]

To

The Executive Engineer,
National Highway Division, Gandhidham,
Plot No.1, Ward-3B,
Adipur.

A. WHEREAS_____[name and address of Contractor] (hereinafter called the "**Contractor**") and Chief Engineer(NH) & Addl. Secy., R&B Department, 1st Floor, Block No. 14, Sardar Bhawan, Sachivalaya, Gandhinagar, Gujarat-382010 through the **Executive Engineer, National Highway Division, Gandhidham** (hereinafter called the "Authority") have entered into an agreement (hereinafter called the "Agreement") for **Upgradation to 6 Lane with Paved shoulder of Gandhidham -Kandla Port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 Lane Major Bridge on Nakti Creek at km 7+170 of NH-141 in the state of Gujarat** on Engineering, Procurement and Construction (the "EPC") basis, subject to and in accordance with the provisions of the Agreement..

B. The Agreement 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 Agreement, during the (Construction Period/ Defects Liability Period and Maintenance Period) (as defined in the Agreement) in a sum of Rs.....…..cr. (Rupees…… crore) (the "**Surety Bond amount**").

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/ Defects Liability Period and Maintenance 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 in the 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 and 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 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 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 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 Agreement

12. This Surety Bond shall also be operatable at our…… …….. Branch at Gandhidham, Gujarat, 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 thereunder claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.

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

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

_____

$ insert date atleast 2(two) years from the date of issuance of this Surety Bond (in accordance with Clause 7.2 of the Agreement). 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)

Annex - IV (Schedule - G)
(See Clause 19.2)
Form for Insurance Surety Bond for Advance Payment

To
The Executive Engineer,
National Highway Division, Gandhidham,
Plot No.1, Ward-3B,
Adipur.

WHEREAS:

(A) [Name and address of contractor] (hereinafter called the "Contractor") has executed an agreement (hereinafter called the "Agreement") with the [name and address of the authority], (hereinafter called the "Authority") for the Upgradation to 6 Lane with Paved shoulder of Gandhidham -Kandla Port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 Lane Major Bridge on Nakti Creek at km 7+170 of NH-141 in the state of Gujarat on Engineering, Procurement and Construction (the "EPC") basis, subject to and in accordance with the provisions of the Agreement

(B) In accordance with Clause 19.2 of the Agreement, the Authority shall make to the Contractor an interest bearing @Bank Rate + 3% advance payment (herein after called "Advance Payment") equal to 10% (ten per cent) of the Contract Price; and that the Advance Payment shall be made in two installments subject to the Contractor furnishing an irrevocable and unconditional Insurance Surety Bond by Insurance Company for an amount equivalent to 110% (one hundred and ten percent) of such installment to remain effective till the complete and full repayment of the installment of the Advance Payment as security for compliance with its obligations in accordance with the Agreement. The amount of {first/second} installment of the Advance Payment is Rs. ------ cr. (Rupees------ crore) and the amount of this Insurance Surety Bond is Rs. ------- cr. (Rupees------ crore) (the "Guarantee Amount")$.

(C) We,..... through our branch at ..... (the "Insurance Company" have agreed to furnish this Insurance Surety Bond (hereinafter called the "Guarantee") for the Guarantee Amount.

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

(1) The Insurance Company hereby unconditionally and irrevocably guarantees the due and faithful repayment on time of the aforesaid instalment of the Advance Payment 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 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.

A letter from the Authority, under the hand of an officer not below the rank of [Superintending Engineer, Road and Building Department], that the Contractor has committed default in the due and faithful performance of all or any of its obligations for the repayment of the instalment of the Advance Payment under and in accordance with the Agreement shall be conclusive, final and binding on the Insurance Company.

The Insurance Company 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 Agreement and its decision that the Contractor is in default shall be final and binding on the Insurance Company, 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.

(2) In order to give effect to this Insurance Surety Bond, the Authority shall be entitled to act as if the Insurance Company were the principal debtor and any change in the constitution of the Contractor and/or the Insurance company, 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 Insurance Company under this Guarantee.

(3) It shall not be necessary, and the Insurance Company hereby waives any necessity, for the Authority to proceed against the Contractor before presenting to the Insurance Company its demand under this Guarantee.

(4) The Authority shall have the liberty, without affecting in any manner the liability of the Insurance Company under this Guarantee, to vary at any time, the terms and conditions of the Advance Payment or to extend the time or period of its repayment 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 Insurance Company 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 Insurance Surety Bond from its liability and obligation under this Guarantee and the Insurance Company hereby waives all of its rights under any such law.

(5) This Insurance Surety Bond 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 Advance Payment.

(6) Notwithstanding anything contained herein before, the liability of Insurance Company 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 Insurance Company under this Guarantee all rights of the Authority under this Insurance Surety Bond shall be forfeited and the Insurance Company shall be relieved from its liabilities hereunder.

(7) The Insurance Surety Bond shall cease to be in force and effect on ****.[$] Unless a demand or claim under this Guarantee is made in writing on or before the aforesaid date, the Insurance Company shall be discharged from its liabilities hereunder.

(8) The Insurance Company 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 behalf of the Insurance Company.

(9) Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Insurance Company at its above referred **branch,** which shall be deemed to have been duly authorised 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.

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

(11) 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 thereunder claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.

Signed and sealed this ..... day of ..... 20..... at .....

SIGNED, SEALED AND DELIVERED

For and on behalf of the Insurance Company by:
(Signature)
(Name)

[$] Insert a date being 90 (ninety) days after the end of one year from the date of payment of the Advance payment to the Contractor (in accordance with Clause 19.2 of the Agreement).

(Designation)
(Code Number)
(Address)

NOTES:

(i) The Insurance Surety Bond should contain the name, designation and code number of the officer(s) signing the Insurance Surety bond.
(ii) The Address, telephone number and other detail of the head of the Insurance Company as well as issuing branch should be mentioned on the covering letter of issuing branch.

Schedule-H

(See Clauses 10.1.4 and 19.3)

Contract Price Weightages

1.1 The Contract Price for this Agreement is Rs (78.61 Crore)

1.2 Proportions of the Contract Price for different stages of Construction of the Project Highway shall be as specified below:

Item	Weightage in Percentage to the Contract Price	Stage for Payment	Percentage weightage of Col.-2
1	2	3	4
Road works including New Pipe Culverts, Junctions	**35.03%**	**A- Widening and strengthening of existing road**	
		(1) Earthwork up to top of the sub-grade	16.22 %
		(2) Sub-Base Course	8.03 %
		(3) Non Bituminous Base Course	7.47 %
		(4) Bituminous Base Course	40.89 %
		(5) Wearing Coat including Glass grid	24.20 %
		(6) Miscellaneous Items like Clearing & grubbing, Survey, Dismantling of R.C.C. work, Brick masonry, Rubble masonry, Flexible pavement, Kerb stone, structural steel etc.	0.69 %
		(7) Widening and repair of culverts	0.00 %
		B.1- Reconstruction/ New2-lane realignment/ bypass (Flexible pavement)	
		(1) Earthwork up to top of the sub-grade	
		(2) Sub Base Course	0.00 %
		(3) Non Bituminous Base Course	0.00 %
		(4) Bituminous Base Course	0.00 %
		(5) Wearing Coat	0.00 %
			0.00 %
		B.2- Reconstruction/ New2-lane realignment/ bypass (Rigid Pavement)	
		(1) Earthwork up to top of the sub-grade	0.00%
		(2) Sub Base Course	0.00%
		(3) Dry Lean Concrete (DLC) Course	0.00%
		(4) Pavement Quality Concrete (PQC) Course	0.00 %
		C.1- Reconstruction/ New service road (Flexible pavement)	
		(1) Earthwork up to top of the sub-grade	0.00%
		(2) Sub Base Course	0.00%
		(3) Non-Bituminous Base Course	0.00%
		(4) Bituminous Base Course	0.00%
		(5) Wearing Coat	0.00%
		C.2- Reconstruction/ New service road (Rigid pavement)	
		(1) Earthwork up to top of the sub-grade	0.00%
		(2) Sub Base Course	0.00%
		(3) Dry Lean Concrete (DLC) Course	0.00%

Item	Weightage in Percentage to the Contract Price	Stage for Payment	Percentage weightage of Col.-2
1	2	3	4
		(4) Pavement Quality Concrete (PQC) Course	0.00%
		D- Re-construction and New culverts on existing road, realignments, bypasses: Culverts (length < 6 m)	
		E- Pipe Culvert	2.50 %
Minor Bridges/ Underpasses/ Overpasses	**0.00%**	**A.1- Widening and Repair of Minor Bridges (length > 6 m and < 60 m)**	
		Minor Bridges	0.00 %
		A.2- New Minor bridges (length > 6 m and < 60 m)	
		(1) **Foundation + Sub- Structure:** On completion of the foundation work including foundations for wing and return walls, abutments, piers up to the abutment/ pier cap.	0.00 %
		(2) **Super- structure:** On completion of the super- structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road signs and markings, tests on completion etc. complete in all respect.	0.00 %
		(3) **Approaches:** On completion of approaches including Retaining walls, stone pitching, protection works complete in all respect and fit for use.	0.00 %
		(4) **Guide Bunds and River Training Works:** On completion of Guide Bunds and river Training Works complete in all respects	0.00%
		B.1- Widening and Repair of underpasses/ overpasses	
		Underpasses/ Overpasses	0.00%
		B.2- New underpasses/ Overpasses	
		(1) **Foundation + Sub- Structure:** On completion of the foundation work including foundations for wing and return walls, abutments, piers up to the abutment/ pier cap.	0.00%
		(2) **Super- structure:** On completion of the super- structure in all respects including wearing	0.00%

Item	Weightage in Percentage to the Contract Price	Stage for Payment	Percentage weightage of Col.-2
1	2	3	4
		coat, bearings, expansion joints, hand rails, crash barriers, road signs and markings, tests on completion etc. complete in all respect. **Wearing Coat** a) in case of Overpass- wearing coat including expansion joints complete in all respects as specified and (b) in case of underpass- rigid pavement including drainage facility complete in all respects as specified. (3) **Approaches:** On completion of approaches including Retaining walls/ Reinforced earth walls, stone pitching, protection works complete in all respect and fit for use.	0.00% 0.00%
Major Bridge with approaches (length > 60 m) works and ROB/ RUB/ elevated sections/ flyovers including viaducts, if any, Road work in approaches	**33.39%**	**A.1- Widening and repairs of Major Bridges** (1) Foundation (2) Sub-structure (3) Super- structure (including bearings) (4) Wearing Coat including expansion joints (5) Miscellaneous Items like hand rails, RCC crash barriers, road markings, C&G, Survey, Filtermedia, weep holes, Back filling behind abutment, drainage spout, synthetic enamel paint, bi-axial geogrid etc. (6) Wing walls/ return walls (7) Guide Bunds, River Training works etc. (8) Approaches (including Earthwork, Approach slab with P.C.C., Retaining walls, stone pitching and protection works) (9) Bridge Approaches - Road works (a) Earthwork up to top of the sub-grade (b) Sub-Base Course (c) Non Bituminous Base Course (d) Bituminous Base Course (e) Wearing Coat	0.00 % 0.00 % 0.00 % 0.00 % 0.00 % 0.00% 0.00% 0.00 % 0.00 % 0.00 % 0.00 % 0.00 % 0.00 %
		A.2- New Major Bridges (1) Foundation (2) Sub-structure (3) Super- structure (including bearings) (4) Wearing Coat including expansion joints (5) Miscellaneous Items like hand rails, RCC crash barriers, Precast railing with pedestal, road markings, C&G, Survey, Filtermedia, weep holes, Back filling behind abutment, drainage spout, synthetic enamel paint, bi-axial geogrid	50.41 % 4.55 % 27.57 % 1.52 % 1.39 %

Item	Weightage in Percentage to the Contract Price	Stage for Payment	Percentage weightage of Col.-2
1	2	3	4
		etc.	
		(6) Wing walls/ return walls	0.00%
		(7) Guide Bunds, River Training works etc.	0.00%
		(8) Approaches (including Earthwork, Approach slab with P.C.C., Retaining walls, stone pitching and protection works)	0.35 %
		(9) Bridge Approaches - Road works	
		(a) Earthwork up to top of the sub-grade	4.37 %
		(b) Sub-Base Course	1.72 %
		(c) Non Bituminous Base Course	1.29 %
		(d) Bituminous Base Course	5.01 %
		(e) Wearing Coat	1.83 %
		B.1- Widening and repair of **(a) ROB** **(b) RUB**	
		(1) Foundation	0.00%
		(2) Sub-structure	0.00%
		(3) Super- structure (including bearings)	0.00%
		(4) Wearing Coat: (a) in case of ROB- wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB- rigid pavement under RUB including drainage facility complete in all respects as specified.	0.00%
		(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.	0.00%
		(6) Wing walls/ return walls	0.00%
		(7) Approaches (including Retaining walls, stone pitching and protection works)	0.00%
		B.2- New ROB/ RUB **(a) ROB** **(b) RUB**	
		(1) Foundation	0.00%
		(2) Sub-structure	0.00%
		(3) Super- structure (including bearings)	0.00%
		(4) **Wearing Coat**: (a) in case of ROB- wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB- rigid pavement under RUB including drainage facility complete in all respects as specified	0.00%
		(5) Miscellaneous Items like hand rails, crash	0.00%

Item	Weightage in Percentage to the Contract Price	Stage for Payment	Percentage weightage of Col.-2
1	2	3	4
		barriers, road markings etc.	
		(6) Wing walls/ return walls	0.00%
		(7) Approaches (including Retaining walls/Reinforced Earth walls, stone pitching and protection works)	0.00%
		C.1- Widening and repair of Elevated Section/ Flyovers/ Grade Separators	
		(1) Foundation	0.00%
		(2) Sub-structure	0.00%
		(3) Super- structure (including bearings)	0.00%
		(4) Wearing Coat including expansion joints.	0.00%
		(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.	0.00%
		(6) Wing walls/ return walls	
		(7) Approaches (including Retaining walls/ Reinforced earth wall, stone pitching and protection works)	0.00% 0.00%
		C.2- New Elevated Section/ Flyovers/ Grade Separators	
		(1) Foundation	0.00%
		(2) Sub-structure	0.00%
		(3) Super- structure (including bearings)	0.00%
		(4) Wearing Coat including expansion joints.	0.00%
		(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.	0.00%
		(6) Wing walls/ return walls	
		(7) Approaches (including Retaining walls/ Reinforced earth wall, stone pitching and protection works)	0.00% 0.00%
Other Works	**25.28 %**	(i) Toll Plaza	0.00 %
		(ii) Road side drains	5.82 %
		(iii) Road signs, markings, km stones, safety devices, Kerbs, Footpaths, Furniture on bridge approaches, Kerb on bridge approaches etc.	6.75 %
		(iv) Project facilities	
		(a) Bus Bays	0.00 %
		(b) Truck lay-byes	0.00 %
		(c) Rest areas	0.00%
		(d) Others	
		(1) Traffic Aid Post, Vehicle rescue etc	0.00 %
		(2) Street light & high mast	0.00 %
		(3) Gantry incl. Excavation, P.C.C., R.C.C. & Reinforcement	0.97 %

Item	Weightage in Percentage to the Contract Price	Stage for Payment	Percentage weightage of Col.-2
1	2	3	4
		(4) Junctions	0.00 %
		(5) Repair of potholes/patches	0.00%
		(6) Renewal with MSS type B	0.00%
		(7) Maintenance, Mobile	0.00%
		(v) Road side plantation	0.00%
		(vi) Protection works other than approaches to the bridges, elevated sections/ flyovers/ grade separators and ROBs/ RUBs (Retaining/Toe walls, W-beam Crash barriers incl. foundation, Pitching, Railings etc.).	
		a) "THRIE" : Metal Beam Crash Barrier	22.31 %
		b) Stone pitching/filter media	0.00 %
		c) Steel Railing	0.00%
		d) Retaining Wall	0.00 %
		(e) Toe wall incl. Excavation, Filter media, weep holes, reinforcement etc	51.25 %
		(f) Interlocking Paver Blocks in footpath	0.00 %
		(g) Concrete shoulder	12.56%
		(h) Turfing	0.33%
		(vii) Safety and traffic management & Maintenance of existing road during construction.	0.00 %
Utility Shifting	**6.30 %**	All type utility Shifting	100%

1.3 Procedure of estimating the value of work done.

1.3.1 Road works.

Procedure for estimating the value of road work done shall be as follows:

Table 1.3.1

Stage of Payment	Percentage-weightage	Payment Procedure
A-Widening and strengthening of existing road		Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in a length of not less than 10 (ten) percent of the total length.
(1) Earthwork up to top of the sub-grade	16.22 %	
(2) Sub-Base Course	8.03 %	
(3) Non Bituminous Base Course	7.47 %	
(4) Bituminous Base Course	40.89 %	
(5) Wearing Coat	24.20 %	

Stage of Payment	Percentage-weightage	Payment Procedure
(6) Miscellaneous Items like Clearing & grubbing, Survey, Dismantling of R.C.C. work, Brick masonry, Rubble masonry, Flexible pavement, Kerb stone, structural steel etc.	0.69 %	**Miscellaneous:** Payment shall be made on completion of all miscellaneous works like Clearing & grubbing, Survey, Dismantling of R.C.C. work, Brick masonry, Rubble masonry, Flexible pavement, Kerb stone, structural steel etc. complete in all respects as specified.
(7) Widening and repair of culverts	0.00 %	Cost of completed culverts shall be determined on pro rata basis with respect to the total number of culverts. The payment shall be made on the completion of atleast five culverts.
B.1- Reconstruction/ New 2-lane realignment/ bypass **(Flexible pavement)** (1) Earthwork up to top of the sub-grade	0.00 %	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in full length or 5 (five) km length, whichever is less.
(2) Sub Base Course	0.00 %	
(3) Non Bituminous Course	0.00 %	
(4) Bituminous Base Course	0.00 %	
(5) Wearing Coat	0.00 %	
B.2- Reconstruction/ New 2- lane realignment/ bypass **(Rigid pavement)** (1) Earthwork up to top of the sub-grade	0.00%	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in full length or 5 (five) km length, whichever is less.
(2) Sub Base Course	0.00%	
(3) Dry Lean Concrete (DLC) Course	0.00 %	
(4) Pavement Quality Concrete (PQC) Course	0.00 %	

Stage of Payment	Percentage-weightage	Payment Procedure
C.1- Reconstruction/ New service road (Flexible pavement)		Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in full length or 5 (five) km length, whichever is less.
(1) Earthwork up to top of the sub-grade	0.00%	
(2) Sub Base Course	0.00%	
(3) Non- Bituminous Course	0.00%	
(4) Bituminous Base Course	0.00%	
(5) Wearing Coat	0.00%	
C.2- Reconstruction/ New service road (Rigid pavement)		Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in full length or 5 (five) km length, whichever is less.
(1) Earthwork up to top of the sub-grade	0.00%	
(2) Sub Base Course	0.00%	
(3) Dry Lean Concrete (DLC) Course	0.00%	
(4) Pavement Quality Concrete (PQC) Course	0.00%	
D- Re-construction and New culverts on existing road, realignments, bypasses:		Cost of each culvert shall be determined on pro rata basis with respect to the total number of culverts. Payment shall be made on the completion of at least five culverts.
(1) Culverts (length < 6m)	0.0 %	
E- Pipe Culvert	2.50%	Cost of each culvert shall be determined on pro rata basis with respect to the total number of culverts. Payment shall be made on the completion of work.

@ . For example, if the total length of bituminous work to be done is 100 km, the cost per km of bituminous work shall be determined as follows:

Cost per km = P x weightage for road work x weightage for bituminous work x (1/L)

Where P = Contract Price

L = Total length in km

Similarly, the rates per km for other stages shall be worked out accordingly.

Note: The length affected due to law and order problems or litigation during execution due to which the Contractor is unable to execute the work, may be deducted from the total project length for payment purposes. The total length calculated here is only for payment purposes and will not affect and referred in other clauses of the Contract Agreement.

1.3.2 Minor Bridges and Underpasses/ Overpasses.

Procedure for estimating the value of Minor bridge and Underpasses/ Overpasses shall be as stated in table 1.3.2:

Table 1.3.2

Stage of Payment	Weightage	Payment Procedure
A.1 - Widening and repairs of Minor Bridges (length > 6m and < 60m)	0.00 %	Cost of each Minor Bridge shall be determined on pro-rata basis with respect to the total linear length of the minor bridges. Payment shall be made on the completion of widening and repair works of a minor bridge.
A.2- New minor bridges (i) **Foundation + Sub-Structure:** On completion of the foundation work including foundations for wing and return walls, abutments, piers up to the abutment/ pier cap.	00.00 %	**(i) Foundation + Sub–Structure:** Cost of each Minor Bridge shall be determined on pro-rata basis with respect to the total linear length (m) of the minor bridges. Payment against foundation + sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation + sub-structure of each bridge subject to completion of at least two foundations along with sub-structure up to abutment/ pier cap level of each bridge. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(ii) **Super-structure:** On completion of the super structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road signs and markings, tests on completion etc. complete in all respect.	0.00 %	**(ii) Super-structure:** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super-structure of at least one span in all respects as specified in the column of "Stage of Payment" in this sub-clause.
(iii) **Approaches:** On completion of approaches including Retaining walls, stone pitching, protection works complete in all respects & fit for use.	0.00 %	**(iii) Approaches:** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of approaches in all respects as specified in the column of "Stage of Payment" in this sub-clause.
(iv) **Guide Bunds and River Training Works:** On completion of guide Bunds and river Training Works complete in all respect.	0.00%	**(iv) Guide Bunds and River Training Works:** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of Guide Bunds and River training Works in all respects as specified.
B.1- Widening and repairs of underpasses/ overpasses	0.00%	Cost of each underpass/ overpass shall be determined on pro-rata basis with respect

Stage of Payment	Weightage	Payment Procedure
		to the total linear length of the underpasses/ overpasses. Payment shall be made on the completion of widening and repair works of an underpass/ overpass.
B.2- New Underpasses/ Overpasses: **(i) Foundation + Sub-Structure:** On completion of the foundation work including foundations for wing and return walls, abutments, piers up to the abutment/ pier cap.	0.00%	(i) Foundation + Sub - Structure: Cost of each Underpass/ Overpass shall be determined on pro rata basis with respect to the total linear length (m) of the Underpasses/ Overpasses. Payment against foundation + sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation + sub-structure of each Underpass/Overpass subject to completion of at least two foundations along with sub-structure up to abutment/ pier cap level each Underpass/overpass. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(ii) Super Structure: On completion of the super structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road signs & markings, tests on completion etc. complete in all respect. **Wearing Coat** (a) in case of Overpass – wearing coat including expansion joints complete in all respects as specified and (b) in case of Underpass-rigid pavement including drainage facility complete in all respects as specified.	0.00%	**(ii) Super Structure :** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of Super-structure of at least one span in all respects as specified in the column of "Stage of Payment" in this sub-clause.
(iii) Approaches: On completion of approaches including Retaining walls/Reinforced Earth walls, stone pitching, protection works complete in all respects & fit for use.	0.00%	**(iii) Approaches:** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of approaches in all respect as specified.

1.3.3 Major Bridge works, ROB/ RUB and Structures.

Procedure for estimating the value of Major Bridge works, ROB / RUB and structures shall be as stated in table 1.3.3:

Table 1.3.3

Stage of payment	Weightage	Payment procedure

Stage of payment	Weightage	Payment procedure
A.1- Widening and repairs of Major Bridges		
(i) Foundation	0.00 %	**(i) Foundation:** Cost of each Major Bridge shall be determined on pro rata basis with respect to the total linear length (m) of the Major Bridge. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 15% of the scope of foundation of the major Bridge subject to completion of at least two foundations of the major Bridge. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(ii) Sub-structure	0.00 %	**(ii) Sub-Structure:** Payment against Sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 15% of the scope of sub-structure of the major bridge subject to completion of at least two sub-structures of abutments/ piers up to abutment/ pier cap level of the major bridge.
(iii) Super-structure (including bearings)	0.00 %	**(iii) Super-structure:** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super structure including bearings of at least one span in all respects as specified.
(iv) Wearing Coat including expansion joints	0.00 %	**(iv) Wearing Coat:** Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(v) Miscellaneous Items like hand rails, crash barriers, road markings etc.	0.00 %	**(v) Miscellaneous:** Payment shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(vi) Wing walls/ return walls	0.00%	**(vi) Wing walls/ return walls:** Payment shall be made on completion of all wing walls/ return walls complete in all respects as specified.
(vii) Guide Bunds, River Training works etc.	0.00%	**(vii) Guide Bunds, River Training works:** Payment shall be made on completion of all guide bunds/ river training works etc. complete in all respects as specified.

Stage of payment	Weightage	Payment procedure
(viii) Approaches (including Retaining walls, stone pitching and protection works)	0.00 %	**(viii) Approaches:** Payment shall be made on completion of both approaches including stone pitching, protection works, etc. complete in all respects as specified.
A.2- New Major Bridges		
(i) Foundation	50.41 %	**(i) Foundation:** Cost of each Major Bridge shall be determined on pro rata basis with respect to the total linear length (m) of the Major Bridge. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the major Bridge subject to completion of at least two foundations of the major Bridge. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(ii) Sub-structure	4.55 %	**(ii) Sub-Structure:** Payment against Sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of the major bridge subject to completion of at least two sub-structures of abutments/ piers up to abutment/ pier cap level of the major bridge.
(iii) Super-structure (including bearings)	27.57 %	**(iii) Super-structure:** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super-structure including bearings of at least one span in all respects as specified.
(iv) Wearing Coat including expansion joints	1.52 %	**(iv) Wearing Coat:** Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(v) Miscellaneous Items like hand rails, RCC crash barriers, Precast railing with pedestal, road markings, C&G, Survey, Filtermedia, weep holes, Back filling behind abutment, drainage spout,	1.39 %	**(v) Miscellaneous:** Payment shall be made on completion of all miscellaneous works like hand rails, R.C.C. crash barriers, road markings, precast railing, Filter media, weep holes, drainage spout etc. complete in

Stage of payment	Weightage	Payment procedure
synthetic enamel paint, bi-axial geogrid etc.		all respects as specified.
(vi) Wing walls/ return walls	0.00%	**(vi) Wing walls/ return walls:** Payment shall be made on completion of all wing walls/ return walls complete in all respects as specified.
(vii) Guide Bunds, River Training works etc.	0.00%	**(vii) Guide Bunds, River Training works:** Payment shall be made on completion of all guide bunds/ river training works etc. complete in all respects as specified.
(viii) Approaches (including Earthwork, Approach slab with P.C.C., Retaining walls, stone pitching and protection works)	0.35 %	**(viii) Approaches:** Payment shall be made on completion of both approaches including Approach slab & PCC, stone pitching, protection works, etc. complete in all respects as specified.
(ix) Bridge Approaches - Road works (a) Earthwork up to top of the sub-grade (b) Sub-Base Course (c) Non Bituminous Base Course (d) Bituminous Base Course (e) Wearing Coat	 4.37 % 1.72 % 1.29 % 5.01% 1.83 %	**(ix)** Bridge Approaches Road works - Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in a length of not less than 10 (ten) percent of the total length.
B.1- Widening and repairs of **(a) ROB** **(b) RUB**	0.00%	
(i) Foundation		**(i) Foundation:** Cost of each ROB/ RUB shall be determined on pro rata basis with respect to the total linear length (m) of the ROBs/ RUBs. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the ROB/ RUB subject to completion of at least two foundations of the ROB/ RUB. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(ii) Sub-structure	0.00%	**(ii) Sub-Structure:** Payment against Sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of the ROB/ RUB subject to completion of at least two sub-structures of abutments/ piers up to

Stage of payment	Weightage	Payment procedure
		abutment/ pier cap level of the ROB/ RUB.
(iii) Super-structure (including bearings)	0.00%	**(iii) Super-structure:** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super-structure including bearings of at least one span in all respects as specified.
(iv) Wearing Coat including expansion joints in case of ROB. In case of RUB, rigid pavement under RUB including drainage facility as specified.	0.00%	**(iv) Wearing Coat:** Payment shall be made on completion of (a) in case of ROB- wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB- rigid pavement under RUB including drainage facility complete in all respects as specified.
(v) Miscellaneous Items like hand rails, crash barriers, road markings etc.	0.00%	**(v) Miscellaneous:** Payment shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(vi) Wing walls/ return walls	0.00%	**(vi) Wing walls/ return walls:** Payment shall be made on completion of all wing walls/ return walls complete in all respects as specified.
(vii) Approaches (including Retaining walls, stone pitching and protection works)	0.00%	**(vii) Approaches:** Payment shall be made on completion of both approaches including stone pitching, protection works, etc. complete in all respects as specified.
B.2- New **(a) ROB** **(b) RUB** (i) Foundation	0.00%	**(i) Foundation:** Cost of each ROB/ RUB shall be determined on pro rata basis with respect to the total linear length (m) of the ROBs/ RUBs. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the ROB/ RUB subject to completion of at least two foundations of the ROB/ RUB. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where

Stage of payment	Weightage	Payment procedure
		specified.
(ii) Sub-structure	0.00%	**(ii) Sub-Structure:** Payment against Sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of the ROB/ RUB subject to completion of at least two sub-structures of abutments/ piers up to abutment/ pier cap level of the ROB/ RUB.
(iii) Super-structure (including bearings)	0.00%	**(iii) Super-structure:** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super-structure including bearings of at least one span in all respects as specified.
(iv) Wearing Coat including expansion joints in case of ROB. In case of RUB, rigid pavement under RUB including drainage facility as specified.	0.00%	**(iv) Wearing Coat:** Payment shall be made on completion of (a) in case of ROB- wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB- rigid pavement under RUB including drainage facility complete in all respects as specified.
(v) Miscellaneous Items like hand rails, crash barriers, road markings etc.	0.00%	**(v) Miscellaneous:** Payment shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(vi) Wing walls/ return walls	0.00%	**(vi) Wing walls/ return walls:** Payment shall be made on completion of all wing walls/ return walls complete in all respects as specified.
(vii) Approaches (including Retaining walls, stone pitching and protection works)	0.00%	**(vii) Approaches:** Payment shall be made on completion of both approaches including stone pitching, protection works, etc. complete in all respects as specified.
C.1- Widening and repairs of Elevated Section/ Flyovers/ Grade Separators		
(i) Foundation	0.00%	**(i) Foundation:** Cost of each structure

Stage of payment	Weightage	Payment procedure
		shall be determined on pro rata basis with respect to the total linear length (m) of the structures. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the structure subject to completion of at least two foundations of the structure. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(ii) Sub-structure	0.00%	**(ii) Sub-Structure:** Payment against Sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of the structure subject to completion of at least two sub-structures of abutments/ piers up to abutment/ pier cap level of the structure.
(iii) Super-structure (including bearings)	0.00%	**(iii) Super-structure:** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super-structure including bearings of at least one span in all respects as specified.
(iv) Wearing Coat including expansion joints	0.00%	**(iv) Wearing Coat:** Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(v) Miscellaneous Items like hand rails, crash barriers, road markings etc.	0.00%	**(v) Miscellaneous:** Payments shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(vi) Wing walls/ return walls	0.00%	**(vi) Wing walls/ return walls:** Payment shall be made on completion of all wing walls/ return walls complete in all respects as specified.
(vii) Approaches (including Retaining walls/ Reinforced earth wall, stone pitching and protection works)	0.00%	**(vii) Approaches:** Payment shall be made on completion of both approaches including stone pitching, protection works, etc. complete in all respects as specified.

Stage of payment	Weightage	Payment procedure
C.2- New Elevated Section/ Flyovers/ Grade Separators		
(i) Foundation	0.00%	**(i) Foundation:** Cost of each structure shall be determined on pro rata basis with respect to the total linear length (m) of the structures. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the structure subject to completion of at least two foundations of the structure. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(ii) Sub-structure	0.00%	**(ii) Sub-Structure:** Payment against Sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of the structure subject to completion of at least two sub-structures of abutments/ piers up to abutment/ pier cap level of the structure.
(iii) Super-structure (including bearings)	0.00%	**(iii) Super-structure:** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super-structure including bearings of at least one span in all respects as specified.
(iv) Wearing Coat including expansion joints	0.00%	**(iv) Wearing Coat:** Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(v) Miscellaneous Items like hand rails, crash barriers, road markings etc.	0.00%	**(v) Miscellaneous:** Payments shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(vi) Wing walls/ return walls	0.00%	**(vi) Wing walls/ return walls:** Payment shall be made on completion of all wing walls/ return walls complete in all respects as specified.

Stage of payment	Weightage	Payment procedure
(vii) Approaches (including Retaining walls/ Reinforced earth wall, stone pitching and protection works)	0.00%	**(vii) Approaches:** Payment shall be made on completion of both approaches including stone pitching, protection works, etc. complete in all respects as specified.

Note: (1) In case of innovative Major Bridge projects like cable suspension/ cable stayed/ Extra Dozed and exceptionally long span bridges, the schedule may be modified as per site requirements before bidding with due approval of DG (RD) & SS, MoRT&H.

(2) The Schedule for exclusive tunnel projects may be prepared as per site requirements before bidding with due approval of DG (RD) & SS, MoRT&H.

1.3.4 Other works.

Procedure for estimating the value of other works done shall be as stated in table 1.3.4:

Table 1.3.4

Stage of Payment	Weightage	Payment Procedure
(i) Toll plaza	0.00 %	Unit of measurement is each completed toll plaza. Payment of each toll plaza shall be made on pro rata basis with respect to the total of all toll plazas.
(ii) Road side drains	5.82 %	Unit of measurement is linear length in km. Payment shall be made on pro rata basis on completion of a stage in a length of not less than 25% (Twenty five per cent) of the total length.
(iii) Road signs, markings, km stones, safety devices, Kerbs, Footpaths etc.	6.75 %	
(iv) Project Facilities a) Bus bays b) Truck lay-byes c) Rest areas d) Others 1) Traffic Aid Post, Vehicle rescue etc (2) Street light & height mast (3) Gantry incl. Excavation, P.C.C., R.C.C. & Reinforcement (4) Junctions, (5) Repair of potholes/patches (6) Renewal with MSS type B (7) Maintenance, Mobile etc.	 0.00 % 0.00% 0.00% 0.00 % 0.00 % 0.97 % 0.00 % 0.00 % 0.00 % 0.00%	Payment shall be made on pro rata basis for completed facilities.
(v) Roadside plantation	0.00%	Unit of measurement is linear length. Payment shall be made on pro rata basis on completion of a stage in a length of not less than 25% (Twenty five per cent) of the total length.
(vi) Protection works other than approaches to the bridges, elevated sections/ flyovers/grade separators and ROBs/ RUBs (Retaining/Toe walls, W-beam Crash barriers, Pitching, Railings etc.). a)W-beam including excavation, Pedestal b) stone pitching/filter media c) steel Railing d) Retaining Wall e) Toe wall incl. Excavation, Filter media, weep holes, reinforcement etc. f) Interlocking Paver Blocks in footpath g) Concrete shoulder h) Turfing	 22.31 % 0.00 % 0.00 % 0.00% 51.25 % 0.00 % 12.56 % 0.33 %	
(vii) Safety and traffic management during construction	0.00 %	Payment shall be made on pro rata basis every three months.

Stage of Payment	Weightage	Payment Procedure

1.3.5 Utility Shifting

Procedure for estimating the value of other works done shall be as stated in table 1.3.5:

Table 1.3.5

Stage of Payment	Weightage	Payment Procedure
Utility Shifting	100.00 %	**Utility Shifting:** Payment shall be made on completion of all type Utility shifting works complete in all respects as specified.

2. Procedure for payment for Maintenance

2.1 The cost for maintenance shall be as stated in Clause 14.1.1.

2.2 Payment for Maintenance shall be made in quarterly installments in accordance with the provisions of Clause 19.7.

Schedule - I

(See Clause 10.2 (iv))

Drawings

1. Drawings

In compliance of the obligations set forth in Clause 10.2 of this Agreement, the Contractor shall furnish to the Authority's Engineer, free of cost, all Drawings listed in Annex-I of this Schedule-I.

2. Additional Drawings

If the Authority's Engineer determines that for discharging its duties and functions under this Agreement, it requires any drawings other than those listed in Annex-I, it may by notice require the Contractor to prepare and furnish such drawings forthwith. Upon receiving a requisition to this effect, the Contractor shall promptly prepare and furnish such drawings to the Authority's Engineer, as if such drawings formed part of Annex-I of this Schedule-I.

Annex – I

(Schedule - I)

Annex-I : List of Drawings

The Contractor shall furnish to the Authority's Engineer, free of cost, all Drawings listed in
Annex-I of this Schedule-I, as following: -

1. Drawing of Horizontal Alignment, Vertical Profile and Cross Sections at 20 mtr interval,
2. Drawings of Cross Drainage works.
3. Drawings of Interchanges, Major/Minor Intersections, Grade Separators and Underpasses
4. Drawings of Control Centre,if any
5. Drawings of road furniture items including traffic signages, road markings etc.
6. Drawings of traffic diversion plans and traffic control measures
7. Drawings of Bridges & Culverts
8. Drawings of drainage, plan & profile.
9. Drawings of Typical details of all protection work measures including structure & highway.
10. Drawings of landscaping & horticultural.
11. Drawings of pedestrian crossing
12. Drawings of project facilities provided.
13. Drawings of street lighting.
14. Drawings as per Authority Engineer's instructions.

Schedule - J

(See Clause 10.3 (ii))

Project Completion Schedule

1. Project Completion Schedule

During Construction period, the Contractor shall comply with the requirements set forth in this Schedule-J for each of the Project Milestones and the **Scheduled Completion Date**. Within 15 (fifteen) days of the date of each Project Milestone, the Contractor shall notify the Authority of such compliance along with necessary particulars thereof.

2. Project Milestone-I

(i) Project Milestone-I shall occur on the date falling on the **189th (One hundred and eighty ninth)** day from the Appointed Date (the **"Project Milestone- I"**).

(ii) Prior to the occurrence of Project Milestone-I, the Contractor shall have commenced construction of the Project Highway and submitted to the Authority duly and validly prepared Stage Payment Statements for an amount not less than 10% (ten per cent) of the Contract Price.

3. Project Milestone-II

(i) Project Milestone-II shall occur on the date falling on the **324th (Three hundred and twenty fourth)** day from the Appointed Date (the **"Project Milestone- II"**).

(ii) Prior to the occurrence of Project Milestone-II, the Contractor shall have continued with construction of the Project Highway and submitted to the Authority duly and validly prepared Stage Payment Statements for an amount not less than 35% (thirty five per cent) of the Contract Price **and should have started construction of all bridges.**

4. Project Milestone-III

(i) Project Milestone-III shall occur on the date falling on the **459th (Four hundred and fifty ninth)** day from the Appointed Date (the **"Project Milestone- III"**).

(ii) Prior to the occurrence of Project Milestone-III, the Contractor shall have continued with construction of the Project Highway and submitted to the Authority duly and validly prepared Stage Payment Statements for an amount not less than 70% (seventy per cent) of the Contract Price and **should have** started construction of all project facilities.

5. Scheduled Completion Date

(i) The Scheduled Completion Date shall occur on the **540th (Five hundred and fortieth)** day from the Appointed Date.

(ii) On or before the Scheduled Completion Date, the Contractor shall have completed construction in accordance with this Agreement.

6. Extension of time

Upon extension of any or all of the aforesaid Project Milestones or the Scheduled Completion Date, as the case may be, under and in accordance with the provisions of this Agreement, the Project Completion Schedule shall be deemed to have been amended accordingly.

Schedule - K

(See Clause 12.1 (ii))

Tests on Completion

1. Schedule for Tests

(i) The Contractor shall, no later than 30 (thirty) days prior to the likely completion of construction, notify the Authority's Engineer and the Authority of its intent to subject the Project Highway to Tests, and no later than 10 (ten) days prior to the actual date of Tests, furnish to the Authority's Engineer and the Authority detailed inventory and particulars of all works and equipment forming part of Works.

(ii) The Contractor shall notify the Authority's Engineer of its readiness to subject the Project Highway to Tests at any time after 10 (ten) days from the date of such notice, and upon receipt of such notice, the Authority's Engineer shall, in consultation with the Contractor, determine the date and time for each Test and notify the same to the Authority who may designate its representative to witness the Tests. The Authority's Engineer shall thereupon conduct the Tests itself or cause any of the Tests to be conducted in accordance with Article 12 and this Schedule-K.

2. Tests

(i) Visual and physical test: The Authority's Engineer shall conduct a visual and physical check of construction to determine that all works and equipment forming part thereof conform to the provisions of this Agreement. The physical tests shall include tests as may be decided with Authority's Engineer at the time of physical tests as per Specifications and Standards and relevant IRC code and Manual)

(ii) Riding quality test: Riding quality of each lane of the carriageway shall be checked with the help of a Network Survey Vehicle (NSV) fitted with latest equipments and the maximum permissible roughness for purposes of this Test shall be 2,000 (two thousand) mm for each kilometre.

(iii) Tests for bridges: All major and minor bridges shall be subjected to the rebound hammer and ultrasonic pulse velocity tests, to be conducted in accordance with the procedure described in Special Report No. 17: 1996 of the IRC Highway Research Board on Non destructive Testing Techniques, at two spots in every span, to be chosen at random by the Authority's Engineer. Bridges with a span of 15 (fifteen) metres or more shall also be subjected to load testing.

(iv) Other tests: The Authority's Engineer may require the Contractor to carry out or cause to be carried additional tests, in accordance with Good Industry Practice, for determining the compliance of the Project Highway with Specifications and Standards, except tests as specified in clause 5,but shall include measuring the reflectivity of road markings and road signs; and measuring the illumination level (lux) of lighting using requisite testing equipment.

(v) Environmental audit: The Authority's Engineer shall carry out a check to determine conformity of the Project Highway with the environmental requirements set forth in Applicable Laws and Applicable Permits.

(vi) Safety Audit: The Authority's Engineer shall carry out, or cause to be carried out, a safety audit to determine conformity of the Project Highway with the safety requirements and Good Industry Practice.

3. Agency for conducting Tests

All Tests set forth in this Schedule-K shall be conducted by the Authority's Engineer or such other agency or person as it may specify in consultation with the Authority.

4. Completion Certificate

Upon successful completion of Tests, the Authority's Engineer shall issue the Completion Certificate in accordance with the provisions of Article 12.

5. The Authority Engineer will carry out tests with following equipment at his own cost in the presence of contractor's representative.

Sr. No.	Key metrics of Asset	Equipment to be used	Frequency of condition survey
1	Surface defects of pavement	Network Survey Vehicle (NSV)	At least twice a year (As per survey months defined for the state basis rainy season)
2	Roughness of pavement	Network Survey Vehicle (NSV)	At least twice a year (As per survey months defined for the state basis rainy season)
3	Strength of pavement	Falling Weight Deflectometer (FWD)	At least once a year
4	Bridges	Mobile Bridge Inspection Unit (MBU)	At least twice a year (As per survey months defined for the state basis rainy season)
5	Road signs	Retro-reflectometer	At least twice a year (As per survey months defined for the state basis rainy season)

The first testing with the help of NSV shall be conducted at the time of issue of Completion Certificate.

Schedule - L

(See Clause 12.2)

Completion Certificate

1 I, ……. (Name of the Authority's Engineer), acting as the Authority's Engineer, under and in accordance with the Agreement dated …… (the "**Agreement**"), for Upgradation to 6 Lane with Paved shoulder of Gandhidham - Kandla Port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 Lane Major Bridge on Nakti Creek at km 7+170 of NH-141 in the state of Gujarat (the "**Project Highway**") on Engineering, Procurement and Construction (EPC) basis through ……. (Name of Contractor), hereby certify that the Tests in accordance with Article 12 of the Agreement have been successfully undertaken to determine compliance of the Project Highway with the provisions of the Agreement, and I am satisfied that the Project Highway can be safely and reliably placed in service of the Users thereof.

2 It is certified that Rain Water Harvesting and Artificial Recharging arrangements have been provided by the Contractor as per Schedule C of the Contract Agreement, and are functional. Details (with location chainage) are as given in Annex- _____.

3 It is certified that, in terms of the aforesaid Agreement, all works forming part of Project Highway have been completed, and the Project Highway is hereby declared fit for entry into operation on this the …… day of …… 20….. , Scheduled Completed Date for which was the …… day of ……20…..

SIGNED, SEALED AND DELIVERED

For and on behalf of the Authority's Engineer by:

(Signature)

(Name)

(Designation) (Address)

Schedule - M

(See Clauses 14.6, 15.2 and 19.7)

Payment Reduction for Non-Compliance

1. Payment reduction for non-compliance with the Maintenance Requirements

(i) Monthly lump sum payments for maintenance shall be reduced in the case of non-compliance with the Maintenance Requirements set forth in Schedule-E.

(ii) Any deduction made on account of non-compliance with the Maintenance Requirements shall not be paid even after compliance subsequently. The deductions shall continue to be made every month until compliance is done.

(iii) The Authority's Engineer shall calculate the amount of payment reduction on the basis of weightage in percentage assigned to non-conforming items as given in Paragraph 2.

2. Percentage reductions in lump sum payments on monthly basis

(i) The following percentages shall govern the payment reduction:

S. No.	Item/Defect/Deficiency	Percentage
(a)	**Carriageway/Pavement**	
(i)	Potholes, cracks, other surface defects	15%
(ii)	Repairs of Edges, Rutting	5%
(b)	**Road, Embankment, Cuttings, Shoulders**	
(i)	Edge drop, inadequate cross fall, undulations, settlement, potholes, ponding, obstructions	10%
(ii)	Deficient slopes, raincuts, disturbed pitching, vegetation growth, pruning of trees	5%
(c)	**Bridges and Culverts**	
(i)	Desilting, cleaning. vegetation growth, damaged pitching, flooring, parapets, wearing course, footpaths, any damage to foundations	20%
(ii)	Any Defects in superstructures, bearings and sub-structures	10%
(iii)	Painting, repairs/replacement kerbs, railings, parapets, guideposts/crash barriers	5%

S. No.	Item/Defect/Deficiency	Percentage
(d)	**Roadside Drains**	
(i)	Cleaning and repair of drains	5%
(e)	**Road Furniture**	
(i)	Cleaning, painting, replacement of road signs, delineators, road markings, 200 m/km/5th km stones	5%
(f)	**Miscellaneous Items**	
(i)	Removal of dead animals, broken down/accidented vehicles, fallen trees, road blockades or malfunctioning of mobile crane	10%
(ii)	Any other Defects in accordance with paragraph 1.	5%
(g)	**Defects in Other Project Facilities**	5%

(ii) The amount to be deducted from monthly lump-sum payment for non-compliance of particular item shall be calculated as under:

$$R = {}^{P}/_{100} \times (M1 \text{ or } M2) \times {}^{L1}/_{L}$$

Where,

P= Percentage of particular item/Defect/deficiency for deduction

M1= Monthly lump-sum payment in accordance para 1.2 above of this Schedule

M2= Monthly lump-sum payment in accordance para 1.2 above of this Schedule

L1= Non-complying length L = Total length of the road,

R= Reduction (the amount to be deducted for non-compliance for a particular item/Defect/deficiency

The total amount of reduction shall be arrived at by summation of reductions for such items/Defects/deficiency or non-compliance.

For any Defect in a part of one kilometer, the non-conforming length shall be taken as one kilometer.

Schedule - N

(See Clause 18.1 (i))

Selection of Authority's Engineer

1. Selection of Authority's Engineer

(i) The provisions of the Model Request for Proposal for Selection of Technical Consultants, issued by the Ministry of Finance in May 2009, or any substitute thereof shall apply for selection of an experienced firm to discharge the functions and duties of an Authority's Engineer.

(ii) In the event of termination of the Technical Consultants appointed in accordance with the provisions of Paragraph 1.1, the Authority shall appoint another firm of Technical Consultants forthwith and may engage a government-owned entity in accordance with the provisions of Paragraph 3 of this Schedule-N.

2. Terms of Reference

The Terms of Reference for the Authority's Engineer (the "**TOR**") shall substantially conform with Annex 1 to this Schedule N.

3. Appointment of Government entity as Authority's Engineer

Notwithstanding anything to the contrary contained in this Schedule, the Authority may in its discretion appoint a government-owned entity as the Authority's Engineer; provided that such entity shall be a body corporate having as one of its primary functions the provision of consulting, advisory and supervisory services for engineering projects; provided further that a government-owned entity which is owned or controlled by the Authority shall not be eligible for appointment as Authority's Engineer.

Annex – I

(Schedule - N)

Terms of Reference for Authority's Engineer

1. Scope

(i) These Terms of Reference (the "**TOR**") for the Authority's Engineer are being specified pursuant to the EPC Agreement dated ..... (the "**Agreement**), which has been entered into between the Chief Engineer (NH) & Addl. Secy., R&B Department, 1st Floor, Block No. 14, Sardar Bhawan, Sachivalaya, Gandhinagar, Gujarat-382010 **through the Executive Engineer, National Highway Division, Gandhidham** (the "**Authority**") and ..... (the "**Contractor**")# for Upgradation to 6 Lane with Paved shoulder of Gandhidham - Kandla Port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 Lane Major Bridge on Nakti Creek at km 7+170 of NH-141 in the state of Gujarat on Engineering, Procurement, Construction (EPC) basis, and a copy of which is annexed hereto and marked as Annex-A to form part of this TOR.

- In case the bid of Authority's Engineer is invited simultaneously with the bid of EPC project, then the status of bidding of EPC project only to be indicated

(ii) The TOR shall apply to construction and maintenance of the Project Highway.

2. Definitions and interpretation

(i) The words and expressions beginning with or in capital letters and not defined herein but defined in the Agreement shall have, unless repugnant to the context, the meaning respectively assigned to them in the Agreement.

(ii) References to Articles, Clauses and Schedules in this TOR shall, except where the context otherwise requires, be deemed to be references to the Articles, Clauses and Schedules of the Agreement, and references to Paragraphs shall be deemed to be references to Paragraphs of this TOR.

(iii) The rules of interpretation stated in Article 1 of the Agreement shall apply, mutatis mutandis, to this TOR.

3. General

(i) The Authority's Engineer shall discharge its duties in a fair, impartial and efficient manner, consistent with the highest standards of professional integrity and Good Industry Practice.

(ii) The Authority's Engineer shall perform the duties and exercise the authority in accordance with the provisions of this Agreement, but subject to obtaining prior written approval of the Authority before determining:

(a) any Time Extension;

(b) any additional cost to be paid by the Authority to the Contractor;

(c) the Termination Payment; or

(d) issuance of Completion Certificate or

(e) any other matter which is not specified in (a), (b), (c) or (d) above and which creates a financial liability on either Party.

(iii) The Authority's Engineer shall submit regular periodic reports, at least once every month, to the Authority in respect of its duties and functions under this Agreement. Such reports shall be submitted by the Authority's Engineer within 10 (ten) days of the beginning of every month.

(iv) The Authority's Engineer shall inform the Contractor of any delegation of its duties and responsibilities to its suitably qualified and experienced personnel; provided, however, that it shall not delegate the authority to refer any matter for the Authority's prior approval in accordance with the provisions of Clause 18.2.

(v) The Authority's Engineer shall aid and advise the Authority on any proposal for Change of Scope under Article 13.

(vi) In the event of any disagreement between the Parties regarding the meaning, scope and nature of Good Industry Practice, as set forth in any provision of the Agreement, the Authority's Engineer shall specify such meaning, scope and nature by issuing a reasoned written statement relying on good industry practice and authentic literature.

4. Construction Period

(i) During the Construction Period, the Authority's Engineer shall review and approve the Drawings furnished by the Contractor along with supporting data, including the geo-technical and hydrological investigations, characteristics of materials from borrow areas and quarry sites, topographical surveys, and the recommendations of the Safety Consultant in accordance with the provisions of Clause 10.1 (vi). The Authority's Engineer shall complete such review and approval and send its observations to the Authority and the Contractor within 15 (fifteen) days of receipt of such Drawings; provided, however that in case of a Major Bridge or Structure, the aforesaid period of 15 (fifteen) days may be extended upto 30 (thirty) days. In particular, such comments shall specify the conformity or otherwise of such Drawings with the Scope of the Project and Specifications and Standards.

(ii) The Authority's Engineer shall review and approve any revised Drawings sent to it by the Contractor and furnish its comments within 10 (ten) days of receiving such Drawings.

(iii) The Authority's Engineer shall review and approve the Quality Assurance Plan submitted by the Contractor and shall convey its comments to the Contractor within a period of 21 (twenty one) days stating the modifications, if any, required thereto.

(iv) The Authority's Engineer shall complete the review and approve of the methodology proposed to be adopted by the Contractor for executing the Works, and convey its comments to the Contractor within a period of 10 (ten) days from the date of receipt of the proposed methodology from the Contractor.

(v) The Authority's Engineer shall grant written approval to the Contractor, where necessary, for interruption and diversion of the flow of traffic in the existing lane(s) of the Project Highway for purposes of maintenance during the Construction Period in accordance with the provisions of Clause 10.4.

(vi) The Authority's Engineer shall review the monthly progress report furnished by the Contractor and send its comments thereon to the Authority and the Contractor within 7 (seven) days of receipt of such report.

(vii) The Authority's Engineer shall inspect the Construction Works and the Project Highway and shall submit a monthly Inspection Report bringing out the results of inspections and the remedial action taken by the Contractor in respect of Defects or deficiencies. In particular, the Authority's Engineer shall include in its Inspection Report, the compliance of the recommendations made by the Safety Consultant.

(viii) The Authority's Engineer shall conduct the pre-construction review of manufacturer's test reports and standard samples of manufactured Materials, and such other Materials as the Authority's Engineer may require.

(ix) For determining that the Works conform to Specifications and Standards, the Authority's Engineer shall require the Contractor to carry out, or cause to be carried out, tests at such time and frequency and in such manner as specified in the Agreement and in accordance with Good Industry Practice for quality assurance. For purposes of this Paragraph 4 (ix), the tests specified in the IRC Special Publication-11 (Handbook of Quality Control for Construction of Roads and Runways) and the Specifications for Road and Bridge Works issued by MORTH (the "Quality Control Manuals") or any modification/substitution thereof shall be deemed to be tests conforming to Good Industry Practice for quality assurance.

(x) The Authority's Engineer shall test check at least 50 (fifty) percent of the quantity or number of tests prescribed for each category or type of test for quality control by the Contractor.

(xi) The timing of tests referred to in Paragraph 4 (ix), and the criteria for acceptance/ rejection of their results shall be determined by the Authority's Engineer in accordance with the Quality Control Manuals. The tests shall be undertaken on a random sample basis and shall be in addition to, and independent of, the tests that may be carried out by the Contractor for its own quality assurance in accordance with Good Industry Practice.

(xii) In the event that results of any tests conducted under Clause 11.10 establish any Defects or deficiencies in the Works, the Authority's Engineer shall require the Contractor to carry out remedial measures.

(xiii) The Authority's Engineer may instruct the Contractor to execute any work which is urgently required for the safety of the Project Highway, whether because of an accident, unforeseeable event or otherwise; provided that in case of any work required on account of a Force Majeure Event, the provisions of Clause 21.6 shall apply.

(xiv) In the event that the Contractor fails to achieve any of the Project Milestones, the Authority's Engineer shall undertake a review of the progress of construction and identify potential delays, if any. If the Authority's Engineer shall determine that completion of the Project Highway is not feasible within the time specified in the Agreement, it shall require the Contractor to indicate within 15 (fifteen) days the steps proposed to be taken to expedite progress, and the period within which the Project Completion Date shall be achieved. Upon receipt of a report from the Contractor, the Authority's Engineer shall review the same and send its comments to the Authority and the Contractor forthwith.

(xv) The Authority's Engineer shall obtain from the Contractor a copy of all the Contractor's quality control records and documents before the Completion Certificate is issued pursuant to Clause 12.2.

(xvi) Authority's Engineer may recommend to the Authority suspension of the whole or part of the Works if the work threatens the safety of the Users and pedestrians. After the Contractor has carried out remedial measure, the Authority's Engineer shall inspect such remedial measures forthwith and make a report to the Authority recommending whether or not the suspension hereunder may be revoked.

(xvii) In the event that the Contractor carries out any remedial measures to secure the safety of suspended works and Users, and requires the Authority's Engineer to inspect such works, the Authority's Engineer shall inspect the suspended works within 3 (three) days of receiving such notice, and make a report to the Authority forthwith, recommending whether or not such suspension may be revoked by the Authority.

(xviii) The Authority's Engineer shall carry out, or cause to be carried out, all the Tests specified in Schedule-K and issue a Completion Certificate, as the case may be.

For carrying out its functions under this Paragraph 4 (xviii) and all matters incidental thereto, the Authority's Engineer shall act under and in accordance with the provisions of Article 12 and Schedule-K.

5. Maintenance Period

(i) The Authority's Engineer shall aid and advise the Contractor in the preparation of its monthly Maintenance Programme and for this purpose carry out a joint monthly inspection with the Contractor.

(ii) The Authority's Engineer shall undertake regular inspections, at least once every month, to evaluate compliance with the Maintenance Requirements and submit a Maintenance Inspection Report to the Authority and the Contractor.

(iii) The Authority's Engineer shall specify the tests, if any, that the Contractor shall carry out, or cause to be carried out, for the purpose of determining that the Project Highway is in conformity with the Maintenance Requirements. It shall monitor and review the results of such tests and the remedial measures, if any, taken by the Contractor in this behalf.

(iv) In respect of any defect or deficiency referred to in Paragraph 3 of Schedule- E, the Authority's Engineer shall, in conformity with Good Industry Practice, specify the permissible limit of deviation or deterioration with reference to the Specifications and Standards and shall also specify the time limit for repair or rectification of any deviation or deterioration beyond the permissible limit.

(v) The Authority's Engineer shall examine the request of the Contractor for closure of any lane(s) of the Project Highway for undertaking maintenance/repair thereof, and shall grant permission with such modifications, as it may deem necessary, within 5 (five) days of receiving a request from the Contractor. Upon expiry of the permitted period of closure, the Authority's Engineer shall monitor the reopening of such lane(s), and in case of delay, determine the Damages payable by the Contractor to the Authority under Clause 14.5.

6. Determination of costs and time

(i) The Authority's Engineer shall determine the costs, and/or their reasonableness, that are required to be determined by it under the Agreement.

(ii) The Authority's Engineer shall determine the period of Time Extension that is required to be determined by it under the Agreement.

(iii) The Authority's Engineer shall consult each Party in every case of determination in accordance with the provisions of Clause 18.5.

7. Payments

(i) The Authority's Engineer shall withhold payments for the affected works for which the Contractor fails to revise and resubmit the Drawings to the Authority's Engineer in accordance with the provisions of Clause 10.2 (iv) (d).

(ii) Authority's Engineer shall -

(a) within 10 (ten) days of receipt of the Stage Payment Statement from the Contractor pursuant to Clause 19.4, determine the amount due to the Contractor and recommend the release of 90 (ninety) percent of the amount so determined as part payment, pending issue of the Interim Payment Certificate; and

(b) within 15 (fifteen) days of the receipt of the Stage Payment Statement referred to in Clause 19.4, deliver to the Authority and the Contractor an Interim Payment Certificate certifying the amount due and payable to the Contractor, after adjustments in accordance with the provisions of Clause 19.10.

(iii) The Authority's Engineer shall, within 15 (fifteen) days of receipt of the Monthly Maintenance Statement from the Contractor pursuant to Clause 19.6, verify the Contractor's monthly statement and certify the amount to be paid to the Contractor in accordance with the provisions of the Agreement.

(iv) The Authority's Engineer shall certify final payment within 30 (thirty) days of the receipt of the final payment statement of Maintenance in accordance with the provisions of Clause 19.16.

8. Other duties and functions

The Authority's Engineer shall perform all other duties and functions as specified in the Agreement.

9. Miscellaneous

(i) A copy of all communications, comments, instructions, Drawings or Documents sent by the Authority's Engineer to the Contractor pursuant to this TOR, and a copy of all the test results with comments of the Authority's Engineer thereon, shall be furnished by the Authority's Engineer to the Authority forthwith.

(ii) The Authority's Engineer shall retain at least one copy each of all Drawings and Documents received by it, including 'as-built' Drawings, and keep them in its safe custody.

(iii) Within 90 (ninety) days of the Project Completion Date, the Authority's Engineer shall obtain a complete set of as-built Drawings, in 2 (two) hard copies and in micro film form or in such other medium as may be acceptable to the Authority,

reflecting the Project Highway as actually designed, engineered and constructed, including an as-built survey illustrating the layout of the Project Highway and setback lines, if any, of the buildings and structures forming part of Project Facilities; and shall hand them over to the Authority against receipt thereof.

(iv) The Authority's Engineer, if called upon by the Authority or the Contractor or both, shall mediate and assist the Parties in arriving at an amicable settlement of any Dispute between the Parties.

(v) The Authority's Engineer shall inform the Authority and the Contractor of any event of Contractor's Default within one week of its occurrence.

Schedule - O

(See Clauses 19.4 (i), 19.6 (i), and 19.8 (i))

Forms of Payment Statements

1. Stage Payment Statement for Works

The Stage Payment Statement for Works shall state:

(a) the estimated amount for the Works executed in accordance with Clause 19.3 (i) subsequent to the last claim;

(b) amounts reflecting adjustments in price for the aforesaid claim;

(c) the estimated amount of each Change of Scope Order executed subsequent to the last claim;

(d) amounts reflecting adjustment in price, if any, for (c) above in accordance with the provisions of Clause 13.2 (iii) (a);

(e) total of (a), (b), (c) and (d) above;

(f) Deductions:

i. Any amount to be deducted in accordance with the provisions of the Agreement except taxes;

ii. Any amount towards deduction of taxes; and

iii. Total of (i) and (ii) above.

(g) Net claim: (e) – (f) (iii);

(h) The amounts received by the Contractor upto the last claim:

i. For the Works executed (excluding Change of Scope orders);

ii. For Change of Scope Orders, and

iii. Taxes deducted

2. Monthly Maintenance Payment Statement

The monthly Statement for Maintenance Payment shall state:

(a) the monthly payment admissible in accordance with the provisions of the Agreement;

(b) the deductions for maintenance work not done;

(c) net payment for maintenance due, (a) minus (b);

(d) amounts reflecting adjustments in price under Clause 19.12; and

(e) amount towards deduction of taxes

3. Contractor's claim for Damages

Note: The Contractor shall submit its claims in a form acceptable to the Authority.

Schedule - P

(See Clause 20.1)

Insurance

1. Insurance during Construction Period

(i) The Contractor shall effect and maintain at its own cost, from the Appointed Date till the date of issue of the Completion Certificate, the following insurances for any loss or damage occurring on account of Non Political Event of Force Majeure, malicious act, accidental damage, explosion, fire and terrorism:

(a) insurance of Works, Plant and Materials and an additional sum of [15 (fifteen)] per cent of such replacement cost to cover any additional costs of and incidental to the rectification of loss or damage including professional fees and the cost of demolishing and removing any part of the Works and of removing debris of whatsoever nature; and

(b) insurance for the Contractor's equipment and Documents brought onto the Site by the Contractor, for a sum sufficient to provide for their replacement at the Site.

(ii) The insurance under sub para (a) and (b) of paragraph 1(i) above shall cover the Authority and the Contractor against all loss or damage from any cause arising under paragraph 1.1 other than risks which are not insurable at commercial terms.

2. Insurance for Contractor's Defects Liability

The Contractor shall effect and maintain insurance cover of not less than 15% of the Contract Price for the Works from the date of issue of the Completion Certificate until the end of the Defects Liability Period for any loss or damage for which the Contractor is liable and which arises from a cause occurring prior to the issue of the Completion Certificate. The Contractor shall also maintain other insurances for maximum sums as may be required under the Applicable Laws and in accordance with Good Industry Practice.

3. Insurance against injury to persons and damage to property

(i) The Contractor shall insure against its liability for any loss, damage, death or bodily injury, or damage to any property (except things insured under Paragraphs 1 and 2 of this Schedule or to any person (except persons insured under Clause 20.9), which may arise out of the Contractor's performance of this Agreement. This insurance shall be for a limit per occurrence of not less than the amount stated below with no limit on the number of occurrences.

The insurance cover shall be not less than: Rs. 2,00,00,000/- (Rupees two crore only)

(ii) The insurance shall be extended to cover liability for all loss and damage to the Authority's property arising out of the Contractor's performance of this Agreement excluding:

(a) the Authority's right to have the construction works executed on, over, under, in or through any land, and to occupy this land for the Works; and

(b) damage which is an unavoidable result of the Contractor's obligations to execute the Works.

4. Insurance to be in joint names

The insurance under paragraphs 1 to 3 above shall be in the joint names of the Contractor and the Authority.

Schedule-Q

(See Clause 14.10)

Tests on Completion of Maintenance Period

1. Riding Quality test:

Riding quality test: Riding quality of each lane of the carriageway shall be checked with the help of a calibrated bump integrator and the maximum permissible roughness for purposes of this Test shall be [2,200 (two thousand and two hundred only)] mm for each kilometre.

2. Visual and physical test:

The Authority's Engineer shall conduct a visual and physical check of construction to determine that all works and equipment forming part thereof conform to the provisions of this Agreement. The physical tests shall include measurement of cracking, rutting, stripping and potholes and shall be as per the requirement of maintenance mentioned in Schedule-E.

Schedule-R

(See Clause 14.10)

Taking Over Certificate

I, …….. (Name and designation of the Authority's Representative) under and in accordance with the Agreement dated…… (the "**Agreement**"), for **Upgradation to 6 Lane with Paved shoulder of Gandhidham -Kandla Port section of NH-141 from km 5+560 to 14+014 (excluding the ROB section from km 05+885 to km 06+870 and Interchange location from km 09+795 to 11+735) and construction of new 6 Lane Major Bridge on Nakti Creek at km 7+170 of NH-141 in the state of Gujarat** (the "**Project Highway**") on Engineering, Procurement and Construction (EPC) basis through …….. (Name of Contractor), hereby certify that the Tests on completion of Maintenance Period in accordance with Article 14 of the Agreement have been successfully undertaken to determine compliance of the Project Highway with the provisions of the Agreement and I hereby certify that the Authority has taken over the Project highway from the Contractor on this day.....

SIGNED, SEALED AND DELIVERED

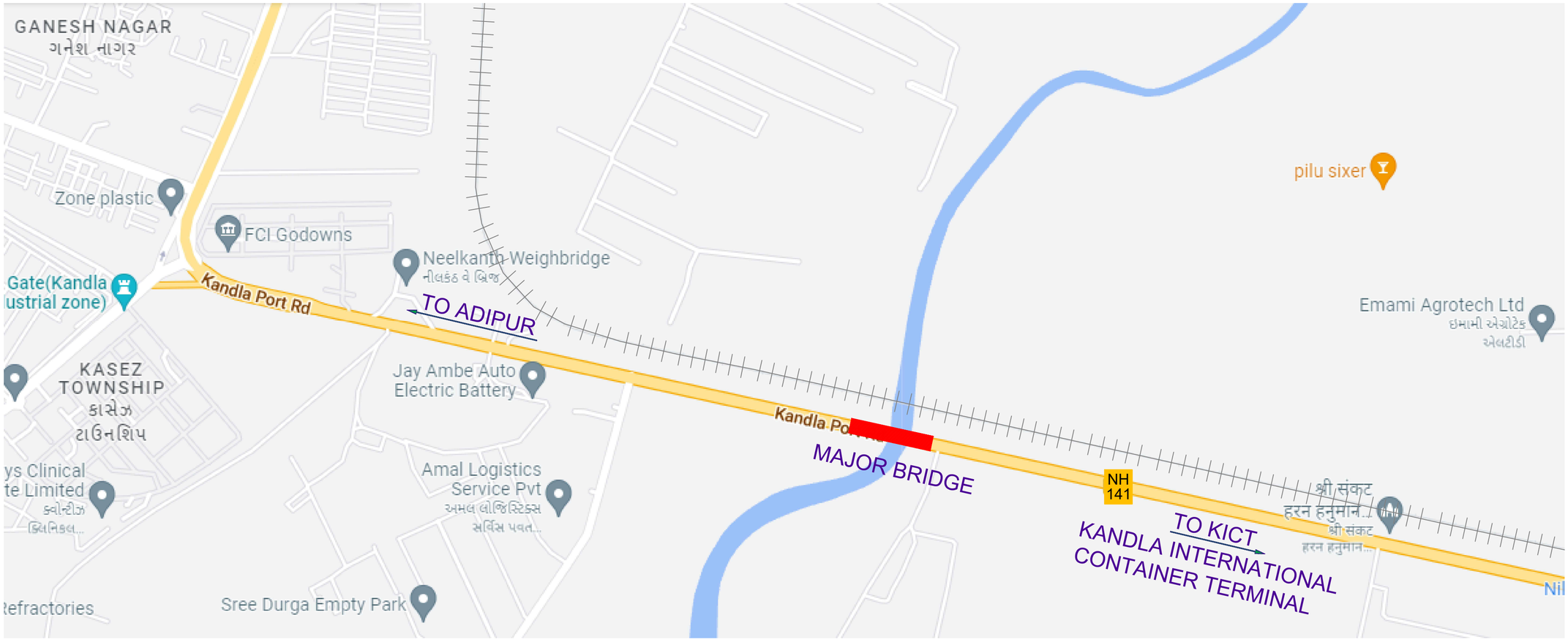
(Signature)

(Name and designation of Authority's Representative)

(Address)

***** End of the Document *****

Consultancy Services for Preparation of Detailed Project Report for Construction of new 6-lane Major Bridge in lieu of existing old Bridge on Nakti Creek at KM 7.170 on NH-141 in the state of Gujarat



PLAN AND PROFILE

SEPTEMBER 2022

CLIENT

Roads And Buildings Department
Government of Gujarat

EXECUTIVE ENGINEER
NATIONAL HIGHWAY DIVISION
GANMDHIDHAM

DEPUTY EXECUTIVE ENGINEER
NATIONAL HIGHWAY SUB DIVISION
GANMDHIDHAM-KUTCH

DESIGN CONSULTANT :

BuildsaFe consultants
910, Shiromani Complex, Opp. Nehrunagar GSRTC
Bus-Stop, Nehrunagar-380015, Ahmedabad.
(O) : +916353408855
Email : Info@buildsafe.co.in

VERTICAL CURVE DETAIL					
IP Chainage	**Level**	**Curve Length**	**Curve Type**	**K Value**	**Speed**
0.000	99.799				
362.067	98.688	75.000	Sag	45.269	100
496.310	100.500	185.000	Hog	137.058	100
806.215	100.500	205.000	Hog	136.660	100
950.475	98.336	70.000	Sag	50.073	100
1660.506	97.611				

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25-09-2022 - 07:02:47pm

REV.	DATE	DESCRIPTION
R0	26/09/2022	FOR APPROVAL ONLY

CLIENT

Roads And Buildings Department
Government of Gujarat

EXECUTIVE ENGINEER
NATIONAL HIGHWAY DIVISION
GANMDHIDHAM

DEPUTY EXECUTIVE ENGINEER
NATIONAL HIGHWAY SUB DIVISION
GANMDHIDHAM-KUTCH

DESIGN CONSULTANT

BuildsaFe consultants
910, Shiromani Complex, Opp. Nehrunagar GSRTC
Bus-Stop, Nehrunagar-380015, Ahmedabad.
(O) : +916353408855
Email : buildsafeconsultants@gmail.com

CHECKED BY:- KG

DESIGN BY:- DM

DRAWN BY:- PD

REV. R0

DATE 25/07/2022

SCALE A2 A3 NTS

PROJECT: Consultancy Services for Preparation of Detailed Project Report for Construction of new 6-lane Major Bridge in lieu of existing old Bridge on Nakti Creek at KM 7.170 on NH-141 in the state of Gujarat

DRAWING TITLE: VIP DETAILS

DRAWING NO. RB/BDY/TSP/PP/MCW/SD

SHEET 2 / 9

PLAN & PROFILE

LEGEND FOR EXISTING

Sr. No.	DISCRIAPION	LINETYPE / SYMBOL
1.	CARRIAGE WAY	
2.	SHOULDER EDGE	
3.	ROAD CENTER	
4.	DRAIN	
5.	CONCRETE EDGE	
6.	EMBANKMENT	
7.	COMPOUND BOUNDARY	
8.	FENCE LINE	
9.	RETAINING WALL	
10.	MEDIAN EDGE	
11.	WATER LINE	W W
12.	RAILWAY LINE	
13.	ROW	ROW
14.	EXISTING ROW	EX.ROW EX.ROW
15.	TELEPHONE LINE	T T T
16.	ELECTRICAL LINE	E E E
17.	HIGH TENSION LINE	HT HT
18.	ROAD HATCH	
19.	BUILDING	
20.	OPTICAL FIBER MARKER POST	
21.	HECTOMETER STONE	
22.	FURLONG STONE	
23.	TELEPHONE POLE	TP
24.	NAME BOARD	NB
25.	ELECTRIC POLE	EL
26.	TEMPLE	
27.	GPS PILLAR	
28.	TBM PILLAR	
29.	TRANSFORMER	
30.	BORE WELL	BW
31.	LAMP POST	LP
32.	KILOMETER STONE	KM
33.	GUARD STONE	GS
34.	WATER TAP	TAP
35.	TREE	
36.	GATE	
37.	HAND PUMP	
38.	WELL	
39.	SIGN BOARD	
40.	MANHOLE	
41.	BORE WELL	BW
42.	TRAFFIC SIGNAL	
43.	MOBILE TOWER	
44.	ROW PILLAR	ROW

LEGEND FOR PLAN

Sr. No.	DISCRIAPION	LINETYPE / SYMBOL
01.	CENTER LINE	
02.	CARRIAGEWAY	
03.	PAVED SHOULDER	
04.	EARTHEN SHOULDER	
05.	LANE MAKING	
06.	EARTH WORK	

LEGEND FOR PROFILE

Sr. No.	DISCRIAPION	LINETYPE / SYMBOL
01.	FRL @ PROPOSED CL	
02.	EX. RL@ PROPOSED CL	
03.	LHS OGL@2M	
04.	RHS OGL@2M	

REV.	DATE	DESCRIPTION
R0	26/09/2022	FOR APPROVAL ONLY

CLIENT

Roads And Buildings Department
Government of Gujarat

EXECUTIVE ENGINEER
NATIONAL HIGHWAY DIVISION
GANMDHIDHAM

DEPUTY EXECUTIVE ENGINEER
NATIONAL HIGHWAY SUB DIVISION
GANMDHIDHAM-KUTCH

DESIGN CONSULTANT

BuildsaFe consultants
910, Shiromani Complex, Opp. Nehrunagar GSRTC Bus-Stop, Nehrunagar-380015, Ahmedabad.
(O) : +916353408855
Email : buildsafeconsultants@gmail.com

CHECKED BY:- KG
DESIGN BY:- DM
DRAWN BY:- PD

REV. R0
DATE 25/07/2022
SCALE A2 A3
H.1:2000 H.1:2850
V.1:200 V.1:285

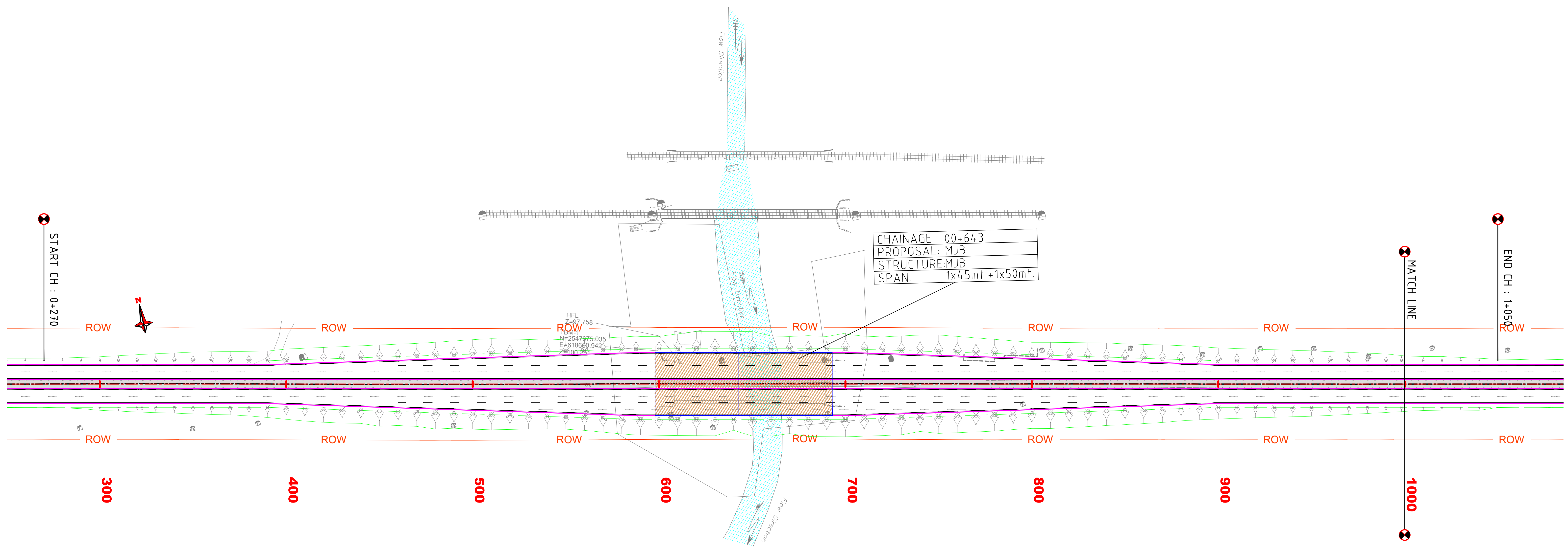
PROJECT: Consultancy Services for Preparation of Detailed Project Report for Construction of new 6-lane Major Bridge in lieu of existing old Bridge on Nakti Creek at KM 7.170 on NH-141 in the state of Gujarat

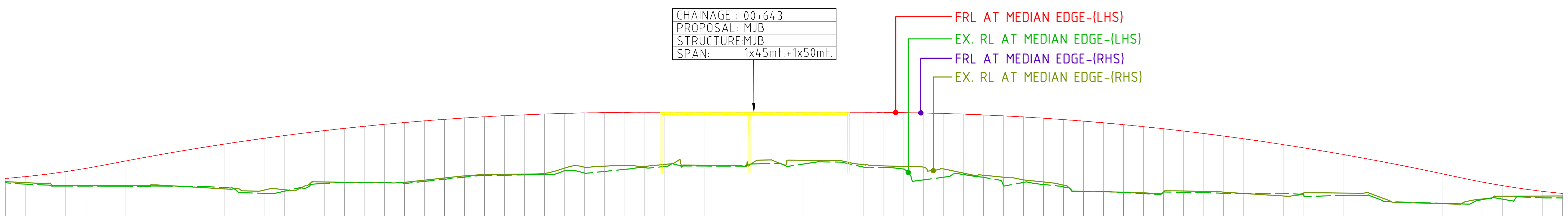
DRAWING TITLE: PLAN AND PROFILE MCW Km.

DRAWING NO. RB/BDY/TSP/PP/MCW/

SHEET 3 / 9

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09-10-2022 - 08:22:25am





LEVEL DATUM (m)=97.0

DESIGN CHAINAGE (m)	FRL AT MEDIAN EDGE-(LHS)	EX. RL AT MEDIAN EDGE-(LHS)	FRL AT MEDIAN EDGE-(RHS)	EX. RL AT MEDIAN EDGE-(RHS)
270.	98.990	98.599	98.990	98.833
280.	99.081	98.630	99.081	98.783
290.	99.194	98.643	99.194	98.748
300.	99.330	98.621	99.330	98.649
310.	99.489	98.618	99.489	98.646
320.	99.670	98.615	99.670	98.643
330.	99.862	98.612	99.862	98.640
340.	100.048	98.623	100.048	98.637
350.	100.226	98.522	100.226	98.643
360.	100.397	98.504	100.397	98.585
370.	100.561	98.448	100.561	98.527
380.	100.717	98.390	100.717	98.468
390.	100.866	98.420	100.866	98.369
400.	101.007	98.310	101.007	98.416
410.	101.141	98.283	101.141	98.426
420.	101.268	98.561	101.268	98.617
430.	101.387	98.536	101.387	98.815
440.	101.500	98.522	101.500	98.801
450.	101.604	98.524	101.604	98.787
460.	101.702	98.578	101.702	98.772
470.	101.792	98.612	101.792	98.799
480.	101.875	98.691	101.875	98.907
490.	101.950	98.769	101.950	99.015
500.	102.018	98.850	102.018	99.118
510.	102.079	98.939	102.079	99.185
520.	102.132	98.978	102.132	99.197
530.	102.178	99.187	102.178	99.209
540.	102.217	99.390	102.217	99.232
550.	102.248	99.538	102.248	99.503
560.	102.272	99.594	102.272	99.553
570.	102.289	99.536	102.289	99.607
580.	102.298	99.585	102.298	99.639
590.	102.300	99.664	102.300	99.595
600.	102.300	99.755	102.300	99.690
610.	102.300	99.270	102.300	99.660
620.	102.300	99.668	102.300	99.648
630.	102.300	99.656	102.300	99.636
640.	102.300	99.798	102.300	99.602
650.	102.300	99.811	102.300	99.910
660.	102.300	99.796	102.300	99.676
670.	102.300	99.901	102.300	99.899
680.	102.300	99.710	102.300	99.887
690.	102.300	99.633	102.300	99.848
700.	102.300	99.668	102.300	99.675
710.	102.297	99.661	102.297	99.621
720.	102.286	99.599	102.286	99.595
730.	102.268	99.538	102.268	99.558
740.	102.243	99.345	102.243	99.465
750.	102.210	99.233	102.210	99.258
760.	102.170	99.040	102.170	99.152
770.	102.123	99.046	102.123	99.052
780.	102.068	98.865	102.068	98.919
790.	102.006	98.624	102.006	98.814
800.	101.937	98.519	101.937	98.654
810.	101.860	98.326	101.860	98.339
820.	101.776	98.310	101.776	98.322
830.	101.684	98.293	101.684	98.306
840.	101.585	98.268	101.585	98.274
850.	101.479	98.207	101.479	98.302
860.	101.365	98.198	101.365	98.365
870.	101.244	98.195	101.244	98.341
880.	101.116	98.176	101.116	98.304
890.	100.980	98.069	100.980	98.241
900.	100.837	98.006	100.837	98.178
910.	100.687	98.017	100.687	98.115
920.	100.529	98.135	100.529	98.217
930.	100.364	98.123	100.364	98.272
940.	100.191	98.147	100.191	98.261
950.	100.011	98.275	100.011	98.251
960.	99.824	98.144	99.824	97.999
970.	99.629	97.762	99.629	97.787
980.	99.427	97.732	99.427	97.757
990.	99.218	97.701	99.218	97.726
1000.	99.004	97.868	99.004	97.770
1010.	98.804	97.979	98.804	97.965
1020.	98.628	97.941	98.628	98.104
1030.	98.474	97.947	98.474	98.107
1040.	98.344	97.966	98.344	98.110
1050.	98.237	97.978	98.237	98.116

VERTICAL SCHEMATIC-(LHS): VCL=90.m, R=4424.m | R=-13615.m, VCL=265.m | L=113.m, G=0.00% | R=-13583.m, VCL=292.m | VCL=90.m, R=4337.m

VERTICAL SCHEMATIC-(RHS): VCL=90.m, R=4424.m | R=-13615.m, VCL=265.m | L=113.m, G=0.00% | R=-13583.m, VCL=292.m | VCL=90.m, R=4337.m

HORIZONTAL SCHEMATIC: L=1660.506m

SUPERELEVATION (%): e=2.50

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09-10-2022 - 08:52:36am

REV.	DATE	DESCRIPTION
R0	26/09/2022	FOR APPROVAL ONLY

CLIENT
Roads And Buildings Department
Government of Gujarat

EXECUTIVE ENGINEER
NATIONAL HIGHWAY DIVISION
GANMDHIDHAM

DEPUTY EXECUTIVE ENGINEER
NATIONAL HIGHWAY SUB DIVISION
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Email : buildsafeconsultants@gmail.com

CHECKED BY:- KG
DESIGN BY:- DM
DRAWN BY:- PD
REV. R0
DATE 25/07/2022
SCALE A2: H.1:2000 V.1:200; A3: H.1:2850 V.1:285

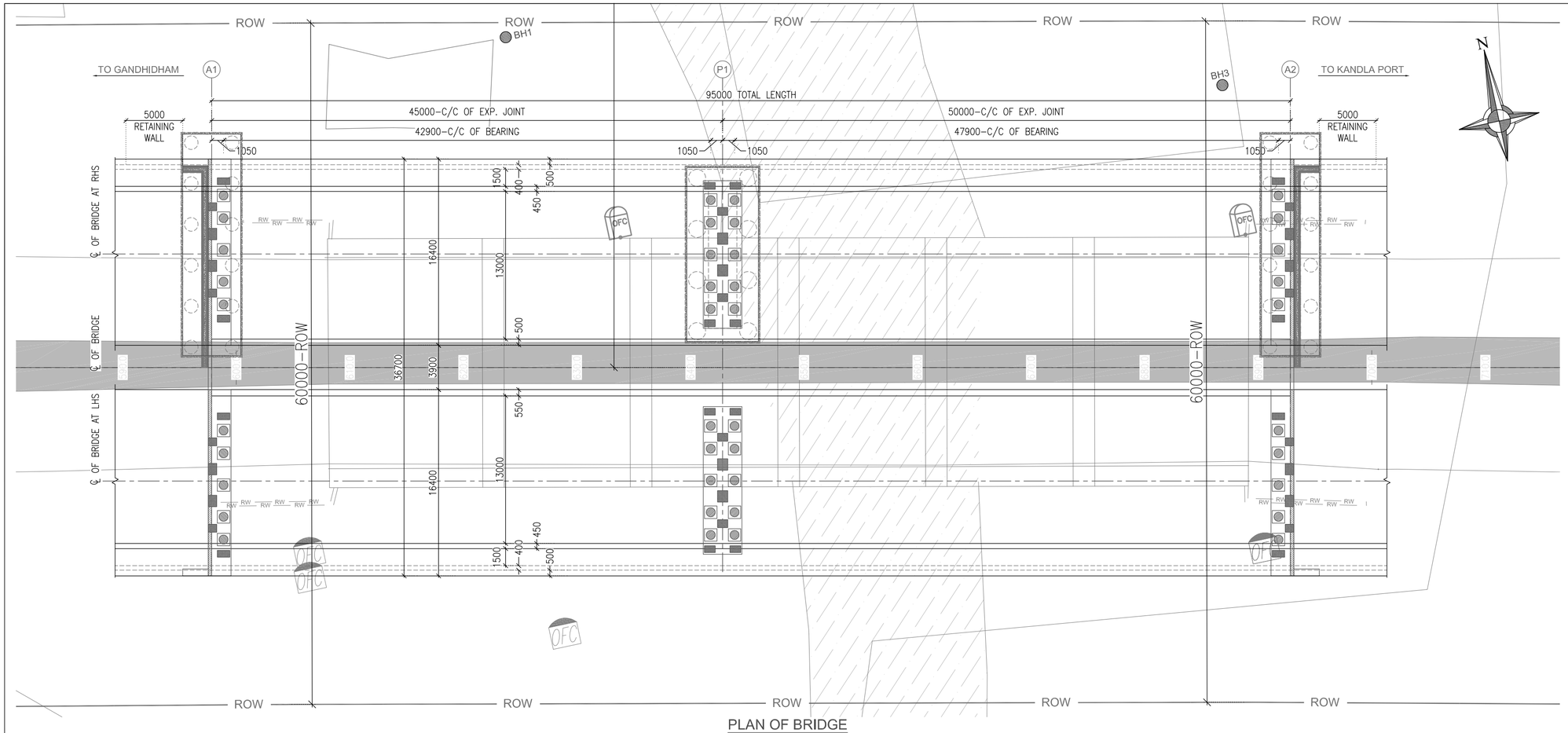
PROJECT
Consultancy Services for Preparation of Detailed Project Report for Construction of new 6-lane Major Bridge in lieu of existing old Bridge on Nakti Creek at KM 7.170 on NH-141 in the state of Gujarat

DRAWING TITLE
PLAN AND PROFILE MCW Km. 00+320 TO 00+985

DRAWING NO. RB/BDY/TSP/PP/MCW/ 0001

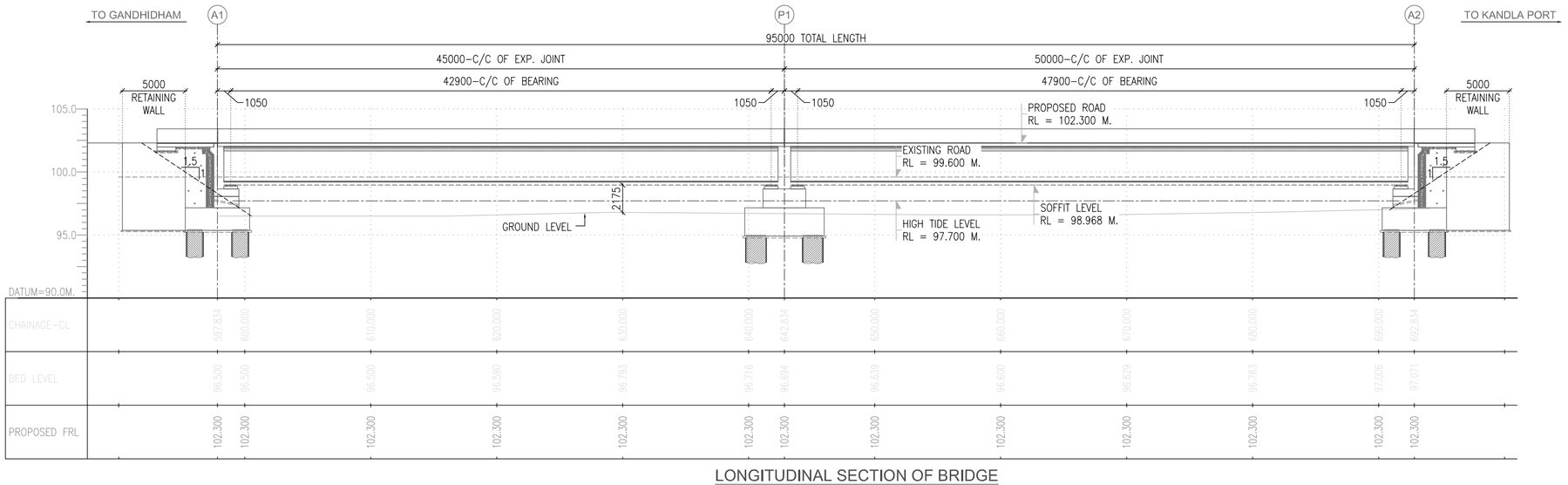
SHEET 4 / 9

BRIDGE
GENERAL ARRANGEMENT DRAWING



PLAN OF BRIDGE

(SCALE=1:300)



LONGITUDINAL SECTION OF BRIDGE

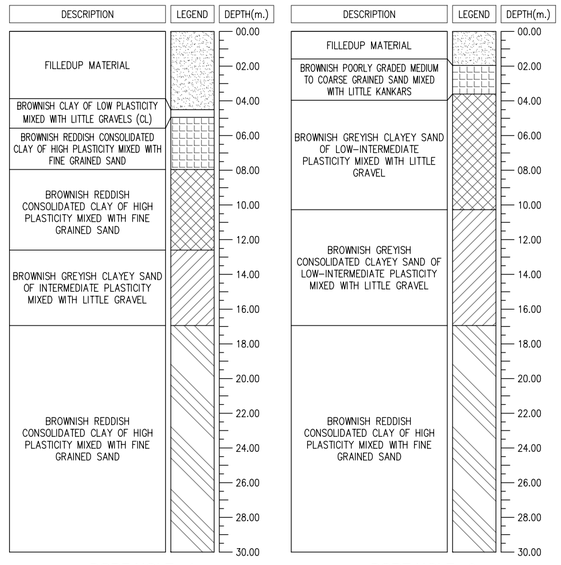
(SCALE=1:300)

NOTED :-

1. ALL DIMENSIONS ARE IN MM & LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED IN DRAWING.
2. DO NOT SCALE THE DRAWING, FOLLOW THE WRITTEN DIMENSION.
3. SIZE OF CONCRETE & DEPTH OF FOUNDATIONS ARE SHOWN HERE IS TENTATIVE & WILL BE AS PER DETAIL DESIGN AND DRAWINGS.
4. THE STRUCTURE IS DESIGNED FOR SEVERE LIVE LOAD AMONG:
   - 4.1. CLASS A LOADING – FOUR LANE
   - 4.2. CLASS 70R + CLASS 70R WHEELED
   - 4.3. SVL
5. GRADE OF CONCRETE

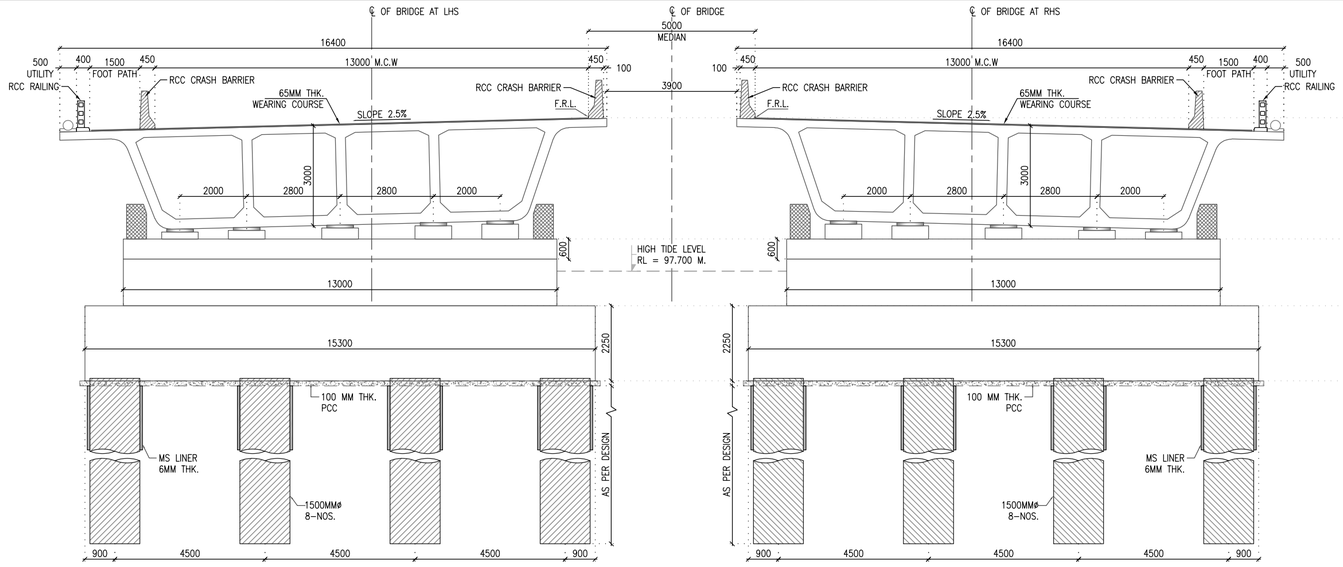
5.1. PILE	– M50	5.7. ABUTMENT	– M50
5.2. PILECAP	– M50	5.8. ABUTMENTCAP & DIRTWALL	– M50
5.3. PIER	– M50	5.9. MEDIAN WALL & SIDE WALL	– M50
5.4. PIERCAP	– M50	5.10. SEISMIC ARRESTER	– M50
5.5. CRASH BARRIER	– M40	5.11. PEDESTAL	– M50
5.6. RETAINING WALL	– M50	5.12. SUPER STRUCTURE	– M50
5.7. APPROACH SLAB	– M30		

6. REINFORCEMENT – TMT – Fe 500D/Fe 550D CONFIRMING TO IS:1786. ANTI CORROSIVE TREATMENT WITH FUSION BONDED EPOXY COATING SHOULD BE DONE NECESSARILY TO TMT FE 500D/550D
7. SEISMIC ZONE – V AS PER IS 1893
8. WEARING COAT – 25MM THK. MASTIC ASPHALT WEARING COAT.
9. GEO GRID BELOW APPROACH SLAB SHALL BE PROVIDED AS PER GOVERNMENT CIRCULAR NO. ૫૨૧/૧૦૨૦૨૦/૧૨૮૩/ચે DT.– 17–02–2021



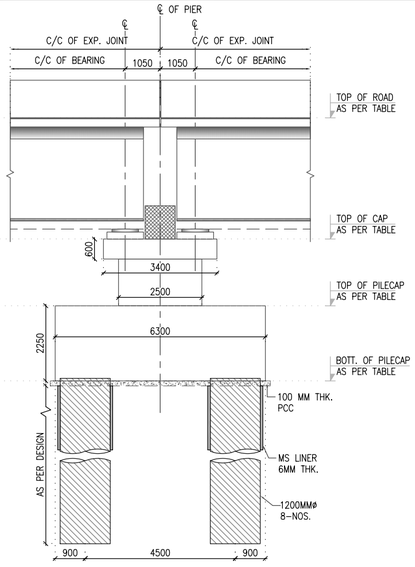
BORE HOLE - 1

BORE HOLE - 3



LONGITUDINAL SECTION OF PIER

(SCALE=1:130)



CROSS SECTION OF PIER

(SCALE=1:130)

NOTED :-

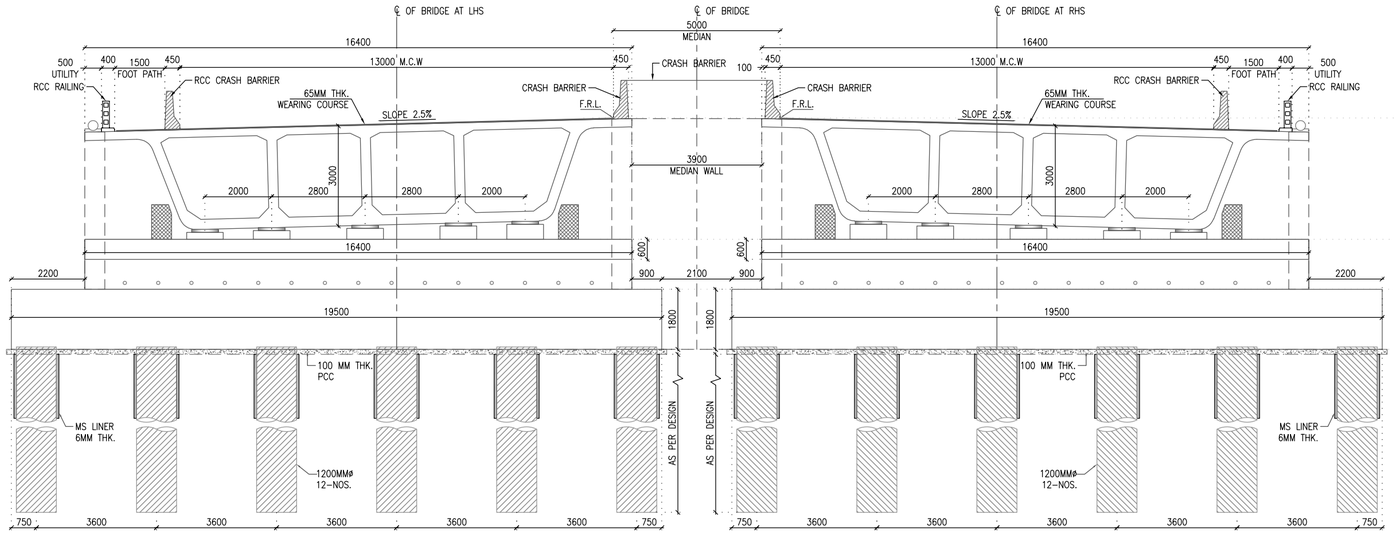
1. ALL DIMENSIONS ARE IN MM & LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED IN DRAWING.
2. DO NOT SCALE THE DRAWING, FOLLOW THE WRITTEN DIMENSION.
3. SIZE OF CONCRETE & DEPTH OF FOUNDATIONS ARE SHOWN HERE IS TENTATIVE & WILL BE AS PER DETAIL DESIGN AND DRAWINGS.
4. THE STRUCTURE IS DESIGNED FOR SEVERE LIVE LOAD AMONG:
   - 4.1. CLASS A LOADING – FOUR LANE
   - 4.2. CLASS 70R + CLASS 70R WHEELED
   - 4.3. SVL
5. GRADE OF CONCRETE

5.1. PILE	– M50	5.7.	ABUTMENT	–	M50
5.2. PILECAP	– M50	5.8.	ABUTMENTCAP & DIRTWALL	–	M50
5.3. PIER	– M50	5.9.	MEDIAN WALL & SIDE WALL	–	M50
5.4. PIERCAP	– M50	5.10.	SEISMIC ARRESTER	–	M50
5.5. CRASH BARRIER	– M40	5.11.	PEDESTAL	–	M50
5.6. RETAINING WALL	– M50	5.12.	SUPER STRUCTURE	–	M50
5.7. APPROACH SLAB	– M30				

6. REINFORCEMENT – TMT – Fe 500D/Fe 550D CONFIRMING TO IS:1786. ANTI CORROSIVE TREATMENT WITH FUSION BONDED EPOXY COATING SHOULD BE DONE NECESSARILY TO TMT FE 500D/550D
7. SEISMIC ZONE – V AS PER IS 1893
8. WEARING COAT – 25MM THK. MASTIC ASPHALT WEARING COAT.
9. GEO GRID BELOW APPROACH SLAB SHALL BE PROVIDED AS PER GOVERNMENT CIRCULAR NO. ૫૨૫/૧૦૨૦૭/૨૬૬૩/ન DT.– 17–02–2021

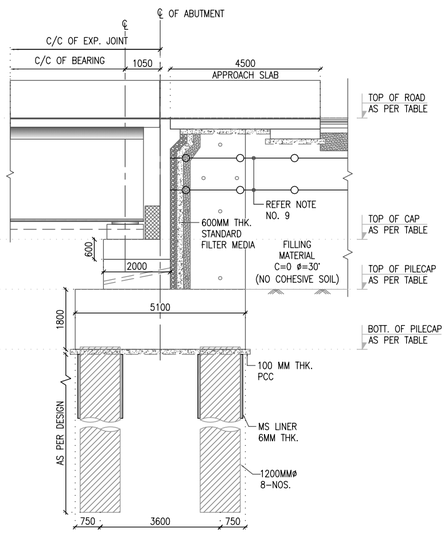
LEVEL TABLE

SR.	COMPONENT	MK.	TOP OF ROAD	TOP OF CAP	GROUND LEVEL	TOP OF PILECAP	BOTT. OF PILECAP
1.0 00 00 0	ABUTMENT	A1	102.300	98.663	96.500	97.163	95.363
2	PIER	P1	102.300	98.663	96.694	97.163	94.913
3	ABUTMENT	A2	102.300	98.663	97.071	97.163	95.363



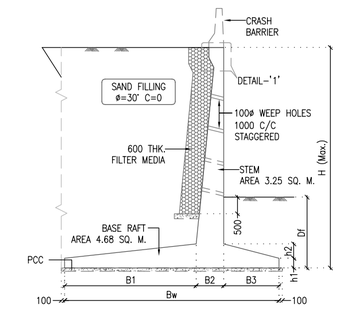
LONGITUDINAL SECTION OF ABUTMENT

(SCALE=1:130)



CROSS SECTION OF PIER

(SCALE=1:130)

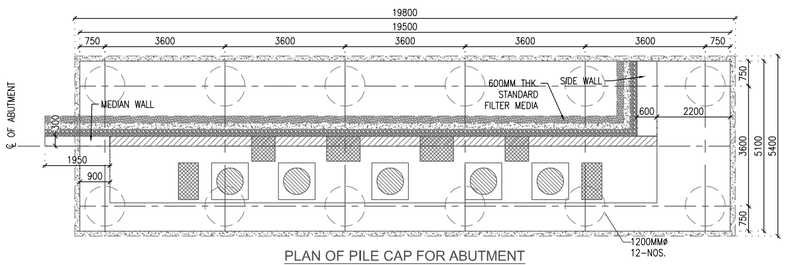


TYPICAL SECTION OF RETAINING WALL

(NOT TO SCALE)

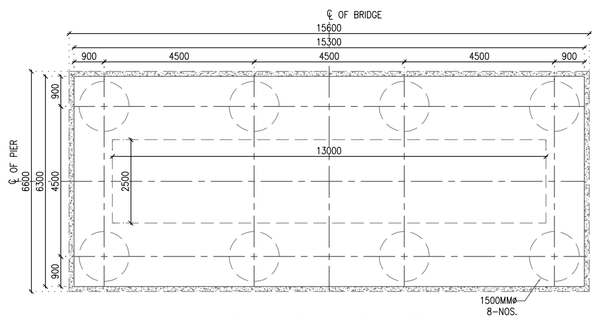
DIMENSIONAL DETAILS OF RETAINING WALL

H(Max.)	h1 (mm)	h2 (mm)	h3 (mm)	Df (mm)	b1 (mm)	b2 (mm)	b3 (mm)	Bw (mm)
7000	450	550	5000	2000	3850	800	1500	6150



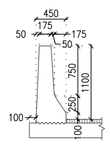
PLAN OF PILE CAP FOR ABUTMENT

(SCALE=1:130)



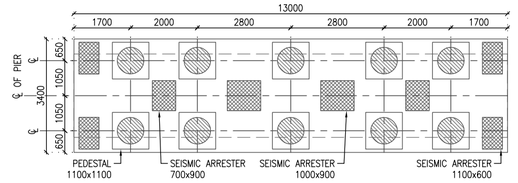
PLAN OF PILE CAP FOR PIER

(SCALE=1:130)



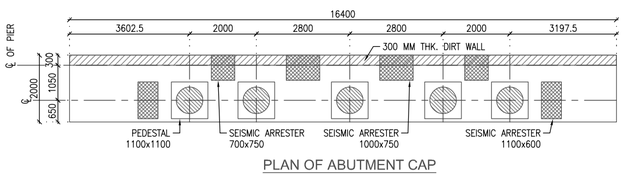
DIMENSION OF
CRASH BARRIER

(NOT TO SCALE)



PLAN OF PIER CAP

(SCALE=1:130)



PLAN OF ABUTMENT CAP

(SCALE=1:130)

TENDER DRAWINGS – VOLUME V

FOR

WIDENING AND UP-GRADATION OF NH-141 (F.T. ZONE - KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH. 5+560 TO CH. 14+535 IN THE STATE OF GUJARAT.

Client :

NATIONAL HIGHWAY DIVISION, GANDHIDHAM



Submitted by :

MULTI MEDIA CONSULTANTS PVT. LTD.

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TENDER DRAWING LIST OF "KANDLA PORT" PROJECT

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REVISION:

NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

DRAWING TITLE :
TENDER DRAWINGS INDEX

DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

SCALE: N.T.S.
DATE : 30/09/2025
PROJECT NO. : XX-XXX-XX
DRAWING NO. : KNDL-PORT-ROAD-INDEX-00
REVISION: R0

DGPS POINT LIST KANDLA PORT ROAD					
TM				UTM	
Point ID	Northing	Easting	Elevation	Local_East(m)	Local_North(m)
GPS 1A	2547641.74	618817.68	8.15	670702.20730	2460226.74210
GPS 1B	2547612.86	618855.53	7.67	670601.77750	2460112.75470
GPS 2A BASE POINT	2547135.19	621230.31	6.91	668876.01070	2459399.42270
GPS 2B	2547070.45	621354.52	7.06	668785.27000	2459369.46000
GPS 3A ROVE TO BASE	2545971.30	623372.58	7.21	667156.86170	2458389.44150
GPS 3B	2545894.81	623466.25	7.33	667063.71720	2458354.61940
GPS 4A	2544878.55	624707.64	8.27	665173.49070	2457609.46080
GPS 4B	2544823.22	624755.19	8.21	665080.91790	2457566.36380

TBM LIST KANDLA PORT ROAD					
SR.NO	EASTING	NORTHING	ELEVATION	SIDE	POINT ID
1	618855.76	2547621.29	8.11	RHS	TBM 1R
2	619090.51	2547563.18	7.42	RHS	TBM 1R
3	619091.50	2547571.14	7.60	RHS	TBM R2
4	619094.91	2547575.29	7.41	LHS	TBM L2
5	619336.78	2547510.57	7.17	RHS	TBM L2
6	619344.64	2547517.57	7.62	RHS	TBM R3
7	619347.51	2547521.89	7.52	LHS	TBM L3
8	619570.04	2547461.22	6.99	RHS	TBM L3
9	619572.17	2547469.28	7.40	RHS	TBM R4
10	619576.77	2547473.16	7.33	LHS	TBM L4
11	619786.14	2547415.72	6.92	RHS	TBM L4
12	619789.42	2547423.36	7.35	RHS	TBM R5
13	619793.68	2547427.33	7.19	LHS	TBM L5
14	620002.18	2547370.30	6.85	RHS	TBM L5
15	620005.52	2547377.66	7.19	RHS	TBM6R
16	620000.82	2547383.53	7.35	LHS	TBM6L
17	624579.07	2544985.99	7.67	LHS	TBM6R
18	620200.98	2547336.36	7.15	RHS	TBM7R
19	620211.21	2547339.00	7.00	LHS	TBM7L
20	620447.47	2547275.95	6.67	RHS	TBM7L
21	620467.42	2547279.99	7.01	RHS	TBM8R
22	620451.02	2547288.24	6.97	LHS	TBM8L
23	620695.34	2547223.56	6.84	RHS	TBM8L
24	620694.29	2547231.84	7.26	RHS	TBM9R
25	620694.89	2547236.52	7.19	LHS	TBM9L
26	620935.21	2547173.20	6.87	RHS	TBM9L
27	620936.45	2547180.52	7.30	RHS	TBM10R
28	620938.54	2547184.89	7.18	LHS	TBM10L
29	621175.41	2547119.31	7.10	RHS	TBM10L
30	621176.63	2547131.19	7.64	RHS	TBM11R

TBM LIST KANDLA PORT ROAD					
SR.NO	EASTING	NORTHING	ELEVATION	SIDE	POINT ID
31	621178.93	2547132.87	7.62	LHS	TBM11L
32	623339.27	2545998.80	7.26	LHS	TBM11L
33	622986.75	2546273.95	7.50	LHS	TBM17L
34	622985.72	2546272.57	7.43	RHS	TBM17R
35	623002.15	2546275.01	7.18	LHS	TBM19R
36	623112.85	2546166.88	7.89	RHS	TBM19R
37	623113.55	2546172.33	7.52	LHS	TBM19L
38	623105.53	2546189.05	7.23	LHS	TBM20R
39	623325.18	2545993.50	7.35	RHS	TBM20R
40	623329.51	2545996.29	7.68	LHS	TBM20L
41	620213.50	2547325.37	6.75	RHS	TBM21R
42	623458.63	2545884.79	7.30	RHS	TBM21R
43	623461.91	2545888.21	7.67	LHS	TBM21L
46	623649.13	2545709.07	7.48	RHS	TBM R22
47	623639.47	2545742.85	7.57	LHS	TBM L22
48	623662.60	2545734.33	7.19	LHS	TBM R23
49	623758.90	2545639.00	7.83	RHS	TBM R23
50	623762.92	2545642.79	7.96	LHS	TBM L23
51	623773.34	2545643.49	7.55	LHS	TBM R24
52	624001.67	2545440.64	7.80	RHS	TBM R24
53	624010.75	2545440.61	8.14	LHS	TBM L24
54	624013.45	2545448.62	7.74	LHS	TBM R25
55	624209.15	2545271.16	7.85	RHS	TBM R25
56	624212.53	2545275.53	8.16	LHS	TBM L25
57	624407.69	2545108.47	7.74	RHS	TBM R26
59	624366.29	2545160.17	7.71	LHS	TBM27R
60	624568.53	2544977.24	7.89	RHS	TBM27R
61	624575.67	2544976.84	8.15	LHS	TBM27L

REVISION:			
NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

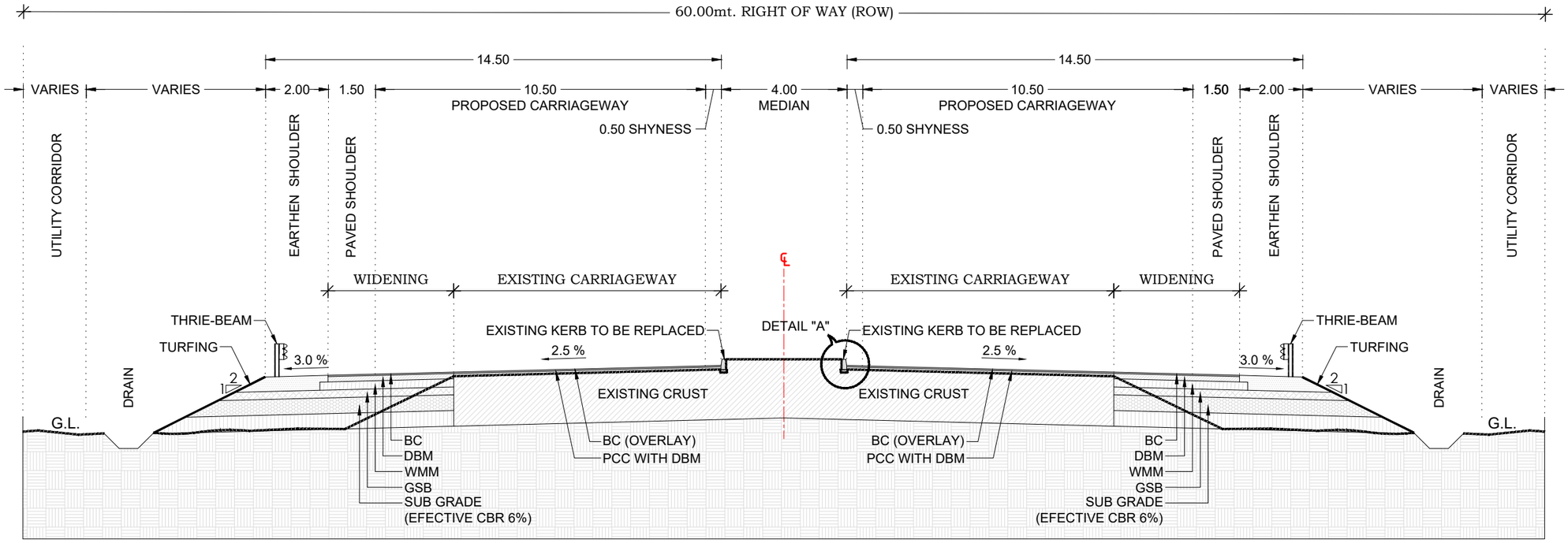
CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

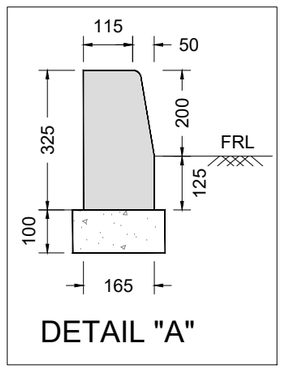
DRAWING TITLE :
DGPS AND TBM POINT LIST OF KANDLA PORT ROAD

SCALE: N.T.S.
DATE : 30/09/2025
PROJECT NO. : XX-XXX-XX
DRAWING NO. : KNDL-PORT-ROAD-DGPS-TBM-01
REVISION: R0



TCS-1

TCS-1
WIDENING OF EXISTING CARRIAGEWAY TO 6-LANE ALONG WITH
OVERLAY AND PROVISON OF PROFILE CORRECTION COURSE
ON EXISTING 4 LANE CARRIAGEWAY



DETAIL "A"

TCS-1 SCHEDULE				
Sl. No.	Chainage (Km)		Length (In Meter)	TCS
	From	To		
1	5560	5885	325.00	TCS-1

REVISION:			
NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
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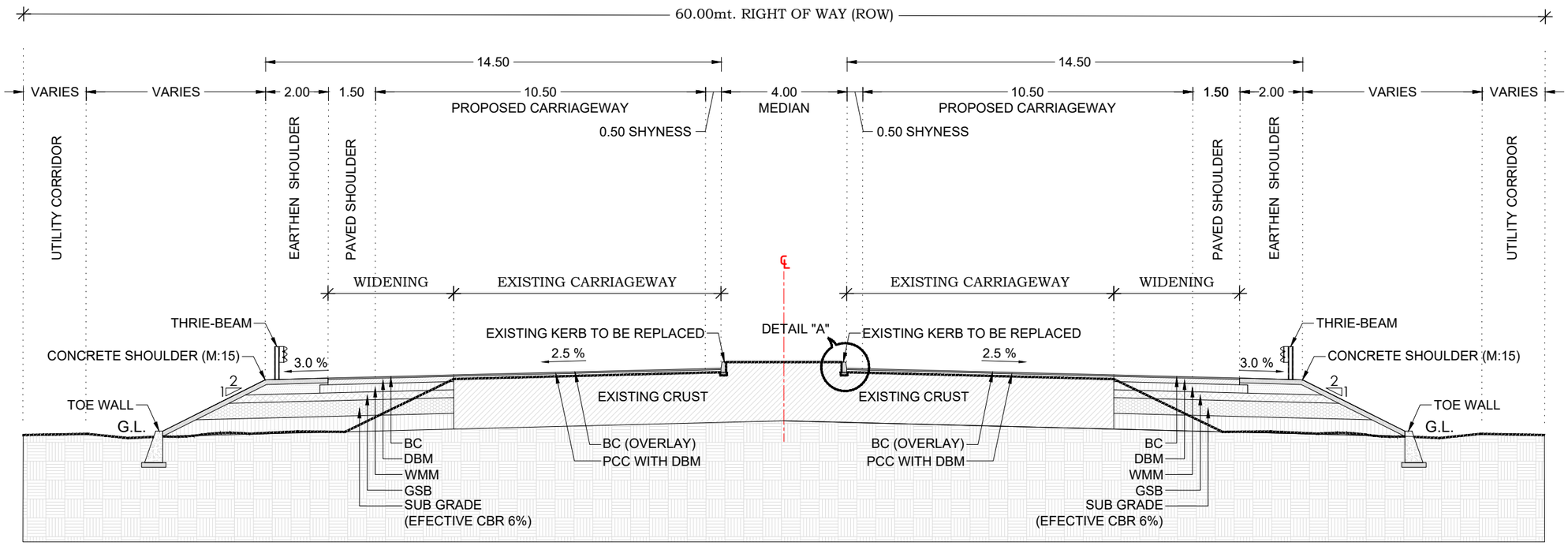
CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

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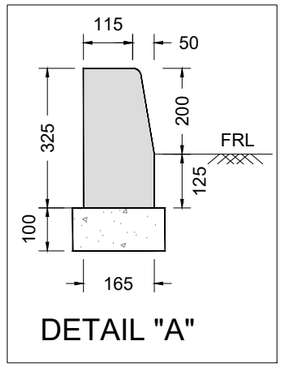
DRAWING TITLE :
TYPICAL CROSS SECTION-1

SCALE: N.T.S.
DATE : 30/09/2025
PROJECT NO. : XX-XXX-XX
DRAWING NO. : KNDL-PORT-ROAD-TCS-01
REVISION: R0



TCS-3

WIDENING OF EXISTING CARRIAGEWAY TO 6- LANES ALONG WITH OVERLAY AND PROVISION OF PROFILE CORRECTION COURSE ON EXISTING 4 LANE CARRIAGEWAY AND CC LINING ON BOTH SIDE EMBANKMENT SLOPE



TCS-3 SCHEDULE				
Sl. No.	Chainage (Km)		Length (In Meter)	TCS
	From	To		
1	7350	8300	950.00	TCS-3
2	11735	12470	735.00	TCS-3

REVISION:

NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

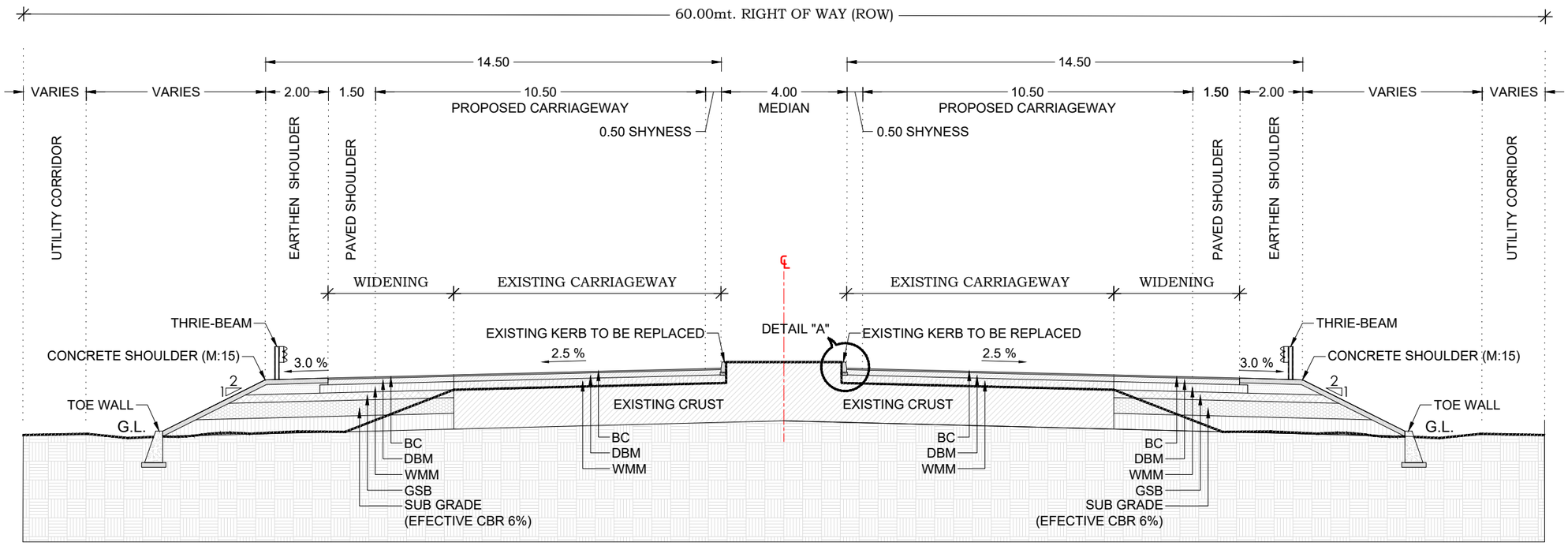
CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

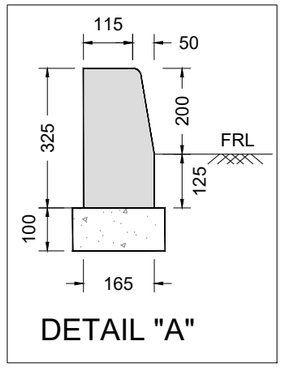
DRAWING TITLE :
TYPICAL CROSS SECTION-3

SCALE: N.T.S.
DATE : 30/09/2025
PROJECT NO. : XX-XXX-XX
DRAWING NO. : KNDL-PORT-ROAD-TCS-03
REVISION: R0



TCS-3A

WIDENING OF EXISTING CARRIAGEWAY TO 6-LANES ALONG WITH RECONSTRUCTION OF EXISTING 4-LANE CARRIAGEWAY FROM WMM ONWARDS AND CC LINING ON BOTH SIDE EMBANKMENT SLOPE



TCS-3A SCHEDULE				
Sl. No.	Chainage (Km)		Length (In Meter)	TCS
	From	To		
1	8300	9795	1495.00	TCS-3A

REVISION:			
NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

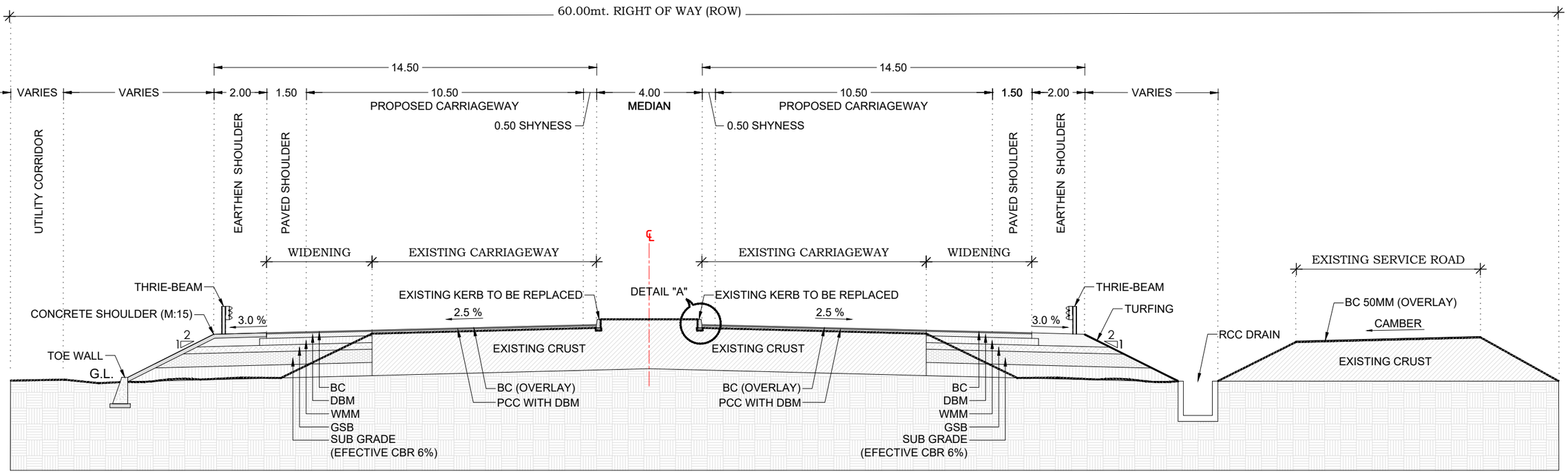
CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

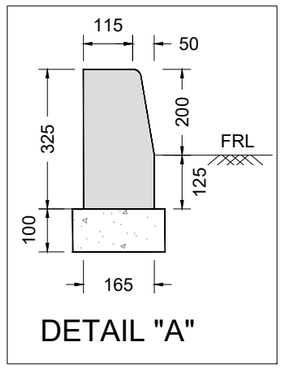
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G.K.G.	D.M.S.	V.S.P.	A.N.P.

DRAWING TITLE :
TYPICAL CROSS SECTION-3A

SCALE: N.T.S.
DATE : 30/09/2025
PROJECT NO. : XX-XXX-XX
DRAWING NO. : KNDL-PORT-ROAD-TCS-3A
REVISION: R0



TCS-4



TCS-4
WIDENING OF EXISTING CARRIAGEWAY TO 6-LANES ALONG WITH OVERLAY AND PROVISION OF PROFILE CORRECTION COURSE ON EXISTING 4 LANE CARRIWAGEWAY; CC LINING ON LHS EMBANKMENT SLOPE AND OVERLAY ON RHS EXISTING SERVICE ROAD

TCS-4 SCHEDULE				
Sl. No.	Chainage (Km)		Length (In Meter)	TCS
	From	To		
1	12470	13880	1410.00	TCS-4

REVISION:			
NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

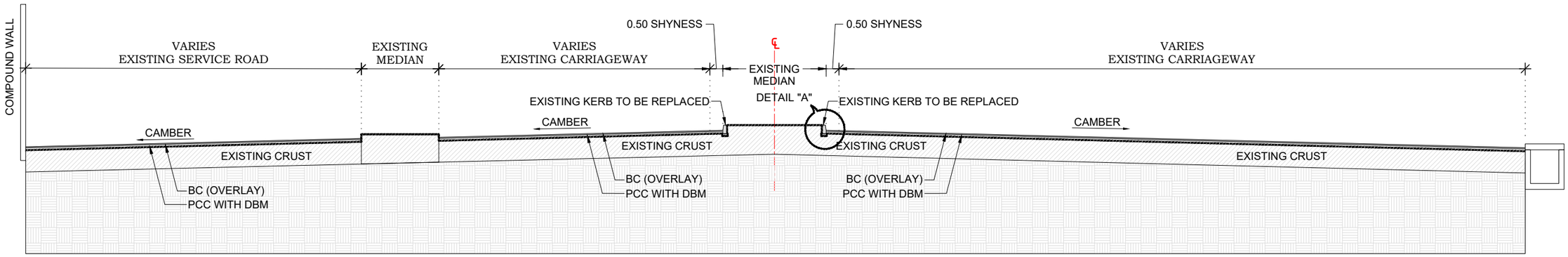
PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

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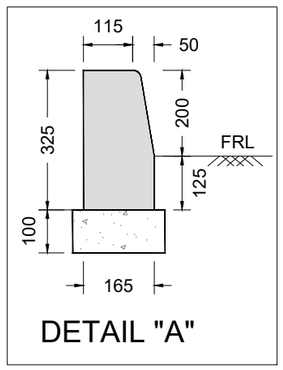
DRAWING TITLE :
TYPICAL CROSS SECTION-4

SCALE: N.T.S.
DATE : 30/09/2025
PROJECT NO. : XX-XXX-XX

DRAWING NO. :	REVISION:
KNDL-PORT-ROAD-TCS-4	R0



TCS-5
OVERLAY OVER EXISTING SIX LANE CARRIAGEWAY
AND BOTH SIDE EXISTING SERVICE ROAD



TCS-5 SCHEDULE				
Sl. No.	Chainage (Km)		Length (In Meter)	TCS
	From	To		
1	13880	14014	134.00	TCS-5

REVISION:			
NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

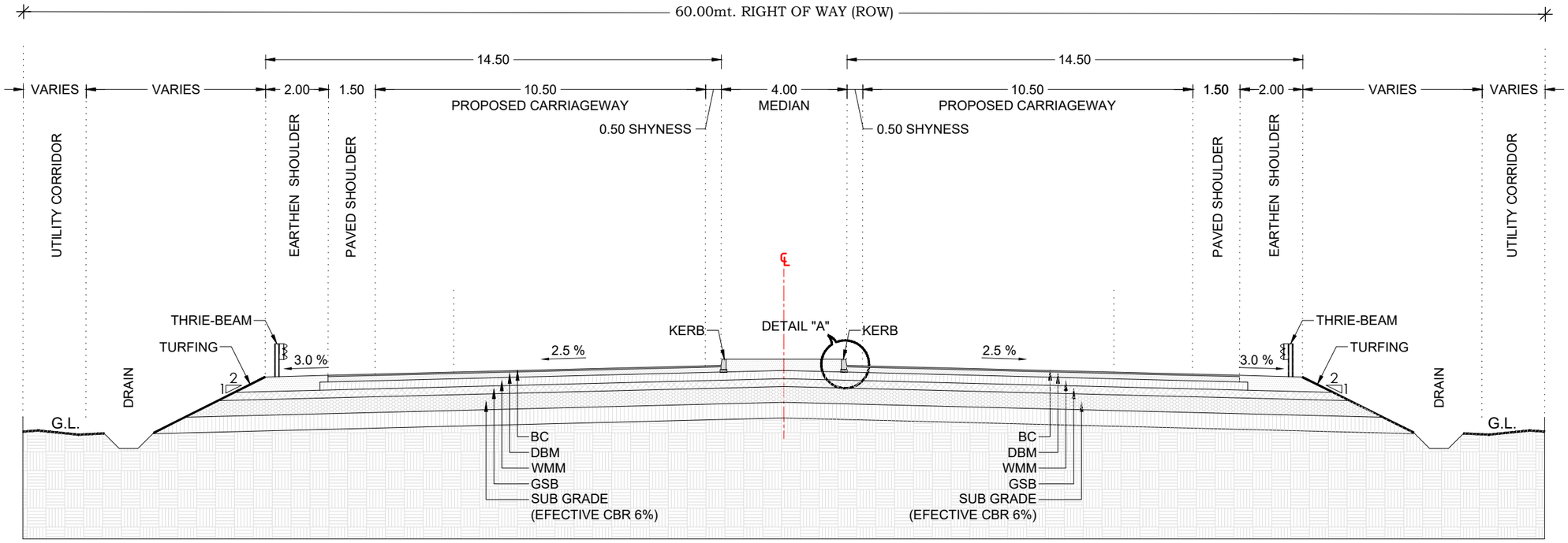
CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
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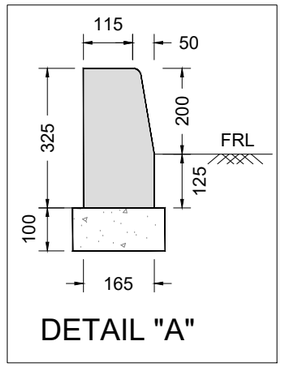
DRAWING TITLE :
TYPICAL CROSS SECTION-5

SCALE: N.T.S.
DATE : 30/09/2025
PROJECT NO. : XX-XXX-XX
DRAWING NO. : KNDL-PORT-ROAD-TCS-5
REVISION: R0



TCS

SIX LANE APPROACHES TO NAKTI BRIDGE (NEW CONSTRUCTION)



REVISION:

NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

DRAWING TITLE :
TYPICAL CROSS SECTION AT NAKTI BRIADGE APPROACH

SCALE:	N.T.S.
DATE :	30/09/2025
PROJECT NO. :	XX-XXX-XX
DRAWING NO. :	KNDL-PORT-ROAD-TCS-7
REVISION:	R0

Horizontal Curve Detail

HIP No	HIP Station			Transition Length	Radius	Transition Start	Circular Start	Circular End	Transition End	Design Speed	Delta angle (Δ)	Length of Curve (Lc)	Degree of Curvature (Θc)	Total Y - Shift (s)	Total X	Theta_s (Θs)	External Secant (Es)	K	External Tangent (Ts)	Type	Super Elevation e
	Chainage	Easting	Northing																		
	m			m	m	m	m	m	m	km/h	Degree	m	Degree	m	m	Degree	m	m	m		%
1	5+884.28	617466.6665	2547917.9483		35000		5+875.04	5+893.53		100	0.0303	18.490	0.0303				0.001		9.245	Curve	
2	6+862.37	618423.4900	2547715.1250		25000		6+852.05	6+872.69		100	0.0473	20.641	0.0473				0.002		10.320	Curve	
3	7+953.10	619490.6064	2547489.3964		25000		7+937.13	7+969.07		100	0.0732	31.939	0.0732				0.005		15.970	Curve	
4	8+359.27	619887.8795	2547404.8340		25000		8+342.34	8+376.20		100	0.0776	33.859	0.0776				0.006		16.930	Curve	
5	9+097.47	620610.1115	2547252.1240		25000		9+073.02	9+121.92		100	0.1121	48.902	0.1121				0.012		24.451	Curve	
6	9+469.85	620974.5888	2547175.8028		15000		9+410.68	9+529.02		100	0.4520	118.334	0.4520				0.117		59.167	Curve	
7	9+646.59	621147.2890	2547138.2150		7500		9+604.03	9+689.15		100	0.6503	85.120	0.6503				0.121		42.560	Curve	
8	11+748.79	622999.3340	2546262.4450		10000		11+739.54	11+758.04		100	0.1059	18.492	0.1059				0.004		9.246	Curve	
9	11+916.68	623129.2570	2546156.1150		15000		11+897.71	11+935.65		100	0.1449	37.939	0.1449				0.012		18.970	Curve	
10	12+271.16	623404.1500	2545932.2990		15000		12+260.26	12+282.06		100	0.0833	21.800	0.0833				0.004		10.900	Curve	
11	13+232.97	624149.1175	2545323.9490		25000		13+219.53	13+246.40		100	0.0616	26.870	0.0616				0.004		13.435	Curve	
12	13+812.65	624597.7170	2544956.8125		2500		13+795.13	13+830.16		100	0.8029	35.033	0.8029				0.061		17.517	Curve	
13	13+966.50	624718.1303	2544861.0513		1900		13+918.97	14+014.00		100	2.8655	95.023	2.8655				0.594		47.521	Curve	

REVISION:

NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

DRAWING TITLE :
HORIZONTAL GEOMETRY REPORT

SCALE:	N.T.S.
DATE :	30/09/2025
PROJECT NO. :	XX-XXX-XX
DRAWING NO. :	KNDL-PORT-ROAD-HGR-01
REVISION:	R0

Vertical Curve Detail - LME

No.	PVI Station	PVI Elevation m	Grade In	Grade Out	A (Grade Change)	Profile Curve Type	Profile Curve Length m	K Value	Design Speed Km/h	Curve Start Chainage (m)	Curve EndChainage (m)
1	5+560.00	9.108		-0.13%							
2	5+771.12	8.832	-0.13%	0.24%	0.37%	Sag	60	164.03	100	5+741.12	5+801.12
3	5+885.00	9.1	0.24%	-0.07%	0.31%				100		
4	6+990.31	8.327	-0.07%	0.92%	0.99%	Sag	60	60.35	100	6+960.31	7+020.31
5	7+325.66	7.634	-1.19%	-0.13%	1.06%	Sag	60	56.74	100	7+295.66	7+355.66
6	7+721.05	7.132	-0.13%	0.25%	0.38%	Sag	60	157.72	100	7+691.05	7+751.05
7	7+885.32	7.548	0.25%	-0.23%	0.48%	Crest	80	165.84	100	7+845.32	7+925.32
8	8+037.14	7.2	-0.23%	0.09%	0.32%	Sag	60	186.24	100	8+007.14	8+067.14
9	8+340.00	7.482	0.09%	-0.04%	0.13%	Crest	80	603.37	100	8+300.00	8+380.00
10	8+998.40	7.222	-0.04%	0.12%	0.16%	Sag	100	617.84	100	8+948.40	9+048.40
11	9+536.95	7.881	0.12%	-0.03%	0.15%	Crest	60	401.02	100	9+506.95	9+566.95
12	11+775.32	7.271	-0.03%	0.13%	0.16%	Sag	60	374.71	100	11+745.32	11+805.32
13	11+923.10	7.467	0.13%	0.03%	0.11%	Crest	60	559.96	100	11+893.10	11+953.10
14	12+323.65	7.57	0.03%	-0.12%	0.15%	Crest	200	1372.98	100	12+223.65	12+423.65
15	12+545.60	7.304	-0.12%	0.44%	0.56%	Sag	60	107.10	100	12+515.60	12+575.60
16	12+715.17	8.051	0.44%	-0.01%	0.45%	Crest	80	178.31	100	12+675.17	12+755.17
17	13+532.28	7.982	-0.01%	0.11%	0.12%	Sag	60	505.45	100	13+502.28	13+562.28
18	13+734.76	8.206	0.11%	-0.44%	0.55%	Crest	75	136.06	100	13+697.26	13+772.26
19	13+825.70	7.805	-0.44%	0.04%	0.49%	Sag	60	123.63	100	13+795.70	13+855.70
20	14+014.05	7.889	0.04%								

Vertical Curve Detail - RME

No.	PVI Station	PVI Elevation m	Grade In	Grade Out	A (Grade Change)	Profile Curve Type	Profile Curve Length m	K Value	Design Speed Km/h	Curve Start Chainage (m)	Curve EndChainage (m)
1	5+560.00	9.237		-0.13%							
2	5+769.37	8.975	-0.13%	0.11%	0.23%	Sag	60	257.92	100	5+739.37	5+799.37
3	5+885.00	9.1	0.11%	-0.08%	0.19%				100	5+885.00	5+885.00
4	6+990.31	8.327	0.02%	0.92%	0.90%	Sag	60	66.58	100	6+960.31	7+020.31
5	7+310.28	7.819	-1.18%	-0.16%	1.03%	Sag	80	77.88	100	7+270.28	7+350.28
6	7+701.43	7.213	-0.16%	0.28%	0.44%	Sag	60	137.32	100	7+671.43	7+731.43
7	7+880.53	7.718	0.28%	-0.21%	0.49%	Crest	80	163.76	100	7+840.53	7+920.53
8	8+128.47	7.206	-0.21%	0.13%	0.34%	Sag	60	178.19	100	8+098.47	8+158.47
9	8+340.00	7.482	0.13%	-0.04%	0.17%	Crest	80	471.39	100	8+300.00	8+380.00
10	8+998.40	7.222	-0.04%	0.12%	0.16%	Sag	100	617.87	100	8+948.40	9+048.40
11	9+536.95	7.881	0.12%	-0.03%	0.15%	Crest	60	401.09	100	9+506.95	9+566.95
12	11+775.32	7.271	-0.03%	-0.11%	0.08%	Crest	60	725.69	100	11+745.32	11+805.32
13	11+998.57	7.025	-0.11%	0.14%	0.25%	Sag	60	241.21	100	11+968.57	12+028.57
14	12+201.04	7.306	0.14%	-0.09%	0.23%	Crest	60	258.67	100	12+171.04	12+231.04
15	12+569.20	6.964	-0.09%	0.59%	0.68%	Sag	60	87.83	100	12+539.20	12+599.20
16	12+707.95	7.782	0.59%	-0.07%	0.66%	Crest	100	152.58	100	12+657.95	12+757.95
17	12+857.91	7.684	-0.07%	0.05%	0.11%	Sag	60	543.29	100	12+827.91	12+887.91
18	13+199.12	7.838	0.05%	-0.11%	0.15%	Crest	60	395.31	100	13+169.12	13+229.12
19	13+353.73	7.673	-0.11%	0.00037	0.00144	Sag	60	416.137	100	13+323.73	13+383.73
20	13+734.64	7.815	0.04%	-0.10%	0.14%	Crest	60	423.50	100	13+704.64	13+764.64
21	13+878.94	7.665	-0.10%	0.00099	0.00203	Sag	60	295.726	100	13+848.94	13+908.94
22	14+014.00	7.798	0.10%								

REVISION:

NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

CLIENT: **National Highway Division, Gandhidham**
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

DRAWING TITLE :
VERTICAL GEOMETRY REPORT AT LME AND RME

SCALE:	N.T.S.
DATE :	30/09/2025
PROJECT NO. :	XX-XXX-XX

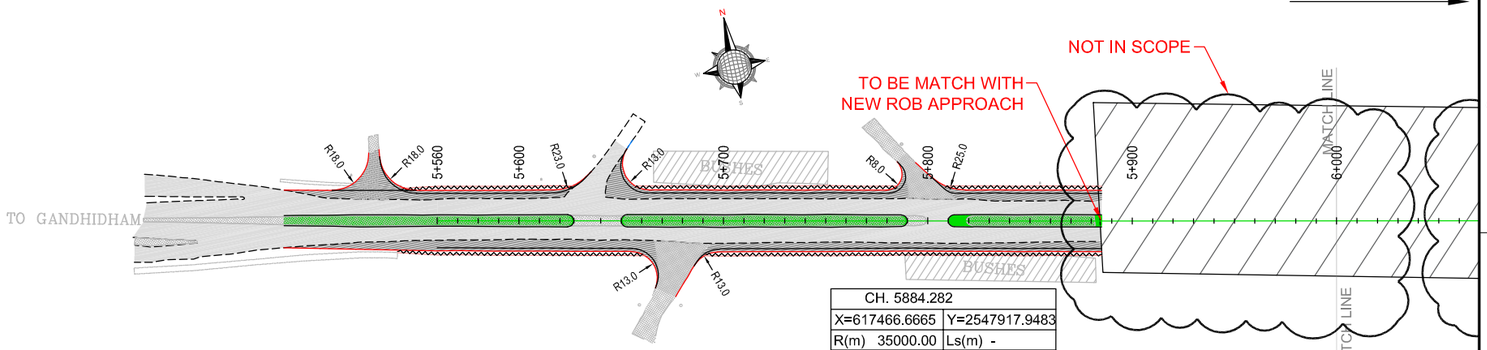
DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

DRAWING NO. : **KNDL-PORT-ROAD-VGR-01**

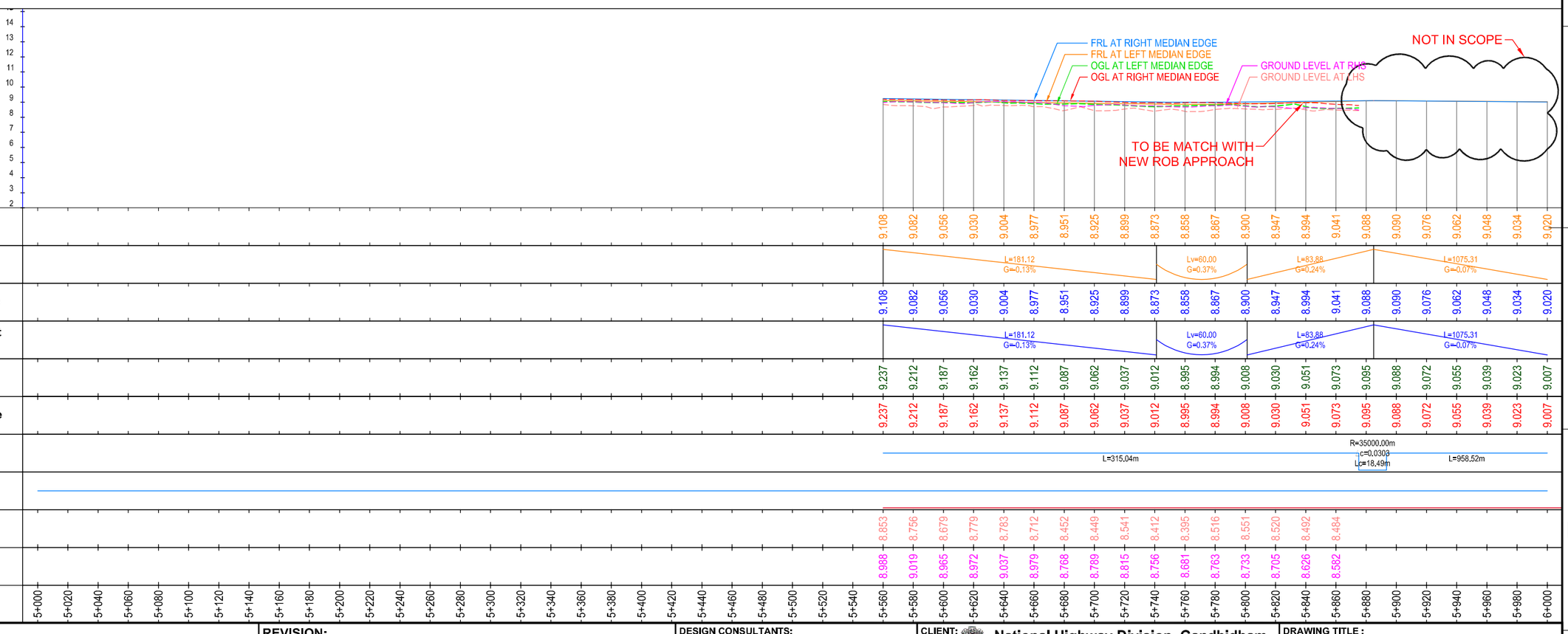
REVISION: **R0**

TO GANDHIDHAM

TO KANDLA PORT



CH. 5884.282	
X=617466.6665	Y=2547917.9483
R(m) 35000.00	Ls(m) -
Dc(deg) 0.03	S(m) -
Lc(m) 18.49	Ts(deg) -
Ts(m) 9.245	D(deg) 0.03
Es(m) 0.001	e% -
Design Speed (V)	100 km/h



LEGEND FOR PLAN

- EXISTING MEDIAN
- EXISTING CARRIAGEWAY
- PROPOSED CENTERLINE
- PROPOSED MEDIAN
- PROPOSED CARRIAGEWAY
- PROPOSED PAVED EDGE
- PROPOSED THRIE BEAM
- PROPOSED EARTHEN SHOULDER
- PROPOSED DRAIN
- PROPOSED SERVICE ROAD

LEGEND FOR PROFILE

- FRL AT RIGHT MEDIAN EDGE
- FRL AT LEFT MEDIAN EDGE
- OGL AT LEFT MEDIAN EDGE
- OGL AT RIGHT MEDIAN EDGE
- GROUND LEVEL AT RHS
- GROUND LEVEL AT LHS
- FRL AT RIGHT SERVICE ROAD
- FRL AT LEFT SERVICE ROAD

REVISION:

NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

DRAWING TITLE :
PROPOSED PLAN AND PROFILE
FROM CH:5+560 TO 6+000

SCALE:	N.T.S.
DATE :	30/09/2025
PROJECT NO. :	XX-XXX-XX

DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

DRAWING NO. : KNDL-PORT-ROAD-P&P-01

REVISION: R0

H:\Road\Current Projects\Kandla Port\For Client\Plan And Profile\With Nakti Bridge\Kandla Port Road Plan And Profile.dwg, Login : Gautam Gohil, 10-10-2025 13:07:23

TO GANDHIDHAM

CH. 7018.093	
X=618575.8050	Y=2547682.7065
R(m) 15000.00	Ls(m) -
Dc(deg) 0.11	S(m) -
Lc(m) 29.51	Ts(deg) -
Ts(m) 14.757	D(deg) 0.11
Es(m) 0.007	e% -
Design Speed (V)	100 km/h

CH. 7281.401	
X=618833.4520	Y=2547628.3990
R(m) 25000.00	Ls(m) -
Dc(deg) 0.04	S(m) -
Lc(m) 17.70	Ts(deg) -
Ts(m) 8.848	D(deg) 0.04
Es(m) 0.002	e% -
Design Speed (V)	100 km/h

TO KANDLA PORT

CH. 7953.096	
X=619490.6064	Y=2547489.3964
R(m) 25000.00	Ls(m) -
Dc(deg) 0.07	S(m) -
Lc(m) 31.94	Ts(deg) -
Ts(m) 15.970	D(deg) 0.07
Es(m) 0.005	e% -
Design Speed (V)	100 km/h

PROPOSED STR. DETAILS
NEW CONST. OF PIPE CULVERT
STR. NO. : 8/1
DIA : 1 X 1200mm
CHAINAGE : 7+780
FRL : 7.435
I.L. : -

DAMAGED KM STONE(NUMBER NOT

MATCH LINE

GPS-1A
E: 618817.676
N: 2547641.736
RL: 8.153

TBM-1R
E: 618855.758
N: 2547621.290
RL: 8.155

GPS-1B
E: 618855.527
N: 2547612.864
RL: 7.869

TBM-R2
E: 619091.499
N: 2547571.144
RL: 7.596

TBM-1R
E: 619090.509
N: 2547563.181
RL: 7.424

TBM-L2
E: 619094.911
N: 2547575.290
RL: 7.569

TBM-L2
E: 619336.784
N: 2547510.571
RL: 7.174

TBM-L3
E: 619347.507
N: 2547521.885
RL: 7.519

TBM-R3
E: 619344.643
N: 2547517.565
RL: 7.617

TO BE MATCH WITH RIVER BRIDGE APPROACH

FOLLOW PLAN AND PROFILE OF NAKTI BRIDGE PROVIDED SEPARATELY

BUSHES
WATER
MOSQUE
R25.0

GROUND LEVEL AT RHS
GROUND LEVEL AT LHS
FRL AT RIGHT MEDIAN EDGE
FRL AT LEFT MEDIAN EDGE
OGL AT LEFT MEDIAN EDGE
OGL AT RIGHT MEDIAN EDGE

NEW CONST. OF PIPE CULVERT
STR. NO. : 8/1
DIA : 1 X 1200mm
CHAINAGE : 7+780

FRL at Left Median Edge	8.451 8.601 8.786 8.971 9.129 9.120 9.112 9.103 9.095 9.086 9.078 8.886 8.649 8.412 8.175 7.940 7.753 7.638 7.590 7.565 7.540 7.514 7.489 7.463 7.438 7.413 7.387 7.362 7.336 7.311 7.285 7.260 7.235 7.209 7.184 7.161 7.160 7.184 7.230 7.281 7.332 7.382 7.433 7.477 7.498 7.495 7.467 7.423 7.377 7.331 7.285
Vertical Schematic at Left Median Edge	Lv=60.00 G=0.99% / L=56.87 G=0.92% / L=126.75 G=-0.04% / L=91.74 G=-1.18% / Lv=60.00 G=1.06% / L=335.39 G=-0.13% / Lv=60.00 G=0.38% / L=94.27 G=0.25% / Lv=80.00 G=-0.48% / L=81.82 G=-0.23%
FRL at Right Median Edge	8.451 8.601 8.786 8.971 9.129 9.120 9.112 9.103 9.095 9.086 9.078 8.886 8.649 8.412 8.175 7.940 7.753 7.638 7.590 7.565 7.540 7.514 7.489 7.463 7.438 7.413 7.387 7.362 7.336 7.311 7.285 7.260 7.235 7.209 7.184 7.161 7.160 7.184 7.230 7.281 7.332 7.382 7.433 7.477 7.498 7.495 7.467 7.423 7.377 7.331 7.285
Vertical Schematic at Right Median Edge	Lv=60.00 G=0.99% / L=56.87 G=0.92% / L=126.75 G=-0.04% / L=91.74 G=-1.18% / Lv=60.00 G=1.06% / L=335.39 G=-0.13% / Lv=60.00 G=0.38% / L=94.27 G=0.25% / Lv=80.00 G=-0.48% / L=81.82 G=-0.23%
OGL at Left Median Edge	8.448 8.602 8.786 8.971 9.129 9.120 9.112 9.103 9.095 9.086 9.078 8.886 8.650 8.413 8.183 7.997 7.863 7.780 7.742 7.711 7.680 7.649 7.618 7.587 7.556 7.525 7.494 7.463 7.432 7.401 7.370 7.339 7.308 7.277 7.249 7.245 7.270 7.322 7.378 7.435 7.491 7.547 7.604 7.649 7.669 7.665 7.637 7.595 7.554 7.513 7.471
OGL at Right Median Edge	8.448 8.602 8.786 8.971 9.129 9.120 9.112 9.103 9.095 9.086 9.078 8.886 8.650 8.413 8.183 7.997 7.863 7.780 7.742 7.711 7.680 7.649 7.618 7.587 7.556 7.525 7.494 7.463 7.432 7.401 7.370 7.339 7.308 7.277 7.249 7.245 7.270 7.322 7.378 7.435 7.491 7.547 7.604 7.649 7.669 7.665 7.637 7.595 7.554 7.513 7.471
Horizontal Geometry	R=15000.00m c=0.1127 L=130.650 Lc=29.51m / L=239.70m / R=25000.00m c=0.0406 Lc=17.70m / L=646.88m / R=25000.00m c=0.0732 Lc=31.94m L=373.27m
Superelevation	
Ground Level at LHS	7.814 8.122 8.405 8.552 8.666 7.229 7.124 6.251 6.710 6.458 8.107 8.595 8.304 8.128 7.838 7.478 7.323 7.379 7.180 7.100 7.049 7.083 7.113 6.985 7.005 6.929 6.942 6.956 6.913 6.935 6.905 6.901 6.859 6.826 6.818 6.826 6.811 6.822 7.010 6.800 6.927 6.972 7.015 6.974 7.075 7.069 6.958 6.912 6.872 6.909 6.857
Ground Level at RHS	8.211 8.286 8.324 8.270 8.184 7.402 6.711 6.976 6.279 6.127 7.801 8.471 8.091 7.949 7.800 7.663 7.463 7.422 7.354 7.273 7.222 7.250 7.217 7.176 7.210 7.151 7.153 7.135 7.092 7.143 7.057 6.988 7.034 7.021 6.913 6.864 6.861 6.873 6.885 7.010 7.058 7.079 7.146 7.252 7.327 7.237 7.156 7.105 7.072 7.153 7.090
Chainage	7+000 7+020 7+040 7+060 7+080 7+100 7+120 7+140 7+160 7+180 7+200 7+220 7+240 7+260 7+280 7+300 7+320 7+340 7+360 7+380 7+400 7+420 7+440 7+460 7+480 7+500 7+520 7+540 7+560 7+580 7+600 7+620 7+640 7+660 7+680 7+700 7+720 7+740 7+760 7+780 7+800 7+820 7+840 7+860 7+880 7+900 7+920 7+940 7+960 7+980 8+000

LEGEND FOR PLAN
- EXISTING MEDIAN
- EXISTING CARRIAGEWAY
- PROPOSED CENTERLINE
- PROPOSED MEDIAN
- PROPOSED CARRIAGEWAY
- PROPOSED PAVED EDGE
- PROPOSED THRIE BEAM
- PROPOSED EARTHEN SHOULDER
- PROPOSED DRAIN
- PROPOSED SERVICE ROAD

LEGEND FOR PROFILE
- FRL AT RIGHT MEDIAN EDGE
- FRL AT LEFT MEDIAN EDGE
- OGL AT LEFT MEDIAN EDGE
- OGL AT RIGHT MEDIAN EDGE
- GROUND LEVEL AT RHS
- GROUND LEVEL AT LHS
- FRL AT RIGHT SERVICE ROAD
- FRL AT LEFT SERVICE ROAD

REVISION:

NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

DRAWING TITLE :
PROPOSED PLAN AND PROFILE
FROM CH:7+000 TO 8+000

SCALE: N.T.S.
DATE : 30/09/2025
PROJECT NO. : XX-XXX-XX

DRAWING NO. : KNDL-PORT-ROAD-P&P-02
REVISION: R0

H:\Road\Current Projects\Kandla Port\For Client\Plan And Profile\With Nakti Bridge\Kandla Port Road Plan And Profile.dwg, Login : Gautam Gohil, 10-10-2025 13:07:42

TO GANDHIDHAM

TO KANDLA PORT

PROPOSED STR. DETAILS
NEW CONST. OF PIPE CULVERT
STR. NO. : 9/1
DIA : 1 X 1200mm
CHAINAGE : 8+300
FRL : 7.445
I.L. : -

CH. 8359.269	
X=619887.8795	Y=2547404.8340
R(m) 25000.00	Ls(m) -
Dc(deg) 0.08	S(m) -
Lc(m) 33.86	Ts(deg) -
Ts(m) 16.930	D(deg) 0.08
Es(m) 0.006	e% -
Design Speed (V) 100 km/h	

PROPOSED STR. DETAILS
NEW CONST. OF PIPE CULVERT
STR. NO. : 9/2
DIA : 1 X 1200mm
CHAINAGE : 8+760
FRL : 7.316
I.L. : -

NEW CONST. OF PIPE CULVERT
STR. NO. : 9/1
DIA : 1 X 1200mm
CHAINAGE : 8+300

NEW CONST. OF PIPE CULVERT
STR. NO. : 9/2
DIA : 1 X 1200mm
CHAINAGE : 8+760

GROUND LEVEL AT RHS
GROUND LEVEL AT LHS
FRL AT RIGHT MEDIAN EDGE
FRL AT LEFT MEDIAN EDGE
OGL AT LEFT MEDIAN EDGE
OGL AT RIGHT MEDIAN EDGE

FRL at Left Median Edge	7.285 7.244 7.222 7.223 7.240 7.259 7.277 7.296 7.314 7.333 7.352 7.370 7.389 7.408 7.426 7.445 7.460 7.469 7.471 7.466 7.458 7.450 7.443 7.435 7.427 7.419 7.411 7.403 7.395 7.387 7.379 7.371 7.364 7.356 7.348 7.340 7.332 7.324 7.316 7.308 7.300 7.292 7.285 7.277 7.269 7.261 7.253 7.245 7.238 7.237 7.443
Vertical Schematic at Left Median Edge	L=31.82 G=-0.23% Lv=60.00 G=0.32% L=232.86 G=0.09% Lv=80.00 G=-0.13% L=568.40 G=-0.04% Lv=100.00 G=0.16%
FRL at Right Median Edge	7.285 7.244 7.222 7.223 7.240 7.259 7.277 7.296 7.314 7.333 7.352 7.370 7.389 7.408 7.426 7.445 7.460 7.469 7.471 7.466 7.458 7.450 7.443 7.435 7.427 7.419 7.411 7.403 7.395 7.387 7.379 7.371 7.364 7.356 7.348 7.340 7.332 7.324 7.316 7.308 7.300 7.292 7.285 7.277 7.269 7.261 7.253 7.245 7.238 7.237 7.243
Vertical Schematic at Right Median Edge	L=31.82 G=-0.23% Lv=60.00 G=0.32% L=232.86 G=0.09% Lv=80.00 G=-0.13% L=568.40 G=-0.04% Lv=100.00 G=0.16%
OGL at Left Median Edge	7.471 7.430 7.389 7.348 7.306 7.265 7.237 7.231 7.247 7.273 7.299 7.325 7.351 7.377 7.403 7.430 7.451 7.465 7.469 7.466 7.458 7.450 7.442 7.434 7.426 7.418 7.411 7.403 7.395 7.387 7.379 7.371 7.363 7.355 7.347 7.339 7.332 7.324 7.316 7.308 7.300 7.292 7.284 7.276 7.268 7.260 7.253 7.245 7.238 7.237 7.243
OGL at Right Median Edge	7.471 7.430 7.389 7.348 7.306 7.265 7.237 7.231 7.247 7.273 7.299 7.325 7.351 7.377 7.403 7.430 7.451 7.465 7.469 7.466 7.458 7.450 7.442 7.434 7.426 7.418 7.411 7.403 7.395 7.387 7.379 7.371 7.363 7.355 7.347 7.339 7.332 7.324 7.316 7.308 7.300 7.292 7.284 7.276 7.268 7.260 7.253 7.245 7.238 7.237 7.243
Horizontal Geometry	L=373.27m R=25000.00m Δc=0.0776 Lc=33.86m L=696.82m
Superelevation	
Ground Level at LHS	6.857 6.764 6.698 6.703 6.735 6.733 6.741 6.709 6.662 6.653 6.642 6.676 6.619 6.565 6.605 6.616 6.511 6.547 6.517 6.483 6.473 6.499 6.496 6.524 6.435 6.314 6.414 6.553 6.669 6.758 6.726 6.611 6.628 6.642 6.554 6.425 6.429 6.411 6.519 6.452 6.481 6.490 6.556 6.579 6.566 6.522 6.492 6.481 6.531 6.469 6.551
Ground Level at RHS	7.090 6.974 6.864 6.829 6.936 6.948 6.954 6.921 6.870 6.882 6.886 6.874 6.831 6.736 6.771 6.797 6.733 6.674 6.667 6.680 6.739 6.755 6.729 6.670 6.592 6.599 6.676 6.749 6.748 6.615 6.561 6.754 6.762 6.787 6.555 6.389 6.409 6.360 6.378 6.377 6.401 6.403 6.436 6.586 6.630 6.553 6.562 6.480 6.457 6.522 6.640
Chainage	8+000 8+020 8+040 8+060 8+080 8+100 8+120 8+140 8+160 8+180 8+200 8+220 8+240 8+260 8+280 8+300 8+320 8+340 8+360 8+380 8+400 8+420 8+440 8+460 8+480 8+500 8+520 8+540 8+560 8+580 8+600 8+620 8+640 8+660 8+680 8+700 8+720 8+740 8+760 8+780 8+800 8+820 8+840 8+860 8+880 8+900 8+920 8+940 8+960 8+980 9+000

LEGEND FOR PLAN

- EXISTING MEDIAN
- EXISTING CARRIAGEWAY
- PROPOSED CENTERLINE
- PROPOSED MEDIAN
- PROPOSED CARRIAGEWAY
- PROPOSED PAVED EDGE
- PROPOSED THRIE BEAM
- PROPOSED EARTHEN SHOULDER
- PROPOSED DRAIN
- PROPOSED SERVICE ROAD

LEGEND FOR PROFILE

- FRL AT RIGHT MEDIAN EDGE
- FRL AT LEFT MEDIAN EDGE
- OGL AT LEFT MEDIAN EDGE
- OGL AT RIGHT MEDIAN EDGE
- GROUND LEVEL AT RHS
- GROUND LEVEL AT LHS
- FRL AT RIGHT SERVICE ROAD
- FRL AT LEFT SERVICE ROAD

REVISION:

NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

DRAWING TITLE :
PROPOSED PLAN AND PROFILE
FROM CH:8+000 TO 9+000

SCALE:	N.T.S.
DATE :	30/09/2025
PROJECT NO. :	XX-XXX-XX

DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

DRAWING NO. : KNDL-PORT-ROAD-P&P-03
REVISION: R0

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TO GANDHIDHAM

TO KANDLA PORT

CH. 9097.469	
X=620610.1115	Y=2547252.1240
R(m) 25000.00	Ls(m) -
Dc(deg) 0.11	S(m) -
Lc(m) 48.90	Ts(deg) -
Ts(m) 24.451	D(deg) 0.11
Es(m) 0.012	e% -
Design Speed (V)100 km/h	

PROPOSED STR. DETAILS
NEW CONST. OF PIPE CULVERT
STR. NO. : 10/1
DIA : 1 X 1200mm
CHAINAGE : 9+400
FRL : 7.732
I.L. : -

CH. 9469.852	
X=620974.5888	Y=2547175.8028
R(m) 15000.00	Ls(m) -
Dc(deg) 0.45	S(m) -
Lc(m) 118.33	Ts(deg) -
Ts(m) 59.167	D(deg) 0.45
Es(m) 0.117	e% -
Design Speed (V)100 km/h	

CH. 9646.594	
X=621147.2890	Y=2547138.2150
R(m) 7500.00	Ls(m) -
Dc(deg) 0.65	S(m) -
Lc(m) 85.12	Ts(deg) -
Ts(m) 42.560	D(deg) 0.65
Es(m) 0.121	e% -
Design Speed (V)100 km/h	

CH. 9817.695	
X=621309.0018	Y=2547104.9362
R(m) 2000.00	Ls(m) -
Dc(deg) 0.99	S(m) -
Lc(m) 34.68	Ts(deg) -
Ts(m) 17.342	D(deg) 0.99
Es(m) 0.075	e% -
Design Speed (V)100 km/h	

TO BE MATCH WITH EXISTING ROAD

NOT IN SCOPE

MATCH LINE

WATER

DAMAGED KM STONE(N

TBM9L E: 620694.889 N: 2547236.522 RL: 7.188

TBM9R E: 620694.291 N: 2547231.844 RL: 7.257

TBM8L E: 620695.342 N: 2547223.563 RL: 6.843

TBM9L E: 620935.209 N: 2547173.199 RL: 6.870

TBM-10L E: 620938.535 N: 2547184.886 RL: 7.182

TBM-10R E: 620936.452 N: 2547180.523 RL: 7.297

TBM-11L E: 621178.932 N: 2547132.874 RL: 7.621

TBM-11R E: 621176.627 N: 2547131.188 RL: 7.637

TBM-10L E: 621175.408 N: 2547119.307 RL: 7.100

GROUND LEVEL AT RHS
GROUND LEVEL AT LHS
NEW CONST. OF PIPE CULVERT
STR. NO. : 10/1
DIA : 1 X 1200mm
CHAINAGE : 9+400
FRL AT RIGHT MEDIAN EDGE
FRL AT LEFT MEDIAN EDGE
OGL AT LEFT MEDIAN EDGE
OGL AT RIGHT MEDIAN EDGE

FRL at Left Median Edge

Vertical Schematic at Left Median Edge: Lv=100.00 G=0.16% | L=458.55 G=0.12% | Lv=60.00 G=-0.15% | L=2178.37 G=-0.03%

FRL at Right Median Edge

Vertical Schematic at Right Median Edge: Lv=100.00 G=0.16% | L=458.55 G=0.12% | Lv=60.00 G=-0.15% | L=2178.37 G=-0.03%

OGL at Left Median Edge

OGL at Right Median Edge

Horizontal Geometry: R=25000.00m Dc=0.1121 Lc=48.90m | L=696.82m | L=288.76m | R=15000.00m Dc=0.4520 Lc=118.33m | L=75.02m | R=7500.00m Dc=0.6503 Lc=85.12m | L=105.20m | R=2000.00m Dc=0.9936 Lc=34.68m | L=356.52m

Superelevation

Ground Level at LHS

Ground Level at RHS

Chainage

LEGEND FOR PLAN

- EXISTING MEDIAN
- EXISTING CARRIAGEWAY
- PROPOSED CENTERLINE
- PROPOSED MEDIAN
- PROPOSED CARRIAGEWAY
- PROPOSED PAVED EDGE
- PROPOSED THRIE BEAM
- PROPOSED EARTHEN SHOULDER
- PROPOSED DRAIN
- PROPOSED SERVICE ROAD

LEGEND FOR PROFILE

- FRL AT RIGHT MEDIAN EDGE
- FRL AT LEFT MEDIAN EDGE
- OGL AT LEFT MEDIAN EDGE
- OGL AT RIGHT MEDIAN EDGE
- GROUND LEVEL AT RHS
- GROUND LEVEL AT LHS
- FRL AT RIGHT SERVICE ROAD
- FRL AT LEFT SERVICE ROAD

REVISION:

NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

DRAWING TITLE :
PROPOSED PLAN AND PROFILE
FROM CH:9+000 TO 10+000

SCALE:	N.T.S.
DATE :	30/09/2025
PROJECT NO. :	XX-XXX-XX

DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

DRAWING NO. : KNDL-PORT-ROAD-P&P-04

REVISION: R0

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TO GANDHIDHAM

TO KANDLA PORT

NOT IN SCOPE

TO BE MATCH WITH EXISTING ROAD

MATCH LINE

11+000 11+100 11+200 11+300 11+400 11+500 11+600 11+700 11+800 11+900 12+000

TBM-19R
E: 623002.147
N: 2546275.013
RL: 7.182

TBM-20R
E: 623105.531
N: 2546189.051
RL: 7.234

TBM-17L
E: 622936.751
RL: 7.500

TBM-18R
E: 622985.717
N: 2546272.567
RL: 7.425

TBM-19L
E: 623113.552
N: 2546172.326
RL: 7.522

BUSHES

WATER

CH. 11748.789	
X=622999.3340	Y=2546262.4450
R(m) 10000.00	Ls(m) -
Dc(deg) 0.11	S(m) -
Lc(m) 18.49	Ts(deg) -
Ts(m) 9.246	D(deg) 0.11
Es(m) 0.004	e% -
Design Speed (V)	100 km/h

CH. 11916.676	
X=623129.2570	Y=2546156.1150
R(m) 15000.00	Ls(m) -
Dc(deg) 0.14	S(m) -
Lc(m) 37.94	Ts(deg) -
Ts(m) 18.970	D(deg) 0.14
Es(m) 0.012	e% -
Design Speed (V)	100 km/h

NOT IN SCOPE

TO BE MATCH WITH EXISTING ROAD

GROUND LEVEL AT RHS
GROUND LEVEL AT LHS
FRL AT RIGHT MEDIAN EDGE
FRL AT LEFT MEDIAN EDGE
OGL AT LEFT MEDIAN EDGE
OGL AT RIGHT MEDIAN EDGE

FRL at Left Median Edge	7.482 7.477 7.471 7.466 7.460 7.455 7.450 7.444 7.439 7.433 7.428 7.422 7.417 7.411 7.406 7.401 7.395 7.390 7.384 7.379 7.373 7.368 7.362 7.357 7.351 7.346 7.341 7.335 7.330 7.324 7.319 7.313 7.308 7.302 7.297 7.292 7.286 7.281 7.278 7.286 7.304 7.330 7.357 7.384 7.410 7.436 7.457 7.470 7.477 7.482 7.487
Vertical Schematic at Left Median Edge	L=2178.37 G=-0.03% ; Lv=60.00 G=0.16% ; L=87.78 G=0.13% ; Lv=60.00 G=-0.11% ; L=270.56 G=-0.03%
FRL at Right Median Edge	7.482 7.477 7.471 7.466 7.460 7.455 7.450 7.444 7.439 7.433 7.428 7.422 7.417 7.411 7.406 7.401 7.395 7.390 7.384 7.379 7.373 7.368 7.362 7.357 7.351 7.346 7.341 7.335 7.330 7.324 7.319 7.313 7.308 7.302 7.297 7.292 7.286 7.281 7.278 7.286 7.304 7.330 7.357 7.384 7.410 7.436 7.457 7.470 7.477 7.482 7.487
Vertical Schematic at Right Median Edge	L=2178.37 G=-0.03% ; Lv=60.00 G=0.16% ; L=87.78 G=0.13% ; Lv=60.00 G=-0.11% ; L=270.56 G=-0.03%
OGL at Left Median Edge	7.482 7.477 7.471 7.466 7.460 7.455 7.449 7.444 7.438 7.433 7.427 7.422 7.417 7.411 7.406 7.400 7.395 7.389 7.384 7.378 7.373 7.368 7.362 7.357 7.351 7.346 7.340 7.335 7.329 7.324 7.319 7.313 7.308 7.302 7.297 7.291 7.286 7.280 7.273 7.261 7.243 7.222 7.200 7.178 7.156 7.134 7.112 7.090 7.068 7.048 7.044
OGL at Right Median Edge	7.482 7.477 7.471 7.466 7.460 7.455 7.449 7.444 7.438 7.433 7.427 7.422 7.417 7.411 7.406 7.400 7.395 7.389 7.384 7.378 7.373 7.368 7.362 7.357 7.351 7.346 7.340 7.335 7.329 7.324 7.319 7.313 7.308 7.302 7.297 7.291 7.286 7.280 7.273 7.261 7.243 7.222 7.200 7.178 7.156 7.134 7.112 7.090 7.068 7.048 7.044
Horizontal Geometry	L=839.44m ; R=10000.00m Dc=0.1059 Lc=18.49m ; L=139.67m ; R=15000.00m Dc=0.1449 Lc=37.94m ; L=324.62m
Superelevation	
Ground Level at LHS	6.953 6.988 7.051 7.220 7.261 7.144 7.144 7.081 7.184 7.138 7.092 7.139 7.119 7.142
Ground Level at RHS	6.806 6.785 6.794 6.715 6.721 6.702 6.746 6.839 6.833 6.797 6.715 6.589 6.726 6.714
Chainage	11+000 11+020 11+040 11+060 11+080 11+100 11+120 11+140 11+160 11+180 11+200 11+220 11+240 11+260 11+280 11+300 11+320 11+340 11+360 11+380 11+400 11+420 11+440 11+460 11+480 11+500 11+520 11+540 11+560 11+580 11+600 11+620 11+640 11+660 11+680 11+700 11+720 11+740 11+760 11+780 11+800 11+820 11+840 11+860 11+880 11+900 11+920 11+940 11+960 11+980 12+000

LEGEND FOR PLAN

- EXISTING MEDIAN
- EXISTING CARRIAGEWAY
- PROPOSED CENTERLINE
- PROPOSED MEDIAN
- PROPOSED CARRIAGEWAY
- PROPOSED PAVED EDGE
- PROPOSED THRIE BEAM
- PROPOSED EARTHEN SHOULDER
- PROPOSED DRAIN
- PROPOSED SERVICE ROAD

LEGEND FOR PROFILE

- FRL AT RIGHT MEDIAN EDGE
- FRL AT LEFT MEDIAN EDGE
- OGL AT LEFT MEDIAN EDGE
- OGL AT RIGHT MEDIAN EDGE
- GROUND LEVEL AT RHS
- GROUND LEVEL AT LHS
- FRL AT RIGHT SERVICE ROAD
- FRL AT LEFT SERVICE ROAD

REVISION:

NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

DRAWING TITLE :
PROPOSED PLAN AND PROFILE
FROM CH:11+000 TO 12+000

DRAWN BY : G.K.G.	DESIGNED BY: D.M.S.	CHECKED BY: V.S.P.	APPROVED BY: A.N.P.

SCALE: N.T.S.
DATE : 30/09/2025
PROJECT NO. : XX-XXX-XX
DRAWING NO. : KNDL-PORT-ROAD-P&P-05
REVISION: R0

H:\Road\Current Projects\Kandla Port\For Client\Plan And Profile\With Nakti Bridge\Kandla Port Road Plan And Profile.dwg, Login : Gautam Gohil, 10-10-2025 13:09:38

TO GANDHIDHAM

TO KANDLA PORT

CH. 12271.161	
X=623404.1500	Y=2545932.2990
R(m) 15000.00	Ls(m) -
Dc(deg) 0.08	S(m) -
Lc(m) 21.80	Ts(deg) -
Ts(m) 10.900	D(deg) 0.08
Es(m) 0.004	e% -
Design Speed (V)	100 km/h

GPS-3 A
E: 623372.579
N: 2545971.304
RL: 7.240

GPS-3B
E: 623466.248
N: 2545894.807
RL: 7.352

TBM-11L
E: 623339.270
N: 2545998.802
RL: 7.263

TBM-21L
E: 623461.909
N: 2545888.206
RL: 7.670

TBM-L22
E: 623639.469
N: 2545742.850
RL: 7.566

TBM-R23
E: 623662.600
N: 2545734.326
RL: 7.188

TBM-L23
E: 623762.917
N: 2545642.788
RL: 7.961

TBM-R24
E: 623773.339
N: 2545643.439
RL: 7.545

TBM-R25
E: 624033.454
N: 2545548.621
RL: 7.727

TBM-20L
E: 623329.513
N: 2545996.286
RL: 7.679

TBM-20R
E: 623325.175
N: 2545993.502
RL: 7.346

TBM-21R
E: 623458.631
N: 2545884.724
RL: 7.302

TBM-R22
E: 623649.126
N: 2545709.074
RL: 7.475

TBM-R23
E: 623758.895
N: 2545639.001
RL: 7.833

TBM-R24
E: 624021.671
N: 2545540.639
RL: 7.757

MATCH LINE

BUSHES

R13.0 R18.0 55.0 95.0 75.0

GROUND LEVEL AT RHS
GROUND LEVEL AT LHS
FRL AT RIGHT MEDIAN EDGE
FRL AT LEFT MEDIAN EDGE
OGL AT LEFT MEDIAN EDGE
OGL AT RIGHT MEDIAN EDGE
OGL AT RIGHT SERVICE ROAD

FRL at Left Median Edge	7.487 7.492 7.497 7.503 7.508 7.513 7.518 7.523 7.528 7.533 7.539 7.544 7.548 7.549 7.548 7.543 7.536 7.525 7.512 7.496 7.477 7.455 7.431 7.407 7.383 7.359 7.336 7.339 7.379 7.456 7.544 7.632 7.720 7.808 7.895 7.967 8.016 8.042 8.047 8.045 8.044 8.042 8.040 8.039 8.037 8.035 8.034 8.032 8.030 8.029 8.027
Vertical Schematic at Left Median Edge	L=270.55 G=0.03% · Lv=200.00 G=-0.15% · L=91.95 G=-0.12% · Lv=60.00 G=0.56% · L=99.57 G=0.44% · Lv=80.00 G=-0.45% · L=747.11 G=-0.01%
FRL at Right Median Edge	7.487 7.492 7.497 7.503 7.508 7.513 7.518 7.523 7.528 7.533 7.539 7.544 7.548 7.549 7.548 7.543 7.536 7.525 7.512 7.496 7.477 7.455 7.431 7.407 7.383 7.359 7.336 7.339 7.379 7.456 7.544 7.632 7.720 7.808 7.895 7.967 8.016 8.042 8.047 8.045 8.044 8.042 8.040 8.039 8.037 8.035 8.034 8.032 8.030 8.029 8.027
Vertical Schematic at Right Median Edge	L=270.55 G=0.03% · Lv=200.00 G=-0.15% · L=91.95 G=-0.12% · Lv=60.00 G=0.56% · L=99.57 G=0.44% · Lv=80.00 G=-0.45% · L=747.11 G=-0.01%
OGL at Left Median Edge	7.044 7.057 7.083 7.111 7.138 7.166 7.194 7.222 7.249 7.276 7.289 7.286 7.270 7.252 7.233 7.214 7.196 7.177 7.158 7.140 7.121 7.103 7.084 7.065 7.047 7.028 7.009 6.991 6.997 7.048 7.145 7.263 7.381 7.499 7.601 7.677 7.727 7.751 7.748 7.735 7.722 7.709 7.697 7.692 7.695 7.703 7.712 7.721 7.730 7.739 7.748
OGL at Right Median Edge	7.044 7.057 7.083 7.111 7.138 7.166 7.194 7.222 7.249 7.276 7.289 7.286 7.270 7.252 7.233 7.214 7.196 7.177 7.158 7.140 7.121 7.103 7.084 7.065 7.047 7.028 7.009 6.991 6.997 7.048 7.145 7.263 7.381 7.499 7.601 7.677 7.727 7.751 7.748 7.735 7.722 7.709 7.697 7.692 7.695 7.703 7.712 7.721 7.730 7.739 7.748
Horizontal Geometry	L=324.62m · R=15000.00m, c=0.0833, Lc=21.80m · L=937.47m
Superelevation	
Ground Level at LHS	7.142 7.077 7.201 7.164 7.113 7.225 7.017 7.145 7.204 7.106 7.140 7.122 7.083 7.121 7.139 7.131 7.141 7.155 7.177 7.150 7.114 6.952 6.985 7.026 7.067 6.907 6.946 6.921 6.966 6.947 7.113 7.142 6.960 7.020 7.065 7.210 7.236 7.384 7.373 7.312 7.210 7.274 7.148 7.166 7.209 7.273 7.245 7.238 7.255 7.272 7.329
Ground Level at RHS	6.714 6.820 6.847 6.680 6.764 7.048 6.953 7.087 6.745 6.873 7.002 6.918 6.838 6.837 6.735 6.391 6.745 6.809 6.702 6.725 6.748 6.596 6.665 6.628 6.745 6.668 6.715 6.650 6.811 6.920 6.977 6.926 7.020 7.065 7.210 7.236 7.384 7.373 7.312 7.210 7.274 7.148 7.166 7.209 7.273 7.245 7.238 7.255 7.272 7.329
Chainage	12+000 12+020 12+040 12+060 12+080 12+100 12+120 12+140 12+160 12+180 12+200 12+220 12+240 12+260 12+280 12+300 12+320 12+340 12+360 12+380 12+400 12+420 12+440 12+460 12+480 12+500 12+520 12+540 12+560 12+580 12+600 12+620 12+640 12+660 12+680 12+700 12+720 12+740 12+760 12+780 12+800 12+820 12+840 12+860 12+880 12+900 12+920 12+940 12+960 12+980 13+000

LEGEND FOR PLAN
- EXISTING MEDIAN
- EXISTING CARRIAGEWAY
- PROPOSED CENTERLINE
- PROPOSED MEDIAN
- PROPOSED CARRIAGEWAY
- PROPOSED PAVED EDGE
- PROPOSED THRIE BEAM
- PROPOSED EARTHEN SHOULDER
- PROPOSED DRAIN
- PROPOSED SERVICE ROAD

LEGEND FOR PROFILE
- FRL AT RIGHT MEDIAN EDGE
- FRL AT LEFT MEDIAN EDGE
- OGL AT LEFT MEDIAN EDGE
- OGL AT RIGHT MEDIAN EDGE
- GROUND LEVEL AT RHS
- GROUND LEVEL AT LHS
- FRL AT RIGHT SERVICE ROAD
- FRL AT LEFT SERVICE ROAD

REVISION:

NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

DRAWING TITLE :
PROPOSED PLAN AND PROFILE
FROM CH:12+000 TO 13+000

SCALE:	N.T.S.
DATE :	30/09/2025
PROJECT NO. :	XX-XXX-XX

DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

DRAWING NO. : KNDL-PORT-ROAD-P&P-06

REVISION: R0

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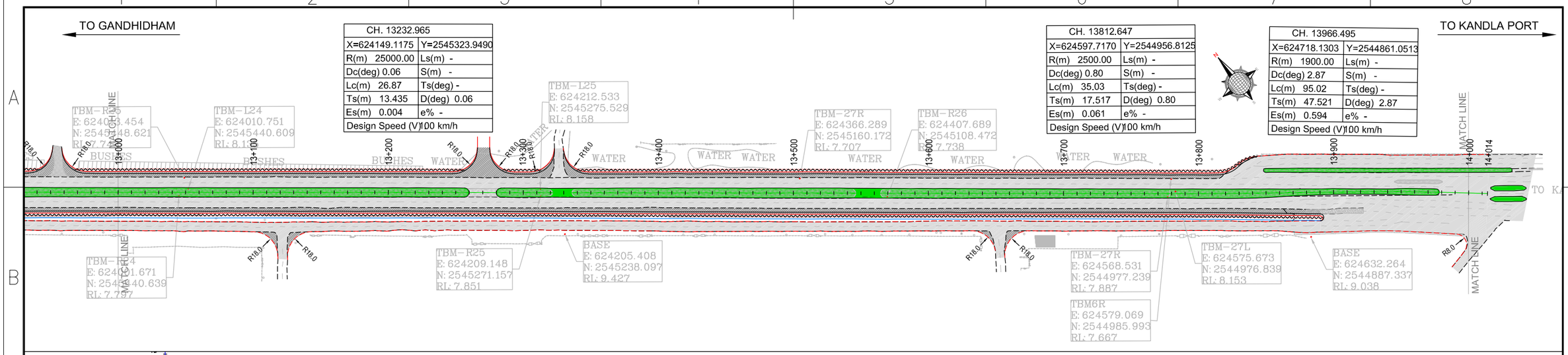
TO GANDHIDHAM

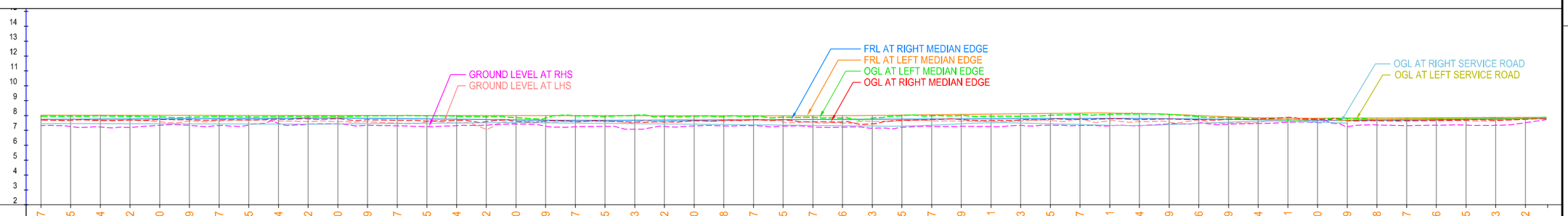
TO KANDLA PORT

CH. 13232.965	
X=624149.1175	Y=2545323.9490
R(m) 25000.00	Ls(m) -
Dc(deg) 0.06	S(m) -
Lc(m) 26.87	Ts(deg) -
Ts(m) 13.435	D(deg) 0.06
Es(m) 0.004	e% -
Design Speed (V)	100 km/h

CH. 13812.647	
X=624597.7170	Y=2544956.8125
R(m) 2500.00	Ls(m) -
Dc(deg) 0.80	S(m) -
Lc(m) 35.03	Ts(deg) -
Ts(m) 17.517	D(deg) 0.80
Es(m) 0.061	e% -
Design Speed (V)	100 km/h

CH. 13966.495	
X=624718.1303	Y=2544861.0513
R(m) 1900.00	Ls(m) -
Dc(deg) 2.87	S(m) -
Lc(m) 95.02	Ts(deg) -
Ts(m) 47.521	D(deg) 2.87
Es(m) 0.594	e% -
Design Speed (V)	100 km/h





FRL at Left Median Edge	8.027 8.025 8.024 8.022 8.020 8.019 8.017 8.015 8.014 8.012 8.010 8.009 8.007 8.005 8.004 8.002 8.000 7.999 7.997 7.995 7.993 7.992 7.990 7.988 7.987 7.985 7.987 7.996 8.013 8.035 8.057 8.079 8.101 8.123 8.145 8.167 8.171 8.144 8.089 8.006 7.919 7.854 7.821 7.820 7.829 7.838 7.847 7.856 7.865 7.873 7.882
Vertical Schematic at Left Median Edge	L=747.11 G=-0.01% / Lv=60.00 G=0.12% / L=134.98 G=0.11% / Lv=75.00 G=-0.55% / L=23.44 G=-0.44% / Lv=60.00 G=0.49% / L=158.35 G=0.04%
FRL at Right Median Edge	8.027 8.025 8.024 8.022 8.020 8.019 8.017 8.015 8.014 8.012 8.010 8.009 8.007 8.005 8.004 8.002 8.000 7.999 7.997 7.995 7.993 7.992 7.990 7.988 7.987 7.985 7.987 7.996 8.013 8.035 8.057 8.079 8.101 8.123 8.145 8.167 8.171 8.144 8.089 8.006 7.919 7.854 7.821 7.820 7.829 7.838 7.847 7.856 7.865 7.873 7.882
Vertical Schematic at Right Median Edge	L=747.11 G=-0.01% / Lv=60.00 G=0.12% / L=134.98 G=0.11% / Lv=75.00 G=-0.55% / L=23.44 G=-0.44% / Lv=60.00 G=0.49% / L=158.35 G=0.04%
OGL at Left Median Edge	7.748 7.757 7.766 7.775 7.784 7.793 7.802 7.811 7.820 7.828 7.826 7.814 7.794 7.773 7.751 7.730 7.709 7.691 7.682 7.683 7.690 7.698 7.705 7.713 7.720 7.727 7.735 7.742 7.750 7.757 7.765 7.772 7.780 7.787 7.795 7.802 7.807 7.803 7.789 7.768 7.747 7.726 7.706 7.687 7.680 7.687 7.705 7.725 7.745 7.765 7.784
OGL at Right Median Edge	7.748 7.757 7.766 7.775 7.784 7.793 7.802 7.811 7.820 7.828 7.826 7.814 7.794 7.773 7.751 7.730 7.709 7.691 7.682 7.683 7.690 7.698 7.705 7.713 7.720 7.727 7.735 7.742 7.750 7.757 7.765 7.772 7.780 7.787 7.795 7.802 7.807 7.803 7.789 7.768 7.747 7.726 7.706 7.687 7.680 7.687 7.705 7.725 7.745 7.765 7.784
Horizontal Geometry	L=937.47m / R=25000.00m Δc=0.0616 Lc=26.87m / L=548.73m / R=2500.00m Δc=0.8029 Lc=35.03m / L=88.81m / R=1900.00m Δc=2.8655 Lc=95.02m / L=0.05m
Superelevation	
Ground Level at LHS	7.723 7.736 7.661 7.690 7.576 7.627 7.640 7.707 7.638 7.594 7.591 7.574 7.487 7.571 7.502 7.068 7.504 7.537 7.610 7.597 7.541 7.548 7.644 7.634 7.697 7.565 7.571 7.487 7.596 7.660 7.647 7.628 7.604 7.632 7.670 7.787 7.652 7.593 7.550 7.712 7.487 7.543 7.697 7.636 7.644 7.692 7.620 7.648 7.648 7.645 7.817
Ground Level at RHS	7.329 7.262 7.223 7.198 7.346 7.342 7.333 7.379 7.480 7.407 7.451 7.346 7.313 7.256 7.323 7.354 7.423 7.285 7.248 7.274 7.081 7.268 7.304 7.301 7.327 7.289 7.242 7.221 7.148 7.212 7.268 7.275 7.257 7.345 7.347 7.327 7.317 7.314 7.439 7.494 7.414 7.470 7.553 7.528 7.244 7.370 7.324 7.350 7.356 7.341 7.517
Chainage	13+000 13+020 13+040 13+060 13+080 13+100 13+120 13+140 13+160 13+180 13+200 13+220 13+240 13+260 13+280 13+300 13+320 13+340 13+360 13+380 13+400 13+420 13+440 13+460 13+480 13+500 13+520 13+540 13+560 13+580 13+600 13+620 13+640 13+660 13+680 13+700 13+720 13+740 13+760 13+780 13+800 13+820 13+840 13+860 13+880 13+900 13+920 13+940 13+960 13+980 14+000 14+015

LEGEND FOR PLAN

- EXISTING MEDIAN
- EXISTING CARRIAGEWAY
- PROPOSED CENTERLINE
- PROPOSED MEDIAN
- PROPOSED CARRIAGEWAY
- PROPOSED PAVED EDGE
- PROPOSED THRIE BEAM
- PROPOSED EARTHEN SHOULDER
- PROPOSED DRAIN
- PROPOSED SERVICE ROAD

LEGEND FOR PROFILE

- FRL AT RIGHT MEDIAN EDGE
- FRL AT LEFT MEDIAN EDGE
- OGL AT LEFT MEDIAN EDGE
- OGL AT RIGHT MEDIAN EDGE
- GROUND LEVEL AT RHS
- GROUND LEVEL AT LHS
- FRL AT RIGHT SERVICE ROAD
- FRL AT LEFT SERVICE ROAD

REVISION:

NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

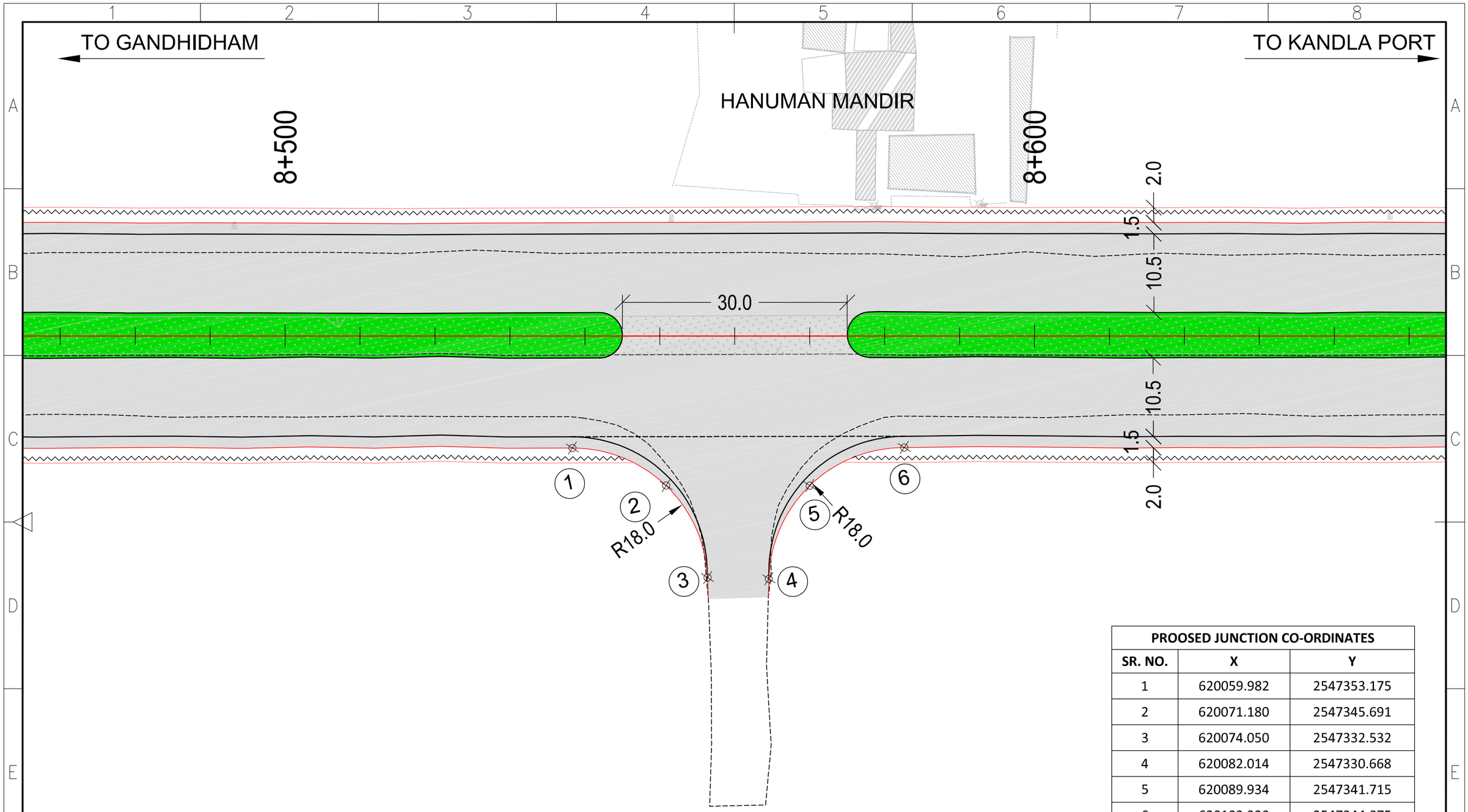
DRAWING TITLE :
PROPOSED PLAN AND PROFILE
FROM CH:13+000 TO 14+014

SCALE:	N.T.S.
DATE :	30/09/2025
PROJECT NO. :	XX-XXX-XX

DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

DRAWING NO. : KNDL-PORT-ROAD-P&P-07
REVISION: R0

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PROOSED JUNCTION CO-ORDINATES		
SR. NO.	X	Y
1	620059.982	2547353.175
2	620071.180	2547345.691
3	620074.050	2547332.532
4	620082.014	2547330.668
5	620089.934	2547341.715
6	620103.320	2547344.075

REVISION:

NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

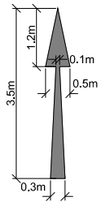
CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

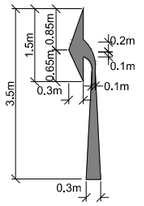
DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

DRAWING TITLE :
PROPOSED JUNCTION DETAIL
AT CH:8+560

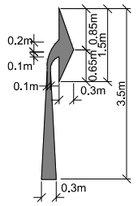
SCALE: N.T.S.
DATE : 30/09/2025
PROJECT NO. : XX-XXX-XX
DRAWING NO. : KNDL-PORT-ROAD-JN-01
REVISION: R0



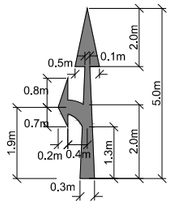
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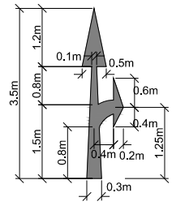
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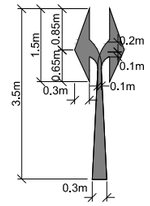
AM03 RIGHT



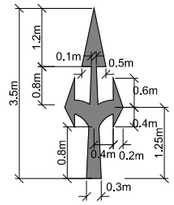
AM04 STRAIGHT & LEFT



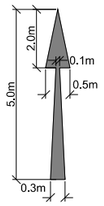
AM05 STRAIGHT & RIGHT



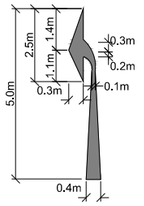
AM06 LEFT & RIGHT



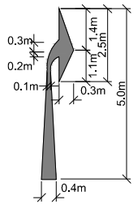
AM07 STRAIGHT & LEFT & RIGHT



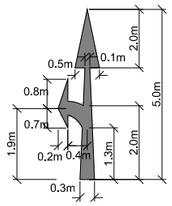
AM08 STRAIGHT



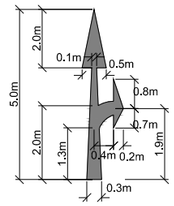
AM09 LEFT



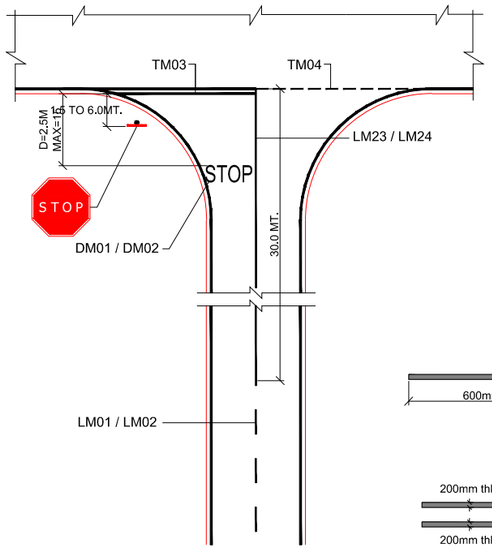
AM10 RIGHT



AM11 STRAIGHT & LEFT

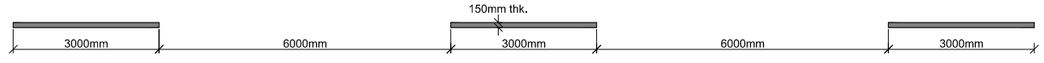


AM12 STRAIGHT & RIGHT



STOP MARKING SIGN

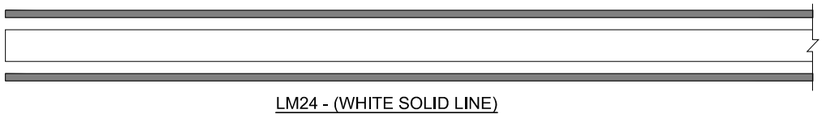
ARROW MARKING FOR ROUTE DIRECTION



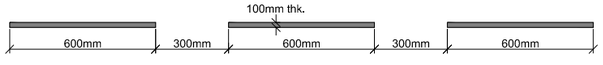
LM02 - LANE MARKING AT STRAIGHT (WHITE BROKEN LINE)



LM12 - LANE MARKING ON CURVE (WHITE BROKEN LINE)



LM24 - (WHITE SOLID LINE)



TM04 - TRANSVERSE MARKING BROKEN



TM03 - TRANSVERSE MARKING CONTINUOUS - TWO LINE SEPERATED

REVISION:			
NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

DRAWING TITLE :
TYPICAL LANE MARKING DETAILS

SCALE:	N.T.S.
DATE :	30/09/2025
PROJECT NO. :	XX-XXX-XX
DRAWING NO. :	KNDL-PORT-ROAD-MISC-01
REVISION:	R0

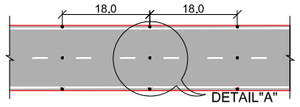


NORMAL

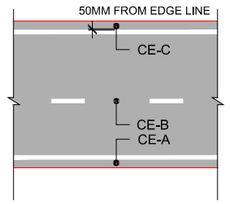


NO-OVERTAKING

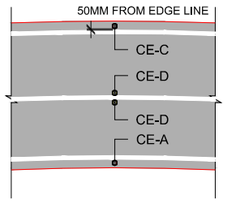
LONGITUDINAL MARKING FOR UNDIVIDED CARRIAGEWAY



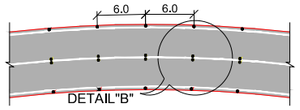
NORMAL



DETAIL "A"



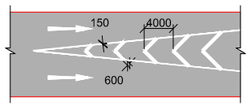
DETAIL "B"



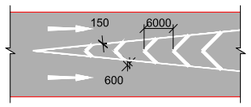
NO OVERTAKING

CAT-EYE LOCATION AT STRAIGHT ROAD

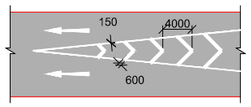
CAT-EYE LOCATION AT CURVATURE OF ROAD



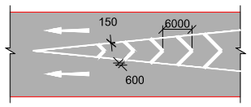
HM02



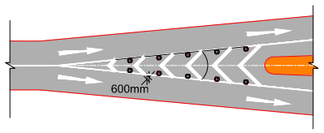
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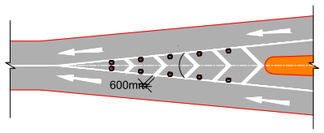
HM05



HM06

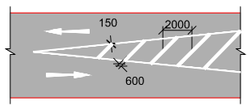


CHEVRON MARKING DIVERGING

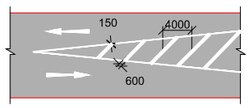


CHEVRON MARKING MERGING

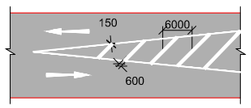
ROAD STUDE FOR CHEVERON MARKING



HM07

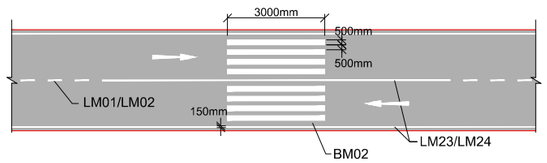


HM08



HM09

HAZARD MARKINGS



PEDESTRAIN CROSSING



CE-A (BI DIRECTIONAL LEFT)



CE-B (CENTER)



CE-C (BI DIRECTIONAL RIGHT)



CE-D (BI DIRECTIONAL CENTER LINE AT NO OVERTAKING)



CE-E (PEDESTRIAN CROSSING, CHEVRON MARKING AND HAZARD MARKING)

CAT-EYE (ROAD STUDD)

REVISION:

NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

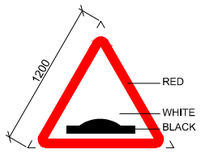
CLIENT: **National Highway Division, Gandhidham**
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

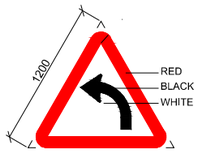
DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

DRAWING TITLE :
TYPICAL LANE MARKING DETAILS

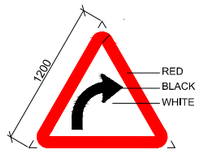
SCALE:	N.T.S.
DATE :	30/09/2025
PROJECT NO. :	XX-XXX-XX
DRAWING NO. :	KNDL-PORT-ROAD-MISC-02
REVISION:	R0



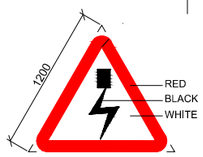
SPEED BREAKER



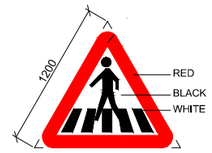
LEFT CURVE SIGN



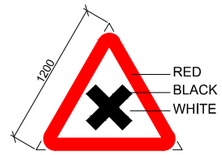
RIGHT CURVE SIGN



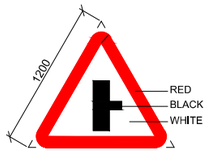
OVERHEAD CABLE



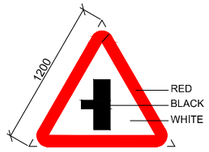
PEDESTRIAN CROSSING



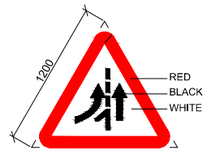
X-INTERSECTION



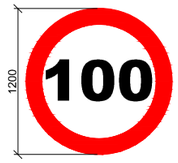
SIDE ROAD



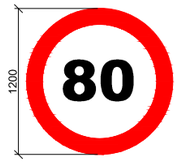
SIDE ROAD



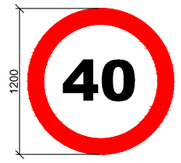
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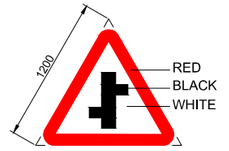
SPEED LIMIT SIGNS



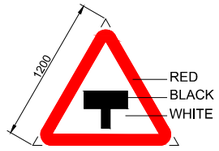
SPEED LIMIT SIGNS



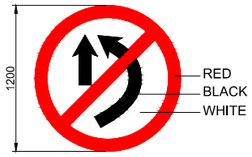
SPEED LIMIT SIGNS



STAGGERED INTERSECTION

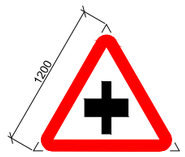


T-INTERSECTION
MAJOR ROAD AHEAD

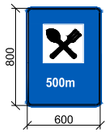


OVER TAKING PROHIBITED

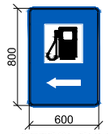




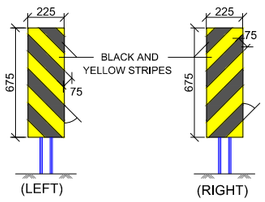
MAJOR ROAD AHED



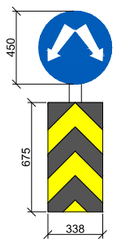
EATING PLACE



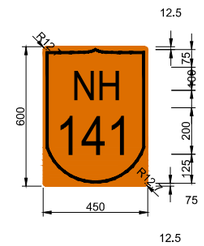
PETROL PUMP



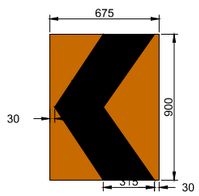
HAZARD MARKER



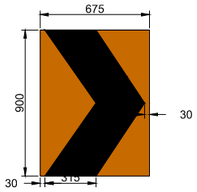
PASS EITHER SIDE WITH HAZARD MARKER



NATIONAL HIGHWAY
ROUTE MARKER SIGN



CHEVRON MARKER LEFT SIGN



CHEVRON MARKER RIGHT SIGN

REVISION:

NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

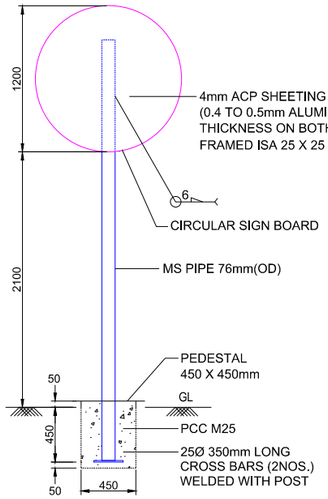
CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

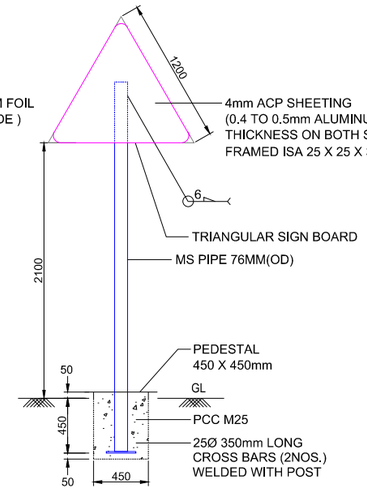
DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

DRAWING TITLE :
TYPICAL DETAILS FOR ROAD SIGNAGES

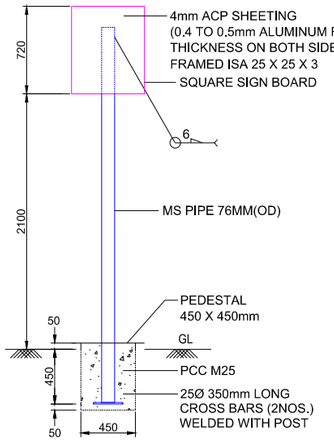
SCALE:	N.T.S.
DATE :	30/09/2025
PROJECT NO. :	XX-XXX-XX
DRAWING NO. :	KNDL-PORT-ROAD-MISC-03
REVISION:	R0



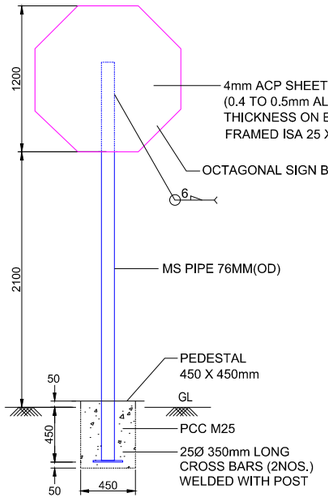
FOR CIRCULAR SIGN



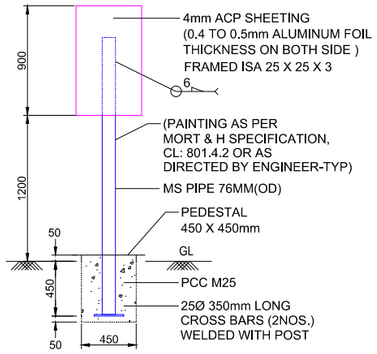
FOR TRIANGULAR SIGN



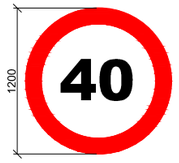
FOR INFORMATORY SIGN



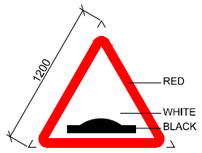
FOR STOP SIGN



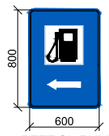
FOR HAZARD MARKING SIGN



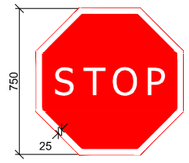
SPEED LIMIT SIGNS



SPEED BREAKER



PETROL PUMP



STOP SIGNS

REVISION:			
NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

DRAWING TITLE :

TYPICAL DETAILS FOR ROAD SIGNAGES

SCALE:	N.T.S.
DATE :	30/09/2025
PROJECT NO. :	XX-XXX-XX
DRAWING NO. :	KNDL-PORT-ROAD-MISC-04
REVISION:	R0



GANTRY MOUNTED ADVANCE DIRECTION SIGN





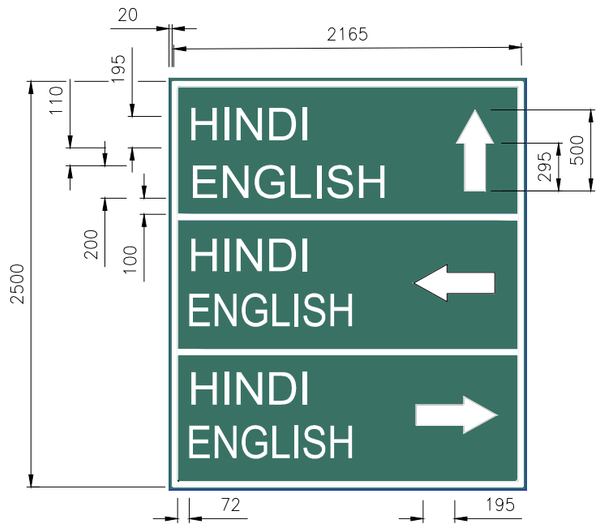
FLAG TYPE DIRECTION SIGN





INFOMATORY SIGN

STACK TYPE ADVANCE DIRECTION SIGN



REVISION:			
NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

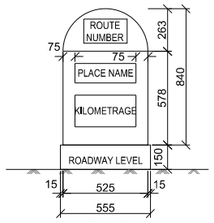
CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

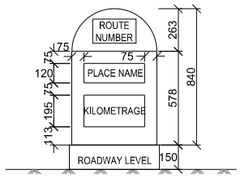
DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

DRAWING TITLE :
TYPICAL DETAILS FOR ROAD SIGNAGES

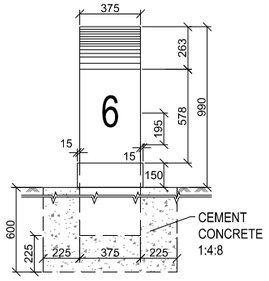
SCALE: N.T.S.
DATE : 30/09/2025
PROJECT NO. : XX-XXX-XX
DRAWING NO. : KNDL-PORT-ROAD-MISC-05
REVISION: R0



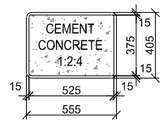
FACE -1



FACE -2

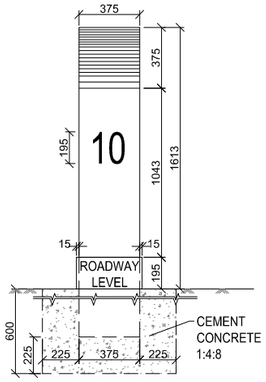


SIDE ELEVATION

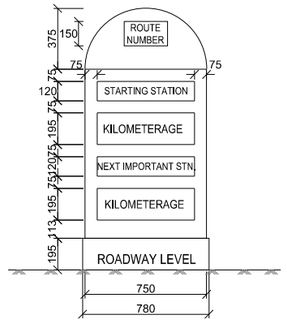


SECTIONAL PLAN

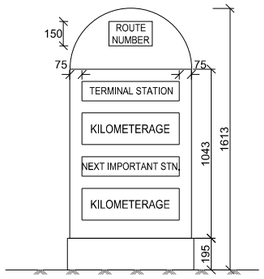
KILOMETER STONE



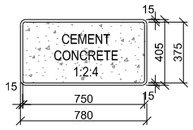
SIDE ELEVATION



FACE -2

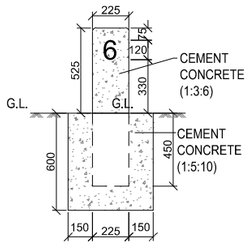


FACE -1

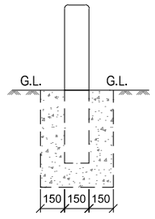


SECTIONAL PLAN

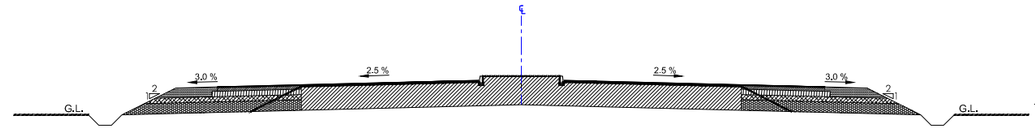
FIFTH KILOMETER STONE

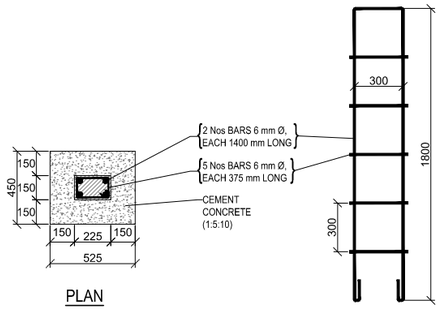


FRONT ELEVATION



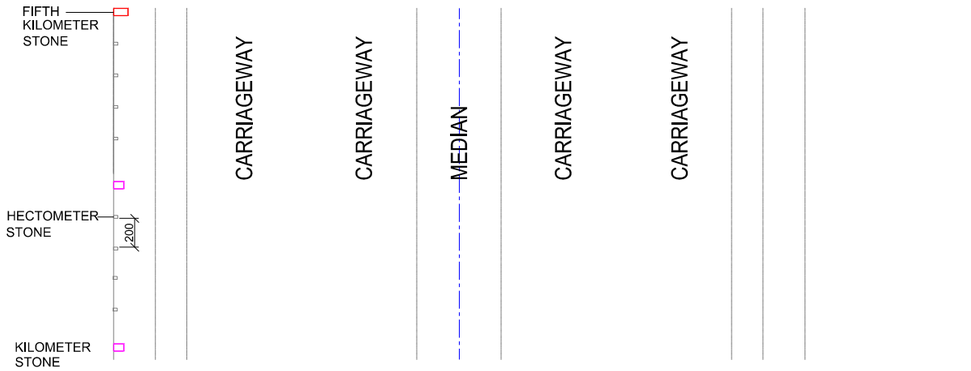
SIDE ELEVATION





PLAN

HECTOMETER STONE



REVISION:

NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

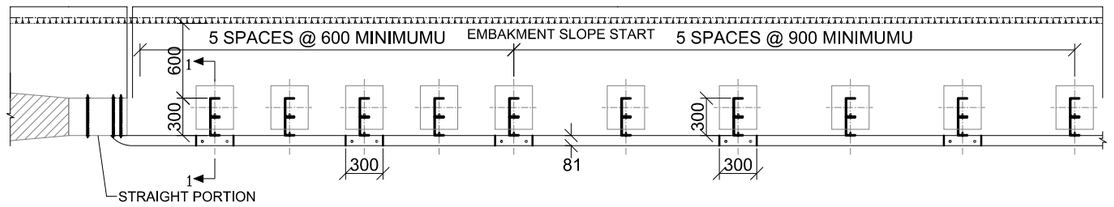
CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

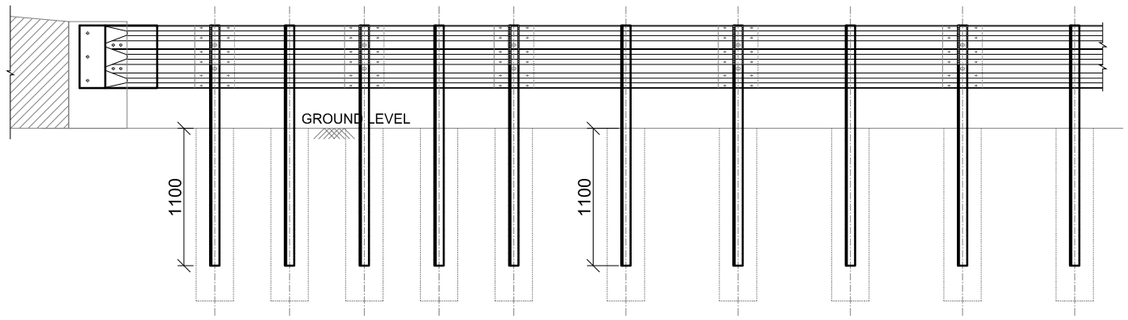
DRAWING TITLE :
TYPICAL DETAILS FOR KM STONE, 5TH KM STONE & HECTOMETER STONE

SCALE:	N.T.S.
DATE :	30/09/2025
PROJECT NO. :	XX-XXX-XX

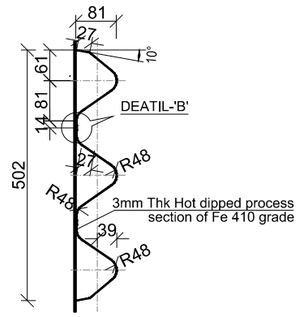
DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:	DRAWING NO. :	REVISION:
G.K.G.	D.M.S.	V.S.P.	A.N.P.	KNDL-PORT-ROAD-MISC-06	R0



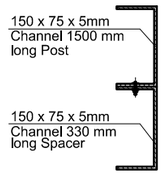
PLAN



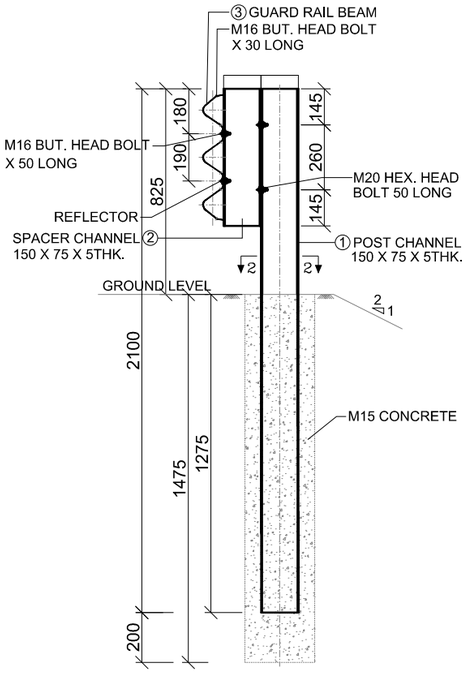
THRIE BEAM CRASH BARRIER



CROSS SECTION OF
'THRIE" BEAM



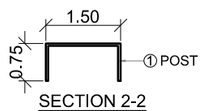
SPACER AND POST



SECTION 1-1



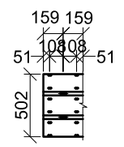
SPLICE BOLT AND NUT



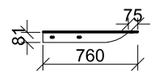
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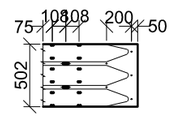


DETAIL-'B'



RAIL SPICE





THRIE BEAM TERMINAL CONNECTOR

REVISION:			
NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

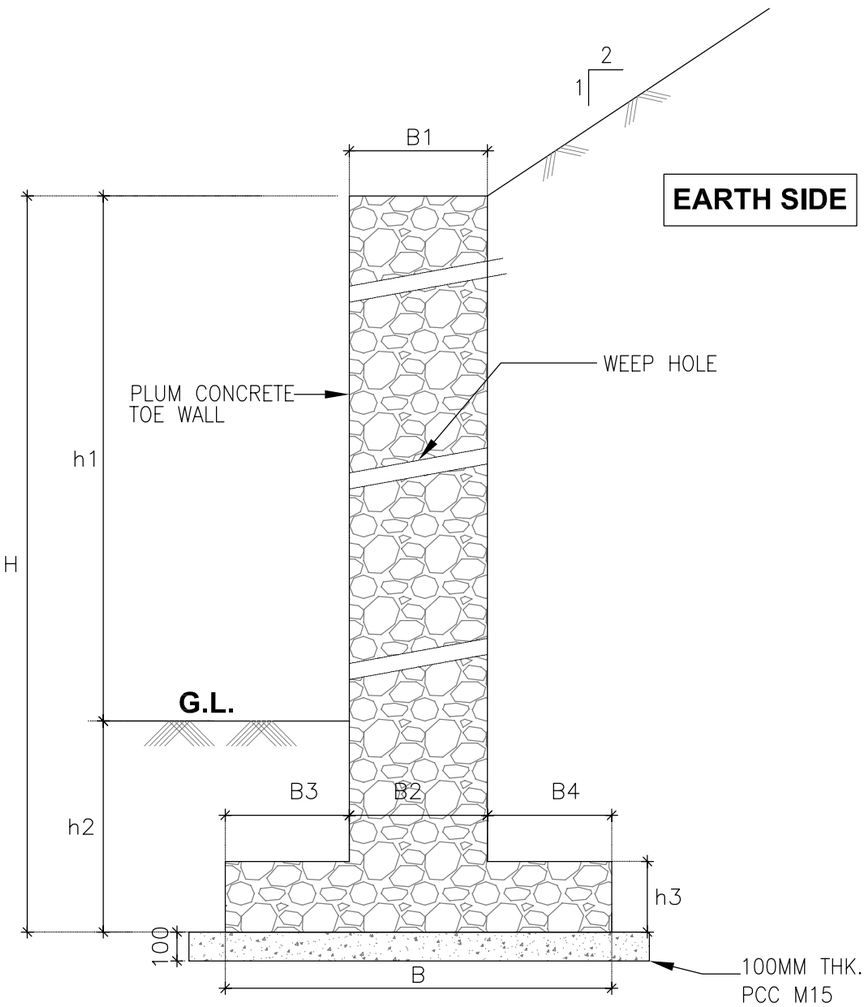
CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

DRAWING TITLE :
TYPICAL DETAILS FOR THIE BEAM CRASH BARRIER

SCALE: N.T.S.
DATE : 30/09/2025
PROJECT NO. : XX-XXX-XX
DRAWING NO. : KNDL-PORT-ROAD-MISC-07
REVISION: R0



PLUM CONCRETE TOE WALL

TABLE OF DIMENSION IN METER

EFFECTIVE HEIGHT	1.80 m
h1	0.60
h2	1.20
h3	0.65
B1	0.85
B2	0.85
B3	0.65
B4	0.65
H	1.80
B	2.15

REVISION:

NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

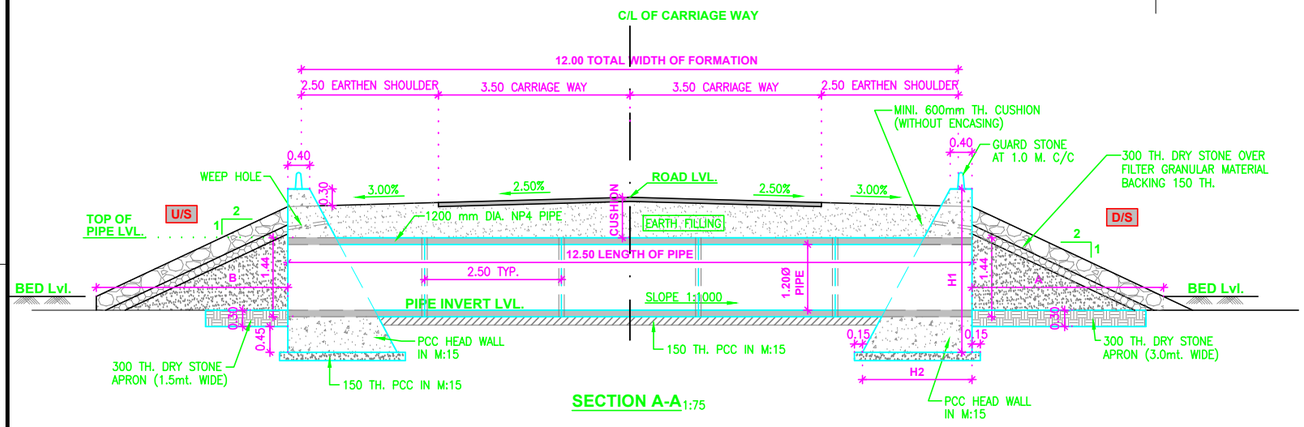
PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

DRAWING TITLE :
TYPICAL DETAIL OF TOE WALL

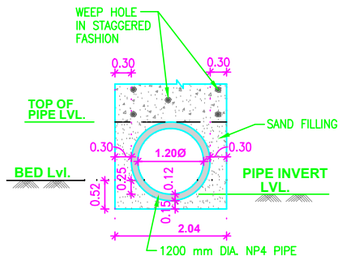
SCALE: N.T.S.
DATE : 30/09/2025
PROJECT NO. : XX-XXX-XX

DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

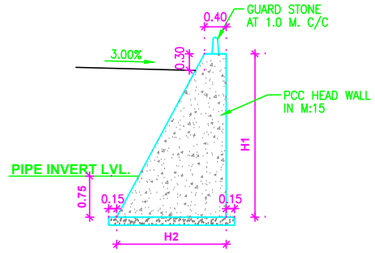
DRAWING NO. : KNDL-PORT-ROAD-MISC-08
REVISION: R0



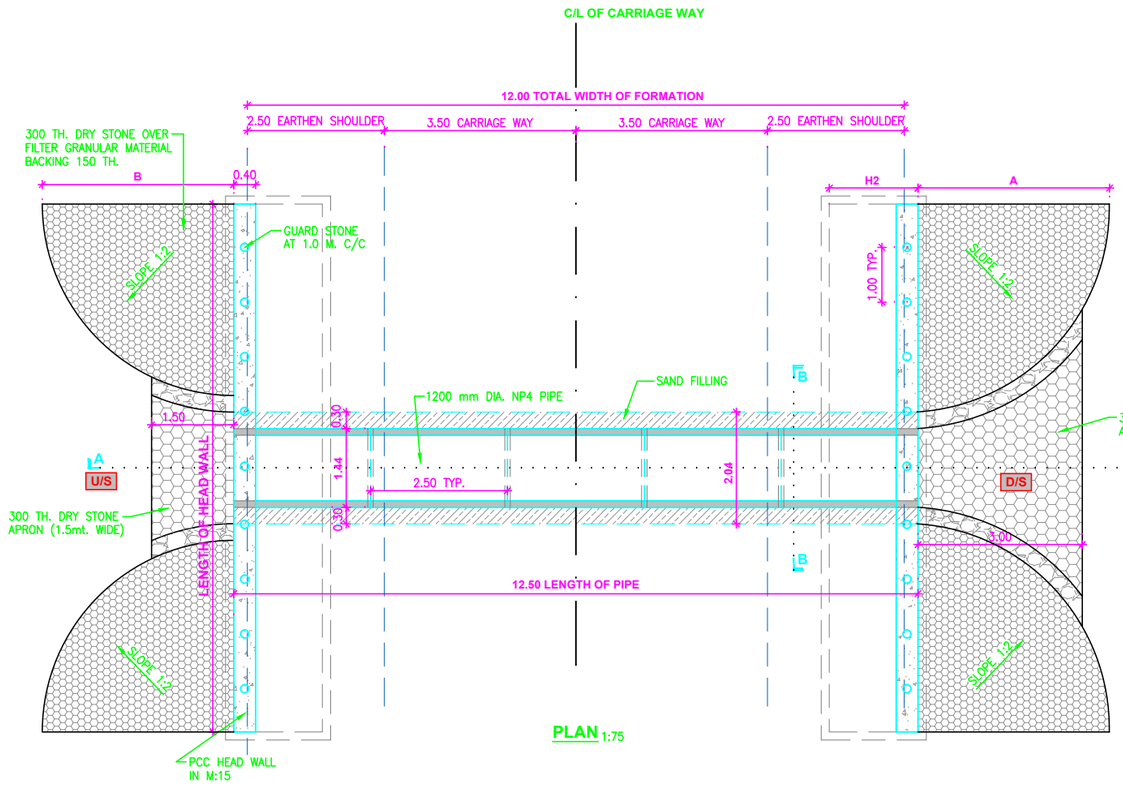
SECTION A-A 1:75



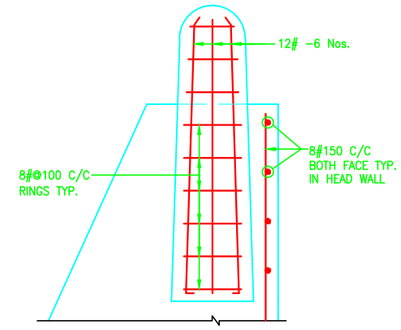
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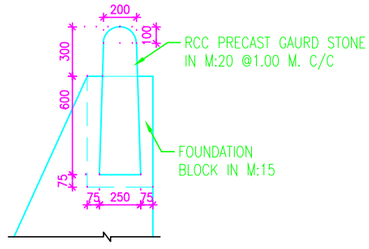
TYP. CROSS SECTION OF HEAD WALL 1:75



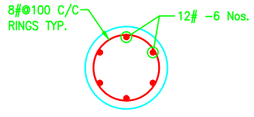
PLAN 1:75



TYP. SECTION

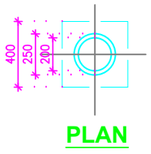


TYP. SECTION



PLAN

TYP. RC DETAILS OF GUARD STONE



PLAN

TYP. SECTION OF GUARD STONE 1:25

REVISION:			
NO.	DATE	DESCRIPTION	DRAWN BY

DESIGN CONSULTANTS:

MULTI MEDIA CONSULTANTS PVT. LTD.
401, Shivalik Shilp, Iskcon Cross Road,
S.G. Highway, Ahmedabad-380 058

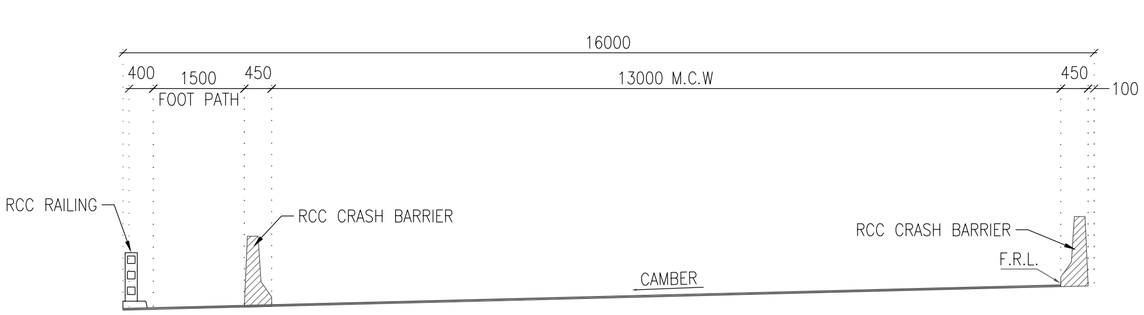
CLIENT: National Highway Division, Gandhidham
Government of Gujarat R & B Department

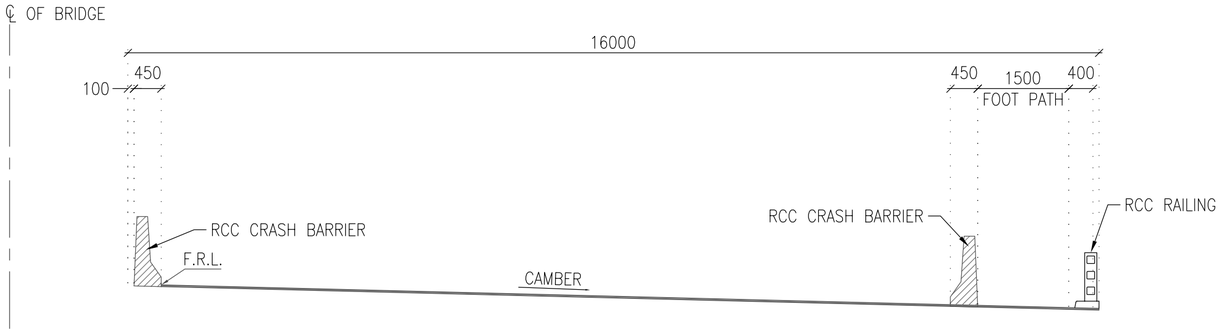
PROJECT:
WIDENING AND UPGRADATION OF NH-141(F.T. ZONE-KANDLA PORT ROAD) TO 6-LANNING FROM EXISTING 4-LANE FROM CH:5+560 TO CH:14+535 IN THE STATE OF GUJARAT

DRAWN BY :	DESIGNED BY:	CHECKED BY:	APPROVED BY:
G.K.G.	D.M.S.	V.S.P.	A.N.P.

DRAWING TITLE :
GAD OF PIPE CULVERT 1x1200mm DIA

SCALE: N.T.S.
DATE : 30/09/2025
PROJECT NO. : XX-XXX-XX
DRAWING NO. : KNDL-PORT-ROAD-PIPE CULV.-01
REVISION: R0


16000
400
1500
450
13000 M.C.W
450
100
FOOT PATH
RCC RAILING
RCC CRASH BARRIER
RCC CRASH BARRIER
F.R.L.
CAMBER


℄ OF BRIDGE
16000
100
450
450
1500
400
FOOT PATH
RCC CRASH BARRIER
F.R.L.
RCC CRASH BARRIER
RCC RAILING
CAMBER