

**PROCUREMENT OF PLANT AND WORKS (DESIGN-BUILD)**

**Bidding Document for  
Procurement of**

**Construction and Maintenance of Two Lane with paved  
Shoulder of Rorathang to Rongli Road from Km 0+000 to  
Km 8+890 [Length: 8.890 Km], in the State of Sikkim,  
under ADB Project No. [P52159-002-IND]**

**Issued on:** 6<sup>th</sup> June 2026

**Invitation for Bids No.:** 117/GoS/R&B/ADB Project/2025-26/06

**OCB No.:** 117/GoS/R&B/ADB Project/2025-26/06A

**Employer:** The State of Sikkim, acting by its Governor, represented by:

The Project Director, ADB Cell, Roads and Bridges Department, Government  
of Sikkim, Nirmaan Bhawan, Zero Point, Gangtok, Sikkim-737101

**Country:** India

# Section 1: Instructions to Bidders

This section specifies the procedures to be followed by Bidders in the preparation and submission of their Bids. Information is also provided on the submission, opening, evaluation of bids, and award of contract.

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## **A. General**

### **1. Scope of Bid**

- 1.1 In connection with the Invitation for Bids (IFB) indicated in the Bid Data Sheet (BDS), the Employer, as indicated in the BDS, issues this Bidding Document for the procurement of Plant and Works (Design–Build) as specified in Section 6 (Employer’s Requirements). The name, identification, and number of contracts of the open competitive bidding (OCB) are provided in the BDS.
- 1.2 Throughout this Bidding Document,
  - (a) the term “in writing” means communicated in written form and delivered against receipt;
  - (b) except where the context requires otherwise, words indicating the singular also include the plural, and words indicating the plural also include the singular; and
  - (c) “day” means calendar day.

### **2. Source of Funds**

- 2.1 The Borrower or Recipient (hereinafter called “Borrower”) indicated in the BDS has applied for or received financing (hereinafter called “funds”) from the Asian Development Bank (hereinafter called “ADB”) toward the cost of the project named in the BDS. The Borrower intends to apply a portion of the funds to eligible payments under the contract(s) for which this Bidding Document is issued.
- 2.1 Payments by ADB will be made only at the request of the Borrower and upon approval by ADB in accordance with the terms and conditions of the Financing Agreement between the Borrower and ADB (hereinafter called “Financing Agreement”), and will be subject in all respects to the terms and conditions of that Financing Agreement. No party other than the Borrower shall derive any rights from the Financing Agreement or have any claim to the funds.

### **3. Fraud and Corruption**

- 3.1 ADB requires Borrowers (including beneficiaries of ADB-financed activity) and their personnel, as well as firms and individuals participating in an ADB-financed activity, including but not limited to, Bidders, Suppliers, and Contractors, agents, subcontractors, subconsultants, service providers, subsuppliers, manufacturers (including their respective officers, directors, employees, and personnel) under ADB-financed contracts to observe the highest standard of ethics during the procurement and execution of such contracts in accordance with ADB’s Anticorruption Policy (1998, as amended from time to time). In pursuance of this policy, ADB
  - (a) defines, for the purposes of this provision, the terms set forth below as follows:
    - (i) “corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;
    - (ii) “fraudulent practice” means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
    - (iii) “coercive practice” means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
    - (iv) “collusive practice” means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party;



- (v) "abuse" means theft, waste, or improper use of assets related to ADB-related activity, either committed intentionally or through reckless disregard; and
  - (vi) "integrity violation" means any act, as defined under ADB's Investigation and Enforcement Framework (as amended from time to time), which violates ADB's Anticorruption Policy, including (i) to (v) above and the following: failure to disclose and manage conflict of interest,<sup>1</sup> obstructive practice, violations of debarment, retaliation against whistleblowers or witnesses, and other violations of ADB's Anticorruption Policy, including failure to adhere to the highest ethical standards.
- (b) will reject a proposal for award if it determines that the Bidder recommended for award or any of its officers, directors, employees, personnel, subconsultants, subcontractors, service providers, suppliers, or manufacturers has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations in competing for the Contract;
  - (c) will cancel the portion of the financing allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of ADB financing engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to ADB to remedy the situation, including by failing to inform ADB in a timely manner at the time they knew of the integrity violations;
  - (d) will impose enforcement and disclosure actions on a firm or an individual, at any time, in accordance with ADB's Anticorruption Policy and Investigation and Enforcement Framework, including declaring ineligible, either indefinitely or for a stated period of time, to participate<sup>2</sup> in ADB-financed, -administered, or -supported activities or to benefit from an ADB-financed, -administered, or -supported contract, financially or otherwise, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations; and
  - (e) will have the right to require that a provision be included in the Bidding Document and in contracts financed, administered, or supported by ADB, requiring Bidders, suppliers and contractors, consultants, manufacturers, service providers, and other third parties engaged or involved in ADB-related activities, and their respective officers, directors, employees, and personnel, to permit ADB or its representative to inspect the site and their assets, accounts, and records and other documents relating to the bid submission and contract performance, and to have them audited by auditors appointed by ADB.
- 3.2 All Bidders, consultants, contractors, suppliers, manufacturers, service providers, and other third parties engaged or involved in ADB-related activities, and their respective officers, directors, employees, and personnel, are required to cooperate fully in any investigation when requested by ADB to do so. As determined on a case-by-case basis by ADB, such cooperation is set out in detail in the Investigation and Enforcement Framework.
- 3.3 All Bidders, consultants, contractors, and suppliers shall require their officers, directors, employees, personnel, and agents to ensure that, in its contracts with its subconsultants, Subcontractors, and other third parties engaged or involved in ADB-related activities, such subconsultants, Subcontractors, and other third parties similarly are required to cooperate fully in any investigation when requested by ADB to do so.

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<sup>1</sup> "Conflict of interest" means any situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations.

<sup>2</sup> Whether as a Contractor, Subcontractor, Consultant, Manufacturer or Supplier, or Service Provider; or in any other capacity (different names are used depending on the particular Bidding Document)

- 3.4 The Employer hereby puts the Bidder on notice that the Bidder or any Joint Venture partner of the Bidder (if any) may not be able to receive any payments under the Contract if the Bidder or any of its Joint Venture partners, as appropriate, is, or is owned (in whole or in part) by a person or entity subject to applicable sanctions.
- 3.5 Furthermore, Bidders shall be aware of the provision stated in Sub-Clauses 1.17 and Part C [Corrupt and Fraudulent Practices] of the Particular Conditions of Contract.

#### **4. Eligible Bidders**

- 4.1 A Bidder may be a natural person, private entity, or government-owned enterprise subject to ITB 4.5—or any combination of them with a formal intent to enter into an agreement or under an existing agreement in the form of a Joint Venture. In the case of a Joint Venture,
- (a) all partners shall be jointly and severally liable; and
  - (b) the Joint Venture shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the parties of the Joint Venture during the bidding process and, in the event the Joint Venture is awarded the Contract, during contract execution.
- 4.2 A Bidder, and all parties constituting the Bidder, shall have the nationality of an eligible country, in accordance with Section 5 (Eligible Countries). A Bidder shall be deemed to have the nationality of a country if the Bidder is a citizen or is constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country. This criterion shall also apply to the determination of the nationality of proposed Subcontractors or Suppliers for any part of the Contract including related services.
- 4.3 A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to be in a conflict of interest with one or more parties in the bidding process if any of, including but not limited to, the following apply:
- (a) they have controlling shareholders in common; or
  - (b) they receive or have received any direct or indirect subsidy from any of them; or
  - (c) they have the same legal representative for purposes of this bid; or
  - (d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to material information about or improperly influence the bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or
  - (e) a Bidder participates in more than one bid in this bidding process, either individually or as a partner in a Joint Venture, except for alternative offers permitted under ITB 13 of the Bidding Document. This will result in the disqualification of all Bids in which it is involved. However, subject to any finding of a conflict of interest in terms of ITB 4.3 (a)–(d) above, this does not limit the participation of a Bidder as a Subcontractor in another Bid or of a firm as a Subcontractor in more than one Bid; or
  - (f) a Bidder, Joint Venture partner, associate, parent company, or any affiliated entity, participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the Bid; or
  - (g) a Bidder was affiliated with a firm or entity that has been hired (or is proposed to be hired) by the Employer or Borrower as Engineer for the Contract; or
  - (h) a Bidder would be providing goods, works, or nonconsulting services resulting from or directly related to consulting services for the preparation or implementation of the project specified in the BDS ITB 2.1 that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm; or
  - (i) A Bidder that has a financial or familial relationship with Employer's personnel, including

personnel of project implementing/executing agency, or of a recipient of a part of the loan who: (i) are directly or indirectly involved in the preparation of the Bidding Document or specifications of the contract, and/or the bid evaluation process of such contract; or (ii) would be involved in the implementation or supervision of such contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to ADB throughout the procurement process and execution of the contract.

- 4.4 A firm will not be eligible to participate in any procurement activities under an ADB-financed, -administered, or -supported project while under suspension or debarment by ADB pursuant to its Anticorruption Policy (see ITB 3), whether such debarment was directly imposed by ADB, or enforced by ADB pursuant to the Agreement for Mutual Enforcement of Debarment Decisions. A bid from a suspended or debarred firm will be rejected and such bid may be in breach of debarment conditions, thereby subject to further ADB's investigation.
- 4.5 Government-owned enterprises in the Employer's country shall be eligible only if they can establish that they (i) are legally and financially autonomous, (ii) operate under commercial law, and (iii) are not a dependent agency of the Employer.
- 4.6 A Bidder shall not be under suspension from bidding by the Employer as the result of the execution of a Bid-Securing Declaration.
- 4.7 Bidders shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer shall reasonably request.
- 4.8 Bidders shall be excluded if, by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of goods from, or payments to, a particular country, person, or entity in respect of goods or services originating in that country. Where the Borrower's country prohibits payments to a particular person or entity or for particular goods or services by such an act of compliance, that firm shall be excluded.

## **5. Eligible Plant, Materials, Equipment, and Services**

- 5.1 The plant, materials, equipment, and services to be supplied under the Contract shall have their origin in eligible source countries as defined in ITB 4.2, and all expenditures under the Contract will be limited to such materials, equipment, and services. At the Employer's request, Bidders may be required to provide evidence of the origin of materials, equipment, and services.
- 5.2 For purposes of ITB 5.1 above, "origin" means the place where the materials and equipment are mined, grown, produced, or manufactured, and from which the services are provided. Plant, materials, and equipment are produced when, through manufacturing, processing, or substantial or major assembling of components, a commercially recognized product results that differs substantially in its basic characteristics or in purpose or utility from its components.

## **B. Contents of Bidding Document**

### **6. Sections of Bidding Document**

- 6.1 The Bidding Document consists of Parts I, II, and III, which include all the sections indicated below, and should be read in conjunction with any addenda issued in accordance with ITB 8.

#### **PART I Bidding Procedures**

Section 1: Instructions to Bidders (ITB)

Section 2: Bid Data Sheet (BDS)

Section 3: Evaluation and Qualification Criteria (EQC)

Section 4: Bidding Forms (BDF)

## Section 5: Eligible Countries (ELC)

### PART II Requirements

#### Section 6: Employer's Requirements (ERQ)

### PART III Conditions of Contract and Contract Forms

#### Section 7: General Conditions of Contract (GCC)

#### Section 8: Particular Conditions of Contract (PCC) including:

Part A – Contract Data,

Part B – Special Provisions,

Part C – Corrupt and Fraudulent Practices,

Part D – Environmental, Health and Safety (EHS),

Part E – Performance Damages (optional), and

Part F – Bonuses (optional)

#### Section 9: Contract Forms (COF)

- 6.2 The IFB issued by the Employer is not part of the Bidding Document.
- 6.3 The Employer is not responsible for the completeness of the Bidding Document and its addenda, if they were not obtained directly from the source stated by the Employer in the IFB.
- 6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Document may result in the rejection of the bid.

## **7. Clarification of Bidding Document, Site Visit, Pre-Bid Meeting**

- 7.1 A prospective Bidder requiring any clarification on the Bidding Document shall contact the Employer in writing at the Employer's address indicated in the BDS or raise his inquiries during the pre-bid meeting if provided for in accordance with ITB 7.4. The Employer will respond in writing to any request for clarification, provided that such request is received no later than 21 days prior to the deadline for submission of bids. The Employer shall forward copies of its response to all Bidders who have acquired the Bidding Document in accordance with ITB 6.3, including a description of the inquiry, but without identifying its source. Should the Employer deem it necessary to amend the Bidding Document as a result of a request for clarification, it shall do so following the procedure under ITB 8 and ITB 23.2.
- 7.2 The Bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the Bid and entering into a contract for the design and construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.
- 7.3 The Bidder and any of its personnel or agents will be granted permission by the Employer to enter its premises and lands for the purpose of such visit, but only upon the express condition that the Bidder, its personnel, and agents will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.
- 7.4 The Bidder's designated representative is invited to attend a pre-bid meeting, if provided for in the BDS. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 7.5 The Bidder is requested to submit any questions in writing, to reach the Employer not later than 1 week before the meeting.

- 7.6 Minutes of the pre-bid meeting, including the text of the questions raised, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Bidders who have acquired the Bidding Document in accordance with ITB 6.3. Any modification to the Bidding Document that may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an addendum pursuant to ITB 8 and not through the minutes of the pre-bid meeting.
- 7.7 Non-attendance at the pre-bid meeting will not be a cause for disqualification of a Bidder.

## **8. Amendment of Bidding Document**

- 1.1 At any time prior to the deadline for submission of Bids, the Employer may amend the Bidding Document by issuing addenda.
- 1.2 Any addendum issued shall be part of the Bidding Document and shall be communicated in writing to all who have obtained the Bidding Document from the Employer in accordance with ITB 6.3.
- 1.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Employer may, at its discretion, extend the deadline for the submission of Bids, pursuant to ITB 23.2.

## **C. Preparation of Bids**

### **9. Cost of Bidding**

- 9.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

### **10. Language of Bid**

- 10.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer, shall be written in the language specified in the BDS. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the BDS, in which case, for purposes of interpretation of the Bid, such translation shall govern.

### **11. Documents Comprising the Bid**

- 11.1 The Bid shall comprise two envelopes submitted simultaneously, one called the Technical Bid containing the documents listed in ITB 11.2 and the other the Price Bid containing the documents listed in ITB 11.3, both envelopes enclosed together in an outer single envelope.
- 11.2 The Technical Bid shall comprise the following:
- (a) Letter of Technical Bid;
  - (b) Bid Security or Bid-Securing Declaration, in accordance with ITB 20;
  - (c) alternative Bids, if permissible, in accordance with ITB 13;
  - (d) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 21.2;
  - (e) documentary evidence in accordance with ITB 15, establishing the Bidder's qualifications to perform the contract if its Bid is accepted;
  - (f) Technical Proposal in accordance with ITB 14;



- (g) documentary evidence in accordance with ITB 16, that the Plant and Works, offered by the Bidder conform to the Bidding Document; and
  - (h) any other document required in the BDS.
- 11.3 The Price Bid Shall Comprise the following;
  - (a) Letter of Price Bid;
  - (b) completed Price Schedules, in accordance with ITB 12 and ITB 17;
  - (c) alternative price Bids, at Bidder's option and if permissible, in accordance with ITB 13; and
  - (d) any other document required in the BDS.
- 11.4 In addition to the requirements under ITB 11.1, Bids submitted by a Joint Venture shall include a copy of the Joint Venture Agreement entered into by all partners. Alternatively, a Letter of Intent to execute a Joint Venture Agreement in the event of a successful Bid shall be signed by all partners and submitted with the Bid, together with a copy of the proposed agreement.

## **12. Letters of Bid and Schedules**

- 12.1 The Letters of Technical Bid and Price Bid, and Schedules, including Schedule of Priced Activities and Sub-Activities, shall be prepared using the relevant forms furnished in Section 4 (Bidding Forms). The forms must be completed without any alterations to the text, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested and as required in the BDS.

## **13. Alternative Bids**

- 13.1 Unless otherwise indicated in the BDS, alternative Bids shall not be considered. If permitted, the evaluation method will be as specified in Section 3 (Evaluation and Qualification Criteria).
- 13.2 Unless otherwise indicated in the BDS, alternative times for completion shall not be considered. If permitted, the evaluation method will be as specified in Section 3 (Evaluation and Qualification Criteria).
- 13.3 Unless otherwise indicated in the BDS, alternative technical solutions shall not be considered. If permitted to submit alternative technical solutions for specified parts of the Works, such parts will be identified in the BDS and described in Section 6 (Employer's Requirements). The method for their evaluation will be stipulated in Section 3 (Evaluation and Qualification Criteria).
- 13.4 Except as provided under ITB 13.3 above, Bidders wishing to offer technical alternatives to the requirements of the Bidding Document must first price the Employer's conceptual design as described in the Bidding Document and shall further provide all information necessary for a complete evaluation of the alternative by the Employer, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details. Only the technical alternatives, if any, of the Most Advantageous Bid conforming to the basic technical requirements shall be considered by the Employer.

## **14. Technical Proposal, Subcontractors**

- 14.1 The Bidder shall furnish a Technical Proposal including design methodology; a statement of work methods, equipment, personnel, and schedule as well as the bidder's environmental, health, and safety management plan (Bidder's EHSMP), and other environmental, health, and safety (EHS) management documents required in the BDS, commensurate with the proposed scope of works; and any other information as stipulated in Section 4 (Bidding Forms), in sufficient detail to demonstrate the adequacy of the Bidders' proposal to meet the work requirements and the completion time.
- 14.2 Unless otherwise stated in the BDS, the Employer does not intend for the contractor to execute any specific elements of the Works through nominated subcontractors.

- 14.3 If subcontractors are proposed for any of the key activities listed in Criterion 1.4.2(b) of Section 3 (Evaluation and Qualification Criteria), they shall be considered as “Specialist Subcontractors” and shall meet qualification requirements for the relevant key activities.

## **15. Documents Establishing the Qualifications of the Bidder**

- 15.1 To establish its qualifications to perform the Contract in accordance with Section 3 (Evaluation and Qualification Criteria) the Bidder shall provide the information requested in the corresponding information sheets included in Section 4 (Bidding Forms).
- 15.2 Domestic Bidders, individually or in Joint Ventures, applying for eligibility for domestic preference shall supply all information required to satisfy the criteria for eligibility as described in ITB 35.

## **16. Documents Establishing Conformity of the Plant and Works**

- 16.1 The documentary evidence of the conformity of the Plant and Works to the Bidding Document may be in the form of literature, drawings, and data, and the Bidder shall furnish:
- (a) a detailed description of the essential technical and performance characteristics of the Plant, Materials, and Services, including the functional guarantees of the proposed Plant and Works, in response to the specification;
  - (b) a list giving full particulars, including available sources, of all spare parts and special tools necessary for the proper and continuing functioning of the plant for the period named in the BDS, following completion of plant and services in accordance with provisions of the contract; and
  - (c) a commentary on the Employer’s Specifications and adequate evidence demonstrating the substantial responsiveness of the plant and services to those specifications. Bidders shall note that standards for workmanship, materials, and equipment designated by the Employer in the Bidding Document are intended to be descriptive (establishing standards of quality and performance) only and not restrictive. The Bidder may substitute alternative standards, brand names, and/or catalog numbers in its Bid, provided that it demonstrates to the Employer’s satisfaction that the substitutions are substantially equivalent or superior to the standards designated in the Specifications.

## **17. Bid Prices and Discounts**

- 17.1 The prices and discounts quoted by the Bidder in the Letter of Price Bid and in the Schedules of Priced Activities and Sub-Activities shall conform to the requirements specified in ITB 17.2. Unless otherwise specified in the BDS, Bidders shall quote for the entire Works on a “single responsibility” basis such that the total lump sum Bid price, subject to any adjustments in accordance with the Contract, covers all the Contractor’s obligations mentioned in or to be reasonably inferred from the Bidding Document in respect of the design, manufacture—including procurement and subcontracting (if any)—delivery, construction, and completion of the Works. This includes all requirements under the Contractor’s responsibilities for testing, pre-commissioning and commissioning (as applicable) of the Works and, where so required by the Bidding Document, the acquisition of all permits, approvals, and licenses, and others; the operation, maintenance, and training services and such other items and services as may be specified in the Bidding Document, all in accordance with the requirements of the General Conditions.
- 17.2 The Bidders shall give a breakdown of the prices in the manner and detail called for in the Schedule of Priced Activities and Sub-Activities included in Section 4 (Bidding Forms), including additional forms with further breakdown of prices for Sub-Activities, as appropriate. The total of the prices of the items

- in the Schedule of Priced Activities is the Bidder's bid to complete the works on a "single responsibility" basis. The cost of any items that the Bidder may have omitted is deemed to be included in the Schedule of Priced Activities and Sub-Activities and will not be paid for separately by the Employer.
- 17.3 The price to be quoted in the Letter of Price Bid, in accordance with ITB 12.1, shall be the total price of the Bid, excluding any discounts offered. Absence of the total bid price in the Letter of Bid may result in the rejection of the Bid.
- 17.4 The Bidder shall quote any discounts and the methodology for their application in the Letter of Price Bid, in accordance with ITB 12.1.
- 17.5 The prices shall be either fixed or adjustable as specified in the BDS.
- (a) In the case of Fixed Price, prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account. A Bid submitted with an adjustable price will be treated as nonresponsive and rejected.
  - (b) In the case of Adjustable Price, prices quoted by the Bidder shall be subject to adjustment during the performance of the contract to reflect changes in the cost elements such as labor, material, transport, and contractor's equipment in accordance with the provisions of the Conditions of Contract. A Bid submitted with a fixed price will be treated as nonresponsive and be rejected. The Bidder shall furnish the indexes and weightings for the price adjustment formulas in the Tables of Adjustment Data included in Section 4 (Bidding Forms) and the Employer may require the Bidder to justify its proposed indexes and weightings. Any bid that omits indexes and weightings shall be subject to clarification with the Bidder.
- 17.6 If so indicated in ITB 1.1, bids are being invited for individual contracts or for any combination of contracts (packages). Bidders wishing to offer any price reduction for the award of more than one Contract shall specify in their bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Price reductions or discounts shall be submitted in accordance with ITB 17.4, provided the Bids for all contracts are submitted and opened at the same time.
- 17.7 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 28 days prior to the deadline for submission of bids, shall be included in the rates and prices and the total Bid Price submitted by the Bidder.

## **18. Currencies of Bid and Payment**

- 18.1 The prices and daywork rates in the Schedules shall be quoted by the Bidder entirely in the currency specified in the BDS.
- 18.2 Bidders shall indicate the portion of the bid price that corresponds to expenditures incurred in the currency of the Employer's country in the Schedule of Payment Currencies included in Section 4 (Bidding Forms).
- 18.3 Bidders expecting to incur expenditures in other currencies for inputs to the Works supplied from outside the Employer's country and wishing to be paid accordingly may indicate the other currencies in the Schedule of Payment Currencies included in Section 4 (Bidding Forms).
- 18.4 The rates of exchange to be used by the Bidder for currency conversion during bid preparation shall be the selling rates for similar transactions prevailing on the date 28 days prior to the deadline for submission of bids published by the source specified in the BDS. If exchange rates are not so published for certain currencies, the Bidder shall state the rates used and the source. Bidders should note that for the purpose of payments, the exchange rates confirmed by the source specified in the BDS as the selling rates prevailing 28 days prior to the deadline for submission of Bids shall apply for the duration of the Contract so that no currency exchange risk is borne by the Bidder.
- 18.5 Foreign currency requirements indicated by the Bidders in the Schedule of Payment Currencies shall



include, but not be limited to the specific requirements for

- (a) expatriate staff and labor employed directly on the Works;
- (b) social, insurance, medical, and other charges relating to such expatriate staff and labor, and foreign travel expenses;
- (c) imported materials, both temporary and permanent, including fuels, oil, and lubricants required for the Works;
- (d) depreciation and usage of imported Plant and Contractor's Equipment, including spare parts, required for the Works;
- (e) foreign insurance and freight charges for imported materials, Plant and Contractor's Equipment, including spare parts; and
- (f) overhead expenses, fees, profit, and financial charges arising outside the Employer's country in connection with the Works.

18.6 Bidders may be required by the Employer to clarify their foreign currency requirements, and to substantiate that the amounts included in the prices and daywork rates and shown in the Schedule of Payment Currencies are reasonable and responsive to ITB 18.3 above, in which case a detailed breakdown of its foreign currency requirements shall be provided by the Bidder.

18.7 Bidders should note that during the progress of the Works, the foreign currency requirements of the outstanding balance of the Contract Price may be adjusted by agreement between the Employer and the Contractor to reflect any changes in foreign currency requirements for the Contract, in accordance with Sub-Clause 14.15 of the Conditions of Contract. Any such adjustment shall be effected by comparing the percentages quoted in the bid with the amounts already used in the Works and the Contractor's future needs for imported items.

## **19. Period of Validity of Bids**

19.1 Bids shall remain valid for the bid validity period specified in the BDS. The bid validity period starts from the date fixed for the bid submission deadline date prescribed by the Employer in accordance with ITB 23.1. A bid valid for a shorter period shall be rejected by the Employer as nonresponsive.

19.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Employer may request Bidders to extend the period of validity of their Bids. The request and the responses shall be made in writing. If a bid security is requested in accordance with ITB 20, it shall also be extended 28 days beyond the deadline of the extended validity period. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request shall not be required or permitted to modify its Bid.

## **20. Bid Security/ Bid-Securing Declaration**

20.1 Unless otherwise specified in the BDS, the Bidder shall furnish as part of its Bid, in original form, either a Bid-Securing Declaration or a bid security as specified in the BDS. In the case of a bid security, the amount and currency shall be as specified in the BDS.

20.2 If a Bid-Securing Declaration is required pursuant to ITB 20.1, it shall use the form included in Section 4 (Bidding Forms). The Employer will declare a Bidder ineligible to be awarded a Contract for a specified period of time, as indicated in the BDS, if the Bid-Securing Declaration is executed.

20.3 If a bid security is specified pursuant to ITB 20.1, the bid security shall be, at the Bidder's option, in any of the following forms:

- a) an unconditional bank guarantee (hard copy of the bank guarantee or in the form of SWIFT message MT760), or
- b) an irrevocable letter of credit, or
- c) a cashier's or certified check

all from a reputable source from an eligible country as described in Section 5 (Eligible Countries). In the case of a bank guarantee, the bid security shall be submitted either using the Bid Security Form included in Section 4 (Bidding Forms) or another form acceptable to the Employer. The form must include the complete name of the Bidder. The bid security shall be valid for 28 days beyond the original validity period of the bid, or beyond any period of extension if requested under ITB 19.2.

- 20.4 Unless otherwise specified in the BDS, any Bid not accompanied by a substantially compliant bid security or Bid-Securing Declaration, if one is required in accordance with ITB 20.1, shall be rejected by the Employer as nonresponsive.
- 20.5 If a bid security is specified pursuant to ITB 20.1, the bid security of substantially nonresponsive Technical Bids shall be returned before opening the Price Bids. The bid security of unsuccessful Bidders at Price Bid Evaluation shall be returned promptly upon the successful Bidder's furnishing of the Performance Security pursuant to ITB 47.
- 20.6 If a bid security is specified pursuant to ITB 20.1, the bid security of the successful Bidder shall be returned promptly once the successful Bidder has signed the Contract and furnished the required Performance Security.
- 20.7 The bid security may be forfeited or the Bid-Securing Declaration executed, if
- (a) notwithstanding ITB 25.3, a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid, except as provided in ITB 19.2; or
  - (b) the successful Bidder fails to
    - sign the Contract in accordance with ITB 46;
    - furnish a Performance Security in accordance with ITB 47;
    - accept the arithmetical correction of its Bid in accordance with ITB 33; or
    - furnish a domestic preference security if so required.
- 20.8 If the bid security is required as per ITB 20.1, the bid security of a Joint Venture shall be in the name of the Joint Venture that submits the Bid. If the Joint Venture has not been legally constituted at the time of bidding, the bid security shall be in the name of any or all of the Joint Venture partners. If the Bid-Securing Declaration is required as per ITB 20.1, the Bid-Securing Declaration of a Joint Venture shall be in the name of the Joint Venture that submits the Bid. If the Joint Venture has not been legally constituted at the time of bidding, the Bid-Securing Declaration shall be in the names of all future partners as named in the letter of intent mentioned in ITB 4.1.

## **21. Format and Signing of Bid**

- 21.1 The Bidder shall prepare one original set of documents comprising the Technical Bid and one original set of the Price Bid as described in ITB 11 and clearly mark it "ORIGINAL-TECHNICAL BID and "ORIGINL PRICE BID." Alternative Bids, if permitted in accordance with ITB 13, shall be clearly marked "ALTERNATIVE." In addition, the Bidder shall submit copies of the Technical and Price Bid, in the number specified in the BDS and clearly mark each of them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.
- 21.2 The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified in the BDS and shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature. If a Bidder submits a deficient authorization, the Bid shall not be rejected in the first instance. The Employer shall request the Bidder to submit an acceptable authorization within the number of days as specified in the BDS. Failure to provide an acceptable authorization within the period as stated in the Employer's

request shall cause the rejection of the Bid. If either the Letter of Technical Bid or Price Bid or Bid-Securing Declaration (if applicable) is not signed, the Bid shall be rejected.

- 21.3 Any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Bid.

## **D. Submission and Opening of Bids**

### **22. Sealing and Marking of Bids**

- 22.1 Bidders shall submit their Bids as specified in the BDS. Procedures for submission, sealing, and marking are as follows:

- (a) Bidders submitting Bids by mail or by hand shall enclose the original of the Technical Bid, the original of the Price Bid, and each copy of the Technical Bid and each copy of the Price Bid, in separate sealed envelopes, duly marking the envelopes as "ORIGINAL - TECHNICAL BID," "ORIGINAL - PRICE BID," and "COPY NO... - TECHNICAL BID" and "COPY NO.... - PRICE BID." These envelopes, the first containing the originals and the others containing copies, shall then be enclosed in one single envelope per set. If permitted in accordance with ITB 13, alternative Bids shall be similarly sealed, marked and included in the sets. The rest of the procedure shall be in accordance with ITB 22.2 and ITB 22.5.
- (b) Bidders submitting Bids electronically shall follow the electronic bid submission procedures specified in the BDS.

- 22.2 The inner and outer envelopes shall

- (a) bear the name and address of the Bidder;
- (b) be addressed to the Employer in accordance with BDS 22.1;
- (c) bear the specific identification of this bidding process indicated in the BDS 1.1; and
- (d) bear a warning not to open before the time and date for bid opening.

- 22.3 The outer envelopes and the inner envelopes containing the Technical Bid shall bear a warning not to open before the time and date for the opening of Technical Bid, in accordance with ITB 25.1.

- 22.4 The inner envelopes containing the Price Bid shall bear a warning not to open until advised by the Employer in accordance with ITB 26.7.

- 22.5 If all envelopes are not sealed and marked as required, the Employer will assume no responsibility for the misplacement or premature opening of the Bid.

### **23. Deadline for Submission of Bids**

- 23.1 Bids must be received by the Employer at the address and no later than the date and time indicated in the BDS.

- 23.2 The Employer may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Document in accordance with ITB 8, in which case all rights and obligations of the Employer and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

### **24. Late Bids**

- 24.1 The Employer shall not consider any Bid that arrives after the deadline for submission of bids, in accordance with ITB 23. Any bid received by the Employer after the deadline for submission of Bids shall be declared late, rejected, and returned unopened to the Bidder.

## **25. Withdrawal, Substitution, and Modification of Bids**

- 25.1 A Bidder may withdraw, substitute, or modify its Technical Bid and Price Bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB 21.2 (except for withdrawal notices, which do not require copies). The corresponding substitution or modification of the Bid must accompany the respective written notice. All notices must be
- (a) prepared and submitted in accordance with ITB 21 and ITB 22 (except for withdrawal notices, which do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," "MODIFICATION"; and
  - (b) received by the Employer no later than the deadline prescribed for submission of Bids, in accordance with ITB 23.
- 25.2 Bids requested to be withdrawn in accordance with ITB 25.1 shall be returned unopened to the Bidders.
- 25.3 No Bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of Bids and the expiration of the period of bid validity specified by the Bidder on the Letters of Technical Bid or Price Bid or any extension thereof.

## **26. Bid Opening**

- 26.1 The Employer shall open the Technical Bids in public at the address, on the date and time specified in the BDS in the presence of Bidders' designated representatives and anyone who chooses to attend. Any specific electronic bid opening procedures required if electronic bidding is permitted in accordance with ITB 22.1, shall be as specified in the BDS. The Price Bids will remain unopened and will be held in custody of the Employer until the specified time of their opening. If the Technical Bid and the Price Bid are submitted together in one envelope, the Employer may reject the entire Bid. Alternatively, the Price Bid may be immediately resealed for later evaluation.
- 26.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding Bid shall not be opened, but returned to the Bidder. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening.
- 26.3 Second, outer envelopes marked "SUBSTITUTION" shall be opened. The inner envelopes containing the Substitution Technical Bid and/or Substitution Price Bid shall be exchanged for the corresponding envelopes being substituted, which are to be returned to the Bidder unopened. Only the Substitution Technical Bid, if any, shall be opened, read out, and recorded. Substitution Price Bid will remain unopened in accordance with ITB 26.1. No envelope shall be substituted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out and recorded at bid opening.
- 26.4 Next, outer envelopes marked "MODIFICATION" shall be opened. No Technical Bid and/or Price Bid shall be modified unless the corresponding modification notice contains a valid authorization to request the modification and is read out and recorded at the opening of Technical Bids. Only the Technical Bids, both Original as well as Modification, are to be opened, read out, and recorded at the opening. Price Bids, both Original as well as Modification, will remain unopened in accordance with ITB 26.1.
- 26.5 All other envelopes holding the Technical Bids shall be opened one at a time, and the following read out and recorded:
- (a) the name of the Bidder;
  - (b) whether there is a modification or substitution;
  - (c) the presence of a bid security or Bid-Securing Declaration, if required; and

(d) any other details as the Employer may consider appropriate.

Only Technical Bids and alternative Technical Bids read out and recorded at bid opening shall be considered for evaluation. Unless otherwise specified in the BDS, all pages of the Letter of Technical Bid are to be initialed by at least three representatives of the Employer attending bid opening. No Bid shall be rejected at the opening of Technical Bids except for late bids, in accordance with ITB 23.1.

- 26.6 The Employer shall prepare a record of the Technical bid opening, which shall include, as a minimum, the name of the Bidder and whether there is a withdrawal, substitution, or modification; alternative bids; and the presence or absence of a bid security or Bid-Securing Declaration, if one was required. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders who submitted Bids on time, and posted online when electronic bidding is permitted.
- 26.7 At the end of the evaluation of the Technical Bids, the Employer will invite bidders who have submitted substantially responsive Technical Bids and who have been determined as being qualified for award to attend the opening of the Price Bids. The date, time, and location of the opening of Price Bids will be advised in writing by the Employer. Bidders shall be given reasonable notice of the opening of Price Bids.
- 26.8 The Employer will notify in writing Bidders who have been rejected for submitting nonresponsive Technical Bids and return their Price Bids unopened together with their bid securities, before opening the Price Bids of the substantially responsive Bidders.
- 26.9 The Employer shall conduct the opening of Price Bids of all Bidders who submitted substantially responsive Technical Bids, in the presence of Bidders' representatives who choose to attend at the address, on the date, and time specified by the Employer. The Bidder's representatives who are present shall be requested to sign a register evidencing their attendance.
- 26.10 All envelopes containing Price Bids shall be opened one at a time and the following read out and recorded:
- (a) the name of the Bidder;
  - (b) whether there is a modification or substitution;
  - (c) the Bid Prices, including any discounts and alternative offers; and
  - (d) any other details as the Employer may consider appropriate.

Only Price Bids discounts, and alternative offers read out and recorded during the opening of Price Bids shall be considered for evaluation. Unless otherwise specified in the BDS, all pages of the Letter of Price Bid and Bill of Quantities are to be initialed by at least three representatives of the Employer attending bid opening. No Bid shall be rejected at the opening of Price Bids.

- 26.11 The Employer shall prepare a record of the opening of Price Bids that shall include, as a minimum, the name of the Bidder, the Bid Price (per lot if applicable), any discounts, and alternative offers. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders who submitted Bids on time, and posted online when electronic bidding is permitted.

## **E. Evaluation and Comparison of Bids**

### **27. Confidentiality**

- 27.1 Information relating to the examination, evaluation, comparison, and post-qualification of Bids and recommendation of contract award, shall not be disclosed to Bidders or any other persons not



officially concerned with such process until information on the Contract award is communicated to all Bidders.

27.2 Any attempt by a Bidder to influence the Employer in the evaluation of the Bids or Contract award decisions may result in the rejection of its Bid.

27.3 Notwithstanding ITB 27.2, from the time of bid opening to the time of Contract award, if any Bidder wishes to contact the Employer on any matter related to the bidding process, it may do so in writing.

## **28. Clarification of Bids**

28.1 To assist in the examination, evaluation, and comparison of the Technical and Price Bids, and qualification of the Bidders, the Employer may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder that is not in response to a request by the Employer shall not be considered. The Employer's request for clarification and the response shall be in writing. No change in the substance of the Technical Bid or prices in the Price Bids shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids, in accordance with ITB 34.

28.2 If a Bidder does not provide clarifications of its Bid by the date and time set in the Employer's request for clarification, its Bid may be rejected .

## **29. Qualification of the Bidder**

29.1 The Employer shall determine to its satisfaction whether a Bidder meets the qualifying criteria specified in Section 3 (Evaluation and Qualification Criteria).

29.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 15.1. Unless permitted in the BDS, the determination shall not take into consideration the qualifications of other firms such as the Bidder's subsidiaries, parent entities, or affiliates.

29.3 An affirmative determination shall be a prerequisite for proceeding with the next step of the evaluation process under ITB 31. A negative determination shall result in disqualification of the Bid in which event the Employer shall return the unopened Price Bid to the Bidder.

## **30. Deviations, Reservations, and Omissions**

30.1 During the evaluation of Bids, the following definitions apply:

- (a) "Deviation" is a departure from the requirements specified in the Bidding Document;
- (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document; and
- (c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Document.

## **31. Determination of Responsiveness**

31.1 The Employer shall examine the Technical Bid to confirm that all documents and technical documentation requested in ITB 11.2 have been provided, and to determine the completeness of each document submitted.

31.2 The Employer shall confirm that the following documents and information have been provided in the Technical Bid. If any of these documents or information is missing, the offer shall be rejected.

- (a) Letter of Technical Bid;

- (b) written confirmation of authorization to commit the Bidder;
  - (c) Bid Security or Bid-Securing Declaration, if applicable; and
  - (d) Technical Proposal in accordance with ITB 16.
- 31.3 The Employer's determination of a Bid's responsiveness is to be based on the contents of the Bid itself, as defined in ITB11.
- 31.4 A substantially responsive Technical Bid is one that meets the requirements of the Bidding Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that,
- (a) if accepted, would
    - (i) affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or
    - (ii) limit in any substantial way, inconsistent with the Bidding Document, the Employer's rights, or the Bidder's obligations under the proposed Contract; or
  - (b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive Bids.
- 31.5 The Employer shall examine the technical aspects of the Bid submitted in accordance with ITB 14, Technical Proposal, in particular, to confirm that all requirements of Section 6 (Employer's Requirements) have been met without any material deviation, reservation, or omission.
- 31.6 If a Bid is not substantially responsive to the requirements of the Bidding Document, it shall be rejected by the Employer and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

## **32. Nonmaterial Nonconformities**

- 32.1 Provided that a Bid is substantially responsive, the Employer may waive any nonconformities in the Bid that do not constitute a material deviation, reservation, or omission.
- 32.2 Provided that a Technical Bid is substantially responsive, the Employer may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the Technical Bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.
- 32.3 Provided that a Technical Bid is substantially responsive, the Employer shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or nonconforming item or component. The adjustment shall be made using the method indicated in Section 3 (Evaluation and Qualification Criteria).

## **33. Correction of Arithmetical Errors**

- 33.1 During the evaluation of Price Bids, the Employer shall correct arithmetical errors on the following basis:
- (a) Schedule of Priced Sub-Activities: where there is a discrepancy between the total of the amounts given under the column for Sub-Activity Price and the amount given under the total for the Sub-Activity, the former shall prevail and the latter will be corrected accordingly;
  - (b) Schedule of Priced Activities: where there is a discrepancy between the total of the amounts given under the column for the Activity Price and the amount given under the total price of Activities, the former shall prevail and the latter will be corrected accordingly;

- (c) where there is a discrepancy between the total of the amounts in the Schedule of Priced Sub-Activities and the corresponding amount in the Schedule of Priced Activities, the former shall prevail and the latter will be corrected accordingly;
- (d) Grand Summary: where there is a discrepancy between the total price of Activities in the Schedule of Priced Activities and the amount given in Grand Summary, the former shall prevail and the latter will be corrected accordingly;
- (e) if there is a discrepancy between the bid price given in the Grand Summary and the bid price in item (d) of the Letter of Bid, the bid price given in the Grand Summary will prevail and the bid price in item (d) of the Letter of Bid will be corrected; and
- (f) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) to (e) above.

33.2 If the Bidder that submitted the Most Advantageous Bid does not accept the correction of errors, its Bid shall be disqualified and its bid security may be forfeited or its Bid-Securing Declaration executed.

#### **34. Conversion to Single Currency**

34.1 For evaluation and comparison purposes, the currency(ies) of the Bid shall be converted into a single currency as specified in the BDS.

#### **35. Domestic Preference**

35.1 Unless otherwise specified in the BDS, domestic preference shall not apply.

#### **36. Financial Evaluation**

36.1 Provided that a Bid is substantially responsive with the technical evaluation in accordance with Section 3 (Evaluation and Qualification Criteria), the Employer will proceed with the detailed evaluation of financial aspects. The Employer shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.

36.2 To evaluate the Price Bid, the Employer shall consider the following:

- (a) the bid price, excluding Provisional Sums and the provision, if any, for contingencies in the Grand Summary, but including Daywork items, where priced competitively;
- (b) price adjustment for correction of arithmetic errors in accordance with ITB 33.1;
- (c) price adjustment due to discounts offered in accordance with ITB 17.4;
- (d) price adjustment for nonmaterial nonconformities in accordance with ITB 32.3;
- (e) converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITB 35;
- (f) assessment whether the bid is abnormally low in accordance with ITB 38; and
- (g) application of all the evaluation factors indicated in Section 3 (Evaluation and Qualification Criteria).

36.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in the bid evaluation.

36.4 If this Bidding Document allows Bidders to submit separate bids for different contracts (or lots), and the award to a single Bidder of multiple contracts (or lots), the methodology to determine the Most Advantageous Bid combinations, including any discounts offered in the Letter of Bid and Schedule, is specified in Section 3 (Evaluation and Qualification Criteria).



### **37. Lowest Evaluated Bid**

- 37.1 The Employer will proceed with the comparison of the Bids prices amongst the substantially responsive bids. The Bid with the lowest price will be determined as the Most Advantageous Bid.

### **38. Abnormally Low Bids**

- 38.1 An abnormally low bid is one where the bid price, in combination with other elements of the bid, appears to be so low that it raises concerns as to the capability of the Bidder to perform the contract for the offered bid price.
- 38.2 When the offered bid price of the Most Advantageous Bid appears to be abnormally low, the Employer shall undertake a three-step review process as follows:
- (a) identify abnormally low costs by comparing them with the Engineer's estimates, other substantially responsive bids, or recently awarded similar contracts;
  - (b) clarify and analyze the bidder's resource inputs and pricing, including overheads, contingencies, and profit margins; and
  - (c) decide whether to accept or reject the bid.
- 38.3 With regard to ITB 38.2 (b) above, the Employer will seek a written explanation from the bidder of the reasons for the offered bid price, including a detailed analysis of costs, by reference to the scope, proposed methodology, schedule, and allocation of risks and responsibilities. This may also include information regarding the economy of the manufacturing process; the services to be provided, or the construction method to be used; the technical solutions to be adopted; and any exceptionally favorable conditions available to the bidder for the works, equipment, or services proposed.
- 38.4 After examining the explanation given and the detailed price analyses presented by the bidder, the Employer may
- (d) accept the bid, if the evidence provided satisfactorily accounts for the low bid price and costs, in which case the bid is not considered abnormally low;
  - (e) reject the bid if the evidence provided does not satisfactorily account for the low bid price, and make a similar determination for the next ranked bid, if required.

### **39. Unbalanced or Front-Loaded Bids**

- 39.1 If the Bid, which results in the Most Advantageous Bid, is seriously unbalanced or front-loaded in the opinion of the Employer, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Schedule of Priced Activities and Sub-Activities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed, as well as the pricing and sources of materials, equipment, and labor.
- 39.2 After the evaluation of the information and detailed price analyses presented by the Bidder, the Employer may, as appropriate:
- (a) accept the Bid; or
  - (b) accept the Bid, but require that the total amount of the Performance Security be increased at the expense of the Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract subject to ITB 47.2; or
  - (c) reject the Bid and make a similar determination for the next ranked bid.

#### **40. Employer's Right to Accept Any Bid, and to Reject Any or All Bids**

- 40.1 The Employer reserves the right to accept or reject any Bid, and to annul the bidding process and reject all Bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all Bids submitted and specifically, bid securities, shall be promptly returned to the Bidders.

### **F. Award of Contract**

#### **41. Award Criteria**

- 41.1 The Employer shall award the Contract to the Bidder whose offer has been determined in line with ITB 37 to ITB 39 above to be the Most Advantageous Bid and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.

#### **42. Notice of Intention for Award of Contract**

- 42.1 If standstill provisions apply as specified in the BDS 44, the standstill period shall be defined in the BDS to specify the duration subsequent to notification of intention for award of contract (before making the actual contract award) within which any unsuccessful bidder can challenge the proposed award.
- 42.2 Prior to the expiration of the period of bid validity the Employer shall transmit the Notice of Intention for Award of Contract using the form included in Section 9 (Contract Forms) to the successful Bidder, in writing.

#### **43. Invitation to Finalization of the Draft Contract Before Notification of Award <sup>3</sup>**

- 43.1 Prior to the expiration of the period of bid validity, the Employer shall invite the successful Bidder to finalize the provisions of the draft contract, before issuing the Notification of Award through issuance of the Letter of Acceptance.
- 43.2 Invitation for finalization of the draft contract shall be done through the issuance of the corresponding form in Section 9 (Contract Forms) to the successful Bidder, in writing.
- 43.3 This step must be finalized as soon as possible, but no later than 14 days.

#### **44. Standstill Period**

- 44.1 The purpose of a standstill period is to allow unsuccessful bidders an opportunity to challenge an intended contract award decision before the actual notification of award. If standstill provisions apply this shall be defined in the BDS to specify the duration subsequent to notification of intention for award of contract (before issuing the Notification of Award as per ITB 45) within which any unsuccessful bidder can challenge the proposed award.
- 44.2 If standstill period applies, unsuccessful bidders may request a debriefing request during the standstill period.
- 44.3 In the event there are any complaints during the standstill period, prior to issuance of the Notification of Award, it will be a condition that the Employer satisfactorily addresses the complaint. However,

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<sup>3</sup> The Employer may issue this Invitation to finalization of the draft contract provisions, in parallel with the notice of intention for award of contract, i.e. at the commencement of the standstill period, if applicable.

continuation of a complaint shall not be a ground for the Employer not to proceed in accordance with ITB 45.

- 44.4 If the standstill period does not apply, upon notification of award through the issuance of a Letter of Acceptance under ITB 45.1, unsuccessful Bidders may request in writing to the Employer for a debriefing seeking explanations on the grounds on which their Bids were not selected. The Employer shall promptly respond in writing and/or in a debriefing meeting to any unsuccessful Bidder who, after publication of contract award, requests a debriefing.

## **45. Notification of Award**

- 45.1 Prior to the expiration of the period of bid validity; and upon satisfactorily addressing any complaints received during the standstill period, if applicable, and after finalization of the draft contract provisions, the Employer shall transmit the Notification of Award through the issuance of a Letter of Acceptance using the form included in Section 9 (Contract Forms) to the successful Bidder, in writing, that its Bid has been accepted, together with the finalized contract, and a request to submit the Beneficial Ownership Disclosure Form providing additional information on its beneficial ownership. The Beneficial Ownership Disclosure Form shall be submitted within 14 days of receiving this request.
- 45.2 Until the formal contract is executed by the contracting parties, the notification of award through the issuance of Letter of Acceptance shall constitute a binding Contract between the Employer and the Contractor.
- 45.3 Within 2 weeks of the award of contract, the Borrower shall publish in an English language newspaper or widely known and freely accessible website the results identifying the bid and lot or package numbers, as applicable, and the following information:
- (a) name of each Bidder who submitted a Bid;
  - (b) bid prices as read out at bid opening;
  - (c) name and evaluated prices of each Bid that was evaluated;
  - (d) names of Bidders whose bids were rejected and the reasons for their rejection; and
  - (e) name of the winning Bidder, and the price it offered, as well as the duration and summary scope of the contract awarded.
  - (f) successful Bidder's Beneficial Ownership Disclosure Form

## **46. Signing of Contract**

- 46.1 The Employer shall send the successful Bidder the Contract Agreement together with or promptly after the issuance of Letter of Acceptance.
- 46.2 Unless agreed otherwise between the parties, within 35 days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Employer.

## **47. Performance Security**

- 47.1 Within 28 days of the receipt of notification of award through issuance of Letter of Acceptance from the Employer, the successful Bidder shall furnish the Performance Security in accordance with the Conditions of Contract, subject to ITB 39, using for that purpose the Performance Security Form included in Section 9 (Contract Forms), or another form acceptable to the Employer. If the bank issuing Performance Security is located outside the Employer's country, it shall be counter-guaranteed or encashable by a bank in the Employer's country.

- 47.2 Failure of the successful Bidder to submit the abovementioned Performance Security, or to sign the Contract Agreement shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security or execution of the Bid-Securing Declaration. In that event, the Employer may award the Contract to the next ranked Bidder whose offer is substantially responsive and is determined by the Employer to be qualified to perform the Contract satisfactorily.
- 47.3 The above provision shall also apply to the furnishing of a domestic preference security if so required.

#### **48. Bidding-Related Complaints**

- 48.1 The procedures for dealing with Bidding-Related Complaints arising out of this bidding process are specified in the BDS.

## Section 2: Bid Data Sheet

This section consists of provisions that are specific to each procurement and supplement the information or requirements included in Section 1 (Instructions to Bidders).

### A. General

ITB 1.1	The number of the Invitation for Bids (IFB) is:117/GoS/R&B/ADB Project/2025-26/06
ITB 1.1	The Employer is: <i>The State of Sikkim, acting by its Governor, represented by: - <b>The Project Director,</b> ADB Cell, Roads and Bridges Department, Government of Sikkim, Nirmaan Bhawan, Zero Point, Gangtok, Sikkim-737101</i>
ITB 1.1	The name of the open competitive bidding (OCB) is: Construction and Maintenance of Two Lane with paved Shoulder of Rorathang to Rongli Road from Km 0+000 to Km 8+890 [Length: 8.890 Km], in the State of Sikkim  The identification number of the OCB is: RRRP-CW-01  The number and identification of lots comprising this OCB is: N.A
ITB 2.1	The Borrower is: Government of India
ITB 2.1	The name of the Project is: Upgradation of Roads and Construction of Bridges in Sikkim

### B. Contents of Bidding Document

ITB 7.1	For <b><u>clarification purposes</u></b> only, the Employer's address is:  Project Director ADB Cell, Roads and Bridges Department, Government of Sikkim Gangtok 737101, India Email: adbsikkim@gmail.com
ITB 7.4	A Pre-Bid meeting will take place.  Date: 02.07.2026 Time: 11.00 Hours(IST) Place: Office of the Project Director, ADB Project Cell, Nirman Bhawan,Gangtok  A site visit conducted by the Employer will be organized.
ITB 7.6	Add the following at end of ITB 7.6:  The Employer shall publish the minutes of the meeting at the e-Tendering platform indicated in ITB 1.3 of the BDS
ITB 8.2	Add the following at the end of ITB 8.2:

	The Employer shall publish the addendum or addenda at the e-Tendering platform indicated in ITB 1.3 of the BDS. The Employer should not be faulted for bidders' failure to download the addendum or addenda.
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### C. Preparation of Bids

ITB 10.1	The language of the Bid is: English
ITB 11.2 (g)	The Bidder shall submit with its Technical Bid the following additional documents: Code of Conduct for Contractor's Personnel (ES) The Bidder shall submit its Code of Conduct that will apply to Contractor's Personnel, to ensure compliance with the Contractor's Environmental and Social (ES) obligations under the Contract. The Proposer shall use for this purpose the Code of Conduct form provided in Section 4 (Bidding form). No substantial modifications shall be made to this form, except that the Bidder may introduce additional requirements, including as necessary to take into account specific Contract issues/risks.
ITB 11.3 (d)	The Bidder shall submit with its Price Bid the following additional documents:  None
ITB 12.1	Price Bid and Schedules, including Schedule of Priced Activities and Sub-Activities, Letter of Price bids shall be prepared using the relevant forms furnished in Section 4 (Bidding Forms) in pdf and Macro Enabled BOQ/Financial Bid format in excel under the financial Folder. No price information should be indicated in the Technical Bid, failing to which bid shall be summarily rejected.
ITB 13.1	Alternative Bids shall not be permitted.
ITB 13.2	Alternative times for completion shall not be permitted.
ITB 13.3	Alternative technical solutions shall not be permitted.
ITB 14.1	The Bidder shall submit the following additional documents in the Technical Proposal of its Bid: <ul style="list-style-type: none"> <li>• <i>Traffic Management Plan to ensure safety of local communities from construction traffic</i></li> <li>• <i>Emergency Preparedness Plan to ensure actions in place during emergency event</i></li> <li>• <i>Occupational Health and Safety Plan to ensure health and safety of workers</i></li> </ul>
ITB 14.2	The Employer <b>does not intend</b> for the contractor to execute any specific elements of the Works through nominated Subcontractors.
ITB 17.1	Bidders shall quote for the entire Works on a "single responsibility" basis.
ITB 17.5	The prices quoted by the Bidder <b>shall be adjustable</b>
ITB 18.1	The prices and unit rates in the Schedules shall be quoted by the Bidder entirely in Indian Rupees (INR)
ITB 18.4	The rates of exchange shall be the selling rates 28 days prior to the deadline for submission of bids published by <b>the Reserve Bank of India</b>
ITB 19.1	The bid validity period shall be 120 days.
ITB 20.1	The Bidder shall furnish a bid security in the amount of ₹.1.85 crore (One crore and eighty five lakh only) (Rs. 18.5 million). As the bid is to be submitted electronically, the copy of bid security needs to be uploaded in e-portal and the original bid security needs to be submitted to the following address before the deadline of the submission of the bid.  Project Director,  ADB Cell, Roads and Bridges Department,  Government of Sikkim, Gangtok-737101  Telephone/Mobile No.: +91-9434174893

	Fax: .....
	E-mail: adbsikkim@gmail.com
ITB 20.2	The ineligibility period will be <b>none (not applicable)</b>
ITB 20.4	<p>Add the following at the end</p> <p>Subject to the succeeding sentences, any bid not accompanied by an irrevocable and callable bid security shall be rejected by the Employer as nonresponsive. If a Bidder submits a bid security that (i) deviates in form, amount, and/or period of validity; or (ii) does not provide sufficient identification of the Bidder (including, without limitation, failure to indicate the name of the Joint Venture or, where the Joint Venture has not yet been constituted, the names of all future Joint Venture Partners), the Employer shall request the Bidder to submit a compliant bid security within <b>14</b> days of receiving such a request. Failure to provide a compliant bid security within the prescribed period of receiving such a request shall cause the rejection of the Bid.</p>
ITB 21.1	In addition to the original Bid, the number of copies is: <b>Not applicable</b>
ITB 21.2	The written confirmation of authorization to sign on behalf of the Bidder shall consist of: <i>An organizational document, board resolution or its equivalent, or power of attorney specifying the representative's authority to sign the Bid on behalf of, and to legally bind, the Bidder. If the Bidder is an intended or an existing Joint Venture, the power of attorney should be signed by all partners and specify the authority of the named representative of the Joint Venture to sign on behalf of, and legally bind, the intended or existing Joint Venture. If the Joint Venture has not yet been formed, also include evidence from all proposed Joint Venture partners of their intent to enter into a Joint Venture in the event of a contract award in accordance with ITB 11.2.</i>
ITB 21.2	The Bidder shall submit an acceptable authorization within <b>7</b> days.

## D. Submission and Opening of Bids

ITB 22.1	Bidders shall submit their Bids electronically
ITB 22.1 (b)	<p><i>Electronic bidding submission procedures shall be:</i></p> <p><i>On-line Tendering Instruction</i></p> <p><i>(i) Bidders are informed to get acquainted with e- procurement system by visiting <a href="https://sikkimtender.gov.in">https://sikkimtender.gov.in</a>. Each bidder uses a password to log in. Using the username and password of the bidder's primary contact or appointed representative, the bidder has access to its own registration profile and proposals, in addition to the data and information provided by the Client to all bidders. The bidder does not have access to any other bidder's registration profile and proposals. The bidder takes responsibility to protect its password. ADB and the Client are not liable for any loss of data and information or any cost or damage resulting from such loss due to an unsecured password. Bidders should be aware that like any IT system, the tender portal may possibly encounter technical difficulties and server malfunctions. Bidders should allow for sufficient time to submit proposals. The Employer and ADB are not liable for any loss or damage claimed by any party due to these technical difficulties.</i></p> <p><i>(ii) To participate in e-bidding, bidders have to pay a (a) Non-refundable fee of Rs. 10,000 (Indian Rupee Ten thousand only) either in the form of Demand draft issued by a "Scheduled Bank" as per Reserve Bank of India Act, 1934 or a reputable bank located outside India in favour of The Project Director, ADB Cell, Roads and Bridges Department, Government of Sikkim, Nirmaan Bhawan, Zero Point ,Gangtok, Sikkim-737101 or bidders may transfer the Tender fee electronically through PFMS to <b>the bank account no. 50210029478496, IFSC: BDBL0001467</b> latest by 24 Hrs prior to last date of the submission of bids. Bidders are required to submit a scanned copy of the demand draft or PFMS receipt as part of the technical bid as proof of the payment. Bids without this payment and required proof will be rejected. A copy of the PFMS</i></p>



	<p><i>receipt is required to be endorsed as a part of the Technical Bid</i></p> <p><i>(iii) To participate in the bidding, it is mandatory for the Bidders to register to have a valid registration of their firm / JV with the e-procurement portal and to have an active user ID and password.</i></p> <p><i>(iv) On-line bids will have to be digitally signed and submitted in a Time stamped electronic sealed tender box in above e-procurement website.</i></p> <p><i>(v) In regard to addendum or addenda, the onus is on the bidder to download and understand the addendum or addenda issued by the Employer through the above e-procurement website. The Employer should not be faulted for bidder's failure to download the addendum or addenda.</i></p> <p><i>(vi) The downloaded Bid forms shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder</i></p> <p><i>(vii) Bidders shall take due precaution to upload and Freeze the Technical Bid documents and Price Bid documents onto the separate envelopes defined in(as separate attachments in the relevant folders) the e-procurement website, on or before the deadline for Bid submission specified in ITB 22.1 of the BDS. (The e-procurement portal will not allow submission of bids after the due time of submission even if the user has logged in before the due time.)</i></p> <p><i>(viii) Bidders shall upload their bids in formats, which can be opened and ready open standard interfaces.</i></p> <p><i>(ix) Bidders shall not lock files uploaded in their proposal with passwords of their choice. The Employer reserves the right to reject the password protected/ locked files outright.</i></p> <p><i>(x) Only those bids that are marked by the system as submitted and frozen, as acknowledged with bid submission reference, will be considered for opening.</i></p> <p><i>(xi) the following supporting documents needs to be submitted physically within 7 days of opening of technical bid:</i></p> <p><i>Original document of the payment made towards Tender Fee, demand draft or other admissible bank Instrument. Original Bid Security, in accordance with ITB 19</i></p> <p><i>Address for Submission:</i></p> <p><i>The Project Director, ADB Cell, Roads and Bridges Department, Government of Sikkim, Nirmaan Bhawan, Zero Point, Gangtok, Sikkim-737101</i></p>
ITB 22.3, 22.4 and 22.5	<i>Not applicable ,deleted.</i>
ITB 23.1	<p>Bids shall be submitted electronically in the e-procurement portal <a href="https://sikkimtender.gov.in">https://sikkimtender.gov.in</a> indicated in ITB 21.1 of the BDS.</p> <p><b>The deadline for bid submission is:</b></p> <p>Date: 17<sup>th</sup> July 2026</p> <p>Time: 12.00 Hours (IST)</p>
ITB 23.3	The Employer will not be held responsible for delay or difficulty faced by the Bidder during online bid submission on account of issues beyond the Employer's control.
ITB 24.1	<p>Sub clause 24.1 shall be replaced with:</p> <p>The e-procurement system will not allow any late submission of Bids after the specified due date and time as per server system. After electronic online proposal submission, the system will generate a unique Identification number which is time stamped. This shall be treated as acknowledgement of the Bid submission.</p>



ITB 25.1 and 25.2	<p>Replace ITB 25.1 to 25.2 with following:</p> <p>Bidders submitting their Bids electronically may withdraw, substitute or modify their bids by logging at the eProc website indicated in ITB 22.1(a) of the BDS, no later than the deadline for submission of bid, as indicated in ITB 23.1.</p>
ITB 26.1	<p>Bids shall be opened electronically</p> <p>Date: 17<sup>th</sup> July 2026</p> <p>Time: 14.30 Hours(IST)Time:</p>
ITB 26.1	<p>Electronic bid opening procedure shall be as follows:</p> <ol style="list-style-type: none"> <li>1. All bidders shall have the option of viewing the opening of bid via video conferencing.</li> <li>2. Only those bids that are marked by the system as submitted and frozen, as acknowledged with bid submission reference will be considered for opening.</li> <li>3. The Employer shall open the Technical Bids, online, in public at the address, on the date, and time specified above, in the virtual / physical presence of Bidder's authorized / designated representatives and anyone who choose to attend.</li> <li>4. Bids shall be opened one-by-one at designated time on the e-procurement portal, reading out the name of the bidder, the presence or absence of a Bid Security, Payment evidence of cost towards procurement of bidding document, and any other details indicated in 11.2 (g) of BDS</li> <li>5. The Employer shall prepare a record of the opening of Technical Bids that shall include salient details as above. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record.</li> </ol> <p>The Price Bids will remain unopened and encrypted in the e-procurement portal indicated in ITB 26.1, until the specified time of their opening.</p>
ITB 26.2,26.3,26.4	<p>In the online bid opening system, ITB 26.2, 26.3, 26.4 are not applicable.</p> <p>The electronic summary of the bid opening will be generated and uploaded online. The Employer will also prepare minutes of the Bid opening, including the information disclosed and upload the same for viewing online. Only the Technical Parts of Bids that are opened at Bid opening shall be considered further for evaluation.</p>
ITB 26.5	<p>The Technical Bid will be opened online from e-procurement portal on the date and time of opening of Technical Bid by the Committee, copy of the letter of the Technical Bid shall be initialed by at least 3 (three) representatives of the Bid Evaluation Committee attending Bid opening.</p>
ITB 26.10	<ol style="list-style-type: none"> <li>1. The price bid will be opened online in the e-procurement portal on the date and time of opening of Price Bid by the committee.</li> <li>2. The Letter of Price Bid and Bill of Quantities shall be downloaded and initialed by at least 3 (three) members of the Bid Evaluation Committee, attending Bid opening.</li> <li>3. The price bids of the bidders shall be recorded in the tender register which is to be verified by at least three members of the Bid Evaluation Committee..</li> </ol>

## E. Evaluation and Comparison of Bids

ITB 29.2	The qualifications of other firms such as the Bidder's subsidiaries, parent entities, or affiliates shall not be permitted.
ITB 34.1	The currency that shall be used for bid evaluation and comparison purposes to convert all bid prices expressed in various currencies into a single currency is: <b>Indian Rupees (INR)</b>

	<p>The source of the selling exchange rate shall be: <b><i>Not applicable</i></b></p> <p>The date for the selling exchange rate shall be: <b><i>Not applicable</i></b></p>
ITB 35.1	Domestic preference <b><i>shall not</i></b> apply.
ITB 44	<p>Standstill provisions shall apply. The duration of the standstill period will be <b>14</b> days from the date of notice of intention for award of contract.</p> <p>The Employer shall, at the start of the standstill period, notify in writing each Bidder that submitted a bid, of its intention to award a contract to the successful Bidder at the end of standstill period. The notification using the form included in Section 9 (Contract Forms) shall include the following information:</p> <ul style="list-style-type: none"> <li>(a) the name of each Bidder who submitted a Bid;</li> <li>(b) the bid prices as read out at bid opening;</li> <li>(c) the name and evaluated prices of each Bid that was evaluated;</li> <li>(d) the names of Bidders whose bids were rejected and the reasons for their rejection;</li> <li>(e) the name of the winning Bidder, and the price it offered, as well as the duration and summary scope of the contract awarded; and</li> <li>(f) a statement of the reason(s) the bid of the unsuccessful Bidder to whom the notification is addressed was unsuccessful, unless the price information under (e) of this paragraph already reveals the reason</li> </ul>

## F. Award of Contract

ITB 48.1	<p>The procedures for Bidding-Related Complaints are referenced in the Procurement Regulations for ADB Borrowers (Appendix 7). The Bidder should submit its complaint following these procedures, in writing, to:</p> <p>For the attention: Mr. Sonam Dadul</p> <p>Title/position: <b><i>The Project Director</i></b></p> <p>Employer: ADB Cell, Roads&amp; Bridges Department, Govt. of Sikkim</p> <p>Email address: adbsikkim@gmail.com</p> <p>Mobile number: +91-9434174893</p>
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# Section 3: Evaluation and Qualification Criteria

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# Qualification

## 1.1 Eligibility

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	

### 1.1.1 Nationality

Nationality in accordance with ITB 4.2.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Forms ELI – 1; ELI – 2 with attachments
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### 1.1.2 Conflict of Interest

No conflicts of interest in accordance with ITB 4.3.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Letter of Bid
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### 1.1.3 ADB Eligibility

Not having been declared ineligible by ADB, as described in ITB 4.4.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Letter of Bid
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### 1.1.4 Government-Owned Entity

Bidder required to meet conditions of ITB 4.5.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Forms ELI – 1; ELI – 2 with attachments
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### 1.1.5 United Nations Eligibility

Not having been excluded by an act of compliance with a United Nations Security Council resolution in accordance with ITB 4.8.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Letter of Bid
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## 1.2 Historical Contract Nonperformance

### 1.2.1 History of Nonperforming Contracts

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Nonperformance of a contract <sup>a</sup> did not occur as a result of contractor default since 1 January 2021.	Must meet requirement	Must meet requirement	Must meet requirement <sup>b</sup>	Not applicable	Form CON – 1

<sup>a</sup> Nonperformance, as decided by the Employer, shall include all contracts where, any of the two conditions<sup>4</sup> below have been met:

- 1) *a) the contract was terminated for cause by the employer due to the contractor's default(s) in fulfilling its obligations (including any environmental, health, and safety (EHS) obligations),*  
*and*  
*b) the contractor did not challenge such termination and/or call of the performance security or employer's claims, including referral to the dispute resolution mechanism under the respective contract*  
or  
*c) contracts that were so challenged, but fully settled against the contractor.*  
OR  
2) *(a) the performance security was called partly or wholly,*  
or  
*(b) claims were made against the contractor by the employer due to the contractor's default(s), which have led to works not being completed, i.e. taking-over certificate not having been issued;*  
and  
*(c) the contractor did not challenge the call of the performance security or employer's claims, including referral to the dispute resolution mechanism under the respective contract*  
or  
*(d) contracts that were so challenged, but fully settled against the contractor as a result of the dispute resolution mechanisms.*

*In cases where challenged by the contractor, Nonperformance must be based on all information on fully settled disputes or litigation, i.e., dispute or litigation that has been resolved in accordance with the dispute resolution mechanism under the respective contract and where all appeal instances available to the Bidder have been exhausted.*

<sup>b</sup> This requirement also applies to contracts executed by the Bidder as a Joint Venture partner.

### 1.2.2 Suspension Based on Execution of Bid-Securing Declaration

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Not under suspension based on execution of a Bid-Securing Declaration pursuant to ITB 4.6.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Letter of Bid

### 1.2.3 Pending Litigation and Arbitration (optional)

Pending litigation and arbitration criterion [*insert "shall" or "shall not"*] apply.<sup>a</sup>

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
All pending litigation, arbitration, or other material events impacting the net worth and/or liquidity of the bidder,	Must meet requirement	Not applicable	Must meet requirement	Not applicable	Form CON – 1

<sup>4</sup> For example, non-performance should meet condition 1 or condition 2. Condition 1 within itself should meet 1a "and" 1b or 1c; condition 2 within itself should meet 2a or 2b "and" 2c or 2d.

if any, shall be treated as resolved against the Bidder and so shall in total not represent more than 50 percent of the Bidder's net worth calculated as the difference between total assets and total liabilities.					
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### 1.3 Financial Situation

#### 1.3.1 Historical Financial Performance

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Submission of audited financial statements or, if not required by the law of the Bidder's country, other financial statements acceptable to the Employer, for the last 3 <b>(three)</b> years to demonstrate the current soundness of the Bidder's financial position. As a minimum, the Bidder's net worth for the last 3 <b>(three)</b> year <b>(From last date of submission of bid)</b> , calculated as the difference between total assets and total liabilities, should be positive.	Must meet requirement	Not applicable	Must meet requirement	Not applicable	Form FIN – 1 with attachments

#### 1.3.2 Average Annual Construction Turnover

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Minimum average annual construction turnover of Rs 68.4 crore (Rs. 684 million) calculated as total certified payments received for contracts in progress or completed, within the last 3 (three ) years.	Must meet requirement	Must meet requirement	Must meet <b>25%</b> of the requirement	Must meet <b>40%</b> of the requirement	Form FIN – 2

### 1.3.3 Financial Resources<sup>5</sup>

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
<b>For Single Entities</b> The Bidder must demonstrate that its financial resources defined in FIN – 3, less its financial obligations for its current contract commitments defined in FIN – 4, meet or exceed the total requirement for the Subject Contract of Rs. 11.4 crore ( <b>INR 114 million</b> )	Must meet requirement	Not applicable	Not applicable	Not applicable	Form FIN – 3 and Form FIN – 4
<b>For Joint Ventures</b> 1. One partner must demonstrate that its financial resources defined in FIN – 3, less its financial obligations for its own major contract commitments as defined in FIN – 4, meet or exceed its required share of <b>40% i.e. Rs. 4.56 crore (INR 45.6 million)</b> from the total requirement for the Subject Contract. AND 2. Each partner must demonstrate that its financial resources defined in FIN – 3, less its financial obligations for its own major contract commitments as defined in FIN – 4, meet or exceed its required share of <b>25% i.e. Rs. 2.85 crore (INR 28.50 million)</b> from the total requirement for the Subject Contract. AND 3. The Joint Venture must demonstrate that the combined financial resources	Not applicable	Not applicable	Not applicable	Must meet requirement	Form FIN – 3 and Form FIN – 4
	Not applicable	Not applicable	Must meet requirement	Not applicable	Form FIN – 3 and Form FIN – 4
	Not applicable	Must meet requirement	Not applicable	Not applicable	Form FIN – 3 and Form FIN – 4

<sup>5</sup> (i) The Employer has the option to move the Financial Resources criterion from Section 3 (Evaluation and Qualification Criteria) to Section 6 (Employer's Requirements), in which case:

- the Employer shall confirm compliance with the financial resources criterion prior to award of contract in accordance with ITB 43.1 – Award Criteria; and
- in place of the Financial Resources criterion, the Employer may require the Bidder to submit together with its bid, and for confirmation during bid evaluation, a Letter of Undertaking to comply with the financial resources described in Section 6 prior to award of contract.

(ii) If the bid evaluation process and the decision for the award of the Contract takes more than 1 year from the date of bid submission, Bidders may be asked to resubmit their major contract commitments and latest information on financial resources supported by the latest audited accounts or audited financial statements, or if not required by the law of the Bidder's country, other financial statements acceptable to the Employer. The Bidders' financial capacity will be reassessed on this basis

of all partners defined in FIN – 3, less all the partners' total financial obligations for the major contract commitments as defined in FIN – 4, meet or exceed the total requirement for the Subject Contract Rs. 11.4 crore ( <b>INR 114 million</b> )					
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## 1.4 Construction Experience

### 1.4.1 Contracts of Similar Size and Nature

#### (a) Similar Size – Must be complied with by the Bidder

Similar size must be complied with by the Bidder.

Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Participation as a contractor, Joint Venture partner, or Subcontractor, in the following contracts that have been satisfactorily completed <sup>b</sup> between 1 <sup>st</sup> January 2016 and bid submission deadline:one contract of minimum Rs. 73 crore( INR 730 million) or <i>two</i> contract(s), each of minimum Rs 45.6 Crore (Rs 456 million) <div>                         a. <i>Intermediate or more lane paved roads /bridges</i> </div>	Must meet requirement	Not applicable	Must meet 25% value of the Bidder's participation requirement i.e., minimum Rs. 18.25 crore( INR 182.5 million) or <i>two</i> contract(s), each of minimum Rs 11.4 Crore (INR 114 million)	Must meet requirement	Form EXP-1 & EXP-2

#### (b) Similar Nature – Must be complied with by the Bidder<sup>d</sup>

Participation and successful implementation, as a contractor, Joint Venture partner, or Subcontractor, in the following technical requirements, within the last 10 years ( <i>From last date of submission of bid</i> ) <b>1. Completed at least 1 (one) hill road project of elevation more than 800 m</b> <b>2. Completed slope protection work using rock bolting/ soil nailing or retaining wall in road project.</b>	Must meet requirement	Must meet requirement	Not applicable	Not applicable	Form EXP-1& EXP-2
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*If the contract value is not in the specific currency, the exchange rate to be used to calculate the value of the contract shall be the selling rate of the borrower's central bank on the date of the contract signing.*

*<sup>b</sup> The requirement of "satisfactorily completed contract" shall meet the following submission requirements:*

- 1. Signed Contract Agreement, and*
- 2. Taking-Over Certificate or Contract Completion Certificate or Performance Certificate,*

*in sufficient detail to verify the contract name, value and completion time. If the documents are other than in English, an accurate certified translation of these documents in English shall be provided.*

*For contracts under which the Bidder participated as a Joint Venture partner or Subcontractor, only the Bidder's share shall be considered to meet this requirement.*

*For contracts implemented by a Joint Venture contractor, if the Bidder comprises the same Joint Venture, the "Single Entity" requirements will apply.*

*<sup>d</sup> i) The requirements under 1.4.1 (b) can be met under separate contracts and it is not a requirement to have completed all requirements under a single contract.*

*ii) Each technical requirement must have been completed under a "single" contract.*

*iii) The Bidder shall submit evidence that the relevant technical requirement (e.g. Interim payment certificate, approval by the Engineer, etc.) has been satisfactorily completed. It is not a requirement that the particular contract within which the technical requirement has been implemented must have been substantially and/or satisfactorily completed yet.*

## 2. Evaluation

The evaluation methodology shall be to determine the Most Advantageous Bid. The Most Advantageous Bid is the one that:

- (i) is substantially responsive to the Bidding Document, and
- (ii) has the lowest evaluated cost

### 2.1 Technical Evaluation

#### 2.1.1 Determination of Substantial Responsiveness

Prior to financial evaluation, a determination of responsiveness shall be carried out in accordance with ITB 30 and ITB 31. This determination may include the verification of the following criteria:

Criteria	Compliance	Documents
Requirement	Single Entity or Joint Venture	Submission Requirements
Assessment of the Bidder's technical capacity to successfully implement the contract considering its proposed site organization, method statement, mobilization, and construction schedule etc (to be described by the Bidder in sufficient detail to demonstrate the adequacy of its work methods, scheduling, and material sourcing under the headings provided in Section 4: Bidding Forms) including the extent to which they are presented in a consistent manner and comply with requirements stipulated in Section 6 (Works' Requirements)	Must meet requirement without material deviation, reservation, or omission	Technical Proposal
Compliance with the requirement for a defined completion time (when no alternative completion time is allowed).	Must meet requirement without material deviation, reservation, or omission	Technical Proposal
Responsiveness of the bidder's Environmental, Health, and Safety Management Plan (EHSMP) to the requirements of the project Environmental Management Plan (EMP).	Must meet requirement without material deviation, reservation, or omission	Technical Proposal
Responsiveness of the bidder's proposal demonstrating bidder's approach to fulfilling the 50% local labor requirement <sup>1</sup>	Must meet requirement without material deviation, reservation, or omission	Technical Proposal
Compliance with other sustainable procurement, if applicable.	Must meet requirement without material deviation, reservation, or omission	Technical Proposal
Other compliance requirements indicated in the Bidding Document.	Must meet requirement without material deviation, reservation, or omission	Technical Proposal

<sup>1</sup> All ADB-financed works contracts with international advertisement must ensure that at least 50% of the total project labor force (by person-days) is sourced within the country, except where ADB approves otherwise in writing.

If the technical proposal is declared not substantially responsive to the requirements of the Bidding Document, the Bid shall be rejected, and it shall not be evaluated further. However, noncompliance with equipment requirements described in Section 6 (Employer's Requirements) shall not normally be a ground for bid rejection, and such noncompliance will be subject to clarification during bid evaluation and rectification prior to contract award.

### **2.1.2 Completion Time**

Alternative Completion Time, if permitted under ITB 13.2, it will be evaluated as follows: Not Applicable

### **2.1.3 Technical Alternatives**

Technical alternatives, if permitted under ITB 13.3, they will be evaluated as follows: Not Applicable

## **2.2 Financial Evaluation**

### **2.2.1 Detailed Financial Evaluation**

It is necessary to conduct a detailed price comparison on the following criteria described below in addition to the criteria listed in ITB 36.2 (a–f), the evaluated bid price shall be determined using the following method:

#### **2.2.1.1 Quantifiable Nonconformities and Omissions**

Subject to ITB 17.2 and ITB 36.2, the evaluated cost of quantifiable nonconformities including omissions, is determined as follows:

“Pursuant to ITB 32.3, the cost of all quantifiable nonmaterial nonconformities shall be evaluated, including omissions in Daywork where competitively priced but excluding omission of prices in the Schedule of Priced Activities and Sub-Activities. The Employer will make its own assessment of the cost of any nonmaterial nonconformities and omissions for the purpose of ensuring fair comparison of Bids.”

#### **2.2.1.2 Domestic Preference**

If domestic preference is provided for under ITB 35.1, the following procedure shall apply: Not Applicable

#### **2.2.1.3 Life Cycle Costs (for Financial Evaluation)**

**Not Applicable**

## **2.3 Multiple Contracts**

As per ITB 36.4 multiple contracts shall only be considered if multiple packages (or lots) are being tendered simultaneously. Packages (or lots) that are being advertised at different dates shall not be considered under multiple contract provisions and shall be treated individually, in which case, aggregate requirements shall not apply.

Pursuant to ITB 36.4, the Employer shall evaluate and compare Bids on the basis of a contract, or a combination of contracts, or as a total of contracts to arrive at the Most Advantageous Bid for the Employer in case of award of multiple contracts.

If a Bidder as defined in ITB 4.1 submits several successful Most Advantageous Bids, the evaluation will also include an assessment of the Bidder's capacity to meet the following aggregated requirements as presented in the bid:

- Average annual construction turnover,
- Financial resources,



# Section 4: Bidding Forms

This section contains the forms to be completed by the Bidder and submitted as part of its Bid.

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# Letter of Technical Bid

## NOTE

*The Bidder must accomplish the Letter of Bid on its letterhead clearly showing the Bidder's complete name and address.*

Date: .....

OCB No.: .....

Invitation for Bid No.: .....

To: *[insert complete name of the Employer]*

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Document, including Addenda issued in accordance with Instructions to Bidders (ITB) 8.
- (b) We acknowledge that we have read and understand ADB's Anticorruption Policy (1998) and Investigation and Enforcement Framework, both as amended from time to time.
- (c) We offer to design and execute in conformity with the Bidding Document the following Works: *[insert narrative]*

*[amount of foreign currency in words], [amount in figures], and [amount of local currency in words], [amount in figures]*

*The total bid price from the Grand Summary should be entered by the Bidder inside this box. Absence of the total bid price in the Letter of Bid may result in the rejection of the bid.*

- (d) Our Bid consisting of the Technical Bid and the Price Bid shall be valid for a period of 120 days starts from the date fixed for the bid submission deadline in accordance with ITB 23.1, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- (e) Our firm, including any Subcontractors or Suppliers for any part of the Contract, has nationalities from eligible countries in accordance with ITB 4.2.
- (f) Our firm, Joint Venture partners, and Subcontractors or Suppliers, for any part of the contract who are named in the Bid, do not have any conflict of interest in accordance with ITB 4.3.

If there is any conflict of interest, please state details:

- (i) Parties involved in the conflict of interest: \_\_\_\_\_
- (ii) Details about the conflict of interest: \_\_\_\_\_
- (g) We are not participating, as a Bidder, either individually or as a partner in a Joint Venture, in more than one Bid in this bidding process in accordance with ITB 4.3 (e), other than alternative offers submitted in accordance with ITB 13.
- (h) Our firm, Joint Venture partners, members of our respective management and supervisory boards of directors, proposed personnel, parent company, Subcontractors or Suppliers for any part of the contract who are named in the bid, consultants, manufacturers, and service providers, are not subject to, or not controlled by any entity or individual that is subject to a suspension or a debarment imposed by ADB or a debarment imposed by ADB in accordance with the Agreement for Mutual Enforcement of Debarment

Decisions between ADB and other development banks.<sup>6</sup>

- (i) We have checked all the parties mentioned in the declaration above against ADB's Publicly Disclosed Debarment of Suspension Subregister accessed via <https://sanctions.adb.org/>.
- (j) Our firm, Joint Venture partners, members of our respective management and supervisory boards of directors, proposed personnel, parent company, Subcontractors or Suppliers for any part of the contract who are named in the bid, consultants, manufacturers, and service providers, are not suspended, debarred, declared ineligible, or subject to any international sanctions by any international organization, multilateral development bank, and other donor agency.

If applicable, please state details:

- (k) Our firm, Joint Venture partners, members of our respective management and supervisory boards of directors, proposed personnel, and parent company, in the last 10 years preceding the date of this letter of bid, have never been convicted of any criminal offense, or been subjected to any criminal, civil, or administrative orders, monitorship or enforcement actions, involving any integrity violation or on grounds comparable to any integrity violation.

If applicable, please state details:

- (l) Our firm, Joint Venture partners, members of our respective management and supervisory boards of directors, proposed personnel, parent company, Subcontractors or Suppliers for any part of the contract who are named in the bid, consultants, manufacturers, and service providers, can make and receive payments through the international banking system or otherwise discharge the Employer's obligation upon initiation of wire transfer.

If unable to make or receive funds through the international banking system or otherwise discharge the Employer's obligation upon initiation of wire transfer, please state the details:

- (i) Nature of the restriction: \_\_\_\_\_
- (ii) Jurisdiction of the restriction: \_\_\_\_\_
- (iii) Other relevant details: \_\_\_\_\_

- (m) Our firm, Joint Venture partners, members of our respective management and supervisory boards of directors, proposed personnel, parent company, Subcontractors or Suppliers for any part of the contract who are named in the bid, consultants, manufacturers, and service providers, are not from a country which is prohibited to export goods or services to, or receive any payments from the Employer's country and/or are not prohibited to receive payments for particular goods or services by the Employer's country by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations.
- (n) We understand that it is our obligation to notify the Employer of any changes in connection with the matters described in paragraphs f), (h), (i), (j), (k), (l), (m), and (q) of this Letter of Technical Bid.
- (o) [We are not a government-owned enterprise] / [We are a government-owned enterprise, but meet the requirements of ITB 4.5]<sup>7</sup>

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<sup>6</sup> These institutions include African Development Bank, European Bank for Reconstruction and Development, Inter-American Development Bank, and the World Bank Group. According to paragraph 9 of the Agreement, other international financial institutions may join upon the consent of all Participating Institutions and signature of a Letter of Adherence by the international financial institution substantially in the form provided (Annex B to the Agreement). Upon adherence, such international financial institution shall become a Participating Institution for purposes of the Agreement. Bidders are advised to check [www.adb.org/integrity](http://www.adb.org/integrity) for updates.

<sup>7</sup> Use one of the two options as appropriate.

- (p) We have not been suspended nor declared ineligible by the Employer based on execution of a Bid-Securing Declaration in accordance with ITB 4.6.
- (q) We have paid, or intend to pay, either directly or indirectly, the following commissions, gratuities, or fees with respect to the bidding process or execution of the Contract:<sup>8</sup>

Name of Recipient	Address	Reason	Amount
.....	.....	.....	.....
.....	.....	.....	.....

- (r) At any time following submission of our Bid, we shall permit and shall cause our Joint Venture partners, directors, key officers, key personnel, associates, parent company, affiliates, or subsidiaries, including any Subcontractors, consultants, subconsultants, manufacturers, service providers, or Suppliers for any part of the contract to permit ADB or its representative to inspect our site, assets, accounts, and records and other documents relating to the bid submission and to have them audited by auditors appointed by ADB. We understand that failure of this obligation may constitute obstructive practice that may result in debarment and/or contract termination.
- (s) Regardless of whether the contract will be awarded to us, we shall preserve all accounts, records, and other documents related to bid submission for at least 5 years from the date of submission of the bid or the period prescribed in applicable law, whichever is longer.
- (t) If we are awarded the contract, we shall preserve all accounts, records, and other documents related to the procurement and execution of the contract for at least 5 years after completing the works contemplated in the relevant contracts or the period prescribed in applicable law, whichever is longer.
- (u) If our Bid is accepted, we commit to mobilizing key equipment and personnel in accordance with the requirements set forth in Section 6 (Employer's Requirements) and our technical proposal, or as otherwise agreed upon with the Employer.
- (v) We certify on behalf of the Bidder, that the information provided in the bid has been fully reviewed, given in good faith, and to the best of our knowledge is true and complete. We understand that it is our obligation to inform the Employer of any changes to the information as and when it becomes known to us. We understand that any misrepresentation that knowingly or recklessly misleads, or attempts to mislead may lead to the automatic rejection of the Bid or cancellation of the contract, if awarded; and may result in enforcement and disclosure actions, in accordance with ADB's Anticorruption Policy and Investigation and Enforcement Framework (both as amended from time to time).

Name: *[insert complete name of person signing the bid]*

In the capacity of *[insert legal capacity of person signing the bid]*

Signed: *[insert signature of person whose name and capacity are shown above]*

Duly authorized to sign the Bid for and on behalf of *[insert complete name of the Bidder]*

Date: *[insert date of signing]*

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<sup>8</sup> If none has been paid or is to be paid, indicate "None."

# Letter of Price Bid

## NOTE

*The Bidder must accomplish the Letter of Price Bid on its letterhead clearly showing the Bidder's complete name and address.*

Date:

OCB No.:

Invitation for Bid No.:

To: [insert complete name of the Employer]

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB) 8.
- (b) We acknowledge that we have read and understand ADB's Anticorruption Policy (1998) and Investigation and Enforcement Framework, both as amended from time to time.
- (c) We offer to execute in conformity with the Bidding Documents and the Technical Bid submitted for the following Works. [insert narrative]
- (d) The total price of our Bid, excluding any discounts offered in item (d) below is:

[amount of foreign currency in words], [amount in figures], and [amount of local currency in words],  
[amount in figures]

The total bid price from the Summary of Bill of Quantities should be entered by the bidder inside this box. Absence of the total bid price in the Letter of Price Bid may result in the rejection of the bid.

- (e) The discounts offered and the methodology for their application are: [insert discounts and methodology for their application if any]
- (f) Our Bid shall be valid for a period of [insert bid validity period as specified in ITB 19.1 of the BDS] days starts from the date fixed for the bid submission deadline in accordance with ITB 23.1, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- (g) If our Bid is accepted, we commit to obtain a performance security in accordance with the Bidding Document.
- (h) We understand that this bid, together with your written acceptance thereof included in your notification of award through the issuance of Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed.
- (i) We understand that you are not bound to accept the first-ranked bid or any other bid that you may receive.
- (j) At any time following submission of our Bid, we shall permit, and shall cause our Joint Venture partners, directors, key officers, key personnel, associates, parent company, affiliates or

subsidiaries, including any Subcontractors, consultants, subconsultants, manufacturers, service providers or Suppliers for any part of the contract to permit ADB or its representative to inspect our site, assets, accounts, and records and other documents relating to the bid submission and to have them audited by auditors appointed by ADB. We understand that failure of this obligation may constitute obstructive practice that may result in debarment and/or contract termination.

- (k) Regardless of whether the contract will be awarded to us, we shall preserve all accounts, records, and other documents related to bid submission for at least 5 years from the date of submission of the bid or the period prescribed in applicable law, whichever is longer.
- (l) If we are awarded the contract, we shall preserve all accounts, records, and other documents related to the procurement and execution of the contract for at least 5 years after completing the works contemplated in the relevant contracts or the period prescribed in applicable law, whichever is longer.
- (m) We confirm and stand by our commitments and other declarations made in connection with the submission of our Letter of Technical Bid.
- (n) We certify on behalf of the Bidder, that the information provided in the bid has been fully reviewed, given in good faith, and to the best of our knowledge is true and complete. We understand that it is our obligation to inform the Employer of any changes to the information as and when it becomes known to us. We understand that any misrepresentation that knowingly or recklessly misleads, or attempts to mislead may lead to the automatic rejection of the Bid or cancellation of the contract, if awarded; and may result in enforcement and disclosure actions, in accordance with ADB's Anticorruption Policy and Investigation and Enforcement Framework (both as amended from time to time).

Name: *[insert complete name of person signing the bid]*

In the capacity of *[insert legal capacity of person signing the bid]*

Signed: *[insert signature of person whose name and capacity are shown above]*

Duly authorized to sign the Bid for and on behalf of *[insert complete name of the Bidder]*

Date: *[insert date of signing]*

# Bid Security<sup>9</sup>

## Bank Guarantee

[Bank's name, and address of issuing branch or office]<sup>10</sup>

Beneficiary: ..... [Name and address of the Employer] .....

Date: .....

Bid Security No.: .....

We have been informed that [name of the Bidder] (hereinafter called "the Bidder") has submitted to you its bid dated [please specify] (hereinafter called "the Bid") for the execution of [name of contract] under Invitation for Bids No. [please specify] ("the IFB").

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the Bidder, we [name of bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [amount in words] [amount in figures] upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder

- (a) has withdrawn its Bid during the period of bid validity specified by the Bidder in the Letter of Bid; or
- (b) does not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter "the ITB"); or
- (c) having been notified of the acceptance of its Bid by the Employer during the period of bid validity, (i) fails or refuses to execute the Contract Agreement, or (ii) fails or refuses to furnish the performance security, in accordance with the ITB, or (iii) fails or refuses to furnish a domestic preference security, if required.

This guarantee will expire (a) if the Bidder is the successful Bidder, upon our receipt of copies of the Contract Agreement signed by the Bidder and the Performance Security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful Bidder, or (ii) 28 days after the expiration of the Bidder's bid.

Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758.<sup>11</sup>

.....  
[Authorized signature(s) and bank's seal (where appropriate)]

<sup>9</sup> Delete this form if Bid-Securing Declaration is used in accordance with ITB 20.1 of the BDS.

<sup>10</sup> All italicized text is for use in preparing this form and shall be deleted from the final document.

<sup>11</sup> Or the employer may use "Uniform Rules for Demand Guarantees (URDG) ICC Publication No. 458" as appropriate.

# Bid-Securing Declaration<sup>12</sup>

Date: *[insert date (as day, month, and year)]*

Bid No.: *[insert number of bidding process]*

Alternative No.: *[insert identification No. if this is a bid for an alternative]*

To: *[insert complete name of the Employer]* We, the undersigned, declare that:

We understand that, according to your conditions, Bids must be supported by a Bid-Securing Declaration.

We accept that we will automatically be suspended from being eligible for bidding in any contract with the Borrower for the period of time of *[insert number of years as indicated in ITB 20.2 of the BDS]* years starting on the date that we receive a notification from the Employer, if we are in breach of our obligation(s) under the bid conditions because we

- (a) have withdrawn our Bid during the period of bid validity specified in the Letter of Bid; or
- (b) do not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter “the ITB”); or
- (c) having been notified of the acceptance of our Bid by the Employer during the period of bid validity, (i) fail or refuse to execute the Contract, if required; or (ii) fail or refuse to furnish the Performance Security, in accordance with the ITB; or (iii) fail or refuse to furnish a domestic preference security, if required.

We understand this Bid-Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) 28 days after the expiration of our Bid.

Signed: *[insert signature of person whose name and capacity are shown]*

In the capacity of *[insert legal capacity of person signing the Bid-Securing Declaration]* Name: *[insert complete name of person signing the Bid-Securing Declaration]*

Duly authorized to sign the bid for and on behalf of *[insert complete name of the Bidder]* Dated on . day of ., \_\_\_\_\_

*[insert date of signing]* Corporate Seal *[where appropriate]*

---

<sup>12</sup> Delete this form if Bid Security is used in accordance with ITB 20.1 of the BDS.



# Affiliate Company Guarantee

Name of Contract/Contract No.: \_\_\_\_\_

Name and Address of Employer: \_\_\_\_\_

*[together with successors and assigns].*

We have been informed that *[name of Contractor]* (hereinafter called the “Contractor”) is submitting an offer for the above-referenced Contract in response to your invitation and that the conditions of your invitation require its offer to be supported by an affiliate company guarantee.

In consideration of you, the Employer, awarding the Contract to the Contractor, we *[name of affiliated company]* irrevocably and unconditionally guarantee to you, as a primary obligation, that (i) throughout the duration of the Contract, we will make available to the Contractor our financial, technical capacity, expertise, and resources required for the Contractor’s satisfactory performance of the Contract; and (ii) we are fully committed, along with the Contractor, to ensuring satisfactory performance of the Contract.

If the Contractor fails to so perform its obligations and liabilities and comply with the Contract, we will indemnify the Employer against and from all damages, losses, and expenses (including legal fees and expenses) which arise from any such failure for which the Contractor is liable to the Employer under the Contract.

This guarantee shall come into full force and effect when the Contract comes into full force and effect. If the Contract does not come into full force and effect within a year of the date of this guarantee, or if you demonstrate that you do not intend to enter into the Contract with the Contractor, this guarantee shall be void and ineffective. This guarantee shall continue in full force and effect until all the Contractor’s obligations and liabilities under the Contract have been discharged, when this guarantee shall expire and shall be returned to us, and our liability hereunder shall be discharged absolutely.

This guarantee shall apply and be supplemental to the Contract as amended or varied by the Employer and the Contractor from time to time. We hereby authorize them to agree on any such amendment or variation, the due performance of which and compliance with which by the Contractor are likewise guaranteed hereunder. Our obligations and liabilities under this guarantee shall not be discharged by any allowance of time or other indulgence whatsoever by the Employer to the Contractor, or by any variation or suspension of the works to be executed under the Contract, or by any amendments to the Contract or to the constitution of the Contractor or the Employer, or by any other matters, whether with or without our knowledge or consent.

This guarantee shall be governed by the law of the same country (or other jurisdiction) that governs the Contract and any dispute under this guarantee shall be finally settled under the *[Rules or Arbitration provided in the Contract]*. We confirm that the benefit of this guarantee may be assigned subject only to the provisions for assignment of the Contract.

Signed by: .....  
*[signature]*

.....  
*[name]*

.....  
*[position in parent/subsidiary company]*

Date:.....

Signed by: .....  
*[signature]*

.....  
*[name]*

.....  
*[position in parent/subsidiary company]*

## NOTE

*If permitted in accordance with ITB 29.2 of the BDS, the Bidder shall provide the Affiliate Company Guarantee Form filled out and signed by each subsidiary, parent entity, or affiliate that the Bidder submits for consideration of the Employer in determining its qualifications.*

# Bidders Qualification

To establish its qualifications to perform the contract in accordance with Section 3 (Evaluation and Qualification Criteria), the Bidder shall provide the following information requested in the corresponding Information Sheets.

## Form ELI – 1: Bidder’s Information Sheet

Bidder’s Information			
		Information of the Bidder	If the Bidder is a subsidiary or branch, information of any parent company or companies
Names	Full legal name(s)		
	Full trading name(s) (if any)		
Addresses	Registered address(es)		
	Trading address(es)		
	Postal address(es) (if different from trading address)		
Type of organization			
Country of constitution, incorporation, and/or registration			
Year of constitution, incorporation, and/or registration			
Corporate or registration number			
In case of a Joint Venture, legal name of each partner			
Bidder’s authorized representative <i>[name, address, telephone number(s), fax number(s), email address]</i>			
<p>Attached are copies of the following documents:</p> <ol style="list-style-type: none"> <li>1. In case of a single entity, articles of incorporation or constitution and company incorporation or registration of the legal entity named above, in accordance with ITB 4.1 and ITB 4.2.</li> <li>2. Authorization to represent the firm or Joint Venture named above, in accordance with ITB 21.2.</li> <li>3. In case of a Joint Venture, a letter of intent to form a Joint Venture or Joint Venture agreement, in accordance with ITB 4.1.</li> <li>4. In case of a government-owned enterprise, any additional documents not covered under 1 required to comply with ITB 4.5.</li> <li>5. Organizational chart and a list of Board of Directors. The successful Bidder shall provide additional information on beneficial ownership, using the Beneficial Ownership Disclosure Form.</li> </ol>			

## Form ELI – 2: Joint Venture Information Sheet

Each partner of the Joint Venture and Specialist Subcontractor must fill out this form separately.

Joint Venture or Specialist Subcontractor Information			
Bidder's legal name			
		Information of Joint Venture Partner or Specialist Subcontractor	If any Joint Venture Partner or Specialist Subcontractor is a subsidiary or branch, information of any parent company or companies
Names	Full legal name(s)		
	Full trading name(s) (if any)		
Addresses	Registered address(es)		
	Trading address(es)		
	Postal address(es) (if different from trading address)		
Type of organization			
Country of constitution, incorporation, and/or registration			
Year of constitution, incorporation, and/or registration			
Corporate or registration number			
Joint Venture Partner's or Specialist Subcontractor's authorized representative information <i>[name, address, telephone number(s), fax number(s), email address]</i>			
<p>Attached are copies of the following documents:</p> <ol style="list-style-type: none"> <li>1. Articles of incorporation or constitution and company incorporation or registration of the legal entity named above, in accordance with ITB 4.1 and ITB 4.2.</li> <li>2. Authorization to represent the firm named above, in accordance with ITB 21.2.</li> <li>3. In the case of a government-owned enterprise, documents establishing legal and financial autonomy and compliance with commercial law, in accordance with ITB 4.5.</li> <li>4. Organizational chart and a list of Board of Directors. The successful Bidder shall provide additional information on beneficial ownership, using the Beneficial Ownership Disclosure Form.</li> </ol>			

## Form CON – 1: Historical Contract Nonperformance

Each Bidder must fill out this form in accordance with Criteria 1.2.1 of Section 3 (Evaluation and Qualification Criteria) to describe any history of nonperforming contracts and pending litigation or arbitration formally commenced against it.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner's name:

Joint Venture Partner: \_\_\_\_\_

Table 1: History of Nonperforming Contracts			
Choose one of the following: <input type="checkbox"/> No nonperforming contracts. <input type="checkbox"/> The following is a description of nonperforming contracts involving the Bidder (or each Joint Venture partner if Bidder is a Joint Venture).			
Year	Description	Amount of Nonperformed Portion of Contract (Rs. equivalent)	Total Contract Amount (Rs.equivalent)
[insert year]	Contract Identification: [indicate complete contract name, number, and any other identification] Name of Employer: [insert full name] Address of Employer: [insert street, city, country] Reason(s) for nonperformance: [indicate main reason(s)]	[insert amount]	[insert amount]
Table 2: Pending Litigation and Arbitration			
Choose one of the following: <input type="checkbox"/> No pending litigation, arbitration or any other material events impacting the net worth and/or liquidity of the bidder. <input type="checkbox"/> The following is a description of all pending litigation, arbitration involving the Bidder or any other material events impacting the net worth and/or liquidity of the bidder (or each Joint Venture partner if Bidder is a Joint Venture).			
Year	Matter in Dispute	Value of Pending Claim (Rs Equivalent)	Value of Pending Claim as a Percentage of Net Worth
[insert year]	Contract Identification, as applicable: [indicate complete contract name, number, and any other identification] Name of Employer, parties involved in the material events impacting the net worth and/or liquidity of the bidder: [insert full name] Address of Employer, parties involved in the material events impacting the net worth and/or liquidity of the bidder: [insert street, city, country] Matter of Dispute: [indicate full description of dispute] Party who initiated the dispute: [indicate "Employer" or "Contractor"] Status: [indicate status of dispute]	[insert amount]	[insert amount]

### NOTE

Table 2 of this form shall only be included if Criterion 1.2.3 of Section 3 (Evaluation and Qualification Criteria) is applicable.

## Form FIN – 1: Historical Financial Performance

Each Bidder must fill out this form.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner's name:

Joint Venture Partner: \_\_\_\_\_

Financial Data for Previous 3 Years, <sup>a</sup> [Rs Equivalent]		
Year 1:	Year 2:	Year 3:

### Information from Balance Sheet

Total Assets (TA)			
Total Liabilities (TL)			
Net Worth = TA – TL			
Current Assets (CA)			
Current Liabilities (CL)			

Most Recent Working Capital		To be obtained for most recent year and carried forward to FIN – 3 Line 1; in case of Joint Ventures, to the corresponding Joint Venture Partner's FIN – 3.
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### Information from Income Statement

Total Revenues			
Profits before Taxes			
Profits after Taxes			

- ☐ Attached are copies of financial statements (balance sheets, including all related notes and income statements) for the last 3 years,<sup>b</sup> as indicated above, complying with the following conditions:
1. Unless otherwise required by Section 3 of the Bidding Document, all such documents reflect the financial situation of the legal entity or entities comprising the Bidder and not the Bidder's parent companies, subsidiaries, or affiliates.<sup>c</sup>
  2. Historical financial statements must be audited by a certified accountant.
  3. Historical financial statements must be complete, including all notes to the financial statements.
  4. Historical financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

<sup>a</sup> If the time period indicated under Criterion 1.3.1 of Section 3 (Evaluation and Qualification Criteria) is either four (4) or five (5) years, then the table columns above should be expanded accordingly.

<sup>b</sup> The time period stated here should be the same as the time period indicated under Criterion 1.3.1 of Section 3 (Evaluation and Qualification Criteria).

<sup>c</sup> When financial qualifications of Bidder's parent companies, subsidiaries, or affiliates are permitted in accordance with ITB 29.2 of Section 2, replace the text of condition 1 with "As required by Section 3 of the Bidding Document, all such documents reflect the financial situation of the legal entity or entities comprising the Bidder, as well as financial situation of such Bidder's parent companies, subsidiaries, or affiliates which are proposed by the Bidder for Criteria 1.3 Financial Situation in Section 3 for consideration of the Employer in determining its qualifications."

## Form FIN – 2: Average Annual Construction Turnover

Each Bidder must fill out this form.

The information supplied should be the Annual Turnover of the Bidder or each partner of a Joint Venture for the total certified payments received from the clients for contracts in progress or completed, converted to United States dollars at the rate of exchange at the end of the period reported.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner's name:

Joint Venture Partner: \_\_\_\_\_

Annual Turnover Data for the Last ____ Years <sup>a</sup> (Construction Only)			
Year	Amount Currency	Exchange Rate	Rs Equivalent
Average Annual Construction Turnover <sup>b</sup>			

<sup>a</sup> The Employer should insert the period described in Criterion 1.3.2 of Section 3 (Evaluation and Qualification Criteria).

<sup>b</sup> To determine the average annual construction turnover, the Employer shall divide the sum of each year's annual turnover by the number of years for which such information was requested.

### Form FIN – 3: Availability of Financial Resources

Bidders must demonstrate sufficient financial resources, usually comprising of Working Capital supplemented by credit line statements or overdraft facilities and others to meet the Bidder's financial requirements for its contract commitments as defined in FIN-4, and the subject contract.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner's name:

Joint Venture Partner: \_\_\_\_\_

Financial Resources		
No.	Source of Financing	Amount (Rs equivalent)
1	Working Capital (to be taken from FIN – 1)	
2	Credit Line <sup>a</sup>	
3	Other Financial Resources <sup>b</sup>	
Total Available Financial Resources		

<sup>a</sup> A credit line is an unconditional and legally binding loan extended to a Bidder by a financial institution. The credit line must be free from any pledge, encumbrance, or commitment to a third party or other transactions. Credit lines should be substantiated by a letter from the bank issuing the line of credit.

<sup>b</sup> Other financial resources are financial assets not considered in the Working Capital. They are noncurrent assets (i.e., with a maturity beyond a 12-month period) such as a loan and/or trade receivables, bank deposits, debt, or equity instruments (provided they are classified as "available for sale" in the financial statements), and are free from any pledge or commitment to a third party and get their value from contractual rights or ownership.

#### NOTE

*Employer may require the Bidder to provide the most recent unutilized balance (i.e., the amount currently available to the Bidder) of the credit line, accompanied by a supporting letter from the issuing financial institution. Further details on credit line requirements may be discussed and agreed upon during preparation of the Bidding Document stage.*



## Form FIN – 4: Financial Requirements for Major Contract Commitments

Bidders (or each Joint Venture partner) should provide information on their commitments on all major contracts<sup>13</sup> that have been awarded<sup>14</sup> after the deadline of the latest financial year for which the financial statements were submitted under Form FIN – 1.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner's name:

Joint Venture Partner: \_\_\_\_\_

Major Contract Commitments						
No.	Name of Contract	Employer's Contact (Address, Tel, Fax)	Contract Completion Date	Contract Value (X) <sup>a</sup>	Contract Period in Months (Y) <sup>b</sup>	Monthly Financial Resources Requirement (X / Y)
1						
2						
3						
4						
Total Monthly Financial Requirement for Major Contract Commitments						Rs ..... .

<sup>a</sup> Values to be calculated from the letter of intent or letter of acceptance or the contract agreement (Rs equivalent based on the foreign exchange rate as of the Base Dates of the respective contracts).

<sup>b</sup> Construction periods (Time for Completion) as defined in the respective contracts.

<sup>13</sup> Major contracts mean contracts with a construction duration that is longer than 12 months

<sup>14</sup> For the purposes of this criterion, "awarded" shall mean: either letter of intent or letter of acceptance has been received, or contract was signed

## Form FIN – 5: Self-Assessment Tool for Bidder’s Compliance to Financial Resources (Criterion 1.3.3 of Section 3)

This form requires the same information submitted in Forms FIN – 3 and FIN – 4. All conditions of “Available Financial Resources Net of contract commitments  $\geq$  Requirement for the Subject Contract” must be satisfied to qualify.

### Form FIN – 5A: For Single Entities

For Single Entities: (A)	Total Available Financial Resources from FIN – 3 (B)	Total Monthly Financial Requirement for Major Contract Commitments from FIN – 4 (C)	Available Financial Resources Net of Major Contract Commitments $D = (B - C)$	Requirement for the Subject Contract (E)	Results: Yes or No [D must be greater than or equal to E] (F)
_____ [Name of Bidder]				..... <sup>a</sup>	

### Form FIN – 5B: For Joint Ventures

For Joint Ventures: (A)	Total Available Financial Resources from FIN – 3 (B)	Total Monthly Financial Requirement for Major Contract Commitments from FIN – 4 (C)	Available Financial Resources Net of Major Contract Commitments $D = (B - C)$	Requirement for the Subject Contract (E)	Results: Yes or No [D must be greater than or equal to E] (F)
One Partner:					
[Name of Partner]				..... <sup>b</sup>	
Each Partner					
[Name of Partner 1]				..... <sup>c</sup>	
[Name of Partner 2]				..... <sup>c</sup>	
[Name of Partner 3]				..... <sup>c</sup>	
All partners combined	D = Sum of available financial resources net of major contract commitments for all partners		D = _____	..... <sup>a</sup>	

<sup>a</sup> The Employer should insert here the total requirement for the Subject Contract (for both single entity and all partners combined) as defined in Criterion 1.3.3 of Section 3.

<sup>b</sup> The Employer should insert here the required share for one partner as defined in Criterion 1.3.3 of Section 3.

<sup>c</sup> The Employer should insert here the required share for each partner as defined in Criterion 1.3.3 of Section 3.

#### NOTE

Form FIN – 5 is made available for use by the bidder as a self-assessment tool, and by the Employer as an evaluation work sheet, to determine compliance with the financial resources requirement as stated in 1.3.3. Failure to submit Form FIN – 5 by the Bidder shall not lead to bid rejection.

## Form EXP – 1: Contracts of Similar Size (1.4.1 (a) and Nature (1.4.1(b)

Fill out one (1) form per contract. Each contract shall be supported by documents such as Signed Contract Agreement, Taking-Over Certificate, Contract Completion Certificate, or Performance Certificate.

The exchange rate to be used to calculate the value of the contract for conversion to a specific currency shall be the selling rate of the Borrower's Central bank on the date of the contract.

Contract of Similar Size and Nature <sup>a</sup>		
Contract No . . . . . of . . . . .	Contract Identification	
Award Date	Completion Date	
Total Contract Amount	Rs	
If partner in a Joint Venture or Subcontractor, specify participation of total contract amount	Percent of Total	Amount
Employer's name Address Telephone number Fax number Email		
Description of the Similarity in Accordance with Criterion 1.4.1 of Section 3 (Evaluation and Qualification Criteria) <sup>a</sup>		
<div style="background-color: #0070c0; color: white; padding: 5px; text-align: center;"><b>NOTE</b></div> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <i>[The Employer should insert here contract size, complexity, methods, technology, or other characteristics as described in Criterion 1.4.1 of Section 3 against which the Bidder demonstrates similarity in the box on the right-hand side.]</i> </div>		

<sup>a</sup> Bidder can submit separate forms corresponding to Similar Size (1.4.1(a) and Nature (1.4.1(b) (if relevant).

## Form EXP – 2: Construction Experience in Key Activities

Fill out one (1) form per contract. Each contract shall be supported by documents such as Signed Contract Agreement, Taking-Over Certificate or Contract Completion Certificate.

Each Bidder must fill out this form.

If complied by Specialist Subcontractor, each Specialist Subcontractor must fill out this form and provide the Specialist Subcontractor's name:

Specialist Subcontractor: \_\_\_\_\_

Contract with Similar Key Activities		
Contract No . . . . . of . . . . .	Contract Identification	
Award Date	Completion Date	
Total Contract Amount	Rs	
If partner in a Joint Venture or Subcontractor, specify participation of total contract amount	Percent of Total	Amount
Employer's name Address Telephone number Fax number Email		
Description of the Key Activities in Accordance with Criterion 1.4.2 of Section 3 (Evaluation and Qualification Criteria)		
<div style="background-color: #0070c0; color: white; padding: 5px; text-align: center; font-weight: bold;">NOTE</div> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p><i>[The Employer should insert here the highly specialized construction activities listed under Criterion 1.4.2 of Section 3 against which the Bidder demonstrates similarity in the box on the right-hand side.]</i></p> </div>		

# Technical Proposal

## NOTE

*The Employer may substitute, delete, or add other information specifying the activities that the Bidders shall describe in their Bid. For each of the forms hereinafter, the Employer may consider specifying a maximum page limit.*

The technical proposal is expected to include as a minimum information described in the following forms:

- (i) Design Methodology;
- (ii) Construction Management Strategy;
- (iii) Construction Methods for Key Component;
- (iv) Design & Construction Schedule;
- (v) Quality Assurance and Quality Control;
- (vi) Environmental, Health, and Safety Management Plan (EHSMP);
- (vii) Anticipated Risks Evaluation;
- (viii) Personnel and Organizational Chart;
- (ix) Personnel;
- (x) Equipment;
- (xi) List of Subcontractors; and
- (xii) Local Participation Plan

## **(i) Design Methodology**

The Bidder shall submit a design methodology that addresses as a minimum the following:

- (a) organizational arrangements for the design, including: team structure, roles and responsibilities, interface arrangements, design review and approval procedures, and quality assurance arrangements;
- (b) proposed design deliverables- methodologies for assessing utilities relocation, tree cutting, geotechnical conditions - including the need for additional boring tests and for selecting the most suitable slope protection types, and other key detailed design particularly to roads in hilly area.
- (c) design statement setting out how the Employers Requirements will be achieved;
- (d) any added value the Bidder will bring, including examples of innovative aspects of the design;
- (e) details of how the EHS requirements, and any proposal to enhance EHS outcomes, will be incorporated into all design stages, and how the implications for the construction phase has been considered; and
- (f) modifying or including any other relevant information, as appropriate.

## **(ii) Construction Management Strategy**

The Bidder shall submit a construction management strategy that addresses as a minimum:

- (a) organizational arrangements for the construction management, including: team structure, roles and responsibilities, interface arrangements, approval procedures, and quality assurance arrangements;
- (b) subcontractor selection and management;
- (c) obtaining and managing consents, permits, and approvals;
- (d) site setup, including access, accommodation, welfare facilities, arrangement for plant and material storage;
- (e) construction phasing proposals, including sequence of work and management of conflicting activities;
- (f) ensuring that geotechnical investigations or other advance works meet the environmental, health, and safety requirements; and
- (g) sustainability aspects demonstrating the bidder's approach and commitment to sustainable construction practices (e.g., energy efficiency, reduction of wastage, material reduction, sources of materials, and others).
- (h) Provide a Traffic Management Plan indicating how traffic will be managed in accordance with the proposed works and Overall Project Programme. Indicate traffic management plans for key work components and critical areas of construction.

### **(iii) Construction Methods for Key Component**

Bidders shall provide typical method statements for the following key activities. Each method statement shall describe the proposed approach to the construction activity, the level of staffing and experience, the safe system of work, and the construction equipment to be used.

Bidders may indicate the key activities methods for construction depending on the final design, or may designate some of the activities using temporary methods until the definitive designs are completed.

1. Provide a detailed method statement for implementing sustainable and innovated construction methods, including any measures to reduce the carbon production from construction activities, such as alternative methods for bituminous heating, alternative materials, reuse of existing materials, etc as applicable to the terrain and conditions for the project. Provide site specific approaches for the innovative and sustainable methods. Provide details of management, supervision and quality assurance
2. Provide slope stabilization methodologies specific for conditions of the proposed project, including identification of key, high-risk sections and specific methodologies for those high-risk sections. Include in the methodology how landslides will be dealt with during construction, including mitigation and response procedure
3. Provide maintenance method plan for the 5-year maintenance activities including methods for specific maintenance activities, maintenance manuals and training for transition to transfer of maintenance activities to the Owner
4. Provide a detailed method statement for steel bridge construction, including staging of materials, procurement plan and storage plan for steel materials, traffic management, etc. Provide details of management, supervision and quality assurance.



#### **(iv) Design and Construction Schedule**

Bidders shall set out a work program for the design and construction of the Works to be undertaken, including the mobilization phase, showing identification of major milestones, and critical path. Detailed timetables may be submitted (as appropriate) for the following aspects:

- (a) Design of the Works, including the submission of the design deliverables, review, and approval of the design by the Engineer;
- (b) Processes and deliverables needed to commence the Works;
- (c) Execution of the Works within the Time for Completion, highlighting activities imposing constraints on the construction sequence; and
- (d) Testing, commissioning, and handing over of the completed Works.

Work programs shall be submitted in paper (hard copy) and in a PDF format compatible with known computer programs, such as for example, PRIMAVERA, TILOS, CAD, or MS Project (GANTT graphics), or similar programs.

Programs must include milestones, when they are applicable, and the specific personnel designation and/or labor outlines, planned for the fulfillment of each program and phase or program activity:

- (a) General work program with an outline of designated personnel and tables of theoretical duration of tasks or activities. Graphic displays of the work progress in flowcharts to show daily production for each activity and the critical path.
- (b) Detailed work program to develop the design to include a personnel allotment outline, equipment, and other resources anticipated, indicating quantity, type, and capacity. Graphic displays such as GANTT Graphics, including milestones and required periods for the Engineer to verify and approve. Minimum unit of time: 1 week.

**(v) Quality Assurance and Quality Control**

Bidders shall have to submit their approach and resources for the quality assurance procedure and quality control process in connection with works and services to be executed under the Contract.

A draft quality management plan should be submitted as supporting documentation.

## **(vi) Environmental, Health, and Safety Management Plan (EHSMP)<sup>15</sup>**

The Bidder shall submit an outline Environmental, Health, and Safety Management Plan (EHSMP) commensurate with the risks and impacts of the proposed works and activities as described in the EMP. These strategies and plans shall describe in detail the actions, materials, equipment, management processes, and others that will be implemented by the Contractor, and its subcontractors to avoid, minimize, and/or mitigate environmental, health, and safety risks associated with implementing the projects activities throughout the project cycle.

In developing these strategies and plans, the Bidder shall have regard to the EHS provisions of the contract and EHS risks, including those as may be more fully described in Section 6 (Employer's Requirements).

The proposal shall also include details in relation to in-house policies and procedures acceptable to the Employer for EHS management such as:

- Availability of the valid International Organization for Standardization (ISO) certification or internationally recognized equivalent (equivalency to be demonstrated by the Bidder), and applicable to the worksite: [*such as*], Quality management certificate ISO 9001, Environmental management certificate ISO 14001, Health and safety management certificate ISO 45001
- Grievance management for both contractor staff and any issues arising between contractor staff and nearby community members
- Performance monitoring system for contractor staff/ subcontractors/ suppliers/suppliers
- Existence of an Ethics Charter.
- Existence of a system for monitoring compliance with EHS commitments for the Bidder's Subcontractors and all its partners.
- Existence of official company procedures for the management of the following relevant points:
  - EHS resources and facilities and EHS monitoring system;
  - Project Areas management information (base camps, quarries, burrow pits, storage areas);
  - Health and Safety on worksites policy and related guidance;
  - Labor Management System;
  - Local recruitment and EHS training of local staff, subcontractors, and/or local partners;
  - Community stakeholder engagement practice;
  - Traffic management practice;
  - Hazardous products management practice;
  - Waste management practice;
  - Protection of water resources;
  - Biodiversity protection practices;
  - Site rehabilitation and revegetation practice;
  - Local cultural heritage protection practice;
  - Erosion and sedimentation practices; and
  - Control of infectious and communicable diseases (HIV/AIDS, malaria, COVID-19, and others)
- Personnel management system: HR policies and procedures, including documented worker grievance mechanisms and evidence of effective implementation (e.g., records of grievances received and resolved).
- System that executes and manages labor management policies and procedures day-to-day
- Evidence of compliance reports to demonstrate implementation of the EMP, audit report in past projects
- Documented HSMP plans, fatalities-free record or evidence of corrective actions in past projects. The Health and Safety Plan shall be in accordance with the Bidder's policies and shall comply with all applicable laws and regulations, including Circular No. RW/NH-36098/25/2022-S&R (P&B), Safety in Road Construction Zones in National Highway Projects - effective and adequate measures to be taken.

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<sup>15</sup> For projects categorized as Category C for environment for which no EMP has been prepared, this subsection should be omitted.

## NOTE

*The Employer shall assess whether the proposed site organization, method statement, mobilization schedule, construction schedule, bidder's Environmental, Health and Safety Management Plan and other EHS management documents described in Section 4 (Bidding Forms) are presented in a consistent manner and comply with requirements stipulated in Section 6 (Works' Requirements) without material deviation, reservation, or omission.*

## **(vii) Anticipated Risks Evaluation**

The Bidder should submit a Risk Management Plan for the proposed project. The Risk Management Plan shall include, at a minimum, the following:

- i. Initial risk register which includes a description of the hazard, an assessment of the potential impact on EHS, cost, program or other, and the proposed mitigation strategy for each hazard.
- ii. Risk mitigation measures
- iii. List of any foreseen uninsurable events, and the bidders approach to managing such events
- iv. Approach to managing non-political force majeure events, including financial resources to mitigate schedule impacts

**(viii) Personnel and Organizational Chart**

The Bidder shall describe the organization of its personnel (an organizational chart shall be provided) specifying the number and specialties of each class of personnel.

For each key personnel, the Bidder shall specify the time periods and number of working days to perform each activity under the design and works implementation phases.

Likewise, for each specialty, the Bidder shall describe the number of personnel and will show their input over the time periods under the design and implementation of the Works.

### (ix) Personnel Form PER

#### Form PER – 1: Proposed Personnel

Bidder should provide the details of the proposed personnel and their experience record in the relevant Information Forms for each candidate:

Design Personnel	
1.	Title of position
	Name
2.	Title of position
	Name
3.	Title of position
	Name
[As needed]	Title of position
	Name
Construction Personnel	
1.	Title of position
	Name
2.	Title of position
	Name
3.	Title of position
	Name
[As needed]	Title of position
	Name

#### NOTE

*All titles of positions will be as listed in Section 6 (Employer's Requirements).*



## Form PER – 2: Résumé of Proposed Personnel

The Bidder shall provide all the information requested below. Use one form for each position.

Position		
Personnel Information	Full Legal Name	Date of Birth
	Known as	Place of Birth
	Nationality	Citizenship
	Type of Government ID Attach a copy of ID to this form	ID number
	Professional Qualifications	
Present Employment	Name of Employer	
	Address of Employer	
	Telephone	Contact (Manager or Personnel Officer)
	Fax	Email
	Job Title	Years with Present Employer

Summarize professional experience in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

From	To	Company, Project, Position, Relevant Technical and Management Experience

## Declaration

I, the undersigned, certify that to the best of my knowledge and belief, the information contained in this Form PER – 2 correctly describes myself, my qualifications, and my experience.

I confirm that I am available throughout the expected time schedule for this position as provided in the

Bid. I understand that any misrepresentation or omission in this Form may:

- (a) be taken into consideration during Bid evaluation;
- (b) result in my disqualification from participating in the Bid;
- (c) result in my dismissal from the Contract.

Name of Key Personnel: \_\_\_\_\_ [*insert name*] \_\_\_\_\_

Signature: \_\_\_\_\_

Date (day month year): \_\_\_\_\_

Countersignature of authorized representative of the Bidder:

Name of authorized representative: \_\_\_\_\_ Signature: \_\_\_\_\_

Date: (day month year): \_\_\_\_\_

## (x) Equipment

### Form EQU: Equipment

The Bidder shall provide adequate information and details to demonstrate clearly that it has the capability to meet the equipment requirements indicated in Section 6 (Employer's Requirements), using the following Forms. A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Bidder.

Item of Equipment		
Equipment Information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current Status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased <input type="checkbox"/> Specially manufactured	

Omit the following information for equipment owned by the Bidder.

Owner	Name of owner	
	Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreements	Details of rental, lease, or manufacture agreements specific to the project	

**(xi) List of Subcontractors (if any)**

Proposed Subcontractors for Major Activities and/or Sub-Activities

The following Subcontractors and/or manufacturers are proposed for carrying out the Major Activity and/or Sub-Activity indicated.

Major Works	Proposed Subcontractors	Nationality

## **(xii) Local Participation Plan**

Bidders are required to submit a Local Participation Plan demonstrating their commitment to employing the minimum required local labor. This plan must include a narrative addressing the following areas, along with supporting data submitted using the provided forms:

### **1. Execution and Sourcing Plan**

- Description of the proposed approach to engage local labor across various project phases.
- Indicative sourcing plan showing potential sources of local labor (e.g., local communities and employment agencies).
- Labor deployment plan (*bidder may append a filled table following template provided below [Form LP1] along with any relevant supporting attachments*)
- (others)

### **2. Stakeholder Roles and Responsibilities**

- Identification of key stakeholders involved in implementing local participation (contractor, subcontractors, and suppliers).
- Clear delineation of roles, responsibilities, and communication mechanisms among those stakeholders to support effective coordination and monitoring.
- (others)

### **3. Risk and Contingency Planning**

- Identification of potential risks (e.g., shortage of skilled labor, migration, or conflict with agricultural seasons for example).
- Mitigation measures and contingency actions to ensure uninterrupted achievement of participation targets.
- (others)

### **4. Organizational Arrangements**

- Linkages to the bidder's project organization chart, highlighting key positions to be filled by local personnel.
- Designation of a responsible focal person or team for managing and reporting on local participation.
- (others)

### **5. Local Job Creation**

- Other local job creation proposals addressing the technical criteria; such as labor exceeding mandatory requirements (e.g., 50%), gender-sensitive hiring, and increased usage of skilled labor.
- Proposal for implementation (*bidder may append a table including details using template Form LP2*).
- (others)

### **6. Skills Development**

- On-the-job training programs.
- Structured training programs and workshops.
- Knowledge transfer.
- (others)

### **7. Monitoring and Reporting Mechanism**

- Description of how progress toward local participation targets will be tracked, verified, and reported during implementation.
- Use of standard forms and periodic reporting consistent with contract requirements.
- (others)

## Schedules

### Schedule of Payment Currencies

For .....insert name of Section of the Works .....

Separate tables may be required if the various sections of the Works (or of the Schedule of Priced Activities and Sub-Activities) will have substantially different foreign and local currency requirements. In such a case, the Employer should prepare separate tables for each Section of the Works.

	A	B	C	D
Name of Payment Currency	Amount of Currency	Rate of Exchange to Local Currency	Local Currency Equivalent $C = A \times B$	Percentage of Net Bid Price (NBP) $\frac{100 \times C}{NBP}$
Local Currency		1.00		
Foreign Currency #1				
Foreign Currency #2				
Foreign Currency #3				
Net Bid Price				100.00
Provisional Sums Expressed in Local Currency	<i>To be entered by the Employer</i>	1.00	<i>To be entered by the Employer</i>	
	<i>[To be entered by the Employer; Delete if not applicable:]</i>		<i>[To be entered by the Employer; Delete if not applicable:]</i>	
	<i>[To be entered by the Employer]</i>		<i>[To be entered by the Employer]</i>	
BID PRICE				

#### NOTE

The rates of exchange shall be the selling rates 28 days prior to the deadline for submission of bids published by the source specified in BDS 18.

This table [Schedule of Payment Currencies] should be made part of the Contract with the successful Bidder.

## Schedule of Cost Indexation

### NOTE TO EMPLOYER

*It is recommended that the Employer is advised by a professional with experience in construction costs and the inflationary effect on construction costs when preparing the contents of the Schedule of Cost Indexation. In the case of very large and/or complex works contracts, it may be necessary to specify several families of price adjustment formulae corresponding to the different works involved. When finalizing the contract document, ensure that the finalized Schedule of Cost Indexation is attached to the Contract Agreement.*

[The formulae for price adjustment shall be of the following general type:]

If in accordance with GC 19.10, prices shall be adjustable. The method to be used to calculate the price adjustment is at GC 19.10

# Section 5: Eligible Countries

This section contains the list of eligible countries.

<https://www.adb.org/about/members>

<b>Regional members</b> <ol style="list-style-type: none"> <li>1. Afghanistan</li> <li>2. Armenia</li> <li>3. Australia</li> <li>4. Azerbaijan</li> <li>5. Bangladesh</li> <li>6. Bhutan</li> <li>7. Brunei Darussalam</li> <li>8. Cambodia</li> <li>9. Cook Islands</li> <li>10. Federated States of Micronesia</li> <li>11. Fiji</li> <li>12. Georgia</li> <li>13. Hong Kong, China</li> <li>14. India</li> <li>15. Indonesia</li> <li>16. Japan</li> <li>17. Kazakhstan</li> <li>18. Kiribati</li> <li>19. Kyrgyz Republic</li> <li>20. Lao People's Democratic Republic</li> <li>21. Malaysia</li> <li>22. Maldives</li> <li>23. Marshall Islands</li> <li>24. Mongolia</li> <li>25. Myanmar</li> <li>26. Nauru</li> <li>27. Nepal</li> <li>28. New Zealand</li> <li>29. Niue</li> <li>30. Pakistan</li> <li>31. Palau</li> <li>32. Papua New Guinea</li> <li>33. People's Republic of China</li> <li>34. Philippines</li> <li>35. Republic of Korea</li> <li>36. Samoa</li> <li>37. Singapore</li> <li>38. Solomon Islands</li> </ol>	<ol style="list-style-type: none"> <li>39. Sri Lanka</li> <li>40. Taipei, China</li> <li>41. Tajikistan</li> <li>42. Thailand</li> <li>43. Timor-Leste</li> <li>44. Tonga</li> <li>45. Türkiye</li> <li>46. Turkmenistan</li> <li>47. Tuvalu</li> <li>48. Uzbekistan</li> <li>49. Vanuatu</li> <li>50. Viet Nam</li> </ol> <b>Non-regional members</b> <ol style="list-style-type: none"> <li>1. Austria</li> <li>2. Belgium</li> <li>3. Canada</li> <li>4. Denmark</li> <li>5. Finland</li> <li>6. France</li> <li>7. Germany</li> <li>8. Ireland</li> <li>9. Israel</li> <li>10. Italy</li> <li>11. Luxembourg</li> <li>12. Netherlands</li> <li>13. Norway</li> <li>14. Portugal</li> <li>15. Spain</li> <li>16. Sweden</li> <li>17. Switzerland</li> <li>18. United Kingdom</li> <li>19. United States</li> </ol>
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# Section 6: Employer's Requirements

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## **Schedule-A**

*(See Clauses 2.1 and 8.1)*

### **Site of the Project**

#### **1 The Site**

- (i) Site of the Intermediate-Lane without Paved shoulder 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 8.2.1 of this Agreement.
- (iv) The alignment plans of the Project Highway are specified in Annex-III. Alignment plans have only been given for reference purpose only. The proposed profile of the Project Highways shall be upgraded by the contractor on the basis of the site requirement and codal guidelines.
- (v) The status of the environment clearances obtained or awaited is given in Annex-IV.

## Annex – I

(Schedule-A)

### The Site

#### 1. The Site

The site of the Project Highway initiates from junction of Rorathang-Rhenock Road with NH717A. (Design km 0+000) and terminates to junction of Rorathang-Rhenock Road with Rhenock-Rongli Highway (Design Km 8.889) in the State of Sikkim. The project road is presently categorized as State Highway 6. The land, carriageway and structures comprising the Site are described below.

#### 2. Land

The Site of the Project Highway comprises the land (sum total of land already in possession and land to be processed) as described below:

Sr. No	Design Chainage		Length	Land already possessed (m)	Remarks
	From (Km)	To (Km)	in km		
1	0+000	8+889	8.889	16.46	

#### 3. Carriageway

The present carriageway of the Project Highway is an intermediate Lane without paved shoulder. The type of the existing pavement is flexible. Details of carriageway width are given below.

Sr. No.	From (Design Chainage)	To (Design Chainage)	Length in km	Type of Carriage way	Carriage way Width (m)	Paved Shoulder Width (m)	
						Left	Right
1	0+000	8+889	8+889	Flexible	5 to 5.5	-	-
Total			8.889	Carriageway width excluding bridge location			

#### 4. Major Bridges

The Site includes the following Major Bridges:

S. No.	Design Chainage (km)	Type of Structure			Span Arrangement	Width of carriage way between kerbs (m)	Total Width(m)
		Abutment	Pier	Super Structure			
NIL							

#### 5. Road over-bridges (ROB)/ Road under-bridges (RUB)

The Site includes the following ROB (road over railway line)/RUB (road under railway line):

S. No.	Design Chainage (km)	Type of Structure		No. of Spans with span length (m)	Width (m)	ROB/ RUB
		Foundation	Superstructure			
NIL						

## 6. Grade separators

The Site includes the following grade separators:

S. No.	Design Chainage (km)	Type of Structure	No. of Spans with span length (m)	Width (m)
Nil				

## 7. Minor bridges

The Site includes the following minor bridges:

S. No.	Design Chainage (km)	Type of Structure			Span Arrangement (m)	Width of carriage way between kerbs (m)	Total Width(m)
		Abutment	Foundation	Super Structure			
1	0+970.75	RCC Wall type	Open foundation	Steel Composite	1 x 17.5	5.4	7.8
2	1+925.860	RCC Wall type	Open foundation	Steel truss	1 x 31	5.3	5.7
3	4+077.240	RCC Wall type	RCC wall pier with open foundation	RCC T Girder + Steel truss	1 x 10.7 + 1 x 47.5	4.1	4.5

## 8. Railway level crossings

The Site includes the following railway level crossings:

S. No.	Design Chainage (km)	Remark
NIL		

## 9. Underpasses (vehicular, non vehicular)

The Site includes the following underpasses:

S. No.	Design Chainage (km)	Type of Structure	No. of Spans with span length (m)	Width (m)
Nil				

## 10. Culverts

The Site has the following culverts:

S. No.	Design Chainage (km)	Type of Culvert	Span Arrangement and Total Vent way (No. x Length) (m)	Width of Culvert (m)	Remarks
1	0+184	Slab culvert	1 x 1 x 0.8	6.5	Reconstruction
2	0+353	Slab culvert	1 x 1 x 0.8	6.5	Reconstruction
3	0+654	Slab culvert	1 x 1 x 0.8	7.0	Reconstruction
4	0+868	Slab culvert	1 x 1 x 0.8	6.4	Reconstruction



S. No.	Design Chainage (km)	Type of Culvert	Span Arrangement and Total Vent way (No. x Length) (m)	Width of Culvert (m)	Remarks
5	1+017	Slab culvert	1 x 1 x 0.8	6.7	Reconstruction
6	1+117	Slab culvert	1 x 1 x 0.8	6.7	Reconstruction
7	1+314	HPC	1 x 1.10 dia.	6.7	Reconstruction
8	1+494	Slab culvert	1 x 1 x 0.8	7.9	Reconstruction
9	1+574	Slab culvert	1 x 1 x 0.8	7.1	Reconstruction
10	1+800	Slab culvert	1 x 1 x 0.8	7.5	Reconstruction
11	2+005	Slab culvert	Structure fully destroyed due to landslide		Reconstruction
12	2+145	Slab culvert	1 x 1 x 0.8	6.7	Reconstruction
13	2+277	Slab culvert	1 x 1 x 0.8	6.7	Reconstruction
14	2+748	Slab culvert	1 x 1 x 0.8	7.2	Reconstruction
15	3+364	Slab culvert	1 x 1 x 0.8	7.7	Reconstruction
16	3+703	Slab culvert	1 x 1 x 0.8	7.6	Reconstruction
17	3+773	Slab culvert	1 x 1 x 0.8	7.6	Reconstruction
18	4+211	Slab culvert	1 x 1 x 0.8	7.0	Reconstruction
19	4+313	Slab culvert	1 x 1 x 0.8	7.0	Reconstruction
20	4+400	Slab culvert	1 x 1 x 0.8	7.0	Reconstruction
21	4+665	Slab culvert	1 x 1 x 0.8	7.0	Reconstruction
22	4+944	Slab culvert	1 x 3.4 x 2.5	7.5	Reconstruction
23	5+430	Slab culvert	1 x 1 x 0.8	6.5	Reconstruction
24	5+583	Slab culvert	1 x 1 x 0.8	6.7	Reconstruction
25	5+631	HPC	1 x 0.9 dia.	6.7	Reconstruction
26	5+681	HPC	1 x 0.9 dia.	6.7	Reconstruction
27	5+761	Slab culvert	1 x 1 x 0.8	7.5	Reconstruction
28	6+009	Slab culvert	1 x 0.9 x 0.8	7.5	Reconstruction
29	6+099	Slab culvert	1 x 1 x 0.8	7.5	Reconstruction
30	6+233	Slab culvert	1 x 0.9 x 0.8	7.5	Reconstruction
31	6+322	Slab culvert	1 x 0.9 x 0.8	7.5	Reconstruction
32	6+565	Slab culvert	1 x 0.7 x 0.8	7.5	Reconstruction
33	6+674	Slab culvert	1 x 0.7 x 0.8	7.5	Reconstruction
34	6+901	Slab culvert	1 x 0.9 x 0.8	7.5	Reconstruction

S. No.	Design Chainage (km)	Type of Culvert	Span Arrangement and Total Vent way (No. x Length) (m)	Width of Culvert (m)	Remarks
35	6+968	Slab culvert	1 x 1.0 x 1.0	8.2	Reconstruction
36	7+152	Slab culvert	1 x 1.0 x 0.8	7.7	Reconstruction
37	7+304	Slab culvert	1 x 1.0 x 0.8	7.7	Reconstruction
38	7+473	Slab culvert	1 x 1.0 x 0.8	7.7	Reconstruction
39	7+637	Slab culvert	1 x 1.0 x 0.8	7.7	Reconstruction
40	7+704	Slab culvert	1 x 1.0 x 0.8	7.7	Reconstruction
41	7+771	Slab culvert	1 x 3.2 x 2.0	7.7	Reconstruction
42	7+859	Slab culvert	1 x 3.2 x 2.0	7.7	Reconstruction
43	8+155	Slab culvert	1 x 3.2 x 2.0	7.7	Reconstruction
44	8+532	Slab culvert	1 x 1.0 x 0.8	7.7	Reconstruction
45	8+687	Slab culvert	1 x 1.0 x 0.8	7.7	Reconstruction

#### 11. Bus Bays/ Bus shelter

The details of bus shelter on the Site are as follows:

S. No.	Design Chainage ( km)	Left Hand Side	Right Hand Side
1	0+010	LHS	
2	0+775	LHS	
3	7+450	LHS	

#### 12. Truck Lay byes

The details of truck lay byes are as follows:

S. No.	Design Chainage ( km)	Left Hand Side	Right Hand Side
NIL			

#### 13. Road side drains

The details of roadside drains are as follows:

S. No.	Design Chainage (km)		Type
	From	To	
1	0+015	0+150	Lined Drain RHS
2	0+300	0+525	Lined Drain RHS
3	0+560	0+935	Lined Drain RHS
4	1+110	1+890	Lined Drain RHS
5	2+090	2+620	Lined Drain RHS
6	3+110	4+020	Lined Drain RHS
7	4+100	8+889	Lined Drain RHS

#### 14. Major junctions

The details of major junctions are as follows:

Sl. No.	Design Chainage	Side	Type of Junction	Destination	Type
1	0+000	L,R	Y	NH717A (Rorathang-Rhenock Road)	Bitumen
2	0+910	L	Y	To Swiss Garnier Company	Concrete

3	2+210	L	Y	Beer Factory	Concrete
4	8+889	L,R	Y	NH717A (Rorathang-Rhenock Road)	Bitumen

#### 15. Minor junctions

The details of the minor junctions are as follows:

Sl. No.	Design Chainage	Side	Type of Junction	Destination
1	1+050	L	Y	L=River
2	2+080	R	Y	Under construction road
3	2+965	L	Y	L=River
4	3+777	R	Y	R=Agricultural field
5	5+390	L	Y	L= Gati Infrastructure
6	7+875	L	Y	L-BDO office
7	8+225	R	Y	R=House

#### 16. Bypasses

Existing road sections have following bypass-

S. No.	Name of Bypass (town)	Design Chainage (km)		Existing Length (Km)
		From	To	
-NIL-				

#### 17. Detail of any other structures

Details of Walls:

Location of Existing Retaining Wall at valley side:

Design Chainage		Length (in m)	Type	Side
Start	End			
0+022	0+063	41	Retaining Wall	Left
0+100	0+145	45	Retaining Wall	Left
0+175	0+192	17	Retaining Wall	Left
0+340	0+402	62	Retaining Wall	Left
0+445	0+455	10	Retaining Wall	Left
0+478	0+550	72	Retaining Wall	Left
0+615	0+627	12	Retaining Wall	Left
0+735	0+770	35	Retaining Wall	Left
1+245	1+275	30	Retaining Wall	Left
1+478	1+485	7	Retaining Wall	Left
1+505	1+520	15	Retaining Wall	Left
1+553	1+582	29	Retaining Wall	Left
1+740	1+765	25	Retaining Wall	Left
1+790	1+815	25	Retaining Wall	Left
1+880	1+910	30	Retaining Wall	Left
2+070	2+085	15	Retaining Wall	Left
2+155	2+170	15	Retaining Wall	Left
2+200	2+365	165	Retaining Wall	Left
2+545	2+665	120	Retaining Wall	Left
2+688	2+718	30	Retaining Wall	Left
2+882	2+908	26	Retaining Wall	Left
2+930	2+935	5	Retaining Wall	Left
3+045	3+095	50	Retaining Wall	Left
3+172	3+225	53	Retaining Wall	Left
3+305	3+335	30	Retaining Wall	Left
3+455	3+475	20	Retaining Wall	Left

Design Chainage		Length (in m)	Type	Side
Start	End			
3+565	3+765	200	Retaining Wall	Left
3+940	4+050	110	Retaining Wall	Left
4+360	4+375	15	Retaining Wall	Left
4+445	4+490	45	Retaining Wall	Left
4+980	5+108	128	Retaining Wall	Left
5+175	5+180	5	Retaining Wall	Left
5+215	5+220	5	Retaining Wall	Left
5+280	5+345	65	Retaining Wall	Left
5+480	5+515	35	Retaining Wall	Left
5+560	5+570	10	Retaining Wall	Left
5+655	5+685	30	Retaining Wall	Left
5+765	5+790	25	Retaining Wall	Left
5+880	5+910	30	Retaining Wall	Left
5+975	6+015	40	Retaining Wall	Left
6+365	6+440	75	Retaining Wall	Left
6+505	6+525	20	Retaining Wall	Left
6+675	6+695	20	Retaining Wall	Left
6+730	6+905	175	Retaining Wall	Left
6+950	7+060	110	Retaining Wall	Left
7+125	7+185	60	Retaining Wall	Left
7+220	7+235	15	Retaining Wall	Left
7+300	7+320	20	Retaining Wall	Left
7+350	7+360	10	Retaining Wall	Left
7+455	7+520	65	Retaining Wall	Left
7+845	7+945	100	Retaining Wall	Left
8+035	8+045	10	Retaining Wall	Left
8+175	8+185	10	Retaining Wall	Left
8+235	8+245	10	Retaining Wall	Left
8+385	8+445	60	Retaining Wall	Left
8+520	8+560	40	Retaining Wall	Left
8+665	8+810	145	Retaining Wall	Left
8+870	8+888	18	Retaining Wall	Left

Location of Existing Breast Wall at hill side:

Design Chainage		Length (in m)	Type	Side
Start	End			
0+000	0+045	45	Breast Wall	Right
0+505	0+585	80	Breast Wall	Right
0+640	0+692	52	Breast Wall	Right
0+865	0+940	75	Breast Wall	Right
0+960	0+980	20	Breast Wall	Right
1+030	1+065	35	Breast Wall	Right
1+340	1+355	15	Breast Wall	Right
1+455	1+485	30	Breast Wall	Right
1+505	1+625	120	Breast Wall	Right
1+675	1+705	30	Breast Wall	Right
1+815	1+850	35	Breast Wall	Right
1+965	1+975	10	Breast Wall	Right
2+365	2+385	20	Breast Wall	Right
2+725	2+750	25	Breast Wall	Right
2+810	2+865	55	Breast Wall	Right
3+128	3+135	7	Breast Wall	Right
3+245	3+255	10	Breast Wall	Right
4+375	4+435	60	Breast Wall	Right
4+618	4+635	17	Breast Wall	Right

Design Chainage		Length (in m)	Type	Side
Start	End			
4+685	4+695	10	Breast Wall	Right
4+780	5+005	225	Breast Wall	Right
5+135	5+145	10	Breast Wall	Right
5+235	5+265	30	Breast Wall	Right
5+370	5+405	35	Breast Wall	Right
5+495	5+530	35	Breast Wall	Right
5+585	5+650	65	Breast Wall	Right
5+845	5+900	55	Breast Wall	Right
5+940	5+955	15	Breast Wall	Right
6+285	6+295	10	Breast Wall	Right
6+400	6+420	20	Breast Wall	Right
6+630	6+642	12	Breast Wall	Right
6+705	6+730	25	Breast Wall	Right
7+040	7+070	30	Breast Wall	Right
7+125	7+160	35	Breast Wall	Right
7+210	7+235	25	Breast Wall	Right
7+410	7+425	15	Breast Wall	Right
7+465	7+690	225	Breast Wall	Right
7+775	7+840	65	Breast Wall	Right
7+875	8+005	130	Breast Wall	Right
8+010	8+030	20	Breast Wall	Right
8+050	8+140	90	Breast Wall	Right
8+185	8+365	180	Breast Wall	Right
8+415	8+510	95	Breast Wall	Right
8+565	8+590	25	Breast Wall	Right
8+790	8+888	98	Breast Wall	Right

## 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 (Km)		Length (Km)	ROW (m)	Date of Providing Right of Way
	From	To			
(i) Full Right of Way (Full Width)					
1	0+000	0+926	926	16.46	On Appointed Date
2	1+009	1+889	880	16.46	
3	1+978	3+990	2012	16.46	
4	4+127	8+889	4762	16.46	
(ii) Part Right of Way (Part Width)					
1	0+926	0+938	12	16.46	On Appointed Date
2	0+938	0+945	7	16.46	
3	0+945	0+950	5	16.46	
4	0+950	1+009	59	16.46	
5	1+889	1+910	21	16.46	
6	1+910	1+913	3	16.46	
7	1+913	1+919	6	16.46	
8	1+919	1+940	21	16.46	
9	1+940	1+971	31	16.46	
10	1+971	1+978	7	16.46	
11	3+990	4+045	55	16.46	
12	4+045	4+060	15	16.46	
13	4+060	4+127	67	16.46	
(iii) Balance Right of Way (Full Width)					
1	0+926	0+938	12	10.19	Within 90 Days of Appointed Date
2	0+938	0+945	7	5.00	
3	0+945	0+950	5	13.2	
4	0+950	1+009	59	12.7	
5	1+889	1+910	21	3.46	
6	1+910	1+913	3	8.48	
7	1+913	1+919	6	8.84	
8	1+919	1+940	21	7.37	
9	1+940	1+971	31	7.41	
10	1+971	1+978	7	1.58	
11	3+990	4+045	55	6.97	
12	4+045	4+060	15	10.82	
13	4+060	4+127	67	10.73	

## **Annex – III**

*(Schedule-A)*

### **Alignment Plans**

The existing alignment of the project highway shall be modified in the following sections as per alignment plan indicated below:

The alignment of the project highway is enclosed in alignment plan drawing. Finished road level indicated in the alignment plan shall be followed by the contractor as minimum FRL. In any case, FRL 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 alignment plan drawing based on site/design requirement.

## **Annex – IV**

*(Schedule-A)*

### **Environment Clearances and Forest clearance**

- Forest clearance is in process
- Environment Clearances-Not applicable

However Environmental mitigation shall be implemented by the contractor as per the Initial Environmental Examination (IEE) Report and Environment Management Plan (EMP) of the project attached herewith for reference and guidelines.

Permission for cutting of Trees from the district administration shall be obtained prior to date of agreement. Felling of trees within the ROW where required / permitted, staking, transportation from the project site to Forest department/ authority where the space is available shall be done as per requirement of Employer / concerned department.



## Annex – V

(Schedule-A)

### 1. Electrical Utilities

The site includes the following electrical utilities:

#### a) Extra High Tension lines (EHT Lines)

Sl No	Chainage (Km)		Length (in Km)				Crossing			
	From	To	400 KV	220 KV	132 KV	66 KV	400 KV	220 KV	132 KV	66 KV
As per existing										

#### b) High Tension/ Low Tension lines (HT/LT Lines)

Sl. No.	Chainage (Km)		Length (in Km)			Crossing			Transformer	
	From	To	33 KV	11 KV	LT	33 KV	11 KV	LT	No.	Capacity (KV)
1	0.540	0.580		0.041			0.00			
2	0.630	0.663		0.034			1.000			
3	1.015	1.070	0.057				0.00			
4	1.210	1.228		0.022			1.00			
5	1.210	1.298	0.085				1.00			
6	1.335	1.900	0.568				5.00			
7	1.519			0.012			1.00			
8	1.959			0.013			1.00			
9	2.190	2.335	0.149				0.00			
10	3.580	3.700		0.116			0.00			
11	4.310	4.320	0.017				1.00			
12	4.340	4.843		0.455			3.00			
13	5.836			0.014			1.000			
14	7.800		0.014				1.00			
15	7.965	8.090		0.122			2.00			
16	8.018	8.130	0.106				1.00			
17	8.122			0.014			1.00			
18	8.250	8.527		0.196			0.00			
19	8.470	8.482		0.018			1.00			
20	8.580	8.685		0.101			0.00			
21	8.685	8.750	0.069				0.00			

### 2. Public Health Utilities (Water/Sewage pipe Lines)

Sl. No.	Chainage (Km)		Length (in Km)				Crossing			
	From	To	Water Supply		Sewage Line		Water Supply		Sewage Line	
			with pumping	with gravity	with pumping	with gravity	with pumping	with gravity	with pumping	with gravity
1	2.971	2.995	-	0.024	-	-	-	0	-	-
2	3.305	3.325	-	0.020	-	-	-	0	-	-
3	3.476	3.484	-	0.008	-	-	-	0	-	-
4	5.173		-	0.007	-	-	-	0	-	-

### **3. Any other Line**

No change of scope shall be paid for any over-ground utilities. However, for any underground utilities not mentioned in this schedule shall be treated as change of scope, which shall be worked out as per as per the estimation of the concerned utility owning department and shall be payable.

## **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.

**2. Rehabilitation and augmentation**

Rehabilitation and augmentation shall include Two-Laning with paved shoulders and strengthening 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 Two-Laning with paved shoulder**

#### **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 hilly terrain to the extent land is available. The horizontal alignment provided in the plan profile drawings shall remain unchanged except locations where if any issues arise, the same shall be finalized in consultation with Authority Engineer and Authority. The vertical profile shall be designed with design speed as given in this Annex. However, the minimum Finished Road Level (FRL) provided in the plan profile drawings (Annex III of Schedule A) shall have to be achieved.

#### **1.2. Built up/ Semi built up area**

The following stretches of the Highway shall be treated as Built up /Semi Built up area.

<b>Built-up section/Town Name</b>	<b>Design Chainages (km)</b>		<b>Length (Km)</b>
	<b>Start</b>	<b>End</b>	
Kharay Village	0+500	0+700	0.200
Mulluke Village	1+200	2+200	1.000
Kalikhola Village	4+350	4+500	0.150
Kalikhola Village	4+820	4+920	0.100
Dalapchand Village	7+600	8+300	0.700
Dalapchand Village	8+400	8+650	0.250

#### **1.3. Four/Six laning Stretches**

NIL

#### **1.4. Width of carriageway**

- a) Two-Laning with paved shoulder shall be undertaken. The paved carriageway width shall be 8 (Eight) m wide including 1.0m wide Paved shoulder on hill side in accordance with the typical cross section drawings.
- b) Except as otherwise provided in this Agreement, the width of the paved carriageway and cross-sectional features shall conform to 1.4 (a) above and Appendix B-1.

#### **2. Geometric design and general features**

##### **2.1. General**

Geometric design and general features of the Project Highway shall be in accordance with Section 6 of the Hill road Manual.

##### **2.2. Design speed**

The design speed shall be the minimum design speed of 20 km per hr for hilly terrain for project stretch.

### 2.3. Improvement of the existing road geometrics

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 rights of way and proper road signs and safety measures shall be provided.

#### 2.3.1. List of Realignment

The Project Highway shall follow the existing alignment except realignment at major bridge and minor bridge locations where it shall follow the alignment plan specified in Annex III of Schedule-A.

#### 2.3.2. Restriction of Design speed

The Project highway shall be designed minimum 20 kmph for hilly terrain.

### 2.4. Right of Way

Details of Right of Way are given in Annex– II of Schedule-A.

Note: Except for junction improvement towards cross road and Major Bridge locations where in PROW shall be as per design.

### 2.5. Type of shoulders

- a) Except as otherwise provided in this Agreement, in hilly terrain, paved shoulder of 1.0m width on hill side shall be provided and balance 1.0m width shall be covered with hard shoulder on valley side.
- b) Design and specifications of paved shoulders and hard shoulder shall conform to the requirements specified in hill road manual and specification mentioned in schedule D.

### 2.6. Lateral and vertical clearances at underpasses / Flyovers

- 2.6.1. Lateral and Vertical clearances at underpasses/ Flyovers and provision of guardrails/crash barriers shall be as per hill road Manual.

Lateral and Vertical clearance: The width of the opening and Vertical Clearance at the underpasses/ Flyovers shall be as follows:

S. No.	Location (Design chainage)	Span/Opening (m)	Vertical Clearance (m)	Remarks
NIL				

### 2.7. Lateral and vertical clearance at overpasses

- 2.7.1. Lateral and Vertical clearances at underpasses/ Flyovers and provision of guardrails/crash barriers shall be as per the Hill road Manual.

- 2.7.2. Lateral and Vertical clearance: The width of the opening and Vertical Clearance at the underpasses/ Flyovers shall be as follows:

S. No.	Location (Design chainage)	Span/Opening (m)	Vertical Clearance (m)	Remarks
NIL				

## 2.8. Slip roads/Service roads

Slip roads/Service roads shall be constructed at the locations and for the lengths indicated below as per Hill road manual:

Sl. No.	FROM	TO	LENGTH	TCS Type	Side	Type of Access road	Width (m)
NIL							

## 2.9. Grade separated structures

2.9.1. Grade separated structures shall be provided as per Hill road Manual. The requisite particulars are given below:

## 2.10. Cattle and pedestrian under pass / over pass

Cattle and pedestrian underpass/overpass shall be provided as per Hill road Manual.

S. No.	Location (Design Ch.)	Type of crossing
NIL		

## 2.11. Typical cross-sections of the Project Highway

Different type of cross sections for different segments of Two Lane with paved shoulders stretch shall be developed as provided in Hill road Manual referred in Schedule D without compromising the minimum dimensions mentioned in the indicative cross sections.

Typical Cross Section showing configuration along with indicative schedule of applicability of different TCS are enclosed in Appendix-B1 to this Schedule B.

## 2.12. Bypasses and Realignments

i) Bypasses

S. No.	Design Chainages (km)		Length (Km)
	From	To	
NIL			

(ii) Realignment

S. No.	Design Chainages (km)		Length (Km)
	From	To	
1	0+930	1+010	0.080
2	1+890	1+960	0.070
3	4+000	4+130	0.130

Note: The above list is indicative only and any increase in number of realignments and length of the realignment shall not be considered as change of scope of work.

## 3. Intersections and Grade Separators

All intersections and grade separators shall be as per Hill road Manual. 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:

### 3.1. At-grade intersections

3.1.1. Major Junction

Sl. No.	Design Chainage	Side	Type of Junction	Destination
1	0+000	L,R	Y	NH717A (Rorathang-Rhenock Road)
2	0+910	L	Y	To Swiss Garnier Company
3	2+210	L	Y	Beer Factory
4	8+889	L,R	Y	NH717A (Rorathang-Rhenock Road)

### 3.1.2. Minor Junction

Sl. No.	Design Chainage	Side	Type of Junction	Destination
1	1+050	L	Y	L=River
2	2+080	R	Y	Under construction road
3	2+965	L	Y	L=River
4	3+777	R	Y	R=Agricultural field
5	5+390	L	Y	L= Gati Infrastructure
6	7+875	L	Y	L-BDO office
7	8+225	R	Y	R=House

**Note** The list of above major and minor junctions is indicative only and any additional minor junctions required in the Project Highway are to be constructed by the contractor in consultation with the Authority Engineer. No change of scope on account of change in number of minor junctions will be accepted.

### 3.2. Grade separated intersection with/without ramps

S. No	Design Chainage	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 Hill road Manual as referred in Schedule D and the specified cross sectional details. Deficiencies in the plan and profile of the existing road shall be corrected within the proposed ROW. The specification of the embankment material shall be as per the specification described in Schedule D.

### 4.2. Raising of the existing road

Existing road shall be raised as per the drawing specified in Annexure III of Schedule A. the existing road profile shall be improved to the extent possible within the given rights of way and proper road signs and safety measures shall be provided.

## 5. Pavement design

- 5.1. Pavement design shall be carried out in accordance with IRC: 37-2018 and Section-10 of the Hill Road Manual referred in Schedule D satisfying the type of pavement mentioned in this schedule. Project road shall be reconstructed from subgrade bottom by constructing 500mm thick subgrade on widening portion whereas on existing road portion, existing subgrade / embankment to be loosening and re compacting to prepare proposed subgrade fulfilling the desired compaction requirement stipulated in relevant clauses of MoRT&H Specification.

### 5.2. Type of pavement

The pavement shall be Flexible for Main Carriageway.

(i) **Design requirements**

**a) Design Period and strategy**

Pavement design shall be carried out in accordance with IRC: 37-2018 and Section-10 of the Hill Road Manual.

Flexible Pavement shall be provided on main carriageway for 10MSA traffic and 8% effective CBR in entire project length, junctions, and Way side amenities as per IRC 37.

Flexible Pavement shall be designed for a minimum design period of 20 years. The thickness of sub base and base pavement section is designed for a minimum design period 20 year of the operation period and stage construction shall not be allowed.

**b) Design Traffic :** Notwithstanding anything to the contrary contained in this Agreement or Hill Road Manual, the Contractor shall design the pavement for minimum design traffic of 10MSA. In case the traffic is more than 10 MSA at the time of traffic survey done by EPC Contractor project design, then the higher traffic will be adopted for design.

(ii) **Reconstruction of stretches**

The following stretches of the existing road shall be reconstructed. These shall be designed as new pavement.

Sr. No	Design Chainage		Total Length (m)	Remarks(TCS)
	From (Km)	To (Km)		
1	0+000	8+889	8889	As per TCS Schedule

**6. Roadside drainage**

Drainage system including surface and subsurface drains for the Project Highway shall be provided as per Hill road Manual referred in Schedule D. Lined V shaped drain shall be provided throughout the hill side as indicated in the typical cross sections. Covered rectangular drain with grating shall be proposed in following stretches.

S. No.	Location of Covered Drain (Design Ch.)		Right hand side (RHS)/Left hand side (LHS)/ or Both sides	Length (km)	Drain Details
	From	To			
1	0+470	0+650	RIGHT SIDE	0.180	Covered rectangular drain with grating
2	8+050	8+130	RIGHT SIDE	0.080	
3	8+150	8+210	RIGHT SIDE	0.060	
4	8+510	8+550	RIGHT SIDE	0.040	
Total length (Km)				0.360	

Note: The above length is indicative only and any increase in length of the covered drain shall not be considered as change of scope of work.

**7. Design of Structures**

**7.1. General**

7.1.1. All bridges, culverts and structures shall be designed and constructed in accordance with section 9 of the Hill road Manual and shall conform to the cross-sectional features and other details specified therein.

7.1.2. Width of the carriageway for all bridges shall be of Two-Lane Standards in accordance with Specification and Standard provided in Hill road Manual referred in Schedule D.



- 7.1.3. All re-constructed, widened and new constructed structures shall be provided with footpaths.
- 7.1.4. All bridges shall be high-level bridges.
- 7.1.5. 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
All new structures carrying utility services			

- 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 9 of the Hill road Manual.

## 7.2. Culverts

- 7.2.1. Overall width of all culverts shall be equal to the roadway width of the approaches.
- 7.2.2. **Reconstruction of existing culverts:**

The existing culverts at the following locations shall be re-constructed as new culverts:

S. No.	Design Chainage (km)	Type of Culvert	Span Arrangement and Total Vent way (No. x Length) (m)	Proposal Type	Remarks
1	0+184	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
2	0+353	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
3	0+654	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
4	0+868	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
5	1+017	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
6	1+117	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
7	1+314	HPC	1 x 1.2 x 1.5	Box culvert	Reconstruction
8	1+494	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
9	1+574	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
10	1+800	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
11	2+005	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
12	2+145	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
13	2+277	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
14	2+748	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
15	3+364	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
16	3+703	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
17	3+773	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
18	4+211	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
19	4+313	Slab culvert	1 x 2.25 x 2.0	Box culvert	Reconstruction
20	4+400	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
21	4+665	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
22	4+944	Slab culvert	1 x 3.0 x 2.75	Box culvert	Reconstruction
23	5+430	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
24	5+583	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
25	5+631	HPC	1 x 1.2 x 1.5	Box culvert	Reconstruction
26	5+681	HPC	1 x 1.2 x 1.5	Box culvert	Reconstruction
27	5+761	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
28	6+009	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
29	6+099	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
30	6+233	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
31	6+322	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
32	6+565	Slab culvert	1 x 2.0 x 2.0	Box culvert	Reconstruction
33	6+674	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
34	6+901	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
35	6+968	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
36	7+152	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction

S. No.	Design Chainage (km)	Type of Culvert	Span Arrangement and Total Vent way (No. x Length) (m)	Proposal Type	Remarks
37	7+304	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
38	7+473	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
39	7+637	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
40	7+704	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
41	7+771	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
42	7+859	Slab culvert	1 x 3.0 x 2.75	Box culvert	Reconstruction
43	8+155	Slab culvert	1 x 3.0 x 2.5	Box culvert	Reconstruction
44	8+532	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction
45	8+687	Slab culvert	1 x 1.2 x 1.5	Box culvert	Reconstruction

Note: (a) The Span arrangement as given above is the minimum. Concessionaire shall design the structures as per Schedule D and according to the site requirement. Any change in the cost due to change in the span arrangement and total length shall be borne by the Concessionaire.

(b) Clear Height indicated in the table is minimum. It may require to increase depending upon the site requirement and design road profile.

(c.) Clear Span indicates square lateral clearance. If the stream crosses the project highway in skew angle, skew span is to be enhanced appropriately to provide square lateral clearance as indicated in table depending upon angle of crossing.

#### 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 9 of the Hill road Manual. Repairs and strengthening of existing structures where required shall be carried out.

Sl. No.	Existing Type	Design Chainage (m)	Span Arrangement (no. x length)	Proposal
NIL				

#### 7.2.4. Additional Culverts (New Construction)

Additional new culverts shall be constructed as per particulars given in the table below:

Sl. No.	Type	Design Chainage (m)	Span Arrangement (no. x length x height)	Proposal
1	RCC BOX	0+226	1 x 1.2 x 1.5	New construction width shall be as per provision of Schedule-D
2	RCC BOX	8+764	1 x 0.8 x 0.6	
3	RCC BOX	8+830	1 x 0.8 x 0.6	

Note: If additional balancing culvert is required to be constructed, then contractor shall construct the same without any change of scope.

#### 7.2.5. Repairs/replacements of railing/parapets, flooring and protection works of the existing culverts shall be undertaken as follows:

Sl. No.	Location at km	Type of repair required
As per Hill road Manual referred in Schedule D		

#### 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/retained

- The existing bridges at the following locations shall be re-constructed as new structures :

#### Major Bridges:

Sl. No.	Design Chainage (m.)	Existing Span Arrangement (m)	Proposed Span Arrangement (m)	Proposed Type of Super-structure	Deck Width (m)		Remarks
					Existing	Proposed	
1	4+077.240	1 x 10.7 + 1 x 47.5	1 x 60	Steel Struss with RCC Deck Slab	4.5	12	2-Lane new construction

#### Minor Bridges:

Sl. No.	Design Chainage (m.)	Existing Span Arrangement (m)	Proposed Span Arrangement (m)	Proposed Type of Super-structure	Deck Width (m)		Remarks
					Existing	Proposed	
1	0+970.75	1 x 17.5	1 x 40	Steel I Girder with RCC Deck Slab	7.8	12	2-Lane new construction
2	1+925.860	1 x 31	1 x 40	Steel I Girder with RCC Deck Slab	5.7	12	2-Lane new construction

- (ii) The following bridges shall be retained:

S. No.	Design Chainage (km)	Type of Structure			Span Arrangement (m)	Width of carriage way between kerbs (m)	Total Width(m)
		Abutment	Foundation	Super Structure			
1	0+970.75	RCC Wall type	Open foundation	Steel Composite	1 x 17.5	5.4	7.8
2	1+925.860	RCC Wall type	Open foundation	Steel truss	1 x 31	5.3	5.7
3	4+077.240	RCC Wall type	RCC wall pier with open foundation	RCC T Girder + Steel truss	1 x 10.7 + 1 x 47.5	4.1	4.5

Note: The Span arrangement as given above is the minimum. Concessionaire shall design the structures as per Schedule D and according to the site requirement. Any change in the cost due to change in the span arrangement and total length shall be borne by the Concessionaire.

### 7.3.2. Additional new bridges

New bridges at the following locations on the Project Highway shall be constructed. GAD's for new bridges shall be attached in the drawing folder.

#### Construction of New 2-lane Minor Bridges on Main road:

Sl. No.	Design Chainage (m)	Span Arrangement (m)	Proposed Width (m)	Type of Super-structure	Remarks
NIL					

Note: The Span arrangement as given above is the minimum. Concessionaire shall design the structures as per Schedule D and according to the site requirement. Any change in the cost due to change in the span arrangement and total length shall be borne by the Concessionaire.

Construction of New 4-lane Minor Bridges on Main road:

Sl. No.	Design Chainage (m)	Span Arrangement (m)	Proposed Width (m)	Type of Super-structure	Remarks
NIL					

Note: The Span arrangement as given above is the minimum. Concessionaire shall design the structures as per Schedule D and according to the site requirement. Any change in the cost due to change in the span arrangement and total length shall be borne by the Concessionaire.

Construction of New 2-lane Major Bridges on Main road:

Sl. No.	Design Chainage (m.)	Span Arrangement	Total Length (m)	Type of Super-structure	Proposed width	Remarks
NIL						

Note: The Span arrangement as given above is the minimum. Concessionaire shall design the structures as per Schedule D and according to the site requirement. Any change in the cost due to change in the span arrangement and total length shall be borne by the Concessionaire.

Construction of New 4-lane Major Bridges on Main road:

Sl. No.	Design Chainage (m)	Span Arrangement (m)	Overall Width (m)	Type of Super-structure	Remarks
NIL					

Note: The Span arrangement as given above is the minimum. Concessionaire shall design the structures as per Schedule D and according to the site requirement. Any change in the cost due to change in the span arrangement and total length shall be borne by the Concessionaire.

7.3.3. The railings of existing bridges shall be replaced by crash barriers at the following locations:

Sl. No.	Location at km	Type of repair required
NIL		

7.3.4. Repairs/replacements of railing/parapet of the existing bridges shall be undertaken as follows:

Sl. No.	Location at km	Type of repair required
NIL		

**7.3.5. Drainage system for bridge decks**

An effective drainage system for bridge decks shall be provided as specified in Hill road Manual referred in Schedule D.

#### 7.3.6. Structures in marine environment:

Sl. No.	Location at km	Remarks
NIL		

#### 7.4. Rail-road bridges

7.4.1. Design, construction and detailing of ROB/RUB shall be as specified in section 9 of the Manual.

7.4.2. Road over-bridges (road over rail) shall be provided at the following level crossings:

S. No.	Chainage (km)	Length of bridge (m)
NIL		

7.4.3. Road under-bridges (road under railway line) shall be provided at the following level crossings:

S. No.	Chainage (km)	Length of bridge (m)
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 (ix) and 3 of this Annex-I.

#### 7.6. Repairs and strengthening of structures

The existing bridges and structures to be repaired/ strengthened, and the nature and extent of repairs /strengthening required are given below:

##### 7.6.1. Bridges

S. No.	Design Chainage (km)	Nature and extent of repairs /strengthening to be carried out
NIL		

##### 7.6.2. ROB / RUB

S. No.	Design Chainage (km)	Nature and extent of repairs /strengthening to be carried out
NIL		

##### 7.6.3. Overpasses/Underpasses and other structures

S. No.	Design Chainage (km)	Nature and extent of repairs /strengthening to be carried out
NIL		

#### 7.7. List of Major Structures

The following is the list of major structures proposed in the project corridor.

S. No.	Design Chainage (km)	Remarks
1	0+970.75	MNB
2	1+925.860	MNB

S. No.	Design Chainage (km)	Remarks
3	4+077.240	MJB

**a. RE wall/Retaining Wall/Toe wall:**

**i. RE wall**

Contractor shall construct RE wall in the following locations:

Contractor shall construct RE wall in the following locations:					
S. No.	Location of RE wall (Design Ch.)		Right hand side (RHS)/Left hand side (LHS)/ or Both sides	Length (km)	RE wall Details
	From	To			
NIL					

Note: The length mentioned above is indicative. The actual length shall depend on applicable cross section with realistic Ground Level & FRL. Any increase in the above length shall be deemed to be considered in the project cost and shall not form a part of any change of scope.

**ii. Retaining wall/ Toe wall**

Contractor shall construct Retaining wall in the following locations:

S. No.	Location of R wall (Design Ch.)		Sides	Length (m)	RE wall Details
	From	To			
1	35.19	41.851	Valley Side	6.661	RET_1
2	92.363	93.637	Valley Side	1.274	RET_2
3	96.269	97.555	Valley Side	1.286	RET_3
4	102.758	104.049	Valley Side	1.291	RET_3
5	106.636	107.914	Valley Side	1.278	RET_2
6	125.73	142.424	Valley Side	16.694	RET_1
7	193.114	200.395	Valley Side	7.281	RET_2
8	204.136	206.878	Valley Side	2.742	RET_1
9	236.167	240.37	Valley Side	4.203	RET_2
10	245.959	264.837	Valley Side	18.878	RET_1
11	269.615	296.94	Valley Side	27.325	RET_2
12	320.169	320.989	Valley Side	0.82	RET_2
13	322.649	325.093	Valley Side	2.444	RET_3
14	327.68	345.677	Valley Side	17.997	RET_2
15	348.916	364.091	Valley Side	15.175	RET_3
16	372.987	379.521	Valley Side	6.534	RET_2
17	382.155	392.009	Valley Side	9.854	RET_3
18	400	408.999	Valley Side	8.999	RET_4
19	492.774	494.436	Valley Side	1.662	RET_1
20	520.033	531.392	Valley Side	11.359	RET_1
21	542.351	543.497	Valley Side	1.146	RET_1
22	562.533	565.529	Valley Side	2.996	RET_2
23	747.483	748.597	Valley Side	1.114	RET_1
24	757.17	775.507	Valley Side	18.337	RET_1
25	800.779	828.19	Valley Side	27.411	RET_1
26	831.99	834.167	Valley Side	2.177	RET_2

S. No.	Location of R wall (Design Ch.)		Sides	Length (m)	RE wall Details
	From	To			
27	835.781	839.04	Valley Side	3.259	RET_1
28	852.343	854.638	Valley Side	2.295	RET_1
29	858.141	863.913	Valley Side	5.772	RET_2
30	867.926	869.091	Valley Side	1.165	RET_3
31	1016.126	1022.596	Valley Side	6.47	RET_2
32	1035.535	1037.368	Valley Side	1.833	RET_3
33	1040.424	1041.346	Valley Side	0.922	RET_2
34	1047.724	1049.573	Valley Side	1.849	RET_2
35	1062.041	1092.283	Valley Side	30.242	RET_2
36	1095.487	1119.537	Valley Side	24.05	RET_1
37	1241.955	1243.726	Valley Side	1.771	RET_3
38	1247.295	1249.06	Valley Side	1.765	RET_4
39	1255.842	1262.983	Valley Side	7.141	RET_2
40	1266.438	1268.233	Valley Side	1.795	RET_1
41	1274.493	1300.936	Valley Side	26.443	RET_1
42	1321.897	1323.1	Valley Side	1.203	RET_1
43	1350.185	1365.628	Valley Side	15.443	RET_1
44	1497.532	1498.679	Valley Side	1.147	RET_1
45	1636.492	1650.08	Valley Side	13.588	RET_1
46	1654.038	1662.354	Valley Side	8.316	RET_2
46	1665.383	1667.236	Valley Side	1.853	RET_1
47	1695.612	1709.09	Valley Side	13.478	RET_1
48	1751.221	1756.83	Valley Side	5.609	RET_2
49	1759.664	1760.46	Valley Side	0.796	RET_1
50	1775.258	1776.056	Valley Side	0.798	RET_1
51	1785.493	1788.493	Valley Side	3	RET_2
52	1794.425	1796.535	Valley Side	2.11	RET_2
53	1870.685	1871.773	Valley Side	1.088	RET_3
54	1873.992	1875.078	Valley Side	1.086	RET_2
55	1882.29	1887.31	Valley Side	5.02	RET_4
56	1890.776	1892.426	Valley Side	1.65	RET_3
57	1896.024	1897.692	Valley Side	1.668	RET_4
58	2194.353	2198.723	Valley Side	4.37	RET_1
59	2233.217	2248.222	Valley Side	15.005	RET_3
60	2254.112	2266.05	Valley Side	11.938	RET_1
61	2283.103	2284.2	Valley Side	1.097	RET_3
62	2315.628	2330.232	Valley Side	14.604	RET_1
63	2507.957	2509.672	Valley Side	1.715	RET_3
64	2517.761	2519.761	Valley Side	2	RET_1
65	2568.368	2571.133	Valley Side	2.765	RET_2
66	2581.105	2582.948	Valley Side	1.843	RET_2
67	2595.454	2599.453	Valley Side	3.999	RET_3
68	2614.158	2619.156	Valley Side	4.998	RET_3
69	2634.253	2639.427	Valley Side	5.174	RET_2
70	2689.697	2700.697	Valley Side	11	RET_3
71	2712.214	2715.213	Valley Side	2.999	RET_2
72	2877.657	2879.861	Valley Side	2.204	RET_4
73	2883.62	2894.523	Valley Side	10.903	RET_2
74	2901.828	2909.548	Valley Side	7.72	RET_4
75	2920.578	2933.576	Valley Side	12.998	RET_3
76	2965.917	2970.273	Valley Side	4.356	RET_1
77	2978.719	2991.074	Valley Side	12.355	RET_1
78	3014.692	3015.897	Valley Side	1.205	RET_4
79	3019.708	3020.882	Valley Side	1.174	RET_1
80	3036.854	3043.854	Valley Side	7	RET_3

S. No.	Location of R wall (Design Ch.)		Sides	Length (m)	RE wall Details
	From	To			
81	3064.81	3065.731	Valley Side	0.921	RET_2
82	3072.329	3077.83	Valley Side	5.501	RET_3
83	3080.735	3088.734	Valley Side	7.999	RET_2
84	3102.444	3113.666	Valley Side	11.222	RET_1
85	3120.136	3131.024	Valley Side	10.888	RET_1
86	3183.992	3191.914	Valley Side	7.922	RET_4
87	3262.589	3267.104	Valley Side	4.515	RET_2
88	3372.738	3390.886	Valley Side	18.148	RET_1
89	3416.042	3434.841	Valley Side	18.799	RET_1
90	3446.837	3479.02	Valley Side	32.183	RET_1
91	3523.075	3525.204	Valley Side	2.129	RET_1
92	3597.323	3612.925	Valley Side	15.602	RET_1
93	3752.881	3767.88	Valley Side	14.999	RET_1
94	3775.026	3782.618	Valley Side	7.592	RET_1
95	3786.578	3788.754	Valley Side	2.176	RET_2
96	3795.911	3818.611	Valley Side	22.7	RET_2
97	3858.547	3860.361	Valley Side	1.814	RET_1
98	3863.624	3879.624	Valley Side	16	RET_2
99	3890.265	3894.576	Valley Side	4.311	RET_1
100	3939.967	3945.66	Valley Side	5.693	RET_4
101	3971.015	3976.965	Valley Side	5.95	RET_3
102	4215.561	4216.672	Valley Side	1.111	RET_2
103	4218.889	4223.327	Valley Side	4.438	RET_2
104	4224.858	4225.968	Valley Side	1.11	RET_3
105	4280.903	4290.301	Valley Side	9.398	RET_4
106	4297.377	4298.702	Valley Side	1.325	RET_4
107	4302.233	4303.57	Valley Side	1.337	RET_5
108	4318.582	4337.523	Valley Side	18.941	RET_1
109	4410.317	4413.828	Valley Side	3.511	RET_1
110	4416.165	4418.5	Valley Side	2.335	RET_1
111	4423.174	4431.366	Valley Side	8.192	RET_1
112	4434.675	4439.895	Valley Side	5.22	RET_2
113	4464.181	4475.745	Valley Side	11.564	RET_1
114	4488.443	4502.443	Valley Side	14	RET_2
115	4506.732	4516.098	Valley Side	9.366	RET_1
116	4551.697	4552.521	Valley Side	0.824	RET_2
117	4560.154	4560.967	Valley Side	0.813	RET_3
118	4616.526	4616.753	Valley Side	0.227	RET_1
119	4937.243	4938.502	Valley Side	1.259	RET_1
120	4940.691	4941.948	Valley Side	1.257	RET_2
121	4956.602	4957.859	Valley Side	1.257	RET_1
122	4960.555	4979.554	Valley Side	18.999	RET_2
123	4991.931	4997.661	Valley Side	5.73	RET_4
124	5000.073	5001.465	Valley Side	1.392	RET_3
125	5004.524	5007.262	Valley Side	2.738	RET_2
126	5030.403	5039.889	Valley Side	9.486	RET_1
127	5041.836	5042.696	Valley Side	0.86	RET_3
128	5068.955	5069.828	Valley Side	0.873	RET_1
129	5083.293	5085.129	Valley Side	1.836	RET_4
130	5089.144	5091.912	Valley Side	2.768	RET_3
131	5095.179	5100.745	Valley Side	5.566	RET_2
132	5108	5119.527	Valley Side	11.527	RET_2
133	5135.495	5159.495	Valley Side	24	RET_1
134	5167.662	5182.677	Valley Side	15.015	RET_2
135	5186.591	5187.736	Valley Side	1.145	RET_1



S. No.	Location of R wall (Design Ch.)		Sides	Length (m)	RE wall Details
	From	To			
136	5207.834	5211.833	Valley Side	3.999	RET_4
137	5242.1	5247.935	Valley Side	5.835	RET_1
138	5314.75	5318.078	Valley Side	3.328	RET_1
139	5332.469	5341.209	Valley Side	8.74	RET_1
140	5346.154	5349.001	Valley Side	2.847	RET_2
141	5351.619	5354.473	Valley Side	2.854	RET_1
142	5431.002	5468.755	Valley Side	37.753	RET_2
143	5498.818	5512.277	Valley Side	13.459	RET_2
144	5518.983	5520.102	Valley Side	1.119	RET_2
145	5571.861	5573.973	Valley Side	2.112	RET_2
146	5590.056	5592.055	Valley Side	1.999	RET_1
147	5597.659	5602.161	Valley Side	4.502	RET_2
148	5625.089	5637.259	Valley Side	12.17	RET_1
149	5655.988	5657.462	Valley Side	1.474	RET_1
150	5659.714	5661.209	Valley Side	1.495	RET_2
151	5664.558	5673.967	Valley Side	9.409	RET_3
152	5700.395	5701.389	Valley Side	0.994	RET_5
153	5714.244	5719.334	Valley Side	5.09	RET_3
154	5721.783	5751.396	Valley Side	29.613	RET_2
155	5763.226	5777.523	Valley Side	14.297	RET_2
156	5784.251	5790.251	Valley Side	6	RET_1
157	5794.289	5800.855	Valley Side	6.566	RET_2
158	5817.767	5828.272	Valley Side	10.505	RET_3
159	5830.18	5833.65	Valley Side	3.47	RET_2
160	6012.083	6012.618	Valley Side	0.535	RET_5
161	6261.192	6264.361	Valley Side	3.169	RET_1
162	6360.198	6362.653	Valley Side	2.455	RET_2
163	6421.532	6427.532	Valley Side	6	RET_2
164	6433.452	6434.516	Valley Side	1.064	RET_2
165	6442.324	6444.453	Valley Side	2.129	RET_1
166	6522.52	6528.385	Valley Side	5.865	RET_1
167	6572.633	6580.281	Valley Side	7.648	RET_1
168	6587.307	6589.494	Valley Side	2.187	RET_1
169	6681.187	6682.342	Valley Side	1.155	RET_2
170	6685.866	6689.866	Valley Side	4	RET_3
171	6727.459	6732.475	Valley Side	5.016	RET_1
172	6741.115	6744.888	Valley Side	3.773	RET_1
173	6760.753	6765.749	Valley Side	4.996	RET_4
174	6770.072	6770.853	Valley Side	0.781	RET_1
175	6801.42	6807.151	Valley Side	5.731	RET_6
176	6807.966	6812.217	Valley Side	4.251	RET_4
177	6830.633	6833.417	Valley Side	2.784	RET_3
178	6835.731	6841.217	Valley Side	5.486	RET_2
179	6861.397	6868.658	Valley Side	7.261	RET_1
180	7086.04	7100.037	Valley Side	13.997	RET_2
181	7109.435	7110.243	Valley Side	0.808	RET_3
182	7191.069	7194.56	Valley Side	3.491	RET_1
183	7203.506	7213.504	Valley Side	9.998	RET_2
184	7217.51	7220.507	Valley Side	2.997	RET_3
185	7234.353	7245.351	Valley Side	10.998	RET_1
186	7266.426	7276.473	Valley Side	10.047	RET_3
187	7340.081	7345.175	Valley Side	5.094	RET_1
188	7352.978	7366.229	Valley Side	13.251	RET_2
189	7376.328	7377.206	Valley Side	0.878	RET_2
190	7481.33	7482.584	Valley Side	1.254	RET_1

S. No.	Location of R wall (Design Ch.)		Sides	Length (m)	RE wall Details
	From	To			
191	7978.451	8010.947	Valley Side	32.496	RET_1
192	8033.944	8037.935	Valley Side	3.991	RET_1
193	8055.216	8056.991	Valley Side	1.775	RET_1
194	8060.239	8066.417	Valley Side	6.178	RET_2
195	8080.862	8104.258	Valley Side	23.396	RET_1
196	8110.728	8113.92	Valley Side	3.192	RET_1
197	8130.457	8131.455	Valley Side	0.998	RET_2
198	8146.275	8147.274	Valley Side	0.999	RET_3
199	8240.153	8242.962	Valley Side	2.809	RET_1
200	8247.094	8249.89	Valley Side	2.796	RET_2
201	8385.485	8386.629	Valley Side	1.144	RET_1
202	8464.954	8467.156	Valley Side	2.202	RET_1
203	8480.07	8501.575	Valley Side	21.505	RET_1
204	8506.446	8516.473	Valley Side	10.027	RET_2
205	8520.033	8521.857	Valley Side	1.824	RET_2
206	8555.761	8561.39	Valley Side	5.629	RET_2
207	8600.548	8620.501	Valley Side	19.953	RET_2
208	8626.2	8633.885	Valley Side	7.685	RET_3
209	8639.964	8653.963	Valley Side	13.999	RET_2
210	8670.178	8674.847	Valley Side	4.669	RET_3
211	8677.353	8681.987	Valley Side	4.634	RET_2
212	8685.304	8687.064	Valley Side	1.76	RET_4
213	8689.531	8694.12	Valley Side	4.589	RET_1
214	8714.222	8715.957	Valley Side	1.735	RET_2
215	8719.07	8720.67	Valley Side	1.6	RET_3
216	8727.892	8745.972	Valley Side	18.08	RET_1

Note: i) RET\_1 to RET\_6 represents the 1 to 6m height retaining wall.

ii) The length mentioned above is indicative. The actual length shall depend on applicable cross section with realistic Ground Level & FRL. Any increase in the above length shall be deemed to be considered in the project cost and shall not form a part of any change of scope.

Contractor shall construct Breast wall in the following locations:

Breast wall stretches			
Design Chainage		Length	type on hill side
from	to		
35.19	35.19	0	BRE_2_6
40	42.668	2.668	BRE_T_2
45.788	45.788	0	BRE_2_6
47.858	49.181	1.323	BRE_T_2
52.846	63.895	11.049	BRE_2_6
67.673	67.673	0	BRE_T_2
76.563	160.159	83.596	BRE_T_2
188.028	217.097	29.069	BRE_T_2
232.989	244.745	11.756	BRE_2_6
249.241	264.302	15.061	BRE_T_2
304.325	333.659	29.334	BRE_T_2
370.22	374.489	4.269	BRE_T_2
410.079	444.172	34.093	BRE_T_2
464.441	476.393	11.952	BRE_T_2
502.596	522.089	19.493	BRE_T_2
543.729	599.287	55.558	BRE_T_2
606.988	624.843	17.855	BRE_T_2
632.769	645.737	12.968	BRE_2_6
717.875	727.829	9.954	BRE_T_2
773.075	799.909	26.834	BRE_T_2
803.855	807.763	3.908	BRE_2_6
823.776	830.108	6.332	BRE_T_2
840.41	856.667	16.257	BRE_T_2
887.71	891.924	4.214	BRE_2_6
905.112	911.498	6.386	BRE_T_2
916.626	919.59	2.964	BRE_2_6
931.334	944.242	12.908	BRE_T_2
1014.489	1019.909	5.42	BRE_T_2
1062.646	1099.121	36.475	BRE_T_2
1104.884	1107.399	2.515	BRE_2_6
1115.372	1125.756	10.384	BRE_2_6
1157.998	1159.704	1.706	BRE_T_2
1162.181	1162.181	0	BRE_2_6
1165.139	1166.822	1.683	BRE_T_2
1200.099	1205.732	5.633	BRE_T_2
1231.939	1244.541	12.602	BRE_T_2
1248.131	1252.904	4.773	BRE_2_6
1256.444	1274.142	17.698	BRE_T_2
1276.618	1278.982	2.364	BRE_2_6
1287.117	1295.083	7.966	BRE_2_6
1323.814	1335.772	11.958	BRE_T_2
1338.841	1369.73	30.889	BRE_2_6
1373.989	1384.949	10.96	BRE_T_2
1399.87	1399.87	0	BRE_2_6
1418.047	1419.664	1.617	BRE_T_2
1424.618	1442.392	17.774	BRE_T_2
1456.85	1464.703	7.853	BRE_2_6
1468.392	1491.731	23.339	BRE_T_2
1502.05	1563.856	61.806	BRE_T_2
1585.931	1591.411	5.48	BRE_T_2
1595.493	1621.168	25.675	BRE_2_6
1623.76	1650.013	26.253	BRE_T_2
1654.491	1656.712	2.221	BRE_2_6
1659.713	1662.799	3.086	BRE_T_2
1700.257	1715.806	15.549	BRE_T_2
1718.549	1724.056	5.507	BRE_2_6
1727.311	1729.629	2.318	BRE_T_2
1751.689	1788.854	37.165	BRE_T_2
1800.93	1816.88	15.95	BRE_T_2
1820.428	1837.454	17.026	BRE_2_6
1827.992	1828.37	0.378	BRE_T_2
1831.721	1831.721	0	BRE_T_2

Breast wall stretches			
Design Chainage		Length	type on hill side
from	to		
1835.003	1837.578	2.575	BRE_T_2
1841.045	1846.813	5.768	BRE_2_6
1856.345	1857.93	1.585	BRE_T_2
1874.9	1874.9	0	BRE_T_2
1882.521	1882.521	0	BRE_T_2
1958.646	1979.037	20.391	BRE_T_2
1997.538	2037.546	40.008	BRE_T_2
2039.696	2039.696	0	BRE_T_2
2041.836	2084.859	43.023	BRE_T_2
2163.849	2188.849	25	BRE_T_2
2198.997	2272.253	73.256	BRE_T_2
2283.305	2285.096	1.791	BRE_T_2
2292.125	2293.872	1.747	BRE_T_2
2304.05	2319.195	15.145	BRE_T_2
2321.27	2361.173	39.903	BRE_T_2
2379.749	2386.49	6.741	BRE_2_6
2392.637	2404.355	11.718	BRE_T_2
2412.611	2430.045	17.434	BRE_T_2
2471.619	2475.619	4	BRE_T_2
2479.387	2479.387	0	BRE_2_6
2481.451	2512.247	30.796	BRE_T_2
2514.343	2592.182	77.839	BRE_T_2
2594.577	2623.493	28.916	BRE_T_2
2634.1	2715.622	81.522	BRE_T_2
2751.238	2790.004	38.766	BRE_T_2
2794.395	2794.395	0	BRE_2_6
2799.277	2799.277	0	BRE_T_2
2840.277	2876.893	36.616	BRE_T_2
2895.753	2934.207	38.454	BRE_T_2
2948.54	2980.856	32.316	BRE_2_6
2992.125	2999.102	6.977	BRE_T_2
3006.276	3007.779	1.503	BRE_2_6
3010.201	3068.43	58.229	BRE_T_2
3070.666	3134.895	64.229	BRE_T_2
3160.077	3181.034	20.957	BRE_T_2
3187.571	3248.106	60.535	BRE_T_2
3251.727	3258.795	7.068	BRE_2_6
3262.335	3282.942	20.607	BRE_T_2
3300.153	3302.374	2.221	BRE_T_2
3305.631	3339.236	33.605	BRE_2_6
3342.636	3346.064	3.428	BRE_T_2
3353.936	3356.187	2.251	BRE_T_2
3360.053	3360.053	0	BRE_2_6
3362.072	3371.462	9.39	BRE_T_2
3395.627	3438.989	43.362	BRE_T_2
3443.089	3446.347	3.258	BRE_2_6
3450.864	3466.68	15.816	BRE_T_2
3477.186	3522.35	45.164	BRE_2_6
3530.173	3532.879	2.706	BRE_2_6
3536.74	3553.16	16.42	BRE_T_2
3573.161	3625.031	51.87	BRE_2_6
3640.345	3679.298	38.953	BRE_T_2
3717.162	3723.991	6.829	BRE_T_2
3742.47	3752.468	9.998	BRE_T_2
3766.655	3779.567	12.912	BRE_T_2
3819.83	3825.815	5.985	BRE_T_2
3832.018	3839.891	7.873	BRE_2_6
3842.052	3844.371	2.319	BRE_T_2
3858.837	3859.964	1.127	BRE_T_2
3868.264	3901.9	33.636	BRE_T_2
3905.184	3906.898	1.714	BRE_2_6
3910.526	3945.004	34.478	BRE_T_2

Breast wall stretches			
Design Chainage		Length	type on hill side
from	to		
3970.974	4004.465	33.491	BRE_T_2
4110.657	4112.4	1.743	BRE_T_2
4118.301	4174.639	56.338	BRE_T_2
4178.156	4187.058	8.902	BRE_2_6
4229.554	4260.613	31.059	BRE_T_2
4263.289	4264.159	0.87	BRE_2_6
4289.19	4301.745	12.555	BRE_T_2
4319.766	4319.766	0	BRE_T_2
4323.874	4363.887	40.013	BRE_T_2
4367.23	4370.908	3.678	BRE_2_6
4440.458	4474.961	34.503	BRE_T_2
4479.857	4486.565	6.708	BRE_T_2
4502.721	4517.763	15.042	BRE_2_6
4531.494	4542.519	11.025	BRE_T_2
4545.275	4545.275	0	BRE_T_2
4548.032	4556.301	8.269	BRE_T_2
4560.334	4568.079	7.745	BRE_T_2
4570.716	4605.29	34.574	BRE_2_6
4605.448	4605.448	0	BRE_T_2
4608.576	4613.525	4.949	BRE_T_2
4621.599	4621.599	0	BRE_T_2
4628.277	4628.277	0	BRE_T_2
4675.012	4679.96	4.948	BRE_T_2
4684.255	4688.18	3.925	BRE_2_6
4691.436	4691.436	0	BRE_T_2
4694.11	4700.659	6.549	BRE_2_6
4702.854	4705.054	2.2	BRE_2_6
4709.219	4714.643	5.424	BRE_T_2
4775.761	4787.134	11.373	BRE_T_2
4792.989	4806.979	13.99	BRE_T_2
4821.565	4825.548	3.983	BRE_T_2
4833.614	4843.391	9.777	BRE_2_6
4853.582	4870.558	16.976	BRE_2_6
4874.167	4878.341	4.174	BRE_T_2
4880.382	4882.5	2.118	BRE_T_2
4903.13	4906.947	3.817	BRE_T_2
4927.136	4927.136	0	BRE_T_2
4976.013	4976.013	0	BRE_2_6
5009.627	5009.767	0.14	BRE_2_6
5030.035	5086.407	56.372	BRE_T_2
5045.314	5045.314	0	BRE_2_6
5088.624	5104.145	15.521	BRE_T_2
5108.48	5110.513	2.033	BRE_2_6
5114.681	5114.681	0	BRE_T_2
5119.232	5134.227	14.995	BRE_2_6
5164.061	5166.535	2.474	BRE_2_6
5169.33	5222.109	52.779	BRE_T_2
5225.153	5228.197	3.044	BRE_T_2
5231.246	5234.119	2.873	BRE_2_6
5236.531	5239.146	2.615	BRE_T_2
5267.205	5331.148	63.943	BRE_T_2
5360.565	5360.565	0	BRE_T_2
5364.775	5367.959	3.184	BRE_2_6
5423.779	5429.843	6.064	BRE_T_2
5440.032	5492.143	52.111	BRE_T_2
5501.405	5511.784	10.379	BRE_T_2
5515.374	5520.574	5.2	BRE_2_6
5539.634	5547.244	7.61	BRE_T_2
5550.268	5553.238	2.97	BRE_2_6
5590.765	5605.754	14.989	BRE_T_2
5608.905	5619.137	10.232	BRE_2_6
5623.323	5624.377	1.054	BRE_T_2

Breast wall stretches			
Design Chainage		Length	type on hill side
from	to		
5648.164	5648.164	0	BRE_2_6
5685.133	5716.586	31.453	BRE_T_2
5729.419	5816.678	87.259	BRE_T_2
5850.365	5850.365	0	BRE_2_6
5855.102	5867.587	12.485	BRE_2_6
5872.443	5879.503	7.06	BRE_2_6
5881.25	5887.975	6.725	BRE_T_2
5909.023	5912.636	3.613	BRE_2_6
5913.712	5914.956	1.244	BRE_T_2
5918.359	5921.023	2.664	BRE_2_6
5925.102	5930.077	4.975	BRE_T_2
5931.226	5933.668	2.442	BRE_2_6
6027.961	6034.467	6.506	BRE_2_6
6037.995	6040.28	2.285	BRE_T_2
6043.651	6047.881	4.23	BRE_2_6
6049.872	6053.099	3.227	BRE_T_2
6125.825	6164.687	38.862	BRE_T_2
6169.993	6196.526	26.533	BRE_2_6
6198.533	6200.542	2.009	BRE_2_6
6206.393	6245.722	39.329	BRE_T_2
6249.73	6260.259	10.529	BRE_2_6
6280.159	6282.951	2.792	BRE_T_2
6291.435	6309.155	17.72	BRE_T_2
6320.027	6361.625	41.598	BRE_T_2
6370.86	6385.077	14.217	BRE_T_2
6389.109	6399.671	10.562	BRE_2_6
6404.954	6408.433	3.479	BRE_2_6
6438.428	6442.136	3.708	BRE_T_2
6466.367	6469.201	2.834	BRE_2_6
6474.24	6475.44	1.2	BRE_T_2
6479.566	6493.079	13.513	BRE_2_6
6495.56	6499.181	3.621	BRE_T_2
6503.692	6521.914	18.222	BRE_2_6
6523.996	6523.996	0	BRE_2_6
6529.07	6533.199	4.129	BRE_T_2
6543.159	6553.821	10.662	BRE_2_6
6557.984	6573.143	15.159	BRE_T_2
6578.835	6592.427	13.592	BRE_T_2
6629.712	6629.712	0	BRE_T_2
6633.971	6650.784	16.813	BRE_2_6
6685.837	6689.787	3.95	BRE_T_2
6698.676	6708.525	9.849	BRE_2_6
6740.698	6788.963	48.265	BRE_T_2
6791.578	6795.952	4.374	BRE_2_6
6798.81	6798.81	0	BRE_T_2
6801.853	6804.7	2.847	BRE_2_6
6807.38	6848.772	41.392	BRE_T_2
6861.692	6953.982	92.29	BRE_T_2
6989.058	7043.318	54.26	BRE_T_2
7048.379	7061.608	13.229	BRE_2_6
7066.724	7070.575	3.851	BRE_T_2
7086.617	7108.464	21.847	BRE_T_2
7111.734	7122.624	10.89	BRE_T_2
7140.124	7151.073	10.949	BRE_T_2
7157.636	7205.629	47.993	BRE_T_2
7214.902	7220.878	5.976	BRE_2_6
7226.47	7259.35	32.88	BRE_T_2
7271.688	7289.101	17.413	BRE_T_2
7326.718	7332.575	5.857	BRE_T_2
7340.007	7351.643	11.636	BRE_2_6
7376.803	7382.838	6.035	BRE_T_2
7386.302	7445.489	59.187	BRE_2_6

Breast wall stretches			
Design Chainage		Length	type on hill side
from	to		
7448.232	7457.649	9.417	BRE_T_2
7459.998	7465.243	5.245	BRE_2_6
7468.166	7468.951	0.785	BRE_T_2
7481.435	7488.733	7.298	BRE_T_2
7493.419	7496.527	3.108	BRE_T_2
7517.332	7519.331	1.999	BRE_T_2
7527.851	7536.358	8.507	BRE_T_2
7546.247	7549.109	2.862	BRE_T_2
7570.937	7572.915	1.978	BRE_T_2
7634.357	7635.651	1.294	BRE_T_2
7683.901	7684.705	0.804	BRE_T_2
7720.076	7748.288	28.212	BRE_T_2
7772.048	7775.765	3.717	BRE_T_2
7788.921	7788.921	0	BRE_2_6
7793.265	7837.273	44.008	BRE_T_2
7840.625	7845.333	4.708	BRE_T_2
7850.026	7850.773	0.747	BRE_T_2
7869.17	7872.87	3.7	BRE_2_6
7875.286	7884.542	9.256	BRE_T_2
7899.735	7901.623	1.888	BRE_2_6
7907.97	7916.912	8.942	BRE_T_2
7919.922	7926.077	6.155	BRE_2_6
7960.225	7961.125	0.9	BRE_2_6
7974.016	7977.202	3.186	BRE_T_2
7982.992	7986.123	3.131	BRE_2_6
7990.766	7999.092	8.326	BRE_T_2
8006.538	8040.095	33.557	BRE_T_2
8042.49	8054.532	12.042	BRE_T_2
8058.149	8059.315	1.166	BRE_2_6
8064.074	8079.519	15.445	BRE_T_2
8120.051	8131.977	11.926	BRE_T_2
8234.155	8236.345	2.19	BRE_2_6
8240.611	8244.999	4.388	BRE_T_2
8250.64	8256.982	6.342	BRE_T_2
8264.962	8270.385	5.423	BRE_T_2
8278.708	8281.525	2.817	BRE_2_6
8283.821	8288.224	4.403	BRE_T_2
8299.641	8306.637	6.996	BRE_T_2
8403.564	8407.454	3.89	BRE_T_2
8444.547	8446.465	1.918	BRE_T_2
8480.549	8484.994	4.445	BRE_T_2
8501.244	8510.74	9.496	BRE_2_6
8514.601	8519.113	4.512	BRE_T_2
8522.92	8528.838	5.918	BRE_T_2
8542.84	8546.003	3.163	BRE_T_2
8553.042	8579.197	26.155	BRE_2_6
8587.973	8591.744	3.771	BRE_T_2
8594.534	8598.871	4.337	BRE_2_6
8600.668	8634.402	33.734	BRE_T_2
8644.528	8654.431	9.903	BRE_2_6
8711.897	8715.243	3.346	BRE_T_2
8798.844	8800.155	1.311	BRE_T_2
8814.668	8815.261	0.593	BRE_T_2
8817.146	8817.692	0.546	BRE_2_6
8837.02	8854.198	17.178	BRE_T_2
8859.006	8866.078	7.072	BRE_2_6
8869.963	8888.69	18.727	BRE_T_2

Note: i) BRE\_T\_2 and BRE\_2\_6 represents the 2m and 2m to 6m height breast wall.

ii) The length mentioned above is indicative. The actual length shall depend on applicable cross section with realistic Ground Level & FRL. Any increase in the above length shall be deemed to be considered in the project cost and shall not form a part of any change of scope.

## **8. Traffic Control Devices and Road Safety Works**

- a. Traffic control devices and road safety works shall be provided in accordance with Section 16 and 17 of the Hill road Manual.

(a) Traffic Signs:

Traffic signs include roadside signs, overhead signs and curb mounted signs along the entire Project Highway.

(b) Pavement Marking:

Pavement markings shall cover road marking for the entire Project Highway.

(c) Safety Barrier:

Provide W-metal beam crash barrier along the project highway at all locations as specified in the Hill road Manual referred in Schedule D.

## **b. Specifications of the reflective sheeting**

Retro reflective sheeting of high intensity grade with micro prismatic retro reflective element type – 9 as per IRC specification shall be provided.

## **Roadside Furnitures**

Roadside furniture shall be provided in accordance with the provisions of Section 15 of the Hill road Manual and schedule C of this agreement.

## **Compulsory Afforestation**

The number of trees which are required to be planted by the Concessionaire as compensatory afforestation should be as per Clause 2.d of Schedule C.

## **Hazardous Locations**

The safety barriers shall also be provided at the following hazardous locations:

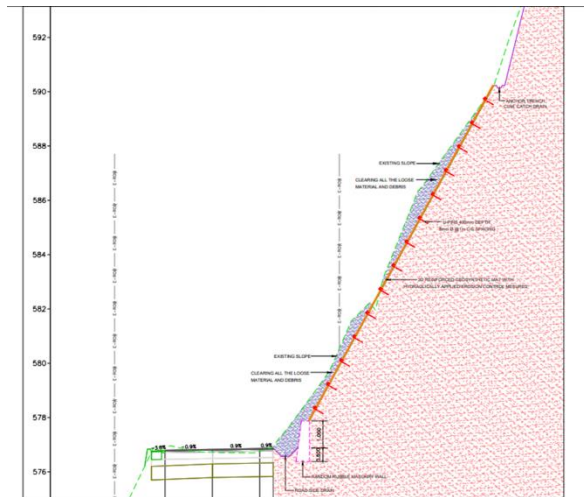
S. No.	Design Chainage (km)	Remarks
As per Hill road Manual referred in Schedule D		

## **9. Special Requirements for Hill Roads**

- a) There are five special hill slope protection locations where special mitigation measures shall be taken. The locations and special cross section with improvement proposals are presented below.

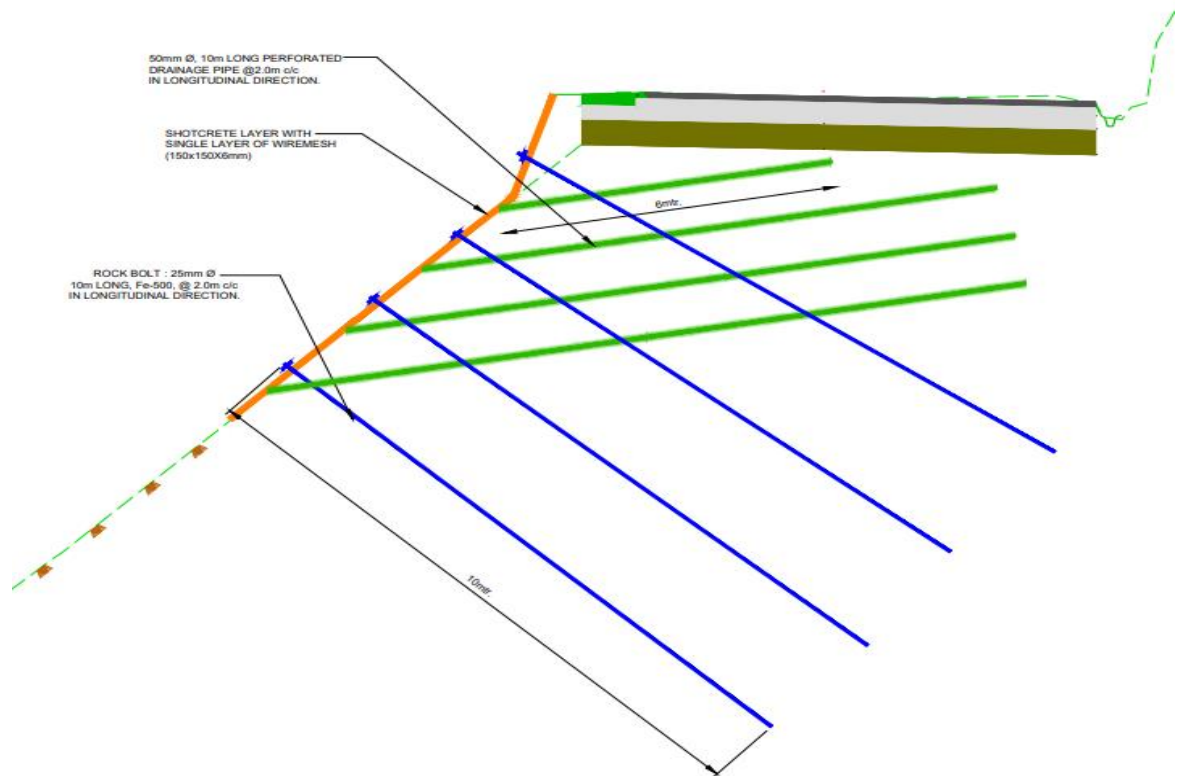
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**Ch. 0+225Km**

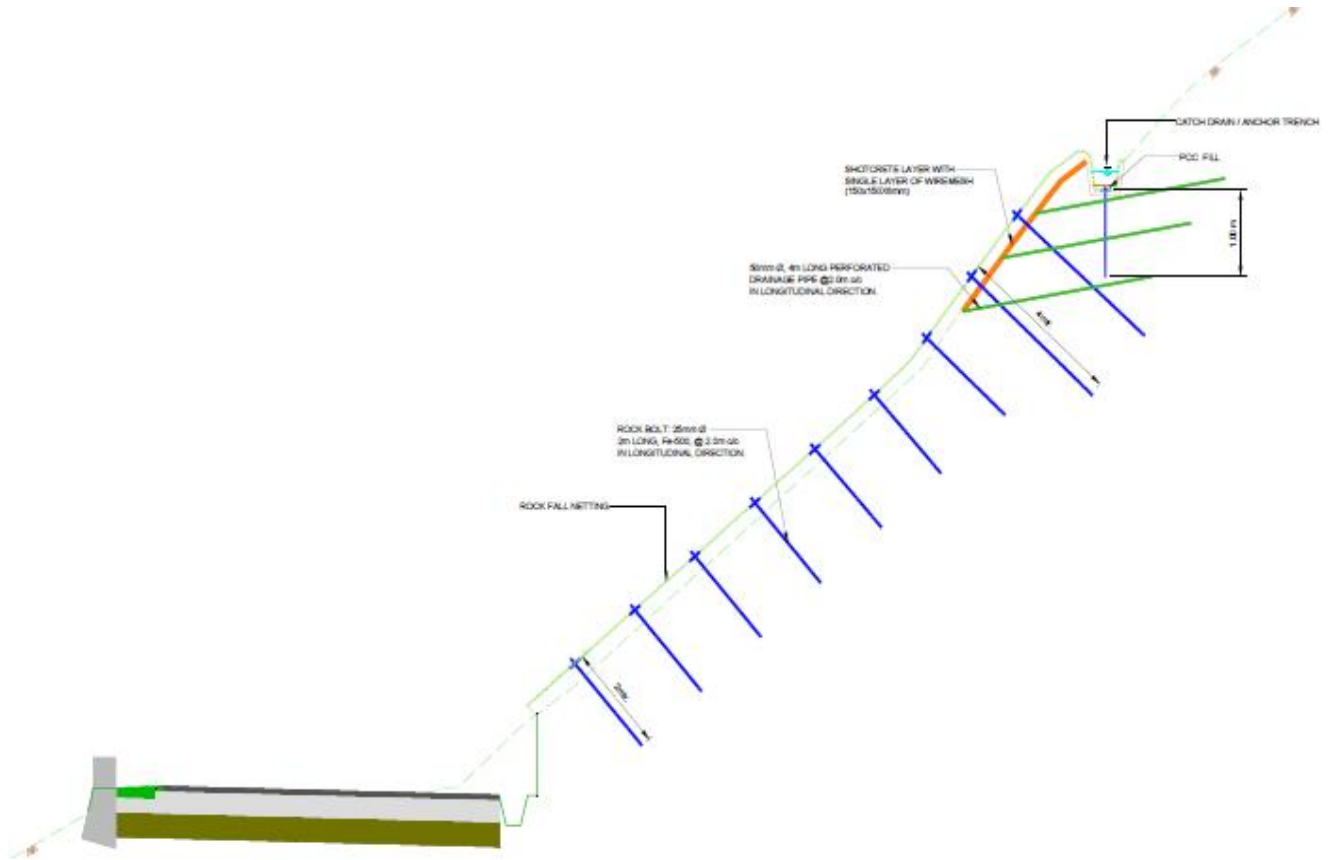




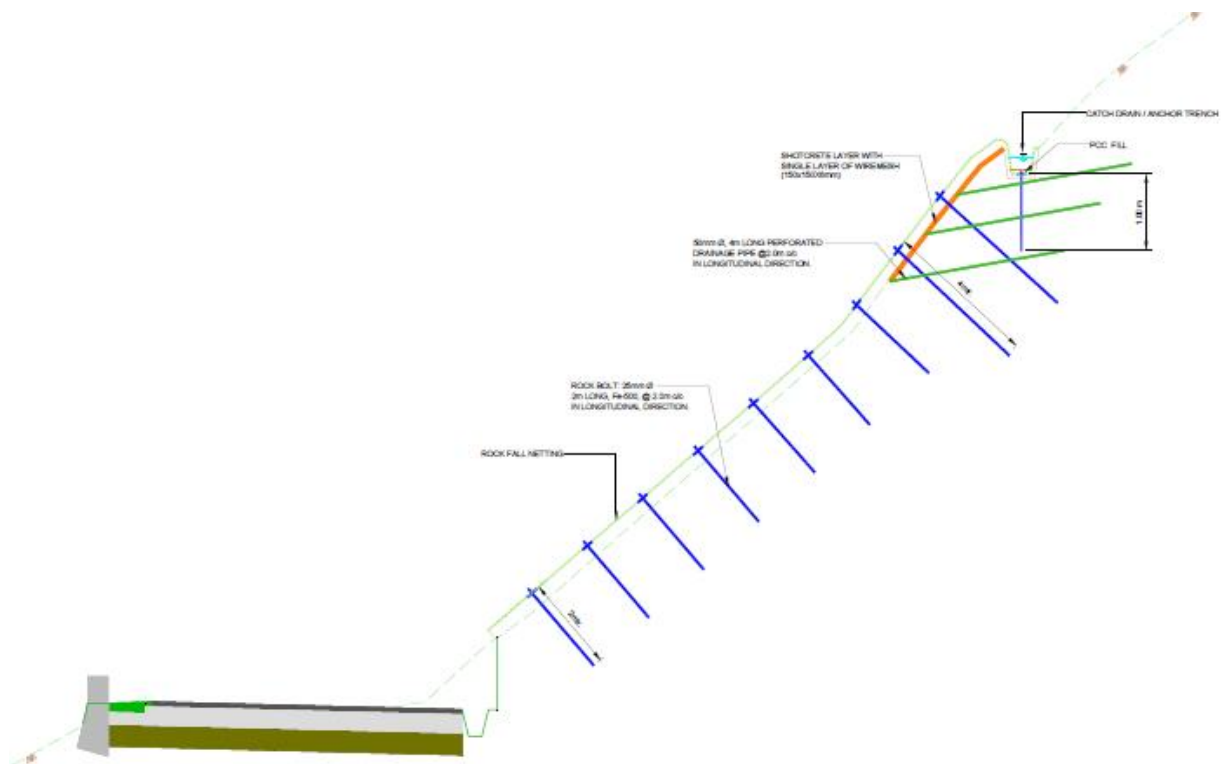
## Ch. 0+420 Km to Ch. 0+510 Km



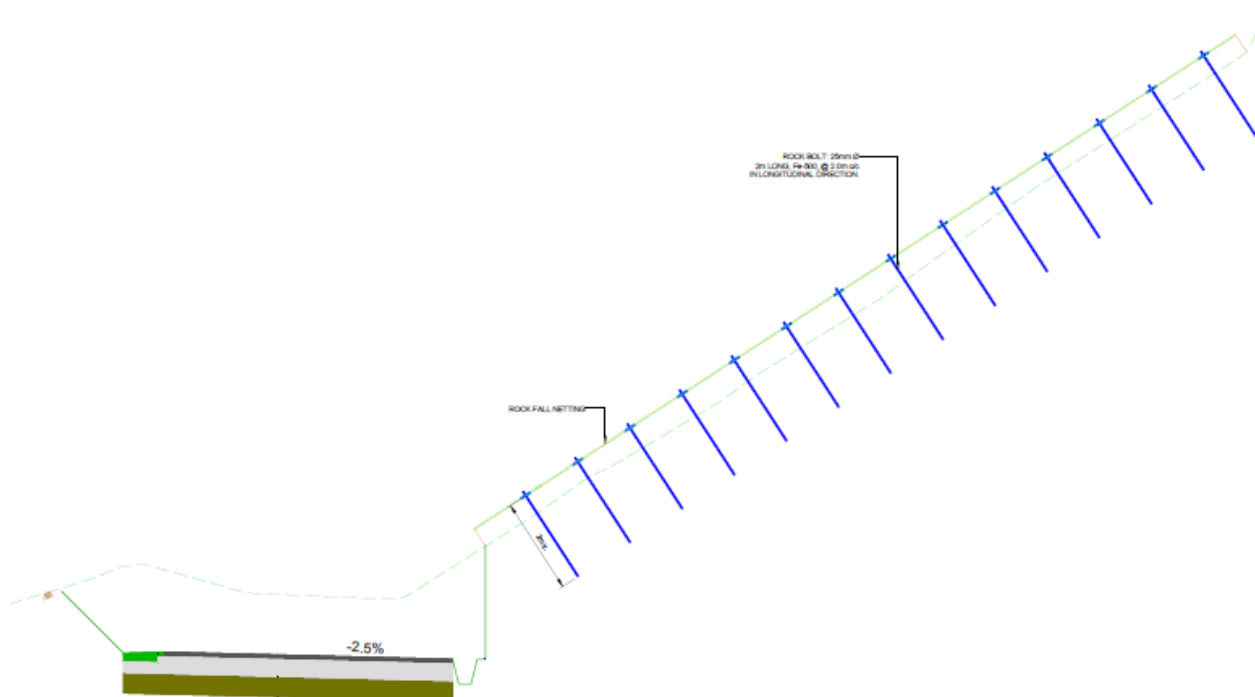
Ch. 2+000 Km to Ch. 2+040 Km



Ch. 2+980 to Ch. 3+050



## Ch. 4+180 to Ch. 4+240



a) The following locations have been identified as proposed sites for dumping

S. No.	Design Chainage (km)	Side	Remarks
1	1+080 to 1+180	On valley side	As per drawing volume
2	3+650 to 3+700	On valley side	As per drawing volume
3	5+240 to 5+300	On valley side	As per drawing volume
4	5+940 to 5+980	On valley side	As per drawing volume

However, these locations are only indicative and the bidders are advised to carry out a detailed assessment of these locations and assess its suitability as per the convenience.

Bidders are also free to identify other locations for dumping subject to their fulfillment of the statutory requirements of the concerned authority.

Please be advised that the employer shall not bear any liabilities towards identification of the dumping sites and all statutory requirements / clearances will have to be obtained by the bidders themselves.

## 10. 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.

Any variation in number and size of culverts specified hereinabove on the basis of detailed investigations shall be determined by the Contractor in accordance with the Specifications and Standards. Any increase in the number or size of the culverts shall not constitute a Change of Scope.

## Appendix B-1

### 1. Typical Cross Section

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

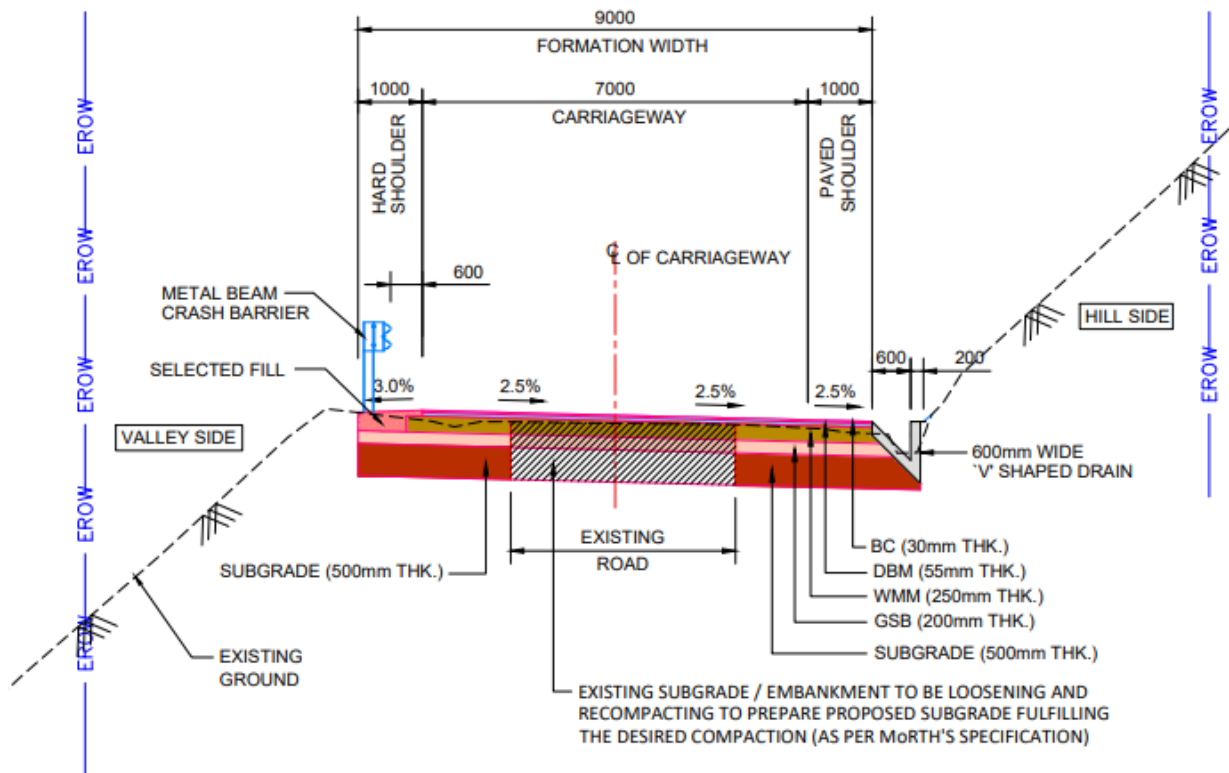
Design Chainage		Length	Type
sFrom	To		
0	30	30	TCS 1
30	50	20	TCS 2
50	70	20	TCS 3B
70	90	20	TCS 1
90	110	20	TCS 4A
110	130	20	TCS 3A
130	170	40	TCS 4A
170	190	20	TCS 2
190	210	20	TCS 4A
210	230	20	TCS 3A
230	250	20	TCS 4B
250	270	20	TCS 4A
270	290	20	TCS 2
290	310	20	TCS 1
310	350	40	TCS 4A
350	410	60	TCS 2
410	450	40	TCS 4A
450	470	20	TCS 3A
470	550	80	TCS 11
550	570	20	TCS 11
570	630	60	TCS 11
630	650	20	TCS 11
650	770	120	TCS 1
770	790	20	TCS 3A
790	850	60	TCS 4A
850	870	20	TCS 2
870	910	40	TCS 1
910	930	20	TCS 3B
930	950	20	TCS 2
950	990	40	TCS 7
990	1010	20	TCS 1
1010	1070	60	TCS 2
1070	1110	40	TCS 4A
1110	1130	20	TCS 4B
1130	1230	100	TCS 1
1230	1250	20	TCS 6
1250	1270	20	TCS 4A
1270	1290	20	TCS 4B
1290	1330	40	TCS 1
1330	1410	80	TCS 3B
1410	1450	40	TCS 3A
1450	1470	20	TCS 3B
1470	1590	120	TCS 1
1590	1630	40	TCS 3B
1630	1670	40	TCS 4A
1670	1710	40	TCS 1
1710	1730	20	TCS 3B
1730	1750	20	TCS 1
1750	1790	40	TCS 4A
1790	1810	20	TCS 2
1810	1830	20	TCS 3B
1830	1850	20	TCS 3A
1850	1890	40	TCS 1
1890	1950	60	TCS 7
1950	1970	20	TCS 3A

Design Chainage		Length	Type
sFrom	To		
1970	2170	200	TCS 1
2170	2230	60	TCS 3A
2230	2270	40	TCS 4A
2270	2290	20	TCS 1
2290	2310	20	TCS 3B
2310	2370	60	TCS 3A
2370	2390	20	TCS 3B
2390	2410	20	TCS 3A
2410	2470	60	TCS 1
2470	2490	20	TCS 3B
2490	2510	20	TCS 1
2510	2650	140	TCS 4A
2650	2690	40	TCS 3A
2690	2710	20	TCS 4A
2710	2870	160	TCS 1
2870	2890	20	TCS 2
2890	2950	60	TCS 4A
2950	2990	40	TCS 3B
2990	3010	20	TCS 1
2990	3130	140	TCS 4A
3130	3150	20	TCS 1
3150	3170	20	TCS 3A
3170	3190	20	TCS 1
3190	3210	20	TCS 4A
3210	3290	80	TCS 3A
3290	3310	20	TCS 1
3310	3370	60	TCS 3B
3370	3390	20	TCS 2
3390	3450	60	TCS 3A
3450	3470	20	TCS 4A
3470	3530	60	TCS 4B
3530	3570	40	TCS 3A
3570	3630	60	TCS 3B
3630	3710	80	TCS 1
3710	3730	20	TCS 3A
3730	3750	20	TCS 1
3750	3830	80	TCS 2
3830	3850	20	TCS 3B
3850	3870	20	TCS 2
3870	3890	20	TCS 4A
3890	3930	40	TCS 3A
3930	3950	20	TCS 4A
3950	3970	20	TCS 2
3970	4010	40	TCS 4A
4010	4110	100	TCS 7
4110	4130	20	TCS 2
4130	4170	40	TCS 9A
4170	4190	20	TCS 8
4190	4210	20	TCS 1
4210	4230	20	TCS 2
4230	4250	20	TCS 3A
4250	4290	40	TCS 2
4290	4310	20	TCS 3A
4310	4330	20	TCS 1
4330	4370	40	TCS 3A

## Section 6: Works' Requirements

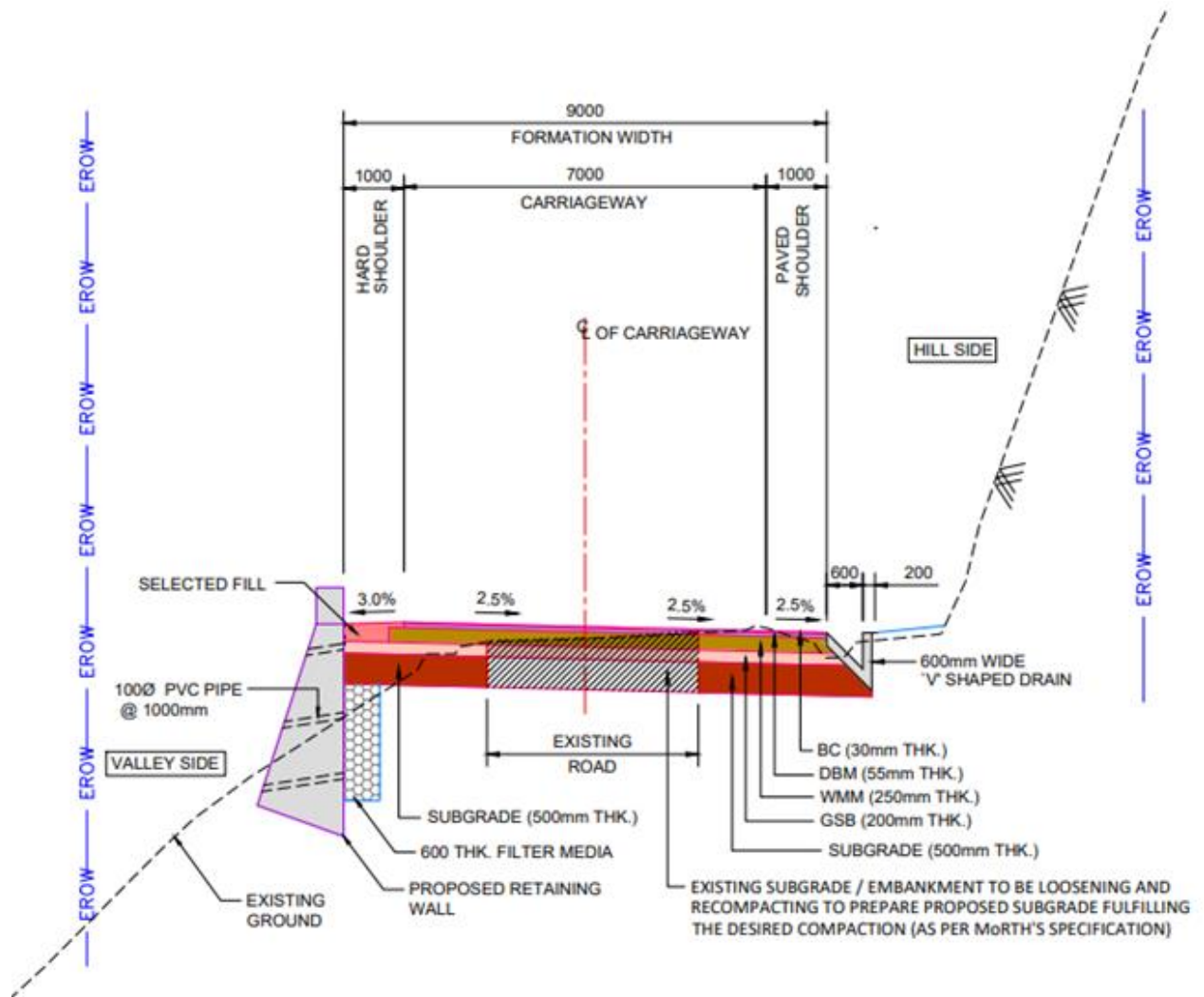
Design Chainage		Length	Type
sFrom	To		
4370	4390	20	TCS 1
4390	4430	40	TCS 2
4430	4490	60	TCS 3A
4490	4530	40	TCS 2
4530	4550	20	TCS 3A
4550	4570	20	TCS 2
4570	4610	40	TCS 3B
4610	4690	80	TCS 1
4690	4710	20	TCS 3B
4710	4830	120	TCS 1
4830	4870	40	TCS 3B
4870	4950	80	TCS 1
4950	5010	60	TCS 2
5010	5030	20	TCS 1
5030	5050	20	TCS 4A
5050	5070	20	TCS 3A
5070	5110	40	TCS 4A
5110	5150	40	TCS 4B
5150	5170	20	TCS 2
5170	5190	20	TCS 4A
5190	5230	40	TCS 3A
5230	5250	20	TCS 1
5250	5270	20	TCS 3B
5270	5330	60	TCS 3A
5330	5350	20	TCS 2
5350	5370	20	TCS 3A
5370	5430	60	TCS 1
5430	5470	40	TCS 2
5470	5490	20	TCS 1
5490	5510	20	TCS 2
5510	5530	20	TCS 4B
5530	5550	20	TCS 3A
5550	5570	20	TCS 1
5570	5610	40	TCS 2
5610	5650	40	TCS 1
5650	5690	40	TCS 2
5690	5710	20	TCS 4A
5710	5730	20	TCS 2
5730	5810	80	TCS 4A
5810	5830	20	TCS 2
5830	5850	20	TCS 3A
5850	5890	40	TCS 3B
5890	5910	20	TCS 2
5910	5930	20	TCS 3B
5930	6030	100	TCS 1
6030	6050	20	TCS 3A
6050	6170	120	TCS 1
6170	6210	40	TCS 3B
6210	6230	20	TCS 5
6230	6250	20	TCS 2
6250	6270	20	TCS 3B
6270	6290	20	TCS 1
6290	6330	40	TCS 3A
6330	6350	20	TCS 1
6350	6370	20	TCS 2
6370	6390	20	TCS 3A
6390	6410	20	TCS 3B
6410	6450	40	TCS 2
6450	6510	60	TCS 3A
6510	6550	40	TCS 3B
6550	6630	80	TCS 1
6630	6650	20	TCS 3B

Design Chainage		Length	Type
sFrom	To		
6650	6670	20	TCS 1
6670	6690	20	TCS 2
6690	6710	20	TCS 3B
6710	6750	40	TCS 1
6750	6770	20	TCS 4A
6770	6790	20	TCS 3A
6790	6810	20	TCS 2
6810	6870	60	TCS 4A
6870	6950	80	TCS 3A
6950	7010	60	TCS 1
7010	7050	40	TCS 3A
7050	7090	40	TCS 3B
7090	7110	20	TCS 4A
7110	7130	20	TCS 3A
7130	7170	40	TCS 1
7170	7190	20	TCS 3A
7190	7210	20	TCS 4A
7210	7230	20	TCS 4B
7230	7270	40	TCS 4A
7270	7290	20	TCS 3A
7290	7310	20	TCS 1
7310	7330	20	TCS 3B
7330	7350	20	TCS 4B
7350	7370	20	TCS 2
7370	7390	20	TCS 3A
7390	7470	80	TCS 3B
7470	7790	320	TCS 1
7790	7850	60	TCS 3A
7850	7890	40	TCS 1
7890	7930	40	TCS 3B
7930	7950	20	TCS 1
7950	7970	20	TCS 3B
7970	8010	40	TCS 2
8010	8030	20	TCS 1
8030	8050	20	TCS 5
8050	8110	60	TCS 11
8110	8130	20	TCS 11
8130	8150	20	TCS 2
8150	8210	60	TCS 11
8210	8270	60	TCS 1
8270	8290	20	TCS 3B
8290	8430	140	TCS 1
8430	8450	20	TCS 3B
8450	8470	20	TCS 1
8470	8510	40	TCS 2
8510	8550	40	TCS 11
8550	8570	20	TCS 4B
8570	8590	20	TCS 1
8590	8630	40	TCS 4A
8630	8650	20	TCS 2
8650	8670	20	TCS 4A
8670	8750	80	TCS 2
8750	8810	60	TCS 1
8810	8830	20	TCS 3B
8830	8850	20	TCS 3A
8850	8880	30	TCS 3B
8880	8890	10	TCS 1



TCS - 1

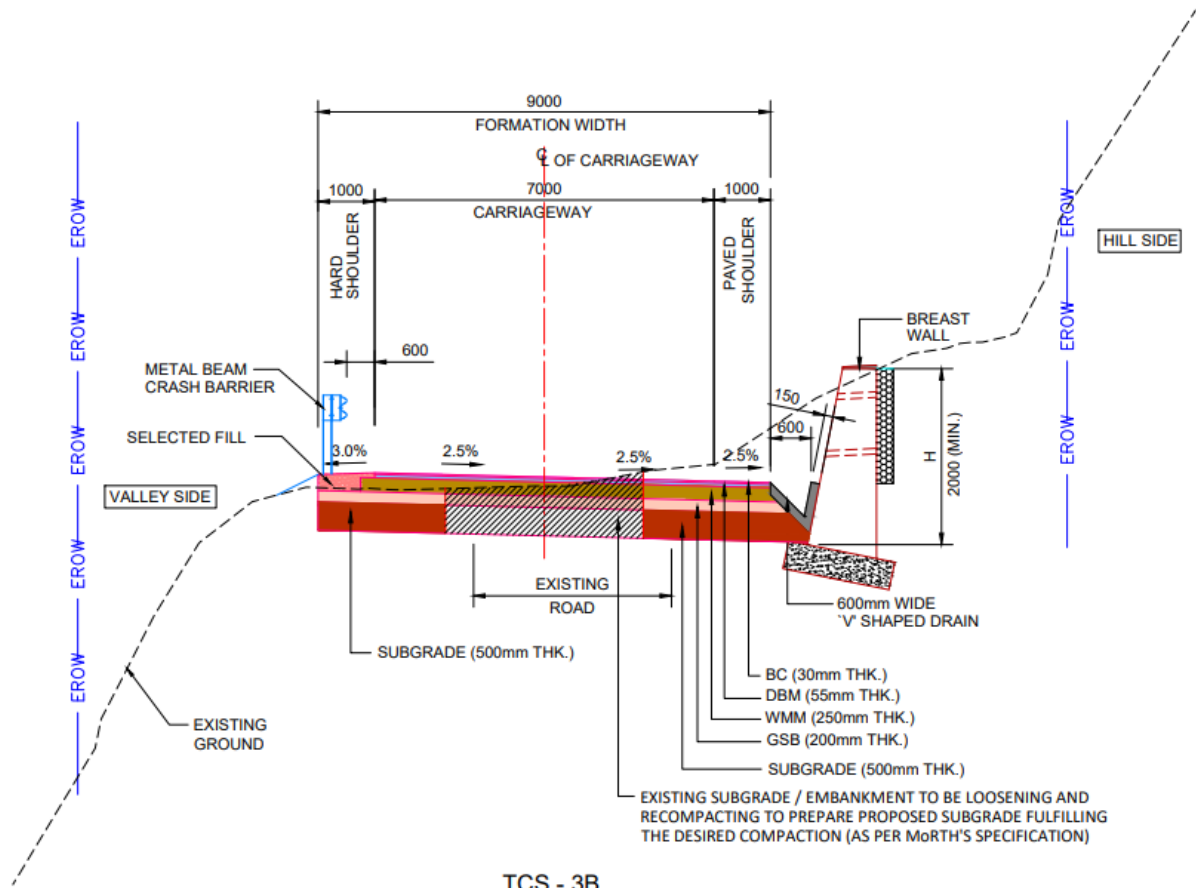
TYPICAL CROSS SECTION FOR RECONSTRUCTION OF EXISTING ROAD



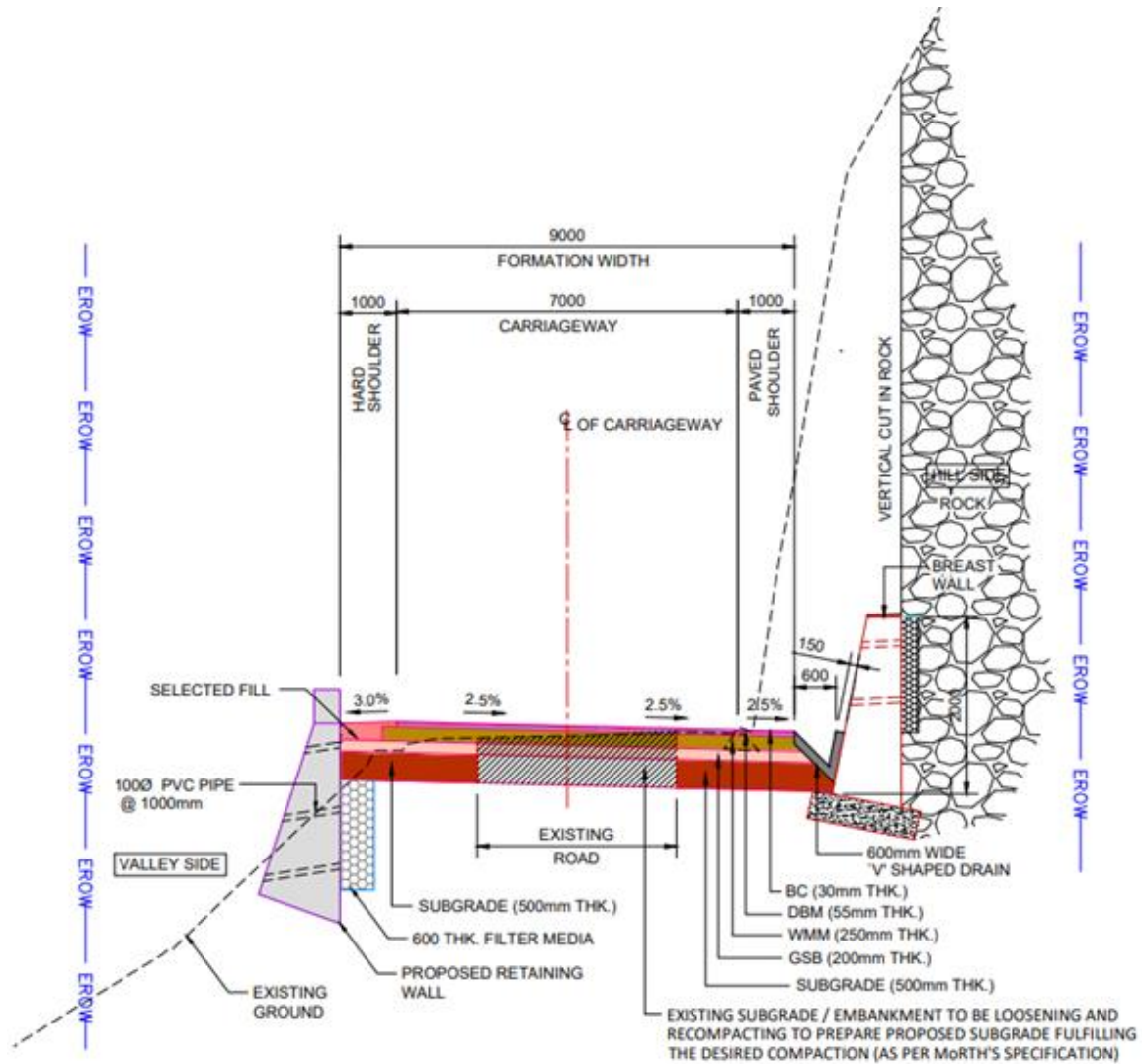
TCS - 2

TYPICAL CROSS SECTION FOR RECONSTRUCTION OF EXISTING ROAD  
(RETAINING WALL ON VALLEY SIDE & HILL CUT NOT REQUIRED)

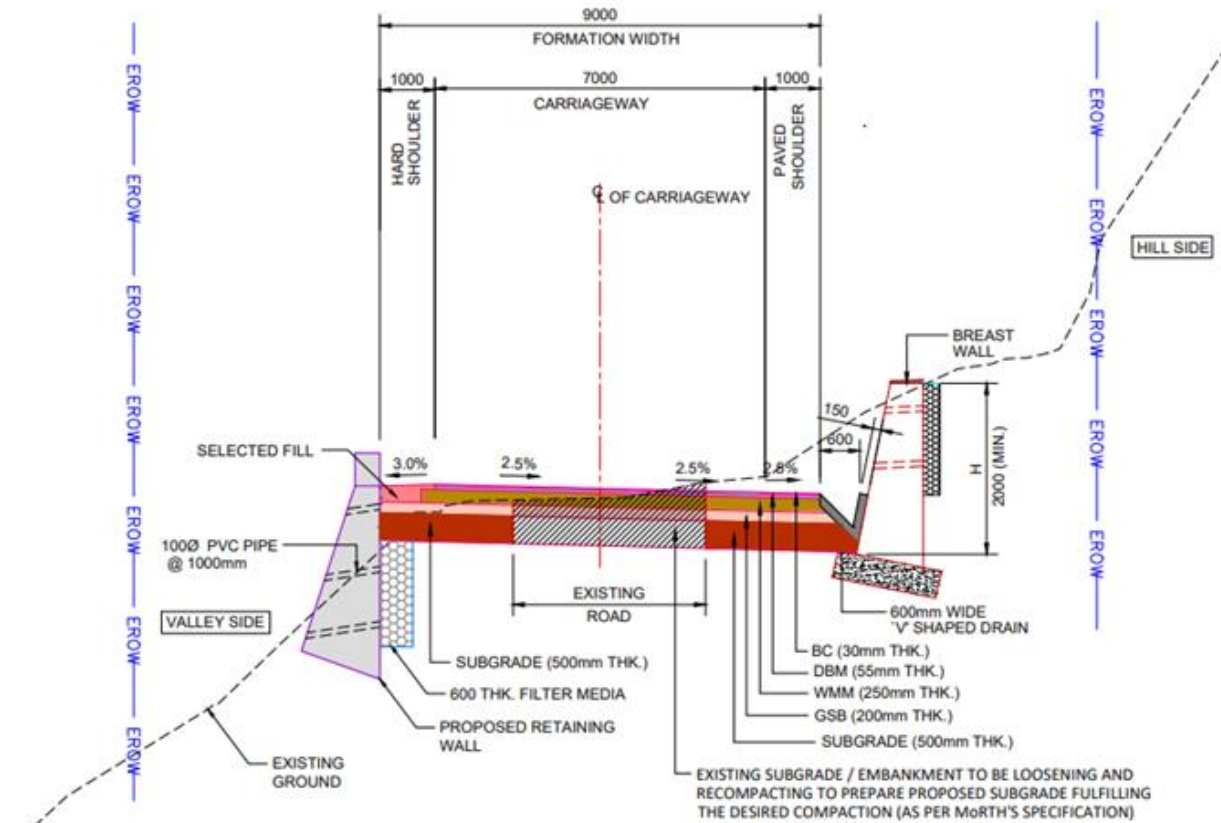




**TCS - 3B**  
**TYPICAL CROSS SECTION FOR RECONSTRUCTION OF EXISTING ROAD**  
**(WITH BREAST WALL ON HILL SIDE )**

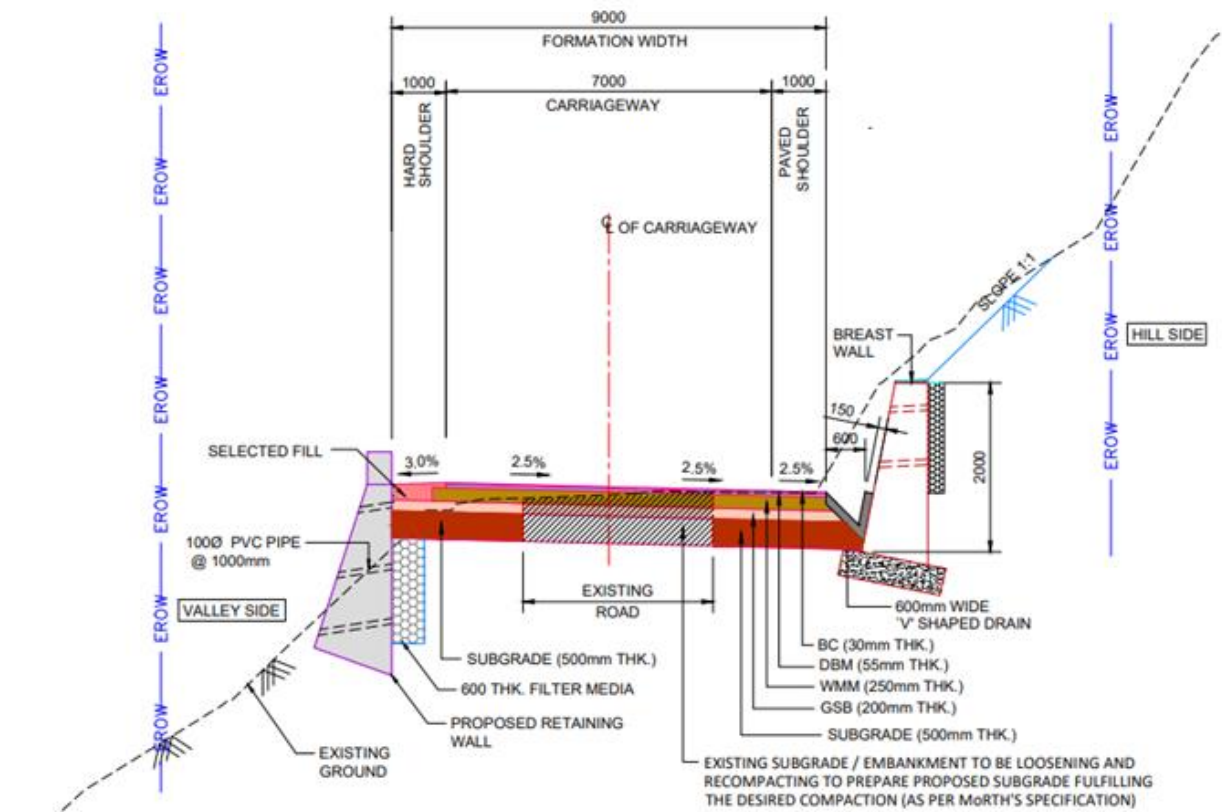


**TCS - 4A**  
**TYPICAL CROSS SECTION FOR RECONSTRUCTION OF EXISTING ROAD**  
**(RETAINING WALL ON VALLEY SIDE & VERTICAL ROCK CUT WITH BREAST WALL ON HILL SIDE )**

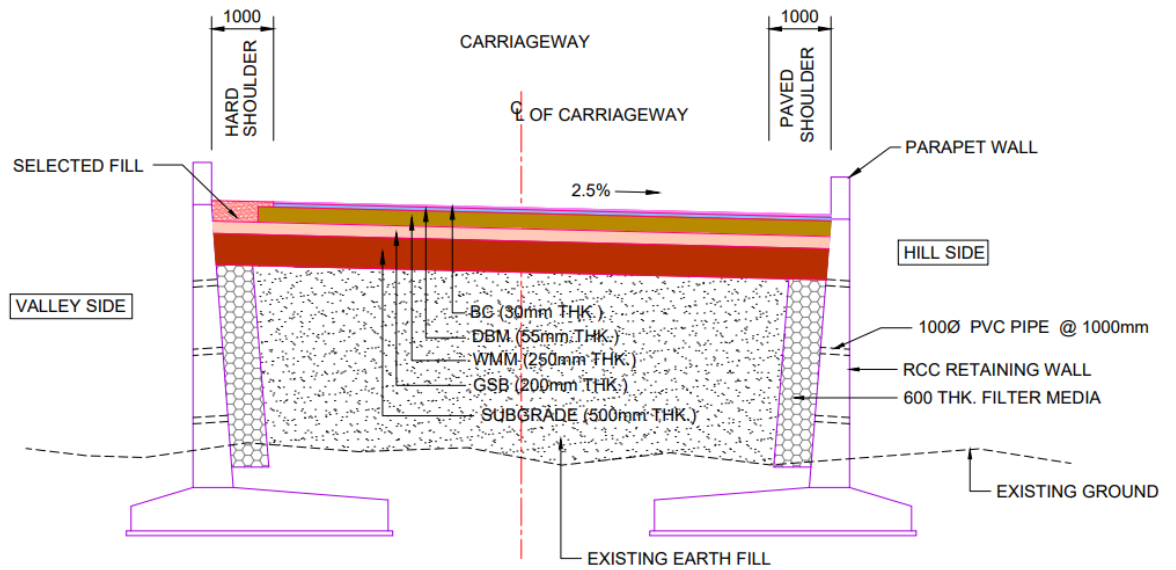


TCS - 4B

TYPICAL CROSS SECTION FOR RECONSTRUCTION OF EXISTING ROAD  
(RETAINING WALL ON VALLEY SIDE & BREAST WALL ON HILL SIDE)

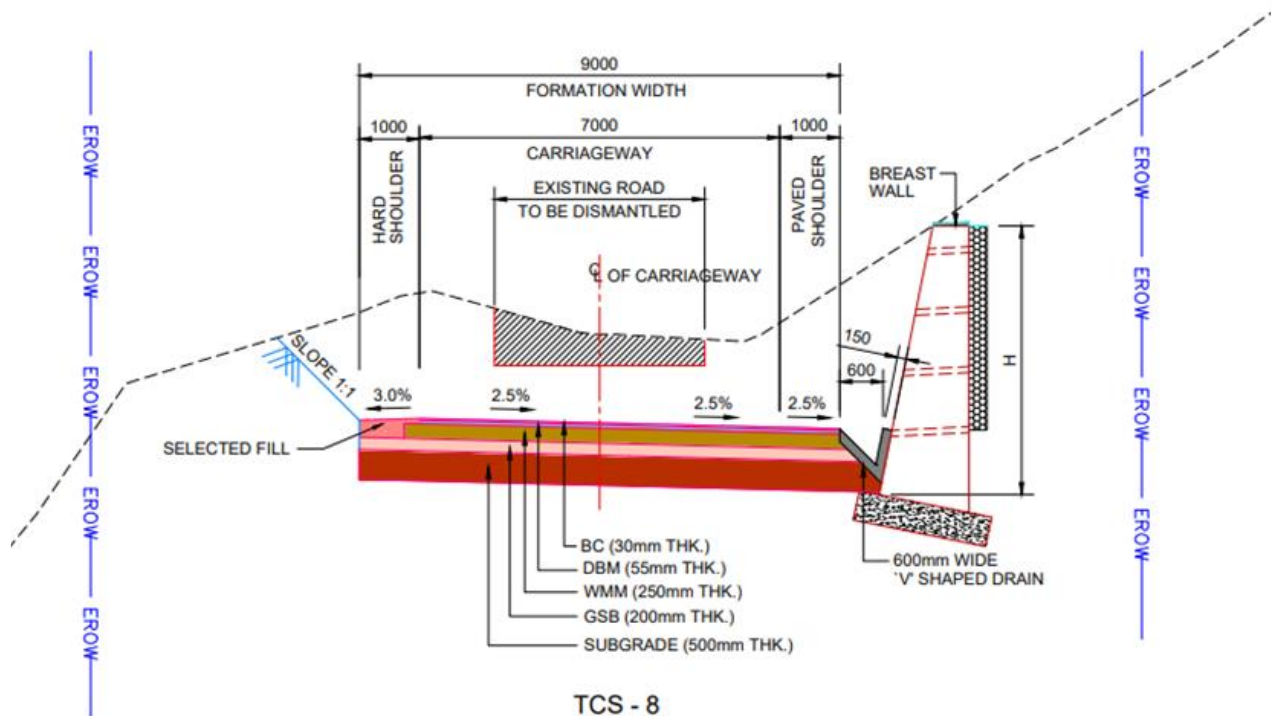


**TCS - 6**  
**TYPICAL CROSS SECTION FOR RECONSTRUCTION OF EXISTING ROAD**  
**(RETAINING WALL ON VALLEY SIDE & BREAST WALL ON HILL SIDE)**



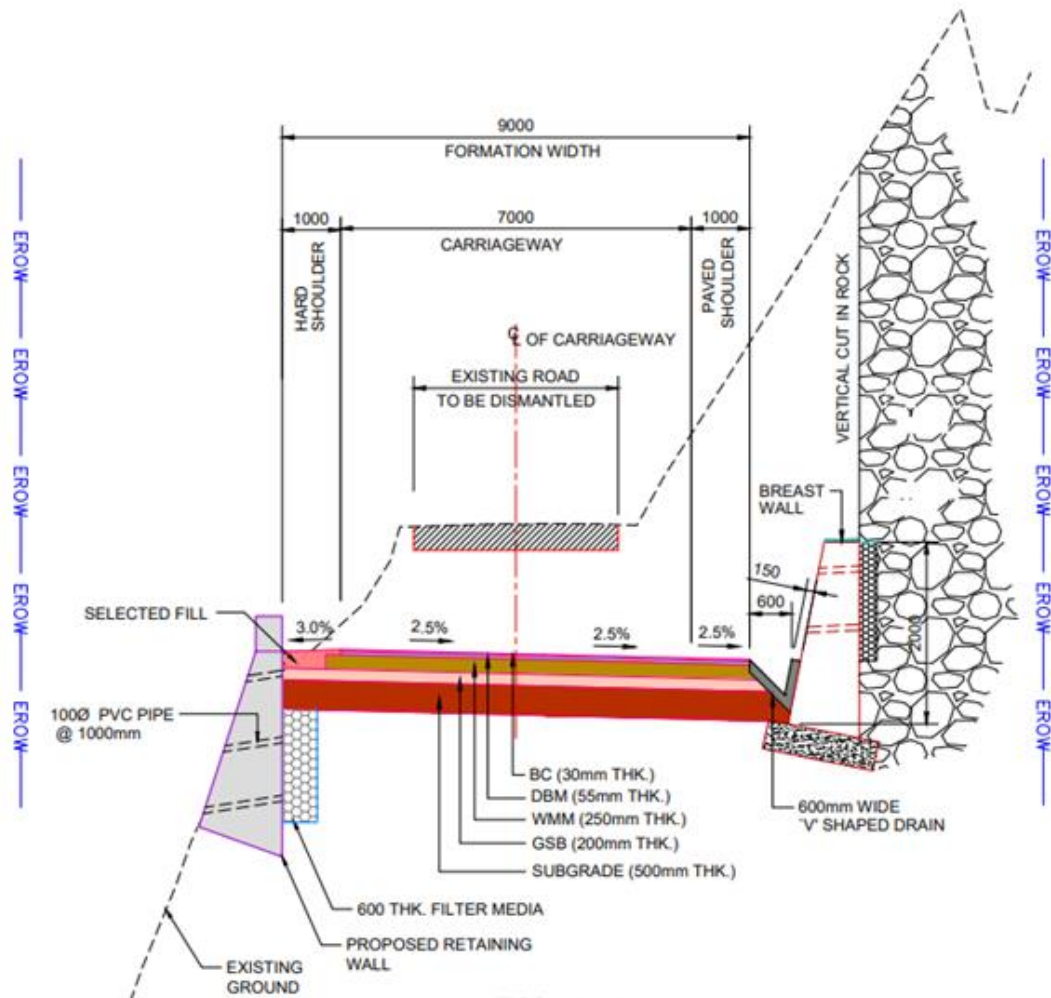
**TCS - 7**

**TYPICAL CROSS SECTION FOR BRIDGE APPROACH LOCATION**



**TCS - 8**

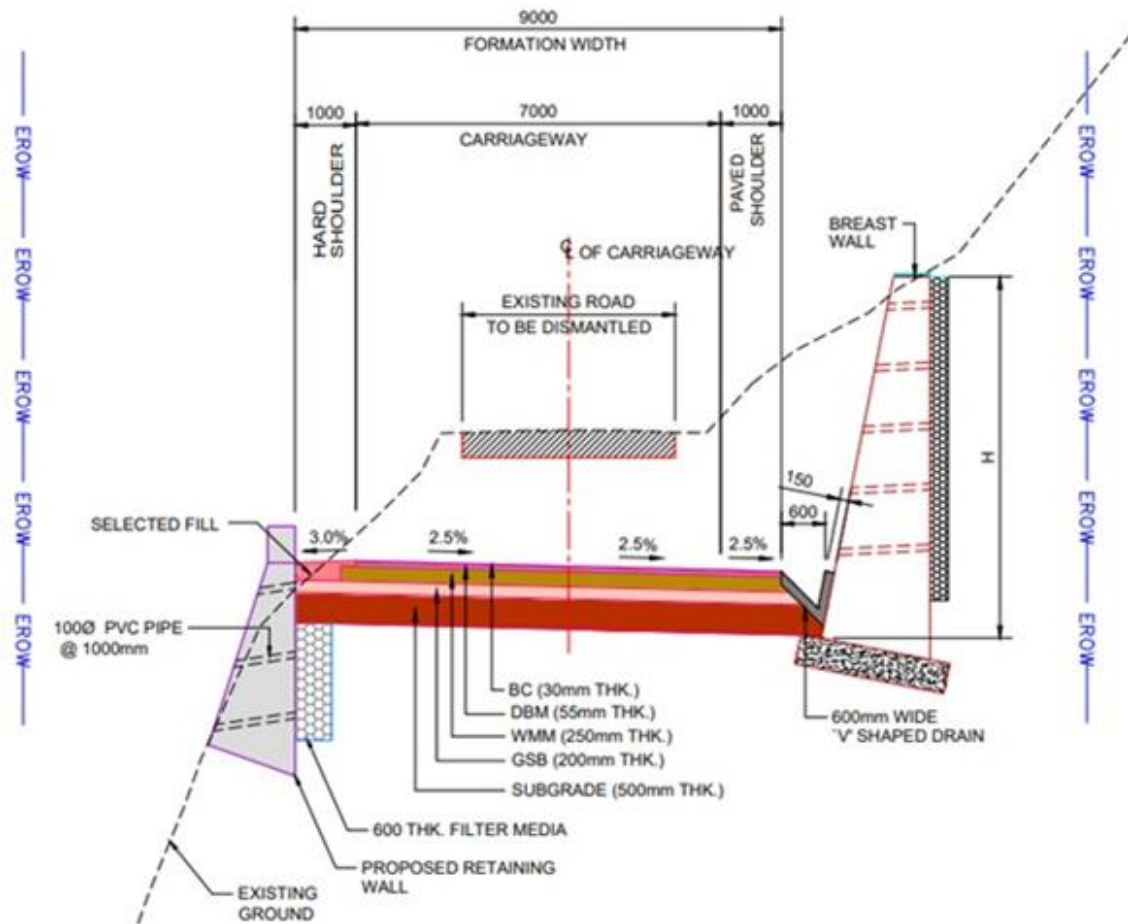
**TYPICAL CROSS SECTION FOR RECONSTRUCTION OF EXISTING ROAD WITH CUTTING  
(SLOPE CUT ON VALLEY SIDE & BREAST WALL ON HILL SIDE)**



TCS - 9A

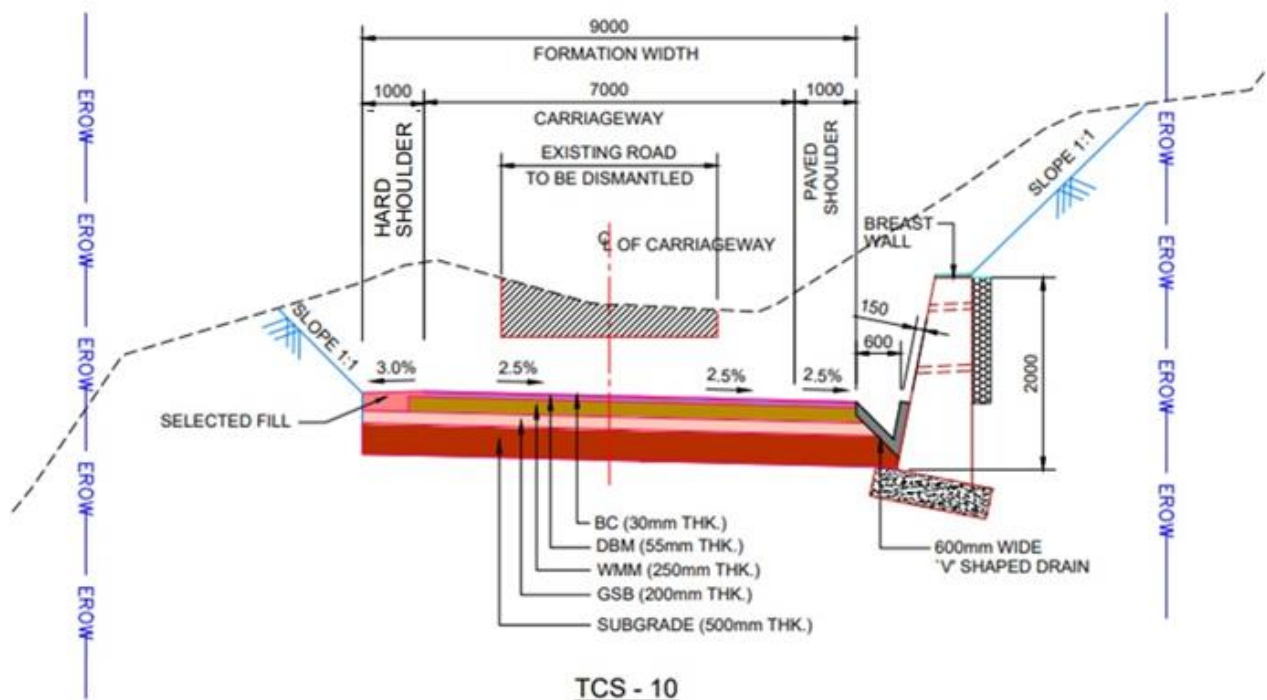
TYPICAL CROSS SECTION FOR RECONSTRUCTION OF EXISTING ROAD WITH CUTTING  
(RETAINING WALL ON VALLEY SIDE & VERTICAL ROCK CUT WITH BREAST WALL ON HILL SIDE)





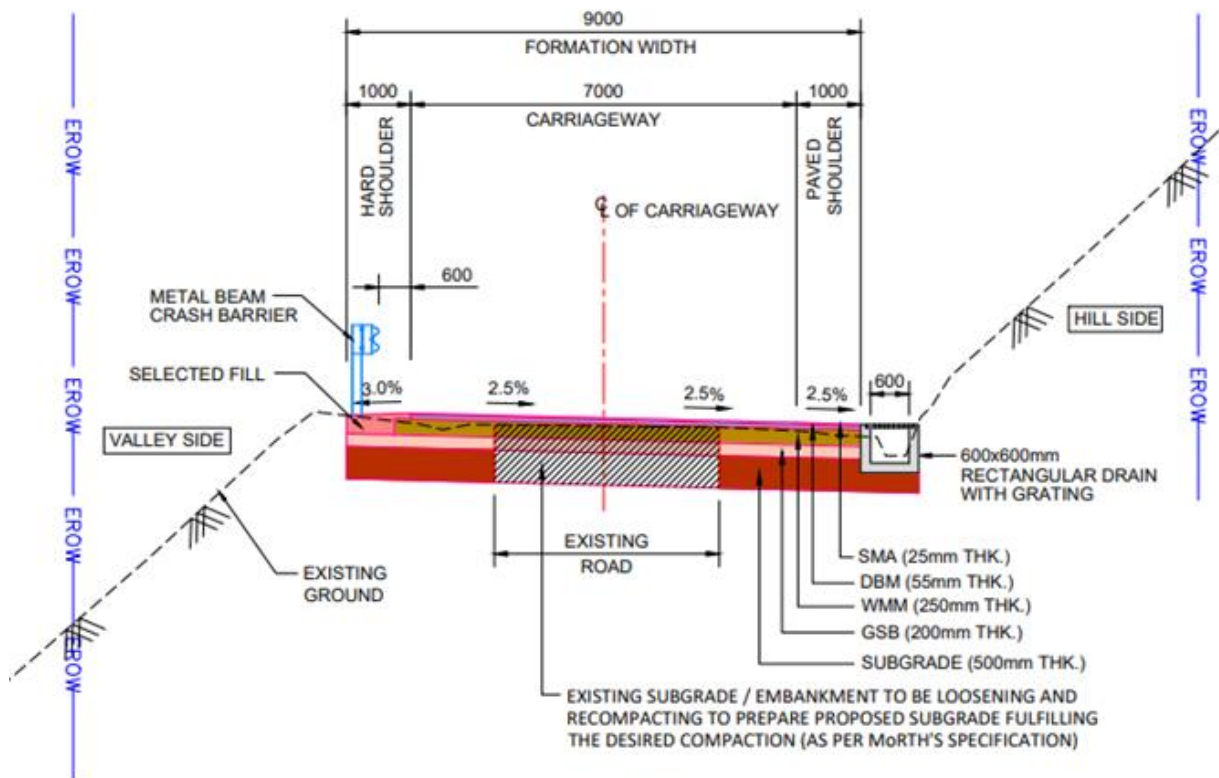
TCS - 9B

TYPICAL CROSS SECTION FOR RECONSTRUCTION OF EXISTING ROAD WITH CUTTING  
(RETAINING WALL ON VALLEY SIDE & BREAST WALL ON HILL SIDE)



**TCS - 10**  
**TYPICAL CROSS SECTION FOR RECONSTRUCTION OF EXISTING ROAD WITH CUTTING**  
**(SLOPE CUT ON VALLEY SIDE & BREAST WALL ON HILL SIDE)**





**TCS - 11**  
**TYPICAL CROSS SECTION FOR RECONSTRUCTION OF EXISTING ROAD**  
**IN BUILT-UP AREA**

## **Annexure-1**

### **1. Utility Shifting**

Shifting of obstructing existing utilities indicated in Schedule A to an appropriate location in accordance with the standards and Specification of concern Utility Owning Departments is a part of scope of work for the Contractor. The bidder may visit the site and assess the quantum of shifting of utilities for the project before submission of the bid. Copy of Utility relocation plan is enclosed. The specifications of concerned Utility Owning Department shall be applicable and followed.

Note:

- 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 latter.
- 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 per 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.

Note II: Copy of Utility shifting plans enclosed as Annex-III to Schedule-A.

## 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) toll plazas;
- b) roadside furniture;
- c) pedestrian facilities;
- d) Landscaping and tree plantation;
- e) truck lay-bys;
- f) bus-bays and bus shelters;
- g) rest areas;
- h) Advanced Traffic Management System
- i) Traffic aid posts
- j) Medical aid posts;
- k) Vehicle rescue posts
- l) Telecom
- m) Highway patrol and Ambulance
- n) Street Lighting

#### 2. Description of Project Facilities

*Each of the Project Facilities is described below:*

##### a) Toll Plaza:

Toll Plaza shall be designed as per the guidelines prescribed on following locations:-

Sr No	Project Facility	Toll Location (Design Ch.)	Design Requirements	Other Essential Details
NIL				

##### b) Roadside Furniture

*The roadside furniture shall include the provision of the;*

##### i. Traffic Signs

Traffic signs include roadside signs, overhead signs and curb mounted signs along the entire Project Highway as per Hill road Manual.

ii. **Pavement Markings**

Pavement markings shall cover road marking for the entire Project Highway as per Hill road Manual.

iii. **LED Traffic Blinkers**

LED traffic blinker signal shall be provided on entire project length.

iv. **Crash barrier**

W-beam crash barrier shall be provided along the project highway at the locations as suggested in Hill road Manual.

v. **Delineators**

Delineators for the entire Project Highway at the locations as suggested in relevant IRC Manual shall be provided

vi. **Boundary stones**

For the entire Project Highway as suggested in Hill road Manual.

vii. **Hectometer / Kilometer stones**

For the entire Project Highway as suggested in Hill road Manual.

c) **Pedestrian Facilities**

The pedestrian facilities shall be provided as per Hill road Manual.

d) **Landscaping and Tree Plantation**

The landscaping and tree plantation shall be provided as per Manual and Guidelines for National Green highways Policy 2015 and amendment thereof; It is further clarified that the contractor shall be responsible to plant and maintain minimum no of trees as per assessment of Forest Department, Government of Sikkim. Species of plants/saplings to be planted on avenue and median shall be approved by the Independent Engineer and Authority.

e) **Truck Lay byes:**

Truck lay byes shall be provided at the following locations:-

S. No.	Design Chainage	Location
NIL		

f) **Bus bays and Bus Shelters**

Minimum three nos bus shelters shall be provided for the project corridor and the locations shall be finalized after discussion with the authority during construction as per available ROW and requirement of the project.

g) **Rest Areas :**

Minimum three nos Toilet blocks with viewpoints (Typical drawing attached with drawing volume) shall be provided for the project corridor and the locations shall be finalized after discussion with the authority during construction as per available ROW and requirement of the project.

h) **Advance Traffic Management System(ATMS)**

ATMS will be provided as per Section 17 of Manual.

**i) Traffic Aid Post**

Traffic Aid Posts shall be provided as per Hill road Manual.

**j) Medical Aid Posts**

Medical Aid Posts shall be provided as per Hill road Manual..

**k) Vehicular Rescue Posts**

Vehicular Rescue Posts shall be provided as per Hill road Manual..

**l) Telecom System**

Telecom system shall be provided as per Hill road Manual..

**m) Highway Patrol and Ambulance**

Provide Highway Patrol Units/facility (Vehicle shall be of GPS mounted with tracking facility) of highway patrolling covering the entire project highway, ambulance and crane as per the Manual and latest NHAI circular Ref. NHAI/policy guidelines/Strengthening the incident management services/2018 Policy no.12.19 Dated. 20-03-2018 and amendment thereof.

**n) Street Lighting**

Street Lighting shall be provided at all major and minor Junctions, bus-shelters as per Manual. All cables, fittings and fixtures shall be concealed/protected as per IS-1944 and national lighting code IS-SP-72. Contractor shall install, maintain and operate highway lighting including electricity bills during Maintenance period.

## **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:

Subject to the provisions of paragraph 2 of this Annex-1, two lane with paved shoulder of the project highway shall conform to Hill Road Manual ( IRC: SP- 48:1998),referred to herein as the Manual.

Latest publications of IRC: SP-48:1998 as on bid due date shall be followed. This shall also mean that the latest publications as on bid due date w.r.t the code & manuals specified in IRC: SP-48:1998 shall also be followed.

## Annex – I

(Schedule-D)

### Specifications and Standards for Construction

#### 1. Specifications and Standards

All Materials, works and construction operations shall conform to the Hill Road Manual (IRC: SP:48: 1998), referred to as Manual, 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 Authority's Engineer.

Following Latest publications of IRC as on bid due date shall be followed.

**IRC: SP-48:1998:** Hill Road manual

**IRC:SP-106-2015 :** Engineering Guidelines on Landslide Mitigation Measures for Indian Roads

**JAICA + MORT&H :** Capacity Development Project on Highways in Mountainous Regions - Guidelines for Slope Protection & Embankment with Advanced Technology Part-I Main Text

**JAICA + MORT&H :** Capacity Development Project on Highways in Mountainous Regions - Guidelines for Slope Protection and Embankment with Advanced Technology Part-II Appendix

**HRB SR No.23, 2014 :** State of the Art Report: Design and Construction of Rockfall Mitigation Systems

**ETAG 27:** Guideline For European Technical Approval Of Falling Rock Protection Kits

**IRC:SP:102-2014 :** Guidelines for Design and Construction of Reinforced Soil Walls

This shall also mean that the latest publications as on bid due date w.r.t the code & manuals specified in the above referred codes shall also be followed

#### 2. Deviations from the Specifications and Standards

i) The terms "Concessionaire", "Independent Engineer" and "Concession Agreement" used in the Manual shall be deemed to be substituted by the terms "Contractor", "Authority's Engineer" and "Agreement" respectively.

ii) 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:

iii) Deviations from the aforesaid Specifications and Standards are listed in table below:

S. No.	Item	Description of Deviation	Clause reference
1	Design speed	Due to ROW and site constraint min design speed is proposed 20KMPH.	Table 6.1 Hill road manual
2	Roadway width	Roadway width for the selected corridor is as per Typical Cross Section Schedule.	Table 6.4 Hill road manual
3	Super elevation	7 % super elevation for curve location and 10% super elevation for hair pin bend location is adopted.	Clause 6.8.2.2 Hill road manual
4	Super elevation	Unidirectional camber is adopted for the whole project corridor	Clause 6.8.2.6 Hill road manual
5	Super elevation	One-third super elevation provided on the straight section before start of the circular curve and the balance two-third on the curve due to the small length of curve. In some locations, curve to curve super elevation is proposed.	Clause 6.8.2.9 Hill road manual
6	Minimum radius of Horizontal curve	Min. 15m radius for normal curve location is provided.	Table 6.7 Hill road manual

<b>S. No.</b>	<b>Item</b>	<b>Description of Deviation</b>	<b>Clause reference</b>
7	Transition curve	Transition curve is not provided such location where very short tangent available between two curves.	Clause 6.8.4 Hill road manual
8	Widenning of curve	Extra widening is avoided to avoid additional cutting and filling and also it reduces additional cost of the project corridor. However, in case of hair pin bend, 1.5 m extra widening is proposed in hill side to provide better movement of the vehicle with small radius.	Clause 6.8.5 Hill road manual
9	Vertical gradient	Existing gradient of the road is very steep, higher steep gradient compare to existing gradient is proposed to reduce the cut fill quantity.	Table 6.11 Hill road manual
10	Hair pin bend	Minimum radius at hair pin bend is adopted 6.5m	Clause 6.10.1.c Hill road manual



## **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.

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.

**6. 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.

**7. 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, approach)	Potholes	Nil	< 0.1 % of area and subject to limit of 10 mm in depth	Daily	Length Measurement Unit like Scale, Tape, odometer etc.	IRC 82: 2015 and Distress Identification Manual for Long Term Pavement Performance Program, FHWA 2003 ( <a href="http://www.tfhr.com/pavement/ltp/reports/03031/">http://www.tfhr.com/pavement/ltp/reports/03031/</a> )	24-48 hours	MORT&H Specification 3004.2
	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 Shoving	Nil	< 0.1 % of area	Daily	Length Measurement Unit like		2-7 days	IRC:82-2015
	Bleeding	Nil	< 1 % of area	Daily	Scale, Tape, odometer etc.		3-7 days	MORT&H Specification 3004.4
	Ravelling / Stripping	Nil	< 1 % of area	Daily			7-15 days	IRC:82-2015 read with IRC SP 81

**Section 6: Works' Requirements**

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					
	Edge Deformation/ Breaking	Nil	< 1 m for any 100 m section and width < 0.1 m at any location,	Daily			7- 15 days	IRC:82-2015
			restricted to 30 cm from the edge					
	RoughnessBI	2000 mm/km	2400 mm/km	Bi-Annually	Class I Profilometer SCRIM (Sideway- force Coefficient Routine Investigation Machine or equivalent)	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 Pavement Condition Survey Equipment	180 days	IRC:82-2015
	Skid Number	60SN	50SN	Bi-Annually			180 days	BS: 7941-1: 2006
	Pavement Condition Index	3	2.1	Bi-Annually			180 days	IRC:82-2015
	Other Pavement Distresses			Bi-Annually			2-7 days	IRC:82-2015
	Deflection/ Remaining Life			Annually	Falling Weight Deflectometer	IRC 115: 2014	180 days	IRC:115-2014
Rigid Pavement (Pavement of MCW, Service Road, Grade structure,	RoughnessBI	2200m m/km	2400mm /km	Bi-Annually	Class I Profilometer	ASTM E950 (98) :2004 and ASTM E1656 -94: 2000	180 days	IRC:SP:83-2008
	Skid	Skid Resistance no. at different speed of vehicles		Bi-Annually	SCRIM (Sideway-force	IRC:SP:83-2008	180 days	IRC:SP:83-2008
		Minimum SN	Traffic Speed (Km/h)		Coefficient Routine Investigation			
		36	50					

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					
		33	65					
		32	80					
		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 /crossfall	Daily			7-15 days	MORT&H Specification 408.4
	Embankment Slopes	Nil	<15 % Variation in	Daily			7-15 days	MORT&H Specification 408.4
			prescribe side slope					
	Embankment Protection	Nil	Nil	Daily	NA		7-15 days	MORT&H Specification
	Rain Cuts/ Gullies inslope	Nil	Nil	Daily Specially During Rainy Season	NA		7-15 days	MORT&H Specification

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 > 1m. Within 7days
			3	w = 0.5 - 1.5 mm, discernible from fast-moving car		
			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	
			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 maybe full depth	
3	Single Longitudinal Crack intersecting with one or more joints	w = width of crack L = length of crack d =	0	Nil, not discernible	No Action	
			1	w < 0.5 mm, discernable from slow moving vehicle	Seal with epoxy, if L > 1m. 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 $d > D/2$
		depth of crack D = depth of slab	2	w = 0.5 - 3.0 mm, discernible from fast vehicle	Route seal and stitch, if L > 1 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 maybe 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 Within 15 days
			4	Multiple Cracks intersecting with one or more joints	w = width of crack	0
1	w < 0.2 mm, hair cracks	Seal, and stitch if L > 1 m. Within 15 days				
2	w = 0.2 - 0.5 mm. discernible from slow vehicle					
3	w = 0.5 - 3.0 mm, discernible from fast vehicle	Full depth repair within 15 days	Dismantle, Reinstall 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					
5	Corner Break	w = width of crack	0	Nil, not discernible	No Action	-
			1	w < 0.5 mm; only 1 corner broken		

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	$w < 1.5 \text{ mm}$ ; $L < 0.6 \text{ m}$ , only one corner broken	Seal with low viscosity epoxy to secure broken parts Within 7 days	Seal with epoxy seal with epoxy Within 7days
			3	$w < 1.5 \text{ mm}$ ; $L < 0.6 \text{ m}$ , two corners broken	Partial Depth (Refer Figure 8.3 of IRC:SP: 83-2008) Within 15 days	Full depth repair
			4	$w > 1.5 \text{ mm}$ ; $L > 0.6 \text{ m}$ or three corners broken		
			5	three or four corners broken		Reinstate sub-base, and reconstruct the slab as per norms and specifications within 30days
			6	Punchout (Applicable to Continuous Reinforced Concrete Pavement (CRCP) only)	$w$ = width of crack $L$ = length (m/m <sup>2</sup> )	0
1	$w < 0.5 \text{ mm}$ ; $L < 3 \text{ m/m}^2$	Seal with low viscosity epoxy to secure broken parts. Within 15days				
2	either $w > 0.5 \text{ mm}$ or $L < 3 \text{ m/m}^2$					
3	$w > 1.5 \text{ mm}$ and $L < 3 \text{ m/m}^2$	Full depth repair - Cut out and replace damaged area taking care not to damage reinforcement. Within 30days				
4	$w > 3 \text{ mm}$ , $L < 3 \text{ m/m}^2$ and deformation					
5	$w > 3 \text{ mm}$ , $L > 3 \text{ m/m}^2$ 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	Long Term
			No action.		Not Applicable	
			1	$r < 2 \%$		
2	$r = 2 - 10 \%$					



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
			3	r = 10-25%	Bonded Inlay, 2 or 3 slabs if affecting. Within 30 days	
			4	r = 25 - 50 %		
			5	r > 50% and h > 25 mm	Reconstruct slabs, 4 or more slabs if affecting. Within 30 days	
8	Scaling	r = damaged surface/total surface of slab (%) h = maximum depth of damage	0	Nil, not discernible	Short Term	Long Term
					No action.	Not Applicable
			1	r < 2 %	Local repair of areas damaged and liable to be damaged. Within 7 days	
			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	
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 5 km. Within 30 days	
10	Popout (Small Hole), Pothole Refer Para 8.4	n = number/m <sup>2</sup> d = diameter h = maximum depth	0	d < 50 mm; h < 25 mm; n < 1 per 5 m <sup>2</sup>	No action.	
			1	d = 50 - 100 mm; h < 50 mm; n < 1 per 5 m <sup>2</sup>		

**Section 6: Works' Requirements**

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	$d = 50 - 100 \text{ mm}$ ; $h > 50 \text{ mm}$ ; $n < 1$ per $5 \text{ m}^2$	Partial depth repair 65 mm deep. Within 15 days	Not Applicable
			3	$d = 100 - 300 \text{ mm}$ ; $h < 100 \text{ mm}$ $n < 1$ per $5 \text{ m}^2$	Partial depth repair 110mm i.e.10 mm more than the depth of the hole. Within 30 days	
			4	$d = 100 - 300 \text{ mm}$ ; $h > 100 \text{ mm}$ ; $n < 1$ per $5 \text{ m}^2$		
			5	$d > 300 \text{ mm}$ ; $h > 100 \text{ mm}$ : $n > 1$ per $5 \text{ m}^2$	Full depth repair. Within 30 days	
Joint Defects						
11	Joint Seal Defects	loss or damage $L = \text{Length as \% total joint length}$	0	Difficult to discern.	Short Term	Long Term
					No action.	
			1	Discernible, $L < 25\%$ but of little immediate consequence with regard to ingress of water or trapping incompressiblematerial.	Clean joint, inspect later.	
			3	Notable. $L > 25\%$ insufficient protectionagainst ingress of water and trapping incompressible material.	Clean and reapply sealant in selected locations. Within 7 days	
			5	Severe; $w > 3\text{mm}$ negligible protection against ingress of water and trapping incompressible material.	Clean, widen and reseal the joint. Within 7 days	
12	Spalling of Joints	$w = \text{width on either side of the joint}$ $L = \text{length of spalled portion (as \% jointlength)}$	0	Nil, not discernible	No action.	Not Applicable
			1	$w < 10 \text{ mm}$	Apply low viscosity epoxy resin/ mortar in cracked portion. Within 7 days	
			2	$w = 10 - 20 \text{ mm}$ , $L < 25\%$		
			3	$w = 20 - 40 \text{ mm}$ , $L > 25\%$	Partial Depth Repair. Within 15 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 = 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	<b>Faulting (or Stepping)</b>	f = difference of level	0	not discernible, < 1 mm	No action.	No action.
	<b>in Cracks or Joints</b>		1	f < 3 mm		Replace the slab as appropriate. Within 30days
			2	f = 3 - 6 mm	Determine cause and observe, take action for diamond grinding	
			3	f = 6 - 12 mm	Diamond Grinding	Replace the slab as appropriate. Within 30days
			4	f= 12 - 18 mm	Raise sunken slab.	
			5	f> 18 mm	Strengthen subgrade and sub-base by grouting and raising sunken slab	
14	<b>Blowup or Buckling</b>	h = vertical displacement from normal profile	0	Nil, not discernible	<b>Short Term</b>	<b>Long Term</b>
				No Action		
			1	h < 6 mm		
			2	h = 6 - 12 mm	Install Signs to Warn Traffic	
			3	h = 12 - 25 mm	within 7 days	
			4	h > 25 mm	Full Depth Repair. Within 30 days	
			5	shattered slabs, ie 4 or more pieces	Replace broken slabs. Within 30 days	
			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 Trafficwithin 7 days	
			3	h = 30 - 50 mm		

Section 6: Works' Requirements

S. No.	Type of Distress	Measured Parameter	Degree of Severity	Assessment Rating	Repair Action	
					For the case $d < D/2$	For the case $d > D/2$
15	Depression	$h$ = negative vertical displacement from normal profile $L$ = length	4	$h > 50$ mm or $> 20\%$ joints	Strengthen subgrade. Reinstall pavement at normal level	
			5	$h > 100$ mm	if $L < 20$ m. Within 30 days	
16	Heave	$h$ = positive vertical displacement from normal profile.  $L$ = length	0	Not discernible. $h < 5$ mm	<b>Short Term</b> No action.	<b>Long Term</b> 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. Reinstall pavement at normal level if length $< 20$ m. Within 30 days	
			5	$h > 100$ mm		
17	Bump	$h$ = vertical	0	$h < 4$ mm	No action	
		Displacement from normal profile	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 on going Maintenance within 15 days	Replace in case of new construction. Within 30 days
			5	$h > 15$ mm	Full Depth Repair. Within 30 days	Full Depth Repair. Within 30 days
18	Lane to Shoulder Drop off	$f$ = difference of level	0	Nil, not discernible $< 3$ mm	<b>Short Term</b> No action.	<b>Long Term</b>
			1	$f = 3 - 10$ mm	Spot repair of shoulder within 7 days	
			2	$f = 10 - 25$ mm		

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
			3	f = 25 - 50 mm	Fill up shoulder within 7 dayss	For any 100 m stretch Reconstruct shoulder, if affecting 25% or more of stretch. Within 30days
			4	f = 50 - 75 mm		
			5	f > 75 mm		
Drainage						
19	Pumping	quantity of fines and water expelled through open joints and cracksNos	0	not discernible	No Action	Inspect and repair sub-drainage at distressed sectionsand upstream.
			1 to 2	slight/ occasional Nos <10%	Repair cracks and joints Withoutdelay.	
			3 to 4	appreciable/ Frequent10 - 25%	Lift or jack slab within 30 days.	
		Nos/100 m stretch	5	abundant, crackdevelopment > 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 discernibleproblem	No action.	Action required to stop water damaging foundation within 30days.
			3 to 4	Blockages observed in drains, but water flowing	Clean drains etc within 7 days,Follow up	
			5	Ponding, accumulation of water observed	-do-	

Table -3: Maintenance Criteria for Safety Related Items and Other Furniture Items:

AssetType	Performance Parameter	Level of Service (LOS)		Frequency of Measurementt		Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards				
Highway	Availability of Safe Sight Distance	As per IRC SP :84-2014, a minimum of safe stopping sight distance shall be available throughout.		Monthly		Manual Measurements with Odometer along with hvideo/ image backup	Removal of obstruction within 24hours, 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		IRC:SP 84-2014				
		Design Speed, kmph	Desirable Minimum SightDistance (m)	Safe Stopping Sight Distance (m)									
		100	360	180			and suitable traffic calming measures such as transverse bar						
		80	260	130			marking, blinkers, etc. shall be applied during the period of						
							rectification.						
					Visual	Re - painting	Cat-1 Defect –	IRC:35-					
Pavement Marking	Wear	<70% of marking remaining		Bi- Annually		Assessment as per Annexure-F of IRC:35-2015		within 24 hours Cat-2 Defect -within 2 months	2015				
	Day tim eVisibility	During expected life Service Time Cement Road - 130mcd/m <sup>2</sup> /lux Bituminous Road -100mcd/m <sup>2</sup> /lux		Monthly		As per Annexure-D of IRC:35-2015	Re - painting	Cat-1 Defect – within 24 hours Cat-2 Defect – within 2 months	IRC:35-2015				
		<u>Initial and Minimum Performance for Dry Retro reflectivity during night time:</u>				As per Annexure-E of IRC:35-2015	Re - painting	Cat-1 Defect – within 24 hours Cat-2 Defect – within 2 months	IRC:35-2015				
		Design	(RL) Retro										
		Speed	Reflectivity										
			(mcd/m <sup>2</sup> /lux)										

AssetType	Performance Parameter	Level of Service (LOS)			Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
			Initial	Minimum					
			(7 Days)	Threshold level					
				(TL) &					
	Night Time Visibility			warranty period required	Bi-Annually				
				up to 2 years					
		Up to 65	200	80					
		65 - 100	250	120					
		Above 100	350	150					
			Initial and Minimum Performance for Night Visibility under wet condition						
		(Retro reflectivity):							
		Initial 7 days Retro reflectivity: 100							
		mcd/m <sup>2</sup> /lux							
		Minimum Threshold Level: 50							
		mcd/m <sup>2</sup> /lux							
		Initial and Minimum performance for Skid Resistance:				As per Annexure-G of		Within 24 hours	IRC:35-2015
		Initial (7days): 55BPN Min. Threshold: 44BPN				IRC:35-2015			
	Skid Resistance	*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				

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AssetType	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
RoadSigns	Shape and Position	Shape and Position as per IRC:67-2012. Signboard should be clearly visible for the design speed of the section.	Daily	Visual with video/image backup	Improvement of shape, in case if shape is damaged. Relocation as per requirement	48 hours in case of Mandatory Signs, Cautionary and Informatory Signs (Single and Dual post signs)	IRC:67-2012
						15 Days in case of Gantry/Cantilever Sign boards	
	Retro reflectivity	As per specifications in IRC:67-2012	Bi-Annually	Testing of each signboard using Retro Reflectivity Measuring Device. In accordance with ASTM D 4956-09.	Change of sign board	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:67-2012
Kerb	Kerb Height	As per IRC 86:1983 depending upon type of Kerb	Bi-Annually	Use of distance measuring tape	Raising Kerb Height	Within 1 Month	RC 86:1983
	Kerb Painting	Functionality: Functioning of Kerb painting as intended	Daily	Visual with video/image backup	Kerb Repainting	Within 7-days	RC 35:2015
Other Road Furniture	Reflective Pavement Markers (Road Studs)	Numbers and Functionality as per specifications in IRC:SP:84-2014 and IRC:35-2015, unless specified in Schedule-B.	Daily	Counting	New Installation	Within 2 months	IRC:SP:84-2014, IRC:35-2015
	Pedestrian Guardrail	Functionality: Functioning of guardrail as intended	Daily	Visual with video/image backup	Rectification	Within 15 days	IRC:SP:84-2014
	Traffic Safety Barriers	Functionality: Functioning of Safety Barriers as intended	Daily	Visual with video/image backup	Rectification	Within 7 days	IRC:SP:84-2014, IRC:119-2015



AssetType	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
	End Treatment of Traffic Safety Barriers	<u>Functionality:</u> Functioning of End Treatment as intended	Daily	Visual with video/image backup	Rectification	Within 7 days	IRC:SP:84- 2014, IRC:119-2015
	Attenuators	<u>Functionality:</u> Functioning of Attenuators as intended	Daily	Visual with video/image backup	Rectification	Within 7 days	IRC:SP- 2014, IRC:119-2015
	Guard Posts and Delineators	<u>Functionality:</u> Functioning of Guard Posts and Delineators as intended	Daily	Visual with video/image backup	Rectificationnn	Within 15 days	IRC: 79 - 1981
	Overhead Sign Structure	Overhead sign structure shall be structurally adequate	Daily	Visual with video/image backup	Rectification	Within 15 days	IRC:67-2012
	Traffic Blinkers	<u>Functionality:</u> Functioning of TrafficBlinkers as intended	Daily	Visual with video/image backup	Rectification	Within 7 days	IRC:SP:84-2014
Highway Lighting System	HighwayLights	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:84-2014
		No major failure in the lighting system	Daily	-	Rectification of failure	24 hours	IRC:SP:84-2014
		No minor failure in the lighting system	Monthly	-	Rectification of failure	8 hours	IRC:SP:84-2014
	Toll Plaza Canopy Lights	Minimum 40 Lux illumination on the road surface	Daily	The illumination level shall be	Improvement in Lighting System	24 hours	IRC:SP:84-2014
				measured with luxmeter			
		No major/minor failure in the lighting system	Daily	-	Rectification of failure	8 hours	IRC:SP:84-2014

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AssetType	Performance Parameter	Level of Service (LOS)	Frequency of Measurementt	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:84-2014
	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 Replacementof Trees and Bushes.	Within 90 days	IRC:SP:84-2014
	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 84-2014
Rest Areas	Cleaning of toilets	-	Daily	-	-	Every 4 hours	
	Defects in electrical,	-	Daily	-	Rectification	24 hours	
	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 84-2014

**Table 4: Maintenance Criteria for Structures and Culverts:**

AssetType	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 be available.	2 times in a year (before and after rainy season)	Inspection by Bridge Engineer as per IRCSP: 35-1990 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:40-1993 and IRC SP:13-2004
	Leak-proof expansion joints if any	No leakage through expansion joints	Bi-Annually	Physical inspection of expansion joints as per IRC SP: 35-1990 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:40-1993 and IRC SP:69-2011
	Structurally sound	Spalling of concrete not more than 0.25sqm	Bi-Annually	Detailed inspection of all components of culvert as per IRC SP:35-1990 and Recording the defects	Repairs to spalling, cracking, delamination, rusting shall be followed as per IRC:SP:40-1993.	15 days	IRC SP 40-1993 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					

## Section 6: Works' Requirements

AssetType	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
	Protection works in good condition	Damaged of roughstone 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:35-1990	Repairs to damaged aprons and pitching	30 days after defect observation or 2 weeks before onset of rainy season whichever is earlier.	IRC: SP 40-1993 and IRC:SP:13-2004.
<b>Bridges including ROBs Flyover etc. as applicable</b>	Riding quality or user comfort	No pothole in wearing coat on bridge deck	Daily	Visual inspection as per IRC SP:35-1990	Repairs to BC or wearing coat	15 days	MORT&H Specification 2811
<b>Bridge - SuperStructure</b>	Bumps	No bump at expansion joint	Daily	Visual inspection as per IRC SP:35-1990	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 or pedestrian)	No damaged or missing stretch of crash barrier or pedestrian	Daily	Visual inspection and detailed condition survey as per IRC SP: 35-	Repairs and replacement of safety barriers as the case may be	3 days	IRC: 5-1998, IRC SP: 84-2014 and IRC SP: 40-
	barrier and guardrail)	hand railing		1990.			1993.
	Rusted reinforcement	Not more than 0.25 sq.m	Bi- Annually	Detailed condition	All the corroded reinforcement shall need to be thoroughly cleaned		IRC SP: 40-
	Spalling of concrete	Not more than 0.50 sq.m					

AssetType	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
	Delamination	Not more than 0.50sq.m		survey as per IRCSP: 35-1990 using Mobile Bridge Inspection Unit	from rusting and applied with anti-corrosive coating before carrying out the repairs to affected concrete portion with epoxy mortar / concrete.	15 days	1993 and MORTH Specification 1600.
	Cracks wider than 0.30 mm	Not more than 1m total length	Bi-Annually	Detailed condition survey as per IRC SP: 35-1990 using Mobile Bridge Inspection Unit	Grouting with epoxy mortar investigating Causes for cracks development and carry out necessary rehabilitation.	48 Hours	IRC SP: 40-1993 and MORTH Specification 2800.
	Rainwater seepage through deck slab	Leakage - nil	Quarterly	Detailed condition survey as per IRCSP: 35-1990 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: 51-1999.

## Section 6: Works' Requirements

AssetType	Performance Parameter	Level of Service (LOS)	Frequency of Measurementt	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
	Vibrations in bridgedeck 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 superstructure	4 months	AASHTOLRFD 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:35-1990 using Mobile Bridge Inspection Unit	Replace of seal in expansion joint	15 days	MORTH specifications 2600 and IRC SP: 40-1993.
	Debris and dust in strip seal expansion joint	No dust or Debris in expansion joint gap.	Monthly	Detailed condition survey as per IRC SP:35-1990 using Mobile Bridge Inspection Unit	Cleaning of expansion joint gaps thoroughly	3 days	MORTH specifications 2600 and IRC SP: 40-1993.
	Drainage spouts	No down take pipe missing/broken below soffit of the deck slab. No silt, debris, Clogging of	Monthly	Detailed condition survey as per IRC SP: 35-1990 using Mobile Bridge Inspection Unit	Cleaning of drainage spouts thoroughly. Replacement of missing/broken downtake pipes with a minimum pipe extension of 500mm below soffit of	3 days	MORTH specification 2700.

AssetType	Performance Parameter	Level of Service (LOS)	Frequency of Measurement	Testing Method	Recommended Remedial measures	Time limit for Rectification	Specifications and Standards
		Drainage spout collection chamber.			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: 35-1990 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: 40-1993 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 IRCSP: 35-1990 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.

## Section 6: Works' Requirements

AssetType	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:35-1990 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: 40-1993, IRC 83-2014, MORTH specification n 2500
	Protection works in good condition	Damaged of roughs tone 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:35-1990	Repairs to damaged aprons and pitching.	30 days after defect observation or 2 weeks before onset of rainy season whichever is earlier.	IRC: SP 40-1993 and IRC:SP:13-2004.
<b>Note:</b> Any Structure during the entire contract period which is found that does not comply 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>(b) Granular earth shoulders, side slopes, drains and culverts</b>		
(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)
<b>(c) Road side furniture including road sign and pavement marking</b>		
(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
<b>(d) Road lighting</b>		
(i)	Any major failure of the system	24 (twenty four) hours
(ii)	Faults and minor failures	8 (eight) hours
<b>(e) Trees and plantation</b>		
(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
<b>(f) Rest area</b>		
(i)	Cleaning of toilets	Every 4 (four) hours
(ii)	Defects in electrical, water and sanitary installations	24 (twenty four) hours
<b>(g) [Toll Plaza]</b>		
<b>(h) Other Project Facilities and Approach roads</b>		
(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
<b>Bridges</b>		
<b>(a) Superstructure</b>		
(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>(b) Foundations</b>		
(i)	Scouring and/or cavitation	15 (fifteen) days
<b>(c) Piers, abutments, return walls and wing walls</b>		
(i)	Cracks and damages including settlement and tilting, spalling, scaling	30 (thirty) days
<b>(d) Bearings (metallic) of bridges</b>		
(i)	Deformation, damages, tilting or shifting of bearings	15 (fifteen) days Greasing of metallic bearings once in a year
<b>(e) Joints</b>		
(i)	Malfunctioning of joints	15 (fifteen) days
<b>(f) Other items</b>		
(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
(vii)	Growth of vegetation affecting the structure or obstructing the waterway	15 (fifteen) days
<b>(g) Hill Roads</b>		
(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

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**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.
  - (j) Clearance of the statutory authority for dumping.
- (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.

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**Schedule – G**  
*(See Clauses 7.1 and 19.2)*

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## Annex-I

(See Clause 7.1)

### Form of Bank Guarantee

#### [Performance Security/Additional Performance Security]

,The Project Director, ADB Projects Cell, Roads & Bridges Department, Government of Sikkim, Gangtok.

]WHEREAS:

- (A) [name and address of contractor] (hereinafter called the “**Contractor**”) and [name and address of the authority], (hereinafter called the “**Authority**”) have entered into an agreement (hereinafter called the “**Agreement**”) for the Construction and Maintenance of Two Lane with paved Shoulder of Rorathang to Rongli Road from Km 0+000 to Km 8+890 [Length: 8.890 Km], in the State of Sikkim, under ADB Project No. [P52159-002-IND ]

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 ₹..... 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 [The Project Director, ADB Projects Cell, Roads & Bridges Department], 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

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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 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 New Delhi, from whom, confirmation regarding the issue of this guarantee or extension / renewal thereof shall be made available on demand. In the contingency of this guarantee being invoked

and payment there under claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.

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 Bandhan, detail of which is as under:

S. No.	Particulars	Details
1.	Name of Beneficiary	Project Director(ADB Project)
2.	Name of Bank	Bandhan
3.	Address of Bank Branch	Gangtok
4.	Account No.	<b>50210029478496</b>
5.	IFSC Code	<b>BDBL0001467</b>

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.

\_\_\_\_\_

\$ Insert date being 2 (two) years from the date of issuance of this Guarantee (in accordance with Clause 7.2 of the Agreement).

**Annexure III of**  
Schedule G  
(See Clause 7.1)  
**FORM OF SURETY BOND**

[Performance Security/Additional Performance Security]

To

\_\_\_\_\_ (name of the authority)

\_\_\_\_\_

[address of Authority]

WHEREAS \_\_\_\_\_

[name and address of Contractor] (hereafter called the "Contractor" has undertaken, in pursuance of Letter of Acceptance (LOA) NO. \_\_\_\_\_ Dated \_\_\_\_\_ for construction of \_\_\_\_\_ [name of the Project] (hereinafter called the "Contract").

AND WHEREAS the Contract requires the Contractor to furnish an {Performance Security/Additional Performance Security} for due and faithful performance of its obligations, under and in accordance with the Contract, during the {Construction Period/ Defects Liability Period and Maintenance Period} in a sum of Rs cr.

(Rupees crore) (the "Surety Bond amount").

AND WHEREAS we,..... through our branch at ..... (the "Surety Insurer") have agreed to furnish this Surety Bond by way of Performance security. NOW, THEREFORE, the Surety Insurer hereby, unconditionally and irrevocably, guarantees and affirms as follows: 2 (B) The agreement requires the Concessionaire to furnish a performance security to the Authority in a sum of Rs \*\*\* Crore (Rupees

\*\*\* Crore) (the "Surety Bond Amount") as security for due and faithful performance of its obligations, under and in accordance with the Agreement, during the Construction Period (as defined in the Agreement)

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

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

1. The Surety Insurer hereby unconditionally and irrevocably guarantees the due and faithful performance of the Concessionaire's obligations during the Construction Period under and in accordance with the Agreement, and agrees and undertakes to pay to the Authority, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Concessionaire, such sum or sums up to an aggregate sum of the Surety Bond Amount as the Authority



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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 Concessionaire has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Agreement shall be conclusive, final and binding on the Surety Insurer. The Surety Insurer further agrees that the Authority shall be the sole judge as to whether the Concessionaire is in default in due and faithful performance of its obligations during the Construction Period under the Agreement and its decision that the Concessionaire is in default shall be final, and binding on the Surety Insurer, notwithstanding any differences between the Authority and the Concessionaire, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Contractor for any reason whatsoever.
3. In order to give effect to this Surety Bond, the Authority shall be entitled to act as if the Surety Insurer were the principal debtor and any change in the constitution of the Concessionaire and/or the Surety Insurer, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Surety Insurer under this Surety Bond.
4. It shall not be necessary, and the Surety Insurer hereby waives any necessity, for the Authority to proceed against the Concessionaire before presenting to the Surety Insurer its demand under this Surety Bond.
5. The Authority shall have the liberty, without affecting in any manner the liability of the Surety Insurer under this Surety Bond, to vary at any time, the terms and conditions of the Agreement or to extend the time or period for the compliance with, fulfillment and/ or performance of all or any of the obligations of the Concessionaire contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Concessionaire, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the Authority, and the Surety Insurer shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Concessionaire or any other forbearance, indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Surety Insurer from its liability and obligation under this Surety Bond and the Surety Insurer hereby waives all of its rights under any such law.
6. This Surety Bond is in addition to and not in substitution of any other Surety Bond or security now or which may hereafter be held by the Authority In respect of or relating to the Agreement or for the fulfillment, compliance and/or performance of all or any of the obligations of the Concessionaire under the Agreement.
7. Notwithstanding anything contained hereinbefore, the liability of the Surety Insurer under this Surety Bond is restricted to the Surety Bond Amount and this Surety Bond will remain in force until the earlier of the 1 (first) anniversary of the Appointed Date or compliance of the conditions specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the Surety Insurer under this Surety Bond, no later than 6 (six) months from the date of expiry of this Surety Bond, all rights of the Authority under this Surety Bond shall be forfeited and the Surety Insurer shall be relieved from its liabilities hereunder.
8. The Performance Security shall cease to be in force and effect when the Concessionaire shall have expended on Project construction an aggregate sum not less than 30% (thirty per cent) of the Bid Project cost which is deemed to be Rs. \*\*cr. (Rupees \*\*\* crore) for the purposes of this Surety Bond,

and provided the Concessionaire is not in breach of this Agreement. Upon request made by the Concessionaire for release of the Performance Security along with the particulars required hereunder, duly certified by a statutory auditor of the Concessionaire, the Authority shall release the Performance Security forthwith.

9. The Surety Insurer undertakes not to revoke this Surety Bond during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this Surety Bond and the undersigned has full powers to do so on behalf of the Surety Insurer.
10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Surety Insurer at its above referred branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.
11. This Surety Bond shall come into force with immediate effect and shall remain in force and effect for a period of one year and six months or until it is released earlier by the Authority pursuant to the provisions of the Agreement
12. This Surety Bond shall also be operatable at our Branch at New Delhi, from whom, confirmation regarding the issue of this bond or extension/renewal thereof shall be made available on demand in the contingency of this bond been invoked and payment thereunder claimed, the said branch shall accept such invocation on letter and make payment of amounts so demanded under the said invocation
13. This Surety Bond is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

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

SIGNED, SEALED AND DELIVERED

For and on behalf of the surety insurer by:

(Signature)

(Name)

(Designation)

(Code Number)

(Address)

## SCHEDULE - H

See Clauses 10.1 (iv) and 19.3  
**Contract Price Weightages**

- 1.1 The Contract Price for this Agreement :
- 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
1	2	3	4
Road works including culverts, widening and repair of culverts.	38.91%	<b>A- Widening and strengthening of existing road</b>	8.97%
		(1). Earthwork up to top of the sub-grade	5.01%
		(2). <u>Sub-Base Course</u>	
		(3) <u>Non-Bituminous Base course</u>	6.98%
		(4) <u>Bituminous Base Course</u>	5.92%
		(5) <u>Wearing Coat</u>	4.09%
			-
		<b>B-Reconstruction/ New 2-lane realignment/ Bypass (Flexible pavement)</b>	
		(1) Earthwork up to top of the sub-grade	0.00014%
		(2) <u>Sub Base Course</u>	0.00008%
		(3) Non- Bituminous Base Course	0.000110%
		(4) Bituminous Base Course	0.000093%
		(5) Wearing Coat	0.000064%
		<b>C-Re-Construction and New culverts on existing road, realignments, bypasses:</b>	-
		Culverts (length <6 m)	7.94%
Minor Bridge s/ Under passes/ Over passes	12.43%	<b>A.1-New Minor bridges (length &gt;6 and &lt;60 m.)</b> Minor bridges	-
		(1) <b>Foundation +Sub- Structure:</b> On completion of the foundation work including foundations for wing and return walls, abutments, piers up to the abutment/pier cap.	2.10%
		(2) <b>Super-structure:</b> 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.	10.17%
		(3) <b>Approaches:</b> On completion of approaches including Retaining walls, stone pitching, protection works complete in all respect and fit for use.	0.10%
		(4) <b>Guide Bunds and River Training Works:</b>	
		On completion of Guide Bunds and river Training Works complete in all respects	0.06%

Item	Weightage in percentage to the Contract Price	Stage for Payment	Percentage weightage
1	2	3	4
Major Bridge (length > 60 m.) works and ROB/RUB/ elevated sections/flyovers including viaducts, if any	13.84%	<b>A.1- New MajorBridges</b>	
		(1) Foundation	0.80%
		(2) Sub-structure	1.19%
		(3) Super-structure(including bearings)	9.62%
		(4) Wearing Coat including expansion joints	0.24%
		(5) Miscellaneous Items like hand rails, crash barriers,road markings etc.)	0.24%
		(6) Wingwalls/return walls	1.64%
		(7) Guide Bunds,River Trainingworks etc.	0.05%
Other works	34.78%	(8) Approaches (including Retaining walls, stone pitching and protection works)	0.06%
		Road side drains	-
		Road signs,markings, km stones,safety devices, ....	0.35%
		Project facilities	1.82%
		a) Bus bays	
		(a) Bus Bays	0.08%
		b) Truck lay-byes	
		(b) Truck lay-byes	
	c) Rest areas	(c) Rest areas	0.06%
		(d) others	10.24%
	d) others	Repair of protection works other than approaches to the bridges, elevated sections/ flyovers/grade separators and ROB/RUBs.	22.23%

### 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
<b>A-Widening and strengthening of existing road</b> (1) Earthwork up to top of the sub-grade	8.97%	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.
(2) <u>Sub-Base Course</u>	5.01%	
(3) <u>Non-Bituminous BaseCourse</u>	6.98%	
(4) <u>Bituminous BaseCourse</u>	5.92%	
5) <u>Wearing Coat</u>	4.09%	
<b>B- Reconstruction/New 2-lane realignment/bypass (Flexible pavement)</b> (1) Earthwork up to top of the sub-grade	0.00014%	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) <u>Sub Base Course</u>	0.00008%	
(3) <u>Non-BituminousCourse</u>	0.00011%	
(4) <u>Bituminous BaseCourse</u>	0.000093%	
(5) <u>Wearing Coat</u>	0.000064%	
<b>C- Re-Construction and New culverts on existing road, realignments, bypasses:</b>		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)	7.94%	

@. 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 =  $P \times \text{weightage for road work} \times \text{weightage for bituminous work} \times (1/L)$

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
1	2	3
A.1- New minor bridges		
i) Foundation +Sub- Structure: On completion of the foundation work including foundations forming and return walls, abutments, piers upto the abutment/pier cap.	2.10%	(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 upto abutment/pier cap level of each bridge.
(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.	10.17%	In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
Approaches: On completion of approaches including Retaining walls, stone pitching, protection works complete in all respect and fit for use.	0.10%	(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.
Guide Bunds and River Training Works: On completion of Guide Bunds and river Training Works complete in all respects	0.06%	(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 in the column of "Stage of Payment" in this sub-clause.
		(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.

### 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
1	2	3
A.1- New major bridges		
i) Foundation +Sub- Structure: On completion of the foundation work including foundations for wing and return walls, abutments, piers upto the abutment/pier cap.	0.8%	(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 upto abutment/pier cap level of each bridge.
(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.	1.19%	In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
Approaches: On completion of approaches including Retaining walls, stone pitching, protection works complete in all respect and fit for use.	0%	(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.
Guide Bunds and River Training Works: On completion of Guide Bunds and river Training Works complete in all respects	0.0%	(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 in the column of "Stage of Payment" in this sub-clause.
		(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.

Stage of Payment 1	Weightage 2	Payment Procedure 3
<b>A.1- New Major Bridges</b>		
(i) Foundation	0.80%	(i) <b>Foundation:</b> 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 .
		(ii) In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
		<b>(ii) Sub-structure</b>
(ii) Sub-structure	1.19%	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 atleast two sub-structures of abutments/piers upto abutment/pier cap level of the major bridge.
		<b>(iii) Super-structure:</b>
(iii) Super-structure(including bearings)	9.62%	Payment shall be made on pro-rata basis on completion of a stage i.e., completion of super-structure including bearings of atleast one span in all respects as specified.
(iv) Wearing Coat including expansion joints	0.24%	<b>(iv) Wearing Coat:</b> 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.	0.24%	<b>(v) Miscellaneous:</b> 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	1.64%	<b>(vi) Wing walls/return walls:</b> Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.
(vii) Guide Bunds, River Training works etc.	0.05%	<b>(vii) Guide Bunds, River Training works:</b> Payments shall be made on completion of all guide bunds/river training works etc. complete in all respects as specified.
(viii) Approaches (including Retaining walls, stone pitching and protection works)	0.06%	<b>(viii) Approaches:</b> Payments 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 Competent Authority.

(2) The Schedule for exclusive tunnel projects may be prepared as per site requirements before bidding with due approval of Competent Authority.

#### 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) Road side drains	0.35%	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 10 % (ten per cent) of the total length.
(ii) Road signs, markings, km stones, safety devices, ...	1.82%	
(iii) Project Facilities a) Bus bays  b) Rest areas  c) others	0.08%  0.06% 10.24%	Payment shall be made on pro rata basis for completed facilities.
(iv) Repair of protection works other than approaches to the bridges, elevated sections/ flyovers/grade separators and ROBs/RUBs.	22.23%	Payment shall be made on pro rata basis on completion of a stage in a length of not less than 10% (ten per cent) of the total length.

## 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 instalments 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.

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## **Annex – I**

*(Schedule - I)*

### **List of Drawings**

**[Note:** The Authority shall describe in this Annex-I, all the Drawings that the Contractor is required to furnish under Clause 10.2.]

## 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 **[35% of the Scheduled Construction Period]** 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

- (iii) Project Milestone-II shall occur on the date falling on the **[60% of the Scheduled Construction Period]** day from the Appointed Date (the “**Project Milestone- II**”).
- (iv) 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

- (v) Project Milestone-III shall occur on the date falling on the **[85% of the Scheduled Construction Period]** day from the Appointed Date (the “**Project Milestone- III**”).
- (vi) 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

- (vii) The Scheduled Completion Date shall occur on the 730 day from the Appointed Date.
- (viii) 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.

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## 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

- (iii) 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 **to be decided with Authority's Engineer at the time of physical tests as per standard relevant IRC code Manual..**
- (iv) Riding quality test: Riding quality of each lane of the carriageway shall be checked with the help of a calibrated bump integrator and 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.
- (v) 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 Nondestructive 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.
- (vi) 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.
- (vii) 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.
- (viii) 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.

2. 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 of defects pavement	Network Vehicle Survey (NSV)	At least twice a year (As per survey months defined for the state basis rainy season)
2	Roughness of pavement	Network Vehicle Survey (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.

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## 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 the Construction and Maintenance of Two Lane with paved Shoulder of Rorathang to Rongli Road from Km 0+000 to Km 8+890 [Length: 8.890 Km], in the State of Sikkim, under ADB Project No. [P52159-002-IND ] ,State Highway No. 6] (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, 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

- (iv) The following percentages shall govern the payment reduction:

S. No.	Item/Defect/Deficiency	Percentage
<b>(a)</b>	<b>Carriageway/Pavement</b>	
(i)	Potholes, cracks, other surface defects	15%
(ii)	Repairs of Edges, Rutting	5%
<b>(b)</b>	<b>Road, Embankment, Cuttings, Shoulders</b>	
(i)	Edge drop, inadequate cross fall, undulations, settlement, potholes, ponding, obstructions	10%
(ii)	Deficient slopes, raincuts, disturbed pitching, vegetation growth, pruning of trees	5%
<b>(c)</b>	<b>Bridges and Culverts</b>	
(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%
S. No.	Item/Defect/Deficiency	Percentage
(iii)	Painting, repairs/replacement kerbs, railings, parapets, guideposts/crash barriers	5%
<b>(d)</b>	<b>Roadside Drains</b>	
(i)	Cleaning and repair of drains	5%
<b>(e)</b>	<b>Road Furniture</b>	
(i)	Cleaning, painting, replacement of road signs, delineators, road markings, 200 m/km/5th km stones	5%
<b>(f)</b>	<b>Miscellaneous Items</b>	
(i)	Removal of dead animals, broken down/accident vehicles, fallen trees, road blockades or malfunctioning of mobile crane	10%
(ii)	Any other Defects in accordance with paragraph 1.	5%
<b>(g)</b>	<b>Defects in Other Project Facilities</b>	5%

- (i) The amount to be deducted from monthly lump-sum payment for non-compliance of particular item shall be calculated as under:

$$R = \frac{P}{100} \times (M1 \text{ or } M2) \times \frac{L1}{L}$$

Where,

P= Percentage of particular item/Defect/deficiency for deduction



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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.

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## 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 [name and address of the Authority] (the “**Authority**”) and ..... (the “**Contractor**”) <sup>#</sup> for the Construction and Maintenance of Two Lane with paved Shoulder of Rorathang to Rongli Road from Km 0+000 to Km 8+890 [Length: 8.890 Km], in the State of Sikkim, under ADB Project No. [P52159-002-IND ] 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

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and frequency and in such manner as specified in the Agreement and in accordance with Good Industry Practice for quality management. For purposes of this Paragraph 4 (ix), the tests specified in MORTH Specifications for Roads and Bridge Works and respective Indian Roads Congress standards/Guidelines/Manuals, together with any other Indian/International standards mentioned therein including any modifications/ substitutions thereof shall be deemed to be tests confirming to Good Industry Practice for quality management.

- (x) The authority's Engineer shall witness all the quality control tests carried out by the Contractor at its site laboratory/main laboratory/field/plants. These include tests for all materials, mixes, products, etc. Authority's Engineer shall also witness all tests of finished products like bearing in the manufacturers' laboratory as mandated in respective standards.  
Authority's Engineer will also conduct review of quality control documents in respect of factory manufactured materials/finished products, etc. as per IRC:SP:112.
- (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 MORTH Specifications for Roads and Bridge Works and respective Indian Roads Congress standards/Guidelines/Manuals, together with any other Indian/International standards referred threto. 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 requiredon 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 thesteps 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

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- (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:

- (i) the monthly payment admissible in accordance with the provisions of the Agreement;
- (j) the deductions for maintenance work not done;
- (k) net payment for maintenance due, (a) minus (b);
- (l) amounts reflecting adjustments in price under Clause 19.12; and
- (m) 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.



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## **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**

- (iii) 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: ₹ 1% of the Contract Price.

- (i) 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 kilometer.

**2. Visual and physical test:**

***The Authority 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.***

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## 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 [the Construction and Maintenance of Two Lane with paved Shoulder of Rorathang to Rongli Road from Km 0+000 to Km 8+890 [Length: 8.890 Km], in the State of Sikkim, under ADB PRF Project No. [P52159-002-IND ]

(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)

## **SCHEDULE - S**

### **Procedure for Dispute Resolution Board**

The parties to the Contract Agreement mutually agree as follows:

1. The Board shall comprise of three Members having experience in the field of construction or have been involved in the Works related to construction and with the interpretation of contractual documents. One Member shall be selected by each of the Authority and the Contractor from the list maintained by NHAI hosted on its website ([www.nhai.gov.in](http://www.nhai.gov.in)). In the event the parties fail to select the member within 28 days of the date of the signing of Contract agreement, in that eventuality, upon the request of either or both parties such Member shall be selected by Society for Affordable Resolution of Disputes within 14 days. The third Member shall be selected by the other two members from the same list. If the two Members selected by or on behalf of the parties fail to select the third Member within 14 days after the later of their selections, then upon the request of either or both parties such third Member shall be selected by SAROD within 14 days. The third Member shall serve as Chairman of the Board.
2. The Board shall be constituted when each of the three Board Members has signed a Board Member's declaration of Acceptance as required by the DRB's rules and procedures (which, along with the declaration of acceptance form, are attached as Annexure herewith).
3. In the event of death, disability, or resignation of any Member, such Member shall be replaced in the same manner as the Member being replaced was selected. If for any other reason, a Member fails or is unable to serve, the Chairman (or failing the action of the Chairman then either of the other Members) shall inform the Parties and such non-serving Member shall be replaced in the same manner as the Member being replaced was selected. Any replacement made by the parties shall be completed within 28 days after the event giving rise to the vacancy on the Board, failing which the replacement shall be made by SAROD in the same manner as described above. Replacement shall be considered complete when the new Member signs the Board Member's Declaration of Acceptance. Throughout any replacement process, the Members not being replaced shall continue to serve and the Board shall continue to function and its activities shall have the same force and effect as if the vacancy had not occurred, provided, however that the Board shall not conduct a hearing nor issue a decision until the replacement is completed.
4. If either the Authority or the Contractor is dissatisfied with any decision of the Board, and/or if the Board fails to issue its decision within 56 days after receipt of all the pleadings (along with the supporting documents) of the parties by the Chairman of the Board or any extension mutually agreed upon by the Authority and the Contractor, in such a case, either the Authority or the Contractor may, within 28 days after his receipt of the decision, or within 28 days after the expiry of the said period, as the case may be, give notice to the other party, with a copy for information to the Authority's Engineer, of his intention to refer the matter to the Conciliation Committee of Independent Experts (CCIE) of the Authority for Conciliation/amicable settlement.
5. It is mandatory to refer all the disputes to DRB before issuance of completion certificate and satisfactory completion of punch list items. No dispute shall be entertained after completion of aforementioned date.
6. If the Board has issued a decision to the Authority and the Contractor within the said 56 days or any extension mutually agreed upon by the Authority and the Contractor and no notice of intention to commence Conciliation by the Conciliation Committee of Independent Experts (CCIE) of the Authority for Conciliation/amicable settlement as to such dispute has been given by either the Authority or the Contractor within 28 days after the parties received such decision from the Board, the decision shall become final and binding upon the Authority and Contractor.

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7. Whether or not it has become final and binding upon the Authority and the Contractor, a decision shall be admissible as evidence in any subsequent dispute resolution procedure, including any arbitration or litigation having any relation to the dispute to which the decision relates.
  8. All decision of DRB which have become final and binding or till they have been reversed in subsequent conciliation/Arbitration process shall be implemented by the parties forthwith. Such implementation shall also include any relevant action of the Authority's Engineer.
  9. If during the Contract Period, the Authority and the Contractor are of the opinion that the Disputes Resolution Board is not performing its functions properly, the Authority and the Contractor may together disband the Disputes Resolution Board and reconstitute it. In that case, a new board shall be selected in accordance with the provisions applying to the selection of the original Board as specified above, except that words "within 28 days after the signing of this Contract agreement" shall be replaced by the words "within 28 days after the date on which the notice disbanding the original Board became effective".
  10. The Authority and the Contractor shall jointly signed a notice specifying that the Board shall stand disbanded with effect from the date specified in the notice. The notice shall be posted by the email to each member of the Board. A Member shall be deemed to have received the email even if he refuses to have received the same.
  11. All other terms and conditions of the original Contract Agreement shall remain unaltered/unaffected and the parties shall remain bound by terms and conditions as contained therein.

## **Annexure to Schedule [S] Disputes Resolution Board's Rules and Procedures**

1. Except for providing the services required hereunder, the Board Members shall not give any advice to either party or to the Authority's Engineer concerning conduct of the Works. The Board Members:
  - a. Shall have no financial interest in any party to the Contract, or the Authority's Engineer, or a financial interest in the contract, except for payment for services on the Board.
  - b. Shall have had no previous employment by, or financial ties to, any party to the Contract Agreement, or the Authority's Engineer, except for fee based consulting services/advisers on other projects, and/or be Retired Government Officers (not connected in whole or part with the project), all of which must be disclosed in writing to both parties prior to appointment to the Board.
  - c. Shall have disclosed in writing to both parties prior to appointment to the Board any and all recent or close professional or personal relationships with any director, officer, or employee of any party to the Contract, or the Authority's Engineer, and any and all prior involvement in the project to which the Contract relates:
  - d. Shall not, while Board member, be employed whether as a consultant or adviser or otherwise by either party to the Contract, or the Authority's Engineer, except as a Board Member, without the prior consent of the parties and the other Board Members;
  - e. Shall not, while a Board Member, engage in discussion or make any agreement with any party to the Contract, or with the Authority's Engineer, regarding employment whether as a consultant or otherwise whether after the Contract is completed or after service as a Board Member is completed.
  - f. Shall remain and be impartial and independent of the parties and shall disclose in writing to the Authority, the Contractor and one another any fact or circumstance which might be such as to cause either the Authority or the Contractor to question the continued existence of the impartiality and independence required of Board Members, and
  - g. Shall be fluent in the language of the Contract.
2. Except for its participation in the Board's activities as provided in the Contract Agreement and in this Agreement none of the Authority, the Contractor, and or the Authority's Engineer shall solicit advice or consultation from the Board or the Board Members on matters dealing with the conduct of the Works.
3. The Contractor shall:
  - a. Furnish to each Board member one copy of all documents which the Board may request including Contract Agreement, progress reports and other documents pertinent to the performance of the Contract Agreement.
  - b. In cooperation with the Authority, coordinate the site visits of the Board, including conference facilities, and secretarial and copying service.
4. The Board shall begin its activities following the signing of a Board Member's Declaration of Acceptance by all three Board Members, and it shall terminate these activities as set forth below:
  - a. The Board shall terminate its regular activities when either (i) issuance of completion certificate and completion of punch list items or (ii) the parties have terminated the contract and when, in either case, the Board has communicated to the parties and the Authority's Engineer its decision on all disputes previously referred to it.

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- b. Once the Board has terminated its regular activities as provided by the previous paragraph, the Board shall remain available to process any dispute referred to it by either party. In case of such a referral, Board Members shall receive payments as provided in paragraphs 7(a) (ii), (iii) and (iv).
  5. Board Members shall not assign or subcontract any of their work under these Rules and Procedures.
  6. The Board Members are Independent and not employees or agents of either the Authority or the Contractor.
  7. Payments to the Board Members for their services shall be governed by the following provisions.
    - a. Each Board Member will receive payments as follows:
      - i. A retainer fee per calendar month as specified in the schedule of fee made part of this Schedule and its revision from time to time. This retainer fee shall be considered as payment in full for:
        - A. Being available, on 7 days' notice, for all hearings, Site Visits, and other meetings of the Board.
        - B. Being conversant with all project developments and maintaining relevant files.
        - C. All offices and overhead expenses such as secretarial services, photocopying and office supplies (but not include telephone calls, faxes and telexes) incurred in connection with the duties as a Board Member.
      - ii. A daily fee as specified in the schedule of fee in respect of fee for site visit & meeting, fee for meeting/ hearing not at site and extra charges for days max. of 02 days for travel on each occasion) other than hearing / meeting days.
      - iii. Expenses, in addition to the above, all reasonable and necessary travel expenses (including economy class air fare, subsistence, and other direct travel expenses). Receipts for all expenses in excess of Rs. 2000/- (Rupees Two Thousand only) shall be provided.
      - iv. Reimbursement of any taxes that may be levied on payments made to the Board Member pursuant to this paragraph 7.
    - b. The retainer fee and other fees shall remain fixed for the period of each Board Member's term until revised by NHAI.
    - c. Phasing out of monthly retainer fee. Beginning with the next month after the completion certificate (or, if there are more than one, the one issued last) has been issued, the Board members shall receive only one-third of the monthly retainer fee till next one year. Beginning with the next month after the Board has terminated its regular activities pursuant to paragraph 4(a) above, the Board members shall no longer receive any monthly retainer fee.
    - d. Payments to the Board Members shall be shared equally by the Authority and the Contractor. The concerned Project Implementation Unit (PIU) of Authority shall pay members' invoices within 30 calendar days after receipt of such invoices and shall invoice the Contractor for one-half of the amounts of such invoices. The Contractor shall pay such invoices within 30 days' time period after receipt of such invoices.
  8. Board Site Visits:
    - a. The Board shall visit the Site and meet the representatives of the Authority, the Contractor and the Authority's Engineer at regular intervals, at times of critical construction events, at the written request of either party, and in any case not less than 6 times in any period or 12 months.

The timing of Site visits shall be as agreed among the Authority, the Contractor and the Board, but failing agreement shall be fixed by the Board.

- b. Site visits shall include an informal discussion of the status of the construction of the Works. Site visits shall be attended by personnel from the Authority, the Contractor and the Authority's Engineer.
- c. At the conclusion of each Site visit, the Board shall prepare a report covering its activities during the visit and shall send copies to the parties and to the Authority's Engineer.

9. Procedure for Dispute Referral to the Board

- a. If either party objects to any action or inaction of the other party or the Authority's Engineer, the objecting party may file a written Notice of Dispute to the other party with a copy to the Authority's Engineer stating that it is given pursuant to the Agreement and state clearly and in details the basis of the dispute.
- b. The party receiving the Notice of Dispute will consider it and respond to it in writing within 14 days after receipt.
- c. This response shall be final and conclusive on the subject, unless a written appeal to the response is filed with the responding party within 10 days after receiving the response and call upon Authority's Engineer to mediate and assist the parties in arriving an amicable settlement thereof. Both parties are encouraged to pursue the matter further to attempt to settle the dispute.
- d. If the Authority's Engineer receiving the Notice of Dispute fails to provide a written response within 14 days after receipt of such Notice or failing mediation by Authority's Engineer, either party may require such dispute to be referred to the Board, either party may refer the dispute to the Board by written Request to the Board. The Request for decision shall state clearly and in full detail the specific issues of the dispute (s) to be considered by Board and shall be addressed to the Chairman of the Board, with copies to the other Board Members, the other party, and the Authority Engineer, and it shall state that it is made pursuant to this Agreement.
- e. When a dispute is referred to the Board, and the Board is satisfied that the dispute requires the Board's assistance, the Board decide when to conduct a hearing on the dispute. The Board may request that written documentation and arguments from both parties be submitted to each Board Member before the hearing begins. The parties shall submit insofar as possible agreed statements of the relevant facts.
- f. During the hearing, the Contractor, the Authority, and the Authority's Engineer shall each have ample opportunity to be heard and to offer evidence. The Board's decision for resolution of the dispute will be given in writing to the Authority, the Contractor and the Authority's Engineer as soon as possible, and in any event not more than 56 days or any mutually extended period between the Authority and the Contractor. The time period of 56 days of issuance of DRB decision will reckon/start from the day of first hearing that begins after submission of complete pleadings (including supporting documents, if any) by the parties.

10. Conduct of Hearings:

- a. Normally hearings will be conducted at the Site, but any location that would be more convenient and still provide all required facilities and access to necessary documentation may be utilized by the Board. Private session of the Board may be held at any cost effective location convenient to the Board. Video recordings of all hearings shall invariably be made.



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- b. The Authority, the Authority's Engineer and the Contractor shall be given opportunity to have representatives at all hearings. Parties should restrain to bring any Advocate/Law Firm during DRB hearings.
  - c. During the hearings, no Board Member shall express any opinion concerning the merit of the respective arguments of the parties.
  - d. After the hearings are concluded, the Board shall meet privately to formulate its decision. The private meeting (s) of the Board shall not exceed 3 sittings. All Board deliberations shall be conducted in private, with all Members' individual views kept strictly confidential. The Board's decisions, together with an explanation of its reasoning shall be submitted in writing to both parties and to the Authority's Engineer. The decision shall be based on the pertinent contract provisions, applicable laws and regulations and the facts and circumstances involved in the dispute.
  - e. The Board shall make every effort to reach a unanimous decision. If this proves impossible the majority shall decide and the dissenting Member may prepare a written minority report together with an explanation of its reasoning for submission to both parties and to the Authority's Engineer
- 11. In all procedural matters, including the furnishing of written documents and arguments relating to disputes, site visits and conduct of hearings, the Board shall have full and the final authority. If a unanimous decision on any such matter proves impossible, the majority shall prevail.
  - 12. After having been selected and where necessary approved each Board Member shall sign two copies of the following declaration and make one copy available each to the Authority and to the Contractor.

### BOARD MEMBER'S DECLARATION OF ACCEPTANCE

#### WHEREAS

- a. A Contract Agreement (the Contract) for the\_\_project [fill in the name ofproject] has been signed on\_\_\_\_\_[fill in date] between\_\_\_\_\_[name ofAuthority] and\_\_\_\_name of Contractor] (the Contractor).;
- b. The provisions of Agreement and Dispute Resolution Board's rules and procedureprovided for establishment and operation of Dispute Resolution Board (DRB).
- c. The undersigned has been selected to serve as a Board Member on said Board;NOW

THEREFORE, the undersigned Board Member hereby declares as follows

1. I accept the selection as a Board Member and agree to serve on the Board and to be bound by the provisions of Contract Agreement and rules and procedure provided for establishment and operation of Dispute Resolution Board DRB).
2. With respect to paragraph 1 of Dispute Resolution Board's Rules and Procedure. said Annex A, I declare
  - a. that I have no financial interest of the kind referred to in subparagraph (a):
  - b. that I have had no previous employment nor financial ties of the kind referred to in subparagraph (b); and
  - c. that I have made to both parties any disclosures that may be required by sub-paragraphs (b) and (c).
3. I declare that I have\_\_\_\_\_no. of Arbitrations (list enclosed) and \_\_\_\_\_no. of DRBs (list enclosed) in progress and that I will give sufficient timefor the current assignment.

BOARD MEMBER

\_\_\_\_\_

\_\_\_\_\_[insert name of Board Member)

Date: \_\_\_\_\_

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**Schedule of expenses and fees payable to the Member(s) of Dispute Resolution Board(DRB)**

The fee and other expenses payable to the Members of DRB shall be as under

<b>S. No.</b>	<b>Particular</b>	<b>Amount Payable</b>
1	Retainer-ship fee, secretarial assistance and incidental charges (telephone, fax, postage etc.)	Rs. 50,000/- per month for one package and maximum of Rs. 75,000/- per month for 2 or more packages
2(i)	Fee for site visit or meetings at site	Rs. 25,000/- per day
(ii)	Fee for meetings/hearings not at site	Rs. 10,000/- per day
3	Traveling expenses	Economy class by air, AC first class by train and AC taxi by road
4	Lodging & Boarding	Rs. 15,000/- per day (Metro Cities):or Rs. 10,000/- per day (in other cities); or Rs. 5,000/- per day (own arrangement)
5	Extra charges for days other than hearing/meeting days (travel days maximum of 2 days on each occasion)	Rs. 5,000/-
6	Local conveyance	Rs. 2,000/-

**Notes:**

- i. Lodging, boarding and travelling expenses will be allowed only for those members who are residing 100 kms away from the place of meeting.
- ii. Delhi, Mumbai, Chennai, Kolkata, Bangalore and Hyderabad shall be considered as Metro Cities.
- iii. The above schedule of fee and expenses shall be applicable on or after the date of issue of this circular.
- iv. The expenses are to be shared equally by the parties i.e. Authority and Contractor.

**Supplementary Information**  
**Regarding Works to Be Procured**

The Feasibility Report / Detailed Project Report prepared by the Employer/ consultants of the Employer (the "Feasibility Report/Detailed Project Report") is enclosed for reference only

**Note:** *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 Employer nor confer any right on the Bidders, and the Employer shall have no liability whatsoever in relation to or arising out of any or all contents of the Feasibility Report/Detailed Project Report.*

### Key Personnel Requirements

Using Form PER – 1 and PER – 2 in Section 4 (Bidding Forms), the Bidder must demonstrate that it has personnel who meet the following requirements:

No.	Position	Qualification	Total Work Experience (years)	In Similar Works Experience ( years)	No.
1.	Project Manager	Master's degree in Civil Engineering	15	7	1
2.	Deputy Project Manager cum Senior Highway Engineer	Bachelor degree in Civil Engineering	12	6	1
3.	Senior Highway Engineer	Bachelor degree in Civil Engineering	10	5	2
4.	Senior Structural Engineer	Bachelor degree in Civil Engineering	10	5	1
5.	Senior Pavement cum Material Engineer	Bachelor degree in Civil Engineering	10	5	1
6.	Quantity Surveyor	Bachelor degree in Civil Engineering	8	4	1
7.	Surveyor	Bachelor degree in Civil Engineering	10	5	1
8.	Highway Engineer	Bachelor degree in Civil Engineering	7	3	2
9.	Structural Engineer	Bachelor degree in Civil Engineering	7	3	1
10.	Pavement cum Material Engineer	Bachelor degree in Civil Engineering	7	3	1
11.	Field Engineer and Highway structures	Bachelor degree/ diploma in Civil Engineering	5 (for degree) 8 (for diploma)	2 (for degree) 3 (for diploma)	2
12.	Field Engineer Structure	Bachelor degree/ diploma in Civil Engineering	5 (for degree) 8 (for diploma)	2 (for degree) 3 (for diploma)	2
13.	Laboratory Technician	Diploma in Civil Engineering / ITI certified	5 (for diploma) 8 (for ITI)	2 (for diploma) 3 (for ITI)	2
14.	Road Safety Engineer	Bachelor degree in Civil Engineering	7	2	1
15.	ESHS Manager	Master's degree in respective field	10	5	1

Using Form EXP-6 in Section 4 (Bidding Forms), the Bidder must demonstrate that it has EHS personnel who meet the following requirements:

### Key Personnel as determined by the EMP and other safeguard management plans

No.	Position	Qualification	Total Work Experience (years)	In Similar Works Experience	No.
1.	ESHS Manager <i>[if the ESHS risks and impacts are assessed as moderate and no specialized expertise is required, otherwise consider separate specialized ES, HS, and External</i>	Master's degree in respective field	10 years in designing and monitoring the implementation of ESHS management plans for construction works	5	1

No.	Position	Qualification	Total Work Experience (years)	In Similar Works Experience	No.
	<i>Stakeholders Relations Managers, as per below]</i>				
2.	Environmental and Social (ES) Manager <i>[if the environmental and social risks and impacts of the works are assessed as significant and/or specialized expertise is required]</i>  <i>[Commensurate with the risks and impacts, one or several experts for each topic (Environmental and Social may be assigned to fulfil this position.)]</i>	Master's degree in respective field	10 years in designing and monitoring the implementation of ESHS management plans for construction works	5	1
3.	Health and Safety (HS) Manager <i>[if the health and safety risks and impacts of the works are assessed as significant and/or specialized expertise is required]</i>  <i>[Minimum requirements for appointing a separate Health and Safety (HS) Manager shall be as follows:</i> <ul style="list-style-type: none"> <li>• <i>Workforce on Site of over 250: full time HS Manager</i></li> <li>• <i>Workforce on Site of 100-250: 50% HS Manager's time</i></li> <li>• <i>Workforce on Site from 20 to 100 workers: as required for the works but a minimum of 5 hours per week the ESHS Manager shall devote to Health and Safety aspects]</i></li> </ul>	Master's degree in respective field	<u>10 years</u> in designing and monitoring the implementation of ESHS management plans for construction works	5	1
4.	External Stakeholders Relations Manager <i>[if the requirement to interact with or the impact on the external stakeholders are assessed as significant and/or specialized expertise is required]</i>	Bachelor degree	<u>10 years</u> in designing and monitoring the implementation of ESHS management plans for construction works	5	1
5.	ESHs Supervisor <i>[for Sites with more than 100 workers on site, one ESHS supervisor for each shift on each Project Area, respecting the provisions of 4.1.3.]</i>	Bachelor degree	<u>5 years</u>		1
6.	Community Liaison Officer  <i>[Fluency in local languages should be mandatory for this position]</i>	Bachelor degree	<u>5 years</u>		1

### Equipment Requirements

Using Form EQU in Section 4 (Bidding Forms), the Bidder must demonstrate that it has the key equipment listed below:

Item No	Equipment Type and Characteristics	Min Capacity	Minimum No
1.	Hot Mix Asphalt Plant (Batch type)	60-90 TPH	1
2.	Concrete Batching Plant	20 cum	1
3.	Base Course Mixing Plant	60-75 TPH	1
4.	Crusher	100 TPH	1
5.	Paver Finisher Hydrostatic with sensor control (Bituminous Works)	100 TPH	2
6.	Paver Finisher Mechanical for Granular base Work	100 TPH	1
7.	Self-propelled Aggregate spreader (chippings)		1
8.	Crawler Dozer	280-330 Hp	4
9.	Transit Mixer	6 cum	4
10.	Hydraulic excavators	1 m3 bucket capacity	8
11.	Motor Grader	150 Kw	2
12.	Loader	1 m3 bucket capacity	6
13.	Dynamic Roller/Compactor	8-10 T	2
14.	Vibratory Roller's	8-10 T	2
15.	Pneumatic Tyre Roller	8-10 T	2
16.	Tripper / Dump trucks	6m3	30
17.	Pavement marking machine fitted with sensor	-	1
18.	Bitumen Pressure distributor	6000 lit	2
19.	Lowbed Trailer	60-ton 3 axle	1
20.	Water Truck 6x4	13000 - 15000 lts	8
21.	Hydraulic Crane	25-30 T	2
22.	Air Compressor	100 cft	1

## **Section 7: General Conditions of Contract**

The Conditions of Contract consists of two parts, this Section 7 (General Conditions of Contract) and the following Section 8 (Particular Conditions of Contract).

The General Conditions shall be the Engineering, Procurement and Construction, published by the Ministry of Road Transport & Highways, Government of India.

Particular Conditions of Contract (PCC) introduced to complement the GCC in such a manner that project-specific provisions/requirements of the Contract can be fulfilled.

The contents of PCC are the supplement or the modification of GCC. In case of any doubt or discrepancies, the details provided in PCC will prevail and supersede over GCC.



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## **PART I PRELIMINARY**

## 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 (iv);

**“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 Design & Construction of Two Lane with paved Shoulder of Rorathang to Rongli Road from Km 0+000 to Km 8+890 [Length: 8.890 Km], in the State of Sikkim 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 report or any other correspondence 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 routed through NHAI Data Lake (unless the law requires to send such notice, communication, etc. through physical / any other specified mode only) 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 writtendimension, the latter shall prevail; and
- (f) between any value written in numerals and that in words, the latter shallprevail.

### **1.5 Joint and several liability**

- (i) If the Contractor has formed a Joint Venture of two or more persons for implementingthe 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 entitledto 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.<sup>6</sup>

<sup>6</sup> This Clause 1.5 may be omitted if the Contractor is not a Joint venture.

## **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.
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## 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) approval of the general arrangement drawings (the “GAD”) from railway authorities to enable the Contractor to construct road over- bridges/ under- bridges at level crossings on the Project Highway in accordance with the Specifications and Standards, and subject to the terms and conditions specified in such approval, within a period of 60 (sixty) days from the Appointed Date, and reimbursement of all the costs and expenses paid by the Contractor to the railway authorities for and in respect of the road over- bridges/ under bridges; and<sup>7</sup>
  - (c) all environmental clearances as required under Clause 3.3.<sup>8</sup>
- (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.

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<sup>7</sup> Clause (b) may be omitted if the Project does not include a road over-bridge/under-bridge.

<sup>8</sup> Clause 3.1 (iii) (c) may be suitably modified in the event that all the environmental clearances for the Project Highway have been received or are not required. It should be clearly stated that all the environmental clearances for the Project Highway have been received; or such environmental clearances for the Project Highway are not required.

- (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.

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### **3.3 Environmental Clearances**

The Authority represents and warrants that the environmental clearances required for construction of the Project shall be procured by the Authority prior to the date of issue of LOA. For the avoidance of doubt, the present status of environmental clearances is specified in Schedule-A.<sup>9</sup>

### **3.4 Deemed Termination upon delay**

Without prejudice to the provisions of Clause 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.

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<sup>9</sup> Clause 3.3 may be suitably modified in the event that all the environmental clearances for the Project Highway have been received or are not required. It should be clearly stated that all the environmental clearances for the Project Highway have been received; or such environmental clearances for the Project Highway are not required.

## 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;
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- (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 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.
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- (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.

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## 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 Qualification and 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
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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 Insurance Surety Bond in the form set forth in Annex III of Schedule -G, Account Payee Demand Draft, Banker's Cheque or an irrevocable and unconditional e-Bank guarantee from a Bank in the form set forth in Annex-I of Schedule-G (the "Performance Security") for an amount equal to 3% (three percent) of its Bid Price. In case of bids mentioned below, the Selected Bidder, along with the Performance Security, shall also furnish to the Authority in the form of Insurance Surety Bond (in the same form given at Annex III of Schedule -G), Account Payee Demand Draft, Banker's Cheque or an irrevocable and unconditional e-Bank guarantee from a Bank in the same form given at Schedule-G Appendix-VII towards an Additional Performance Security (the "Additional Performance Security") for an amount calculated as under:  
The Selected Bidder, along with the Performance Security, shall also furnish to the Authority an irrevocable and unconditional guarantee from a Bank in the same form given at Annex-I of Schedule-G towards an Additional Performance Security (the "Additional Performance Security") for an amount calculated as under:
- (a) if the Bid price offered by the selected bidder is lower than 20% of the estimated project cost/cost put to tender, the additional performance security shall be calculated @ 20% of the difference in the (i) Estimated Project Cost (as mentioned in RFP)-20% of the Estimated Project Cost and (ii) the Bid Price offered by the selected Bidder.
- (b) Maximum limit of additional performance security shall be limited to 3% of the Bid price offered by the selected bidder.
- (c) This Additional Performance Security shall be treated as part of the Performance Security.
- Provided that in any case, amount of Additional Performance Security shall not exceed the amount of Performance Security.
- (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. 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.
- (iii) 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 maybe, 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<sup>10</sup>**

- (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.

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<sup>10</sup> The Authority may, in its discretion, omit Clause 7.5 and in lieu thereof increase the Performance Security under Clause 7.1 from 7.5% (seven point five per cent) to 10% (ten per cent).

## 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:

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

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 ROB/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 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 <del>reduced</del> 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 here to 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 the 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 specifications 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 owing 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 here under 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 of 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;
  - (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 [650th (six hundred and fiftieth) 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 180<sup>th</sup> (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 180<sup>th</sup> (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 detailson 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;
- (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:

- 11.9.1 manufacturer's test reports and standard samples of manufactured Materials; and
- (ii) 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 management. The authority's Engineer shall witness all the quality control tests carried out by the Contractor at its site laboratory/main laboratory/field/plants. These include tests for all materials, mixes, products, etc. Authority's Engineer shall also witness all tests of finished products like bearing in the manufacturers' laboratory as mandated in respective standards.  
Authority's Engineer will also conduct review of quality control documents in respect of factory manufactured materials/finished products, etc. as per IRC:SP:112.

- (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 carry out video recording of each project every month since award of the work till completion of construction and biannually during maintenance period.

Authority has finalised specifications/ methodology for video recording and identified zone-wise agencies and 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 AE. Recording of previous videos and the 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 DataLake 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 Authority 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.

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, The Authority 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, Authority 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.

As the drone videos/ report will be permanent record on Data Lake and will be used as evidences during dispute resolution process before Arbitral Tribunals/ Court including Supreme Court, the drone video shall be carried out carefully and correctly without distortions/ tampering by all the parties concerned. The amount spent on recording shall be charged to Contractor to the extent covered in the agreement. **(for detail refer Annexure -1)**

## Annexure1

Home / Drone Videos

Select Project: All Select From Date: 03/11/2021 Select To Date: 03/11/2021 Select Month: November-2021

Filter

NOTE:  
 1) Above Filter is based on Duration of Drone Video Survey From Date  
 2) To Filter Data, Please select From Date and To Date or Select Month  
 3) Drone Video download will be based on your internet speed. In case of any issue, please RESUME the download from Download bar of Browser

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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
<a href="#">Preview Video 1</a>	1	Submitted by Contractor			CGM-AP	Jharkhand	RO-Ranchi	Daltonganj	N00009/03011UH	Al, km km 1...	26/10/2021	26/10/2021	196.6700	219.6000	Other	02/11/2021	RGNPL/20-21NH-75/120
<a href="#">Preview Video 1</a>	2	Submitted by PIU			CGM-HR	Haryana	RO-Chandigarh (H-R)	Sonapat	N05021/01001H-R	Rantah Pans...	27/10/2021	27/10/2021	0	88.8560	Other	02/11/2021	445
<a href="#">Preview Video 1</a>	3	Submitted by PIU			CGM-DL	Haryana	RO-Delhi	Ghaziabad	N01005/01002H-R	Earlen Pans...	25/10/2021	26/10/2021	1	22	Other	01/11/2021	1258october
<a href="#">Preview Video 1</a>	4	Submitted by PIU			CGM-HR	Haryana	RO-Chandigarh (H-R)	Sonapat	N03000/0003H-R	Dokara - Sa...	25/10/2021	25/10/2021	40.6010	78.8370	Other	01/11/2021	509

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 1) Above Filter is based on Duration of Drone Video Survey From Date  
 2) To Filter Data, Please select From Date and To Date or Select Month  
 3) Drone Video download will be based on your internet speed. In case of any issue, please RESUME the download from Download bar of Browser

PDF Excel Video Preview Search

AERIAL VIDEOGRAPHY OF 706-8 (AKSHARDHAM TO EPS) PACKAGE-2 FROM 14+750M TO 31+698M

24-09-2021 21-10-2021

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
<a href="#">Preview Video 1</a>	5	Submitted by PIU											58.5050		Other	01/11/2021	1023
<a href="#">Preview Video 1</a>	7	Submitted by PIU											42		M/s Delapit Pvt Ltd	29/10/2021	862
<a href="#">Preview Video 1</a>	8	Submitted by PIU											88.2500		Other	01/11/2021	825
<a href="#">Preview Video 1</a>	9	Submitted by PIU											44.8000		Other	01/11/2021	1098
<a href="#">Preview Video 1</a>	10	Submitted by PIU			CGM-BM	Uttar Pradesh	RO-Delhi	Ghaziabad	N04040/01003UP	DUP Savle...	25/10/2021	30/10/2021	14.7580	31.6000	Other	01/11/2021	1255october

- (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.
- (i)
- (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.

#### **11.17 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 9.2 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 Contractor's 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 Sub-Clause 12.4, 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) / 10 (ten)] 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. 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 [\*\*\*\*]. 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 (twohundred 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's 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. PD/ RO/ CGM/ Member in the case of NHAI; RO/CE/ADG in the case of MoRTH projects executed through the State PWDs; and PD/ED/Director in the case of NHIDCL; Project Director in the case of ADB ) 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 therepresentation. 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.

**19.1.2** 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

### 19.2 Advance Payment

- (i) The Authority shall make an interest free advance payment (the “**Advance Payment**”) 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 ( @ “**Bank Rate+ 3%**”) 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 Bank Guarantee. This advance shall be further subject to the condition that:

- (a) Such new equipments are considered by the Authority's Engineer to be necessary for the works and
- (b) these new equipments 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 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 guarantee from a Bank 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 guarantee from a Bank 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.

The Contractor has the option of splitting the Bank Guarantee 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 shall remain effective till full repayment of such part advance corresponding to this bank guarantee. Such part of Bank Guarantee 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 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 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 7<sup>th</sup> (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 7<sup>th</sup> (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 1/12<sup>th</sup> (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 workdone:  
 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:

$$(i) \quad VRW = 0.85RW \times [PL \times (L_1 - L_0)/L_0 + PA \times (A_1 - A_0)/A_0 + PF \times (F_1 - F_0)/F_0 + PB \times (B_1 - B_0)/B_0 + PM \times (M_1 - M_0)/M_0 + PC \times (C_1 - C_0)/C_0 + PS \times (S_1 - S_0)/S_0].$$

$$(ii) \quad VBR = 0.85BR \times [PL \times (L_1 - L_0)/L_0 + PA \times (A_1 - A_0)/A_0 + PF \times (F_1 - F_0)/F_0 + PM \times (M_1 - M_0)/M_0 + PC \times (C_1 - C_0)/C_0 + PS \times (S_1 - S_0)/S_0].$$

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).

AO = 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.

AI = The WPI for construction machinery for the month three months prior to the month to which the IPC relates.

BO = The official retail price of bitumen at the nearest refinery at [Panipat] on the Base Date.

BI = The official retail price of bitumen at nearest refinery at [Panipat], on the first day of the month three months prior to the month to which the IPC relates.

CO = The WPI for Ordinary Portland Cement for the month of the Base Date.

CI = The WPI for Ordinary Portland Cement for the month three months prior to the month to which the IPC relates.

FO = The official retail price of high speed diesel (HSD) oil at the existing consumer pumps of Indian Oil Corporation ("IOC") in the State of [Haryana] on the Base Date.

FI = The official retail price of HSD at the existing consumer pumps of IOC in the State of [Haryana] on the first day of the month three months prior to the month to which the IPC relates.

LO = The consumer price index for industrial workers for the [circle \*\*\*\* in the State of Uttar Pradesh], published by Labour Bureau, Ministry of Labour, Government of India, (hereinafter called "CPI") for the month of the Base Date.

LI = The CPI for the month three months prior to the month to which the IPC relates.

MO = The WPI for all commodities for the month of the Base Date.

MI = The WPI for all commodities for the month three months prior to the month to which the IPC relates.

SO = The WPI for Mild Steel –Long Products for the month of the Base Date.

SI = 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%]
<b>Total</b>	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:

Where

$$V = P \times \frac{W_i - W_0}{W_0}$$

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<sub>0</sub>= The wholesale price index (all commodities) for the month of the Base Date.

W<sub>i</sub>= 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.

## **Section 7: General Conditions of Contract**

### **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 premium 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 premium.
- (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 premium 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 willful 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 willful 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 service 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:

- (g) 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;

- (h) 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;
- (i) 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;
- (j) any failure or delay of a Sub-contractor to the extent caused by any Indirect Political Event;
- (k) any Indirect Political Event that causes a Non-Political Event; or
- (l) 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:

- (m) Change in Law, only if consequences thereof cannot be dealt with under and in accordance with the provisions of Clause 19.17;
- (n) compulsory acquisition in national interest or expropriation of any Project Assets or rights of the Contractor or of the Sub-Contractors;
- (o) 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;
- (p) any failure or delay of a Sub-contractor but only to the extent caused by another Political Event; or
- (q) 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:

- (r) the suspension of performance shall be of no greater scope and of no longer duration than is reasonably required by the Force Majeure Event;
- (s) 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
- (t) 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 15<sup>th</sup> (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:

- (d) 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;

- (e) 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
- (f) 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**

26.1.1 In the event of any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the "Dispute") either Party may call upon the Authority Engineer, to mediate and assist the Parties in arriving at an amicable settlement thereof.

26.1.2 The Parties agree to use their best efforts for resolving all Disputes arising under or in respect of this Agreement promptly, equitably and in good faith, and further agree to provide each other with reasonable access during normal business hours to all non-privileged records, information and data pertaining to any Dispute.

26.1.3 Dispute Resolution Board (DRB):

Failing mediation by the Authority's Engineer or without the intervention of the Authority's Engineer, either Party may require such Dispute to be referred to the Dispute Resolution Board ("DRB") in accordance with the procedure set forth in Schedule-S to the Contract Agreement. The decision(s) of the Dispute Resolution Board shall be binding on both parties who shall promptly give effect to unless and until the same is revised/modified, as hereinafter provided, in a Conciliation/Arbitral Tribunal.

### **26.2 Conciliation**

If either the employer (i.e. Authority) or the Contractor is dissatisfied with any decision of the DRB, and/ or if the DRB is unable to resolve the dispute, either Party may refer the Dispute to arbitration in accordance with the provisions of Clause 26.3 but before resorting to such arbitration, the parties agree to explore conciliation by the Conciliation Committees of Independent Experts set up by the Authority in accordance with the procedure decided by the panel of such experts and notified by the Authority on its website including its subsequent amendments. In the event of the conciliation proceedings being successful, the parties to the dispute would sign the written settlement agreement and the conciliators would authenticate the same. Such settlement agreement would then be binding on the parties in terms of Section 73 of the Arbitration Act. In case of failure of the conciliation process even at the level of the Conciliation Committee, either party may refer the Dispute to arbitration in accordance with the provisions of Clause 26.3.

### **26.3 Arbitration**

26.3.1 Any Dispute which is not resolved amicably by conciliation as provided in Clause 26.2 shall be finally settled by arbitration as set forth below:

- i) The Dispute shall be finally referred to Society for Affordable Resolution of Disputes (hereinafter called as SAROD), a Society registered under Society's Act, 1860 vide Registration no. S/RS/SW1049/2013 duly represented by Authority and National Highways Builders Federation (NHBF). The dispute shall be dealt with in terms of Rules of SAROD. The detailed procedure for conducting Arbitration shall be governed by the Rules of SAROD and provisions of Arbitration & Conciliation Act, 1996, as amended from time to time. The Dispute shall be governed by Substantive Law of India.

- ii) The appointment of Tribunal, Code of conduct for Arbitrators and fees and expenses of SAROD and Arbitral Tribunal shall also be governed by the Rules of SAROD as amended from time to time. The rules of SAROD are placed at Annexure to schedule S.
  - iii) 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.
  - iv) The venue of Arbitration shall be New Delhi or a place selected by governing body of SAROD and the language for all documents and communications between the parties shall be English.
  - v) The expenses incurred by each party in connection with the preparation, presentation, etc., of arbitral proceedings shall be shared by each party itself.
- 26.3.2 The arbitrators shall make a reasoned award (the "Award"). Any Award made in any arbitration held pursuant to this Article 26 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.
- 26.3.3 The Contractor and the Authority agree that an Award 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 proceedings 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.

#### **26.4 Adjudication by Regulatory Authority, Tribunal or Commission**

In the event of constitution of a statutory regulatory authority, tribunal or commission, as the case may be, with powers to adjudicate upon disputes between the Contractor and the Authority, all Disputes arising after such constitution shall, instead of reference to arbitration under Clause 26.3, be adjudicated upon by such regulatory authority, tribunal or commission in accordance with the Applicable Law and all references to Dispute Resolution Procedure shall be construed accordingly. For the avoidance of doubt, the Parties hereto agree that the adjudication hereunder shall not be final and binding until an appeal against such adjudication has been decided by an appellate tribunal or court of competent jurisdiction, as the case may be, or no such appeal has been preferred within the time specified in the Applicable Law.

## **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:

- (e) 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
- (f) 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**

- (ii) 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.
- (iii) 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 Qualification or Request for Proposals, as the case may be, 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 routed through NHA Data Lake under the hand of the authorized representative and shall:

- (g) In the case of the Contractor, be given through NHA Data Lake 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;

{Attention:

Designation:

Address:

Fax No:

Email ;}

- (h) In the case of the Authority, through NHA Data Lake 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;

{Attention:  
Designation:  
Address:  
Fax No:  
Email ;}

- (i) Any notice or communication by one contracting Party to the other Party, given in accordance herewith, shall be deemed to have been delivered when given through or made on the NHA Data Lake.

#### **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 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:

- (j) 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
- (k) 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.

# Section 8: Particular Conditions of Contract

## Part A – Contract Data

Ref. Sub-Clause (Col 1)	Conditions (Col 2)	Data (Col 3)
Article 1: sub-clause 1.1 (ii)	Definitions	Add the following definition: <b>ADB</b> means Asian Development Bank
Article 1: sub-clause 1.1 (ii)	Definitions	Replace the definition with the following: <b>“Applicable Laws”</b> 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. In case there is a conflict between the laws enforced by the Government of India and those enforced by the State Government, the laws enforced by Government of India shall prevail.
Article 1: sub-clause 1.1 (ii)	Definitions	Add the following definition: <b>“Bank rate”</b> means the rate of interest specified by Reserve Bank of India from time to time in pursuance of section 49 of Reserve Bank of India Act, 1934 or any replacement of such Bank Rate for the time being in effect;
Article 1: sub-clause 1.1 (ii)	Definitions	Add the following definition: <b>“Contractor’s Personnel”</b> means the Contractor’s Representative and all personnel whom the Contractor utilises on Site, who may include the staff, labour and other employees of the Contractor and of each Subcontractor; and any other personnel assisting the Contractor in the execution of the Work
Article 1: sub-clause 1.1 (ii)	Definitions	Add the following definition: <b>“Eligible Countries”</b> means country specified as Eligible Country in Section 5 of the bid document.
Article 1: sub-clause 1.1 (ii)	Definitions	Add the following definition: <b>“NOA or Notification of Acceptance”</b> means the letter of acceptance issued by the Authority as referred to in Recital (D);.
Article 1: sub-clause 1.1 (ii)	Definitions	Replace the definition with the following: <b>“Project”</b> means “Construction and Maintenance of Two Lane with paved Shoulder of Rorathang to Rongli Road from Km 0+000 to Km 8+890 [Length: 8.890 Km], in the State of Sikkim”
Article 1: sub-clause 1.1 (ii)	Definitions	Add the following definition: <b>“Schedules”</b> : The schedules mentioned in the General Conditions of the contract refer to those provided under Section 6: Works Requirement.

Ref. Sub-Clause (Col 1)	Conditions (Col 2)	Data (Col 3)
Article 1: sub-clause 1.1 (ii)	Definitions	Replace the definition with the following: “ <b>Authority</b> ” means the Employer named in the Bid Data Sheet (BDS) and their legal successors. Interpret Authority as Employer
Article 1: sub-clause 1.1 (ii)	Definitions	Add the following definition: The term “ <b>Works Requirements</b> ” wherever appearing in the Contract document shall be read as “ <b>Employer’s requirement</b> ”.
Article 1: sub-clause 1.2 (i) j	Interpretation	Replace “ <b>Delhi</b> ” with “ <b>Sikkim</b> ”
Article 1: sub-clause 1.2 (i) t	Interpretation	Replace the clause with the following: “Any agreement, consent, approval, authorization, notice, communication, information, or report required under this Agreement from any Party or the Authority’s Engineer shall be valid and effective only if it is in writing and signed by a duly authorized representative of such Party or the Authority’s Engineer, as applicable”;
Article 1: sub-clause 1.4 (iii)	Priority of agreements and errors/discrepancies	Add the following at the end of this sub-clause: (iii) The details provided in Particular Condition of Contract (PCC) will prevail and supersede over General Condition of Contract (GCC)
Article 3: sub-clause 3.3	Environmental Clearances	Replace “ <b>LOA</b> ” with “ <b>NOA</b> ”
Article 4: sub-clause 4.1 (iii)	Obligations of the Contractor	Add the following sub-clause at the end: “All equipment, material, and services to be incorporated in or required for the works shall have their origin in any eligible source country as defined by the Asian Development Bank, in Section 5 of the bid document”.
Article 4: sub-clause 4.1 (xiv)	Obligations of the Contractor	Add the following sub-clause at the end: “The Contractor shall allow ADB and/or the Authority to inspect its accounts, records, and other documents related to bid submission and contract performance. Auditors appointed by ADB and/or the Authority may conduct audits as required. The Contractor shall retain all documents and records pertaining to the Contract for a period of ten (10) years after the completion of the Works. Additionally, the Contractor shall provide any documents necessary for investigating allegations of fraud, collusion, coercion, or corruption and shall ensure that its employees or agents with relevant knowledge of the Contract cooperate and respond to inquiries from ADB and/or the Authority”
Article 4: sub-clause 4.2.(i)	Obligations relating to sub-contracts and any other agreements	Replace “ <b>Highway</b> ” with “ <b>Road</b> ”
Article 4: sub-clause 4.2.(v)	Obligations relating to sub-contracts and any other agreements	Add the following sub-clause at the end:

Ref. Sub-Clause (Col 1)	Conditions (Col 2)	Data (Col 3)
		Specialist Subcontractors are allowed with the prior permission of the Chief Engineer and Project Director (EAP).
Article 4: sub-clause 4.10.(ii)	Environmental Measures	<p>Add the following sub-clause at the end:</p> <p>The Contractor shall comply with all applicable national, provincial and local environmental laws regulations. The Contractor shall (a) establish an operational system for managing environmental impacts (b) carry out all of the monitoring and mitigation measures set forth in the Initial Environmental Examination and Prepare updated Environmental Management Plan (EMP) including the action plan and checklist. The Contractor shall allocate the budget required to ensure that such measures are carried out and submit quarterly/semi-annual reports on carrying out of such measures to the Authority.</p> <p>More particularly, the Contractor shall comply with (i) the measures and requirements set forth in the environmental management plan attached here to; and (ii) any corrective or preventive actions set out in safeguards monitoring reports that the Authority will prepare from time to time to monitor implementation of the Environmental Management Plan.</p> <p>The Contractor shall allocate a budget for compliance with these measures, requirements and actions.</p>
Article 4: sub-clause 4.11.(i) & (j)	Site data	<p>Add the following sub-clauses at the end:</p> <p>(i) The Contractor shall adequately record the condition of roads, agricultural land and other infrastructure prior to the start of transporting materials, goods and equipment, and construction.</p> <p>(j) The Contractor shall independently study and survey all existing major and minor bridges, as well as cross drainage (C.D.) works along the project length. The condition survey shall be conducted at the Contractor's own cost. For bridges identified for retention in the schedule, the Contractor must assess and account for any necessary repair costs before bidding. Additionally, as per IRC standards, certain bridges, culverts, or C.D. works may require widening. The Contractor shall consider the costs for both widening and repairs of retained structures in their bid.</p>
Article 4: sub-clause 4.15	Corrupt or Fraudulent Practices	<p>Add the following sub-clauses at the end:</p> <p>(i) The Contractor and its agents (whether declared or not), Sub-contractors, sub- consultants, service providers or suppliers, and any personnel thereof, shall not engage in corrupt, fraudulent, collusive or coercive practices, in competing for or in executing the Agreement.</p> <p>(ii) If the Authority determines, based on reasonable evidence, that the Contractor has engaged in corrupt, fraudulent, collusive or coercive practices, in competing for or in executing the Project, then the Authority may, after giving 14 days' notice to the Contractor, terminate the Agreement and expel him from</p>

Ref. Sub- Clause (Col 1)	Conditions (Col 2)	Data (Col 3)
		<p>the Site, and the provisions of Article 23 shall apply as if such termination had been made under Sub-Clause 23.1 [Termination for Contractor Default].</p> <p>(iii) Should any employee of the Contractor be determined, based on reasonable evidence, to have engaged in corrupt, fraudulent or coercive practice during the execution of the Works then that employee shall be removed in accordance with Sub-Clause 4.4 [Contractor's Personnel].</p> <p>(iv) For the purposes of this Subclause:</p> <p>ADB requires Borrowers(including beneficiaries of ADB-financed activity), as well as Contractors, Subcontractors, manufacturers, and Consultants under ADB-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, ADB defines, for the purposes of this provision, the terms set forth Part C – Corrupt and Fraudulent Practices of Particular Condition of Contract</p> <p>All Bidders, consultants, contractors, suppliers and other third parties engaged or involved in ADB-related activities have a duty to cooperate fully in any screening or investigation when requested by ADB to do so. Such cooperation includes, but is not limited to, the following:</p> <p>a)being available to be interviewed and replying fully and truthfully to all questions asked;</p> <p>b)including, but not limited to, documents and other physical objects;</p> <p>c)upon written request by ADB, authorizing other related entities to release directly to ADB such information that is specifically and materially related, directly or indirectly, to the said entities or issues which are the subject of the investigation;</p> <p>d)cooperating with all reasonable requests to search or physically inspect their person and/or work areas, including files, electronic databases, and personal property used on ADB activities, or that utilizes ADB's Information and Communications Technology (ICT) resources or systems (including mobile phones, personal electronic devices, and electronic storage devices such as external disk drives);</p> <p>e)cooperating in any testing requested by ADB, including but not limited to, fingerprint identification, handwriting analysis, and physical examination and analysis; and</p> <p>f)preserving and protecting confidentiality of all information discussed with, and as required by, ADB.</p> <p>All Bidders, consultants, contractors and suppliers shall ensure that, in its contract with its sub-consultants, Subcontractors, and other third parties engaged or involved in ADB-related activities, such sub-consultants, Subcontractors, and other third parties similarly undertake</p>

Ref. Sub-Clause (Col 1)	Conditions (Col 2)	Data (Col 3)
		the foregoing duty to cooperate fully in any screening or investigation when requested by ADB to do so."
Article 4: sub-clause 4.16	Respectful Work Environment	<p>Add the following sub-clauses at the end:</p> <p>i. The Contractor shall ensure that its employees and sub-contractors observe the highest ethical standards and refrain from any form of bullying, discrimination, misconduct and harassment, including sexual harassment and shall, at all times, behave in a manner that creates an environment free of unethical behavior, bullying, misconduct and harassment, including sexual harassment. The Contractor shall take appropriate action against any employees or sub-contractors, including suspension or termination of employment or sub- contract, if any form of unethical or inappropriate behavior is identified.</p> <p>ii. The Contractor shall conduct training programs for its employees and sub- contractors to raise awareness on and prevent any form of bullying, discrimination, misconduct and harassment including sexual harassment, and to promote a respectful work environment. The Contractor shall keep an up to date record of its employees and sub- contractors who have attended and completed such training program and provide such records to the Authority or the Engineer at their first written request.</p>
Article 4: sub-clause 4.17	Health Awareness Programme	<p>Add the following sub-clauses at the end:</p> <p>The Contractor shall Quarterly (i) carry out HIV/AIDS awareness programs for labour and disseminate information at worksites on risks of sexually transmitted diseases and HIV/AIDS as part of health and safety measure for those employed during construction;</p> <p>and (ii) follow and implement all statutory provisions on labour (including not employing children as labour, equal at for equal work) health, safety, welfare, sanitation and working conditions. Breach on any of the above stated provisions will be around for contract termination.</p>
Article 4: sub-clause 4.18	Environmental (IEE/ EMP) and Social (RP/IPP) Safeguards	<p>Add the following sub-clauses at the end:</p> <p>The Contractor shall comply with measures and requirements relevant to the contractor set forth in the IEE, the respective EMP, and the respective RP, and the IPP(s) as applicable (to the extent they concern impacts on affected people during construction), in particular no demolishing or relocating private assets before ensuring asset owner has received compensations and resettlement assistance, and any corrective or preventative actions set out in a Safeguards Monitoring Report.</p> <p>The Contractor shall allocate a budget for compliance with these measures, requirements and actions.</p>
Article 4: sub-clause 4.19	Environmental (IEE/ EMP) and Social (RP/IPP) Safeguards	<p>Add the following sub-clauses at the end:</p> <p>In addition to the foregoing, the Contractor shall provide the Authority with a written notice of any unanticipated environmental or indigenous peoples risks if any, or impacts that arise during construction, implementation or operation of the Project that were not considered in the IEE, the respective EMP, and the respective RP, and the</p>



Ref. Sub-Clause (Col 1)	Conditions (Col 2)	Data (Col 3)
		IPP if any. The EMP is attached along with the bid document for reference. An updated RP shall be provided when the contract is signed.
Article 4: sub-clause 4.20	Environmental (IEE/EMP) and Social (RP/IPP) Safeguards	<p>Add the following sub-clauses at the end:</p> <p>The selection of appropriate materials and technology shall be at the discretion of the Contractor, provided it complies with the provisions of Circular No. RW/NH-33044/2020/S&amp;R (P&amp;B) issued by MORT&amp;H on 14.12.2020. The Contractor may also use new or alternative materials and technologies, provided they have been previously and successfully implemented in India.</p> <p>If new or alternative technology is to be adopted as part of the original scope of work or at the EPC Contractor's own initiative, the EPC Contractor shall deposit an amount equivalent to 20% of the cost of work involving such technology. This deposit shall be made in the form of a bank guarantee or demand draft in favor of the Project Director, ADB Projects Cell, Roads &amp; Bridges Department, Govt. of Sikkim, before the execution begins.</p> <p>The bank guarantee shall remain valid for three (3) years from the date of submission to the Engineer In-charge, following the satisfactory completion of work using the new material or technology. In the event of failure of any road portion or structure due to the adoption of such technology, the bank guarantee or demand draft shall be forfeited, and the amount realized from such forfeiture shall be used to restore the affected road or structure.</p> <p>The EPC Contractor shall consider these conditions in the design of the road or structure and incorporate them into their bid whenever new or alternative technology is proposed</p>
Article 5: sub-clause 5.1.(i).(n)	Representations and warranties of the Contractor	<p>Add the following sub-clauses at the end:</p> <p>all information provided by the {selected contractor/ members of the Consortium} in response to the Request for Qualification and Bidding Documents or otherwise, is to the best of its knowledge and belief, true and accurate in all material respects and</p>
Article 6: sub-clause 6.1.(vii)	Disclaimer	<p>Add the following sub-clauses at the end:</p> <p>The Scope of Work outlined herein represents the minimum requirement. However, the Contractor assumes full responsibility for any risks arising from unforeseen site conditions, regulatory changes, or site-specific modifications. The Contractor acknowledges that no additional compensation will be provided for such changes. It is the Contractor's responsibility to ensure their bid comprehensively accounts for all foreseeable and unforeseeable risks, thereby eliminating the need for further financial compensation or extensions to the project timeline</p>
Article 7: sub-clause 7.1.(i)	Performance Security	Amend the amount of Performance Security to 7.50% (Seven and half percent) of its Bid Price bifurcated in two parts of 3% (three percent) and 4.5% (four and half percent)

Ref. Sub-Clause (Col 1)	Conditions (Col 2)	Data (Col 3)								
Article 7: sub-clause 7.3.(iii)	Appropriation of Performance Security	<p>Add the following sub-clauses at the end:</p> <p>Upon the failure of the Contractor to achieve the milestones referred in schedule J within the prescribed period as per the schedule at the fault of the Contractor the Additional Performance Security shall be appropriated/encashed</p>								
Article 8: sub-clause 8.3.(iv)	Damages for delay in handing over the Site	<table><tr><td colspan="2">Replace the table under this sub-clause with the following</td></tr><tr><th>Value of the Works withdrawn</th><th>Percentage of value of works to be reduced from Contract Price</th></tr><tr><td>upto 5% of Contract Price</td><td>90%</td></tr><tr><td>More than 5% of the Contract Price</td><td>90% of the value of the first 5% of the Contract Price, plus 95% of the value of the withdrawn Works exceeding 5% of the Contract Price</td></tr></table>	Replace the table under this sub-clause with the following		Value of the Works withdrawn	Percentage of value of works to be reduced from Contract Price	upto 5% of Contract Price	90%	More than 5% of the Contract Price	90% of the value of the first 5% of the Contract Price, plus 95% of the value of the withdrawn Works exceeding 5% of the Contract Price
Replace the table under this sub-clause with the following										
Value of the Works withdrawn	Percentage of value of works to be reduced from Contract Price									
upto 5% of Contract Price	90%									
More than 5% of the Contract Price	90% of the value of the first 5% of the Contract Price, plus 95% of the value of the withdrawn Works exceeding 5% of the Contract Price									
Article 9: sub-clause 9.2	Shifting of obstructing utilities	<p>Replace the Article with the following:</p> <p>The Contractor shall, in accordance with Applicable Laws and with the assistance of the Authority, undertake the work of shifting of any utility (including electric lines, water pipes, gas pipelines 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. The cost of shifting of such utilities as per estimates prepared by the entity owning the utility and approved by the Authority, shall be reimbursed by the Authority to the Contractor. The scope of work of such shifting of utilities shall be as indicated in Schedule-B. In the event of any delay of such shifting on the part of the Contractor, no extension of time for completion of the project and no claims , in any manner, shall be admissible on this account against the Authority.</p> <p>The work of shifting of Utilities can be taken up by the Contractor any time after signing of the Agreement.</p>								
Article 9: sub-clause 9.5	Dismantling of structures	<p>Add the following paragraph at the end:</p> <p>Structure owners shall be permitted to retrieve materials salvaged from dismantled houses and shops without any charges. A notice to this effect shall be issued, informing structure owners that they may collect the salvaged materials within 15 days from the date of demolition. If the materials are not collected within this period, the Contractor shall have the right to dispose of them without any further notice.</p>								
Article 10: sub-clause 10.1.(i).(e)	Obligations prior to commencement of Works	<p>Add the following sub-clauses at the end:</p> <p>Prepare a checklist outlining the safety procedures to be implemented within the construction zone</p>								
Article 10: sub-clause 10.1.(i).(f)	Obligations prior to commencement of Works	<p>Add the following sub-clauses at the end:</p>								

Ref. Sub-Clause (Col 1)	Conditions (Col 2)	Data (Col 3)
		Prepare an updated Environmental Management Plan (EMP) that includes a detailed action plan
Article 10: sub-clause 10.2.(v)	Design and Drawings	Replace the Article with the following: Any costs or delays in construction arising from the review or approval process by the Authority's Engineer shall be borne by the Contractor. However, the Authority shall be responsible for any undue delays in the review/approval process caused by the Authority's Engineer
Article 10: sub-clause 10.3.(i)	Construction of the Project Highway	Please consider the Scheduled Completion Date stated under this clause as follows: The Scheduled Completion Date shall be 730 (seven hundred and thirtieth) day from the Appointed Date
Article 11: sub-clause 11.7	Monthly progress reports	Replace the title of the sub-clause as under: Monthly & Quarterly progress reports
Article 11: sub-clause 11.7.(t)	Monthly progress reports	Add the following sub-clause at the end: The Contractor shall provide the Employer with quarterly reports of its activities, including each of its obligations specified under Clauses 4.15, 4.16, 4.17, 4.18, 11.18.i (f) and 11.18.ix
Article 11: sub-clause 11.17.(i).(f)	Staff and Labour	Add the following sub-clause at the end: The Contractor shall make employment decisions solely based on job requirements, without considering personal characteristics unrelated to the role. The Contractor shall ensure that the employment relationship is grounded in equal opportunity and fair treatment, refraining from any form of discrimination in areas such as recruitment, hiring, compensation (including wages and benefits), working conditions, terms of employment, retirement, or discipline. Additionally, the Contractor shall provide equal wages and benefits to men and women for work of equal value or type
Article 11: sub-clause 11.17.(ix)	Staff and Labour	Add the following sub-clause at the end: The Contractor shall not employ any child to perform work, including work that is economically exploitative, hazardous, interferes with the child's education, or is harmful to the child's health or physical, mental, spiritual, moral, or social development. For the purposes of this clause, 'Child' refers to any individual below the statutory minimum age as defined by applicable national law
Article 11: sub-clause 11.18	Decision	Add the following sub-clause at the end: 11.18 Decision i. In the event of a difference of opinion between the Authority's Engineer, the Superintending Engineer of Vigilance and Quality Control, the Concerned Superintending Engineer, or any officer appointed by the Authority regarding any quality aspect of the work, the decision of the Chief Engineer and Project Director (EAP) shall be final and binding on all parties. ii. In all technical matters related to the work, the decision of the Chief Engineer and Project Director (EAP) shall be binding on all parties

Ref. Sub-Clause (Col 1)	Conditions (Col 2)	Data (Col 3)
Article 12: sub-clause 12.2.(ii)	Completion Certificate	Add at the end of this sub-clause Upon completion of construction, the Contractor shall fully reinstate pathways, other local infrastructure, and agricultural land to at least their pre-project conditions, as documented by the Contractor in accordance with its obligations under Clause 3.13
Article 12: sub-clause 12.4	Decision	Add the following sub-clause at the end: 12.4 Decision i. In the event of a difference of opinion between the Authority's Engineer, the Superintending Engineer of Vigilance and Quality Control, the Concerned Superintending Engineer, or any officer appointed by the Authority regarding any quality aspect of the work, the decision of the Chief Engineer and Project Director (EAP) shall be final and binding on all parties. ii. In all technical matters related to the work, the decision of the Chief Engineer and Project Director (EAP) shall be binding on all parties
Article 14: sub-clause 14.1.(i)	Maintenance obligations of the Contractor	Please consider the Maintenance Period stated under this clause as follows: The Maintenance Period shall be 5 (Years), corresponding to the Defects Liability Period, and shall commence from the date of the Completion Certificate
Article 14: sub-clause 14.4 (ii)	Maintenance: Safety, vehicle breakdowns and accidents	Vehicle rescue post shall be located at Rongli Bazar.
Article 15: sub-clause 15.5	Decision	Add the following sub-clause at the end: 15.5 Decision i. In the event of a difference of opinion between the Authority's Engineer, the Superintending Engineer of Vigilance and Quality Control, the Concerned Superintending Engineer, or any officer appointed by the Authority regarding any quality aspect of the work, the decision of the Chief Engineer and Project Director (EAP) shall be final and binding on all parties. ii. In all technical matters related to the work, the decision of the Chief Engineer and Project Director (EAP) shall be binding on all parties
Article 19: sub-clause 19.9 (i) (b)	Time of Payment and Interest	Replace "30 (thirty) days" with "40 (forty) days"
Article 19: sub-clause 19.10.(iv).(d)	Price adjustment for the Works	The source of following indices are as under: BO&BI = The official retail price of bitumen at the nearest refinery at Haldia on the Base Date. FO &FI= The official retail price of high speed diesel (HSD) oil at the existing consumer pumps of Indian Oil Corporation ("IOC") in the State of Sikkim on the Base Date. LO &LI = The consumer price index for industrial workers for the applicable circle in the State of Sikkim or

Ref. Sub- Clause (Col 1)	Conditions (Col 2)	Data (Col 3)
		Darjeeling/Silaguri in the neighboring state of West Bengal, published by Labour Bureau, Ministry of Labour, Government of India, (hereinafter called "CPI") for the month of the Base
Article 26: sub-clause 26.1.3	Dispute Resolution Board (DRB):	<p>Replace the sub-clause with the following:</p> <p>Failing mediation by the Authority's Engineer or without the intervention of the Authority's Engineer, either Party may require such Dispute to be referred to the Dispute Resolution Board ("DRB") in accordance with this clause.</p> <p>i.Appointment of Dispute Review Board</p> <p>Disputes shall be referred to a DB for decision in accordance with this Clause. The parties shall appoint a DB within 3 months of signing of Agreement. The DB shall comprise of three suitably qualified persons (the members), each of whom shall be a professional experienced in the type of construction involved in the Works and with the interpretation of contractual documents. The DB is to comprise of three persons, each Party shall nominate one member for approval of other Party. The first two members shall recommend and the Parties shall agree upon the third member, who shall act as Chairman. The terms of the remuneration of each of the three members, including the remuneration of any expert whom the DB consults, shall be mutually agreed upon by the Parties. Each Party shall be responsible for paying one-half of this remuneration. If at any time the Parties so agree, they may jointly refer a matter to the DB for it to give its opinion. Neither Party shall consult DB on any matter without the agreement of the other Party. If a member declines to act or is unable to act as a result of death, disability, resignation or termination of appointment, a replacement shall be appointed in the same manner as the replaced person was required to have been nominated or agreed upon, as described in this clause. The appointment of any member may be terminated by mutual agreement of both parties, but not by the Authority or the Contractor acting alone. Unless otherwise agreed by both parties, the appointment of DB (including each member) shall expire when the Completion Certificate is issued by the Authority.</p> <p>ii.Obtaining Dispute Review Board's Decision</p> <p>If a dispute (of any kind whatsoever) arises between the Parties in connection with, or arising out of, the Contract or the execution of the Works, including any dispute as to any certificate, determination, instruction, opinion or valuation of the Authority's Engineer, either Party may refer the dispute in writing to the DB for its decision, with copies to the other Party and the Authority's Engineer. Such reference shall state that it is given under this Clause. The DB shall be deemed to have received such reference on the date when it is received by the Chairman of the DB. Both Parties shall promptly make available to the DB all such information, further access to the Site, and appropriate facilities, as the DB may require for the purpose of making a decision on such dispute. The DB shall be deemed to be not acting as arbitrator(s). Within 84</p>

Ref. Sub- Clause (Col 1)	Conditions (Col 2)	Data (Col 3)
		<p>days after receiving such reference, or within such other period as may be proposed by the DB and approved by both Parties, the DB shall give its decision, which shall be reasoned and shall state that it is given under this Sub-Clause. The decision shall be binding on both Parties, who shall promptly give effect to it unless and it shall be revised in an amicable settlement or an arbitral award as described below. Unless the Contractor has already been abandoned, repudiated or terminated, the Contractor shall continue to proceed with the Works in accordance with Contract. If either Party is dissatisfied with the DB's decision, then either Party may, within 28 days after receiving the decision, give a notice of dissatisfaction to the other Party indicating its dissatisfaction and intention to commence arbitration. If the DB fails to give its decision within the period of 84 days (or as otherwise approved) after receiving such reference, then either party may, within 28 days after this period has expired, give a notice of dissatisfaction to the other Party. In either event, this Notice of Dissatisfaction shall state that it is give under this Clause, and shall set out the matter in dispute and the reason(s) for dissatisfaction. Neither Party shall be entitled to commence arbitration of a dispute unless a Notice of Dissatisfaction has been given in accordance with this Clause. If the DB has given its decision as to a matter in dispute to both Parties, and no Notice of Dissatisfaction has been given by either Party within 28 days after it received the DB's decision, then the decision shall become final and binding upon both parties.</p>
Article 26: sub- clause26.3	Arbitration	<p>Replace the sub-clause with the following:</p> <p><b>26.3 Arbitration</b></p> <p>26.3.1 Any Dispute which is not resolved by Conciliation, as provided in Clause 26.2, shall be finally decided by reference to arbitration by a Board of Arbitrators appointed in accordance with Clause 26.3.2. Any dispute between the Parties arising out of or in Connection with the Contract not settled in respect of which the DB's decision per Clause 26.2 (ii) has not become final and binding shall be finally settled by arbitration. The seat of arbitration shall be at a geographical location nearest to the Site, unless otherwise agreed by the parties.</p> <p>26.3.2 Disputes shall be settled by arbitration in accordance with the following provisions:</p> <p><b>a.Selection of Arbitrators:</b> Each dispute submitted by a Party to arbitration shall be heard by an arbitration tribunal composed of three (3) arbitrators, in accordance with the following provisions:</p> <p>i.The Authority and the Contractor shall each appoint one (1) arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration tribunal. If the arbitrators named by the Parties do not succeed in appointing a third arbitrator within thirty(30) days after the latter of the two (2) arbitrators named by the Parties has been appointed, the appointment shall be done in accordance with the provision of the SIAC Arbitration Rule</p>

Ref. Sub- Clause (Col 1)	Conditions (Col 2)	Data (Col 3)
		<p>for foreign Contractor and Arbitration and Conciliation Act 1996 of India for domestic contractor.</p> <p>ii.If, in a dispute subject to paragraph (a) above, one Party fails to appoint its arbitrator within thirty (30) days after the other Party has appointed its arbitrator, the Party which has appointed its arbitrator, the party may take recourse to the provision of SIAC Arbitration Rule for foreign Contractor and Arbitration and Conciliation Act 1996 of India for domestic contractor.</p> <p><b>b.Rules of Procedure:</b> If the Contract is with a foreign contractor, arbitration proceedings shall be conducted in accordance with the rules of the Singapore International Arbitration Centre (SIAC) or UNCITRAL. It shall be administered by SIAC and the place of arbitration shall be Singapore.</p> <p>If the Contract is with a domestic contractor, arbitration proceedings shall be conducted in accordance with the procedure of the Arbitration and Conciliation Act 1996 of India.</p> <p><b>c.Substitute Arbitrators:</b> If for any reason an arbitrator is unable to perform his/her function, a substitute shall be appointed in the same manner as the original arbitrator.</p> <p><b>Nationality and Qualification of Arbitrators</b> -the Arbitrators appointed pursuant to paragraphs 1(a) through 1(b) above shall be a legal or technical expert with extensive experience in relation to the matter in dispute.</p>
Article 27: sub-clause 27.1	Governing law and jurisdiction	<p>Replace the sub-clause with the following:</p> <p>This Agreement shall be construed and interpreted in accordance with and governed by the laws of India, and the courts at <b>Sikkim</b> shall have exclusive jurisdiction over matters arising out of or relating to this Agreement</p>
Article 27: sub-clause 27.13	Notices	<p>Replace the sub-clause with the following:</p> <p>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 routed through Public Works Department under the hand of the authorized representative and shall:</p> <p>(a) In the case of the Contractor, be given through Public Works Department 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; {Attention: Designation: Address: Fax No: Email ;}</p> <p>(b) In the case of the Authority, Public Works Department and be addressed to the Chief Engineer Department of the Authority with a copy delivered to the Authority Representative or such</p>

Ref. Sub- Clause (Col 1)	Conditions (Col 2)	Data (Col 3)
		<p>other person as the Authority may from time to time designate by notice to the Contractor;            {Attention:            Designation:            Address:            Fax No:            Email ;}</p> <p>(c) Any notice or communication by one contracting Party to the other Party, given in accordance herewith, shall be deemed to have been delivered when given through or made on the Public Works Department.</p>



## Part B – Special Provisions

Ref. Sub- Clause (Col 1)	Conditions (Col 2)	Data (Col 3)
Schedule – K, See Sub- Clause 2.(i)	Tests on Completion	The visual physical tests shall include the following: Cracking, Rutting, Stripping, Potholes and other road safety features like road signage, marking, crush barrier, and other road assets, lighting, plantation, drainage system

## Part C – Corrupt and Fraudulent Practices

### 1. Purpose

- 1.1 ADB's Anticorruption Policy and Integrity Principles and Guidelines (both as amended from time to time) and this annex apply with respect to procurement under ADB-financed activities.

### 2. Requirements

- 2.1 ADB requires Borrowers (including beneficiaries of ADB-financed activity) and their personnel, as well as firms and individuals participating in an ADB-financed activity, including but not limited to, Bidders, Suppliers and Contractors, agents, subcontractors, subconsultants, service providers, subsuppliers, manufacturers (including their respective officers, directors, employees and personnel) under ADB-financed contracts to observe the highest standard of ethics during the procurement and execution of such contracts in accordance with ADB's Anticorruption Policy (1998, as amended from time to time). In pursuance of this policy, ADB

(a) defines, for the purposes of this provision, the terms set forth below as follows:

- (i) "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;
  - (ii) "fraudulent practice" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
  - (iii) "coercive practice" means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
  - (iv) "collusive practice" means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party;
  - (v) "abuse" means theft, waste, or improper use of assets related to ADB-related activity, either committed intentionally or through reckless disregard;
  - (vi) "conflict of interest" means any situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations;
  - (vii) "integrity violation" means any act, as defined under ADB's Integrity Principles and Guidelines (2015, as amended from time to time), which violates ADB's Anticorruption Policy, including (i) to (vi) above and the following: obstructive practice, violations of ADB sanctions, retaliation against whistleblowers or witnesses, and other violations of ADB's Anticorruption Policy, including failure to adhere to the highest ethical standards.
- (b) will reject a proposal for award if it determines that the Bidder recommended for award or any of its officers, directors, employees, personnel, subconsultants, subcontractors, service providers, suppliers or manufacturers has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations in competing for the Contract;
- (c) will cancel the portion of the financing allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of ADB financing engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to ADB to remedy the situation, including by failing to inform ADB in a timely manner at the time they knew of the integrity violations;
- (d) will impose remedial actions on a firm or an individual at any time, in accordance with ADB's Anticorruption Policy and Integrity Principles and Guidelines, including declaring ineligible, either indefinitely or for a stated period of time, to participate<sup>16</sup> in activities financed, administered, or supported by ADB or to benefit from a contract financed, administered, or

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<sup>16</sup>Whether as a Contractor, Subcontractor, Consultant, Manufacturer or Supplier, or Service Provider; or in any other capacity (different names are used depending on the particular Bidding Document).

supported by ADB or otherwise, if it, at any time, determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations; and

- (e) will have the right to require that a provision be included in bidding documents and in contracts financed, administered, or supported by ADB, requiring Bidders, suppliers, contractors, consultants, manufacturers, service providers and other third parties engaged or involved in ADB-related activities, and their respective officers, directors, employees and personnel, to permit ADB or its representative to inspect the site and their assets, accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by ADB.
- 2.2 All Bidders, consultants, contractors, suppliers, manufacturers, service providers, and other third parties engaged or involved in ADB-related activities and their respective officers, directors, employees and personnel, are required to cooperate fully in any investigation when requested by ADB to do so. As determined on a case-by-case basis by ADB, such cooperation is set out in detail in the Integrity Principles and Guidelines.
  - 2.3 All Bidders, consultants, contractors and suppliers shall require their officers, directors, employees, personnel, agents to ensure that, in its contracts with its subconsultants, Subcontractors, and other third parties engaged or involved in ADB-related activities, such subconsultants, Subcontractors, and other third parties similarly are required to cooperate fully in any investigation when requested by ADB to do so.
  - 2.4 The Contractor undertakes that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the bid, have been given or received in connection with the procurement process or in the contract execution.<sup>17</sup>

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<sup>17</sup>The undertaking also applies during the period of performance of the contract.

## Part D- Environmental, Health and Safety (EHS)

### Metrics for Progress Reports

*Metrics for regular reporting:*

**a. Incidents for Non-Conformance**

- (i) Environmental incidents or non-conformance with contract requirements, including contamination, pollution, or damage to ground or water supplies
- (ii) Health and safety incidents, accidents, injuries that require treatment, and all fatalities
- (iii) Interactions with regulators: identify agency, dates, subjects, outcomes (report the negative if none)

**b. Status of All Permits and Agreements:**

- (i) Work permits: number required, number received, and actions taken for those not received
- (ii) Status of permits and consents:
  - (a) List areas and facilities with permits required (quarries, asphalt, and batch plants), dates of application, dates issued (actions to follow up if not issued), dates submitted to resident engineer (or equivalent), and status of area (waiting for permits, working, abandoned without reclamation, decommissioning plan being implemented, etc.).
  - (b) List areas with landowner agreements required (borrow and spoil areas, camp sites), dates of agreements, and dates submitted to resident engineer (or equivalent).
  - (c) Identify and highlight major activities and environment, health, and safety activities undertaken in each area in the reporting period (land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation).
  - (d) For quarries: indicate status of relocation and compensation (completed, or details of activities and current status in the reporting period).
  - (e) List parts of the Site for which Notice to commence work and confirmation by the Employer as per Sub-Clause 2.1 was received by the Contractor and the other parts of the Site for which such Notice is pending.

**c. Compliance<sup>18</sup>**

- (i) Compliance status for conditions of all relevant consents and permits for the Work, including quarries, etc.: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
- (ii) Compliance status of SSHSMP (as per Sub-Clause 4.8 [*Health and Safety Obligations*]) and SSEMP (as per Sub-Clause 4.18 [*Protection of the Environment*]): statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
- (iii) Other unresolved issues from previous reporting periods related to environmental and social: continued violations, continued failure of equipment, continued lack of vehicle covers, spills not dealt with, continued compensation or blasting issues, etc.; cross-reference other sections as needed

**d. Supervision**

- (i) Environmental Supervision
  - (a) Environmental specialist: number of days worked, areas inspected, number of inspections of each (road section, work camp, accommodations, quarries, borrow areas, spoil areas, swamps, forest crossings, etc.), highlights of activities and findings (including violations of environmental requirements/best practices, actions taken), and reports to environmental specialist, construction, and site management
  - (b) Community liaison person(s): number of days worked (hours community center open), number of people met, highlights of activities (issues raised, etc.), and reports to specialist, construction, and site management

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<sup>18</sup>For projects categorized as Category C for environment for which no EMP has been prepared, the item (ii) should be deleted.

(ii) Health and Safety Supervision

- (a) Health and Safety specialist: number of days worked, number of full and partial inspections, and reports to construction and project management
- (b) Number of workers, work hours, metric of personal protection equipment (PPE) use (percentage of workers with full PPE, partial, etc.), worker violations observed (by type of violation, PPE or otherwise), warnings given, repeat warnings given, and follow-up actions taken (if any)
- (c) Number of partial and full site inspections (by area: road section, work camp, accommodations, quarries, borrow areas, spoil areas, work site, clinic, HIV/AIDS center, community centers, etc.), highlights of activities (including violations of environmental, health and safety requirements observed, actions taken), and reports to health and safety specialist/construction/site management

**e. Worker Accommodations:**

- (i) Number of expats housed in accommodations and number of locals
- (ii) Date of last inspection and highlights of inspection including status of accommodations' compliance with national and local laws and good practice, including sanitation, space, etc.
- (iii) Actions taken to recommend or require improved conditions, or to improve conditions

**f. Training:**

- (i) Number of new workers, number receiving induction training, and dates of induction training
- (ii) Number and dates of toolbox talks, number of workers receiving training related to Environment, Health and Safety (EHS)
- (iii) Number and dates of communicable diseases (including sexually transmitted diseases [STDs]) sensitization and/or training, number of workers receiving training (in the reporting period and in the past), and same questions for gender sensitization and flag person training
- (iv) Number and date of EHS-related prevention sensitization and/or training events, including number of workers receiving training on EHS Code of Conduct for Contractor's Personnel (in the reporting period and in the past), etc.

**g. Grievances:**

List of EHS-related grievances: grievances from affected communities and Worker grievances as recorded in the Contractor's grievance redress mechanism; traffic, road safety, and vehicles/equipment (health and safety or safeguard or environmental specialist needs to provide these requirements),

- (i) Traffic and road safety incidents and accidents involving project vehicles and equipment: provide date, location, damage, cause, follow-up
- (ii) Traffic and road safety incidents and accidents involving non-project vehicles or property (also reported under immediate metrics): provide date, location, damage, cause, and follow-up
- (iii) Overall condition of vehicles or equipment (subjective judgment by environmentalist); non-routine repairs and maintenance needed to improve safety and/or environmental performance (to control smoke, etc.).

**h. Mitigations and Issues (what has been done):**

- (i) Environmental Mitigations
  - (a) Dust: number of working bowsters, number of watering per day, number of complaints, warnings given by environmentalist, actions taken to resolve; highlights of quarry dust control (covers, sprays, operational status); percentage of rock and spoil lorries with covers, and actions taken for uncovered vehicles
  - (b) Erosion control: controls implemented by location, status of water crossings, environmentalist inspections and results, actions taken to resolve issues, and emergency repairs needed to control erosion or sedimentation

- (c) Quarries, borrow areas, spoil areas, asphalt plants, batch plants: identify major activities undertaken in the reporting period at each, and highlights of environmental protection—land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, and decommissioning implementation
  - (d) Blasting: number of blasts (and locations), status of implementation of blasting plan (including notices, evacuations, etc.), and incidents of off-site damage or complaints (cross-reference other sections as needed)
  - (e) Spill clean-ups, if any: material spilled, location, amount, actions taken, and disposal (report all spills that result in water or soil contamination)
  - (f) Waste management: types and quantities generated and managed, including amount taken off-site (and by whom) or reused, recycled, or disposed on-site
  - (g) Details of tree plantings and other mitigations required undertaken in the reporting period
  - (h) Details of water and swamp protection mitigations required undertaken in the reporting period
  - (i) The Contractor shall identify and report on any special or temporary right of way and any additional facility that have temporary and/or permanent impacts on affected persons' assets, access to assets and/or livelihoods (income sources). It shall put in place corresponding mitigation measures, and implement them.
- (ii) Health and Safety Mitigations
- (a) Details of hazard prevention and control mitigations required undertaken in the reporting period

# Section 9: Contract Forms

This section contains forms which, once completed, will form part of the Contract. The forms for Performance Security and Advance Payment Guarantee, when required, shall only be completed by the successful Bidder after contract award.

## Table of Forms

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## (v) Notice of Intention for Award of Contract

[on letterhead paper of the Employer]

[date of notification]

To: [name of the Bidder]  
Attention: [insert name of the Bidder's authorized representative]  
Address: [insert address of the Bidder's authorized representative]  
Telephone and/or Fax numbers: [insert telephone and/or fax numbers of the Bidder's authorized representative]  
Email Address: [insert email address of the Bidder's authorized representative]

This is to notify you of our intention to award the contract [insert name of the contract and identification number, as given in the Bid Data Sheet]. You have [insert number of days as specified in ITB 43.1 of the BDS] days from the date of this notification to (i) request for a debriefing in relation to the evaluation of your Bid; and/or (ii) submit a bidding-related complaint in relation to the intention for award of contract, in accordance with the procedures specified in ITB 48.1.

The summary of the evaluation is as follows:

### 1. List of Bidders

Name of Bidder	Bid Price as Read Out at Opening	Evaluated Bid Price	Technical Score	Financial Score	Combined Technical and Financial Scores

### 2. Reason/s Why Your Bid Was Unsuccessful

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### 3. The Successful Bidder

Name of Bidder	
Address	
Accepted Contract Amount	
Duration of Contract	
Scope of the Contract Awarded	
Amount Performance Security Required	

Authorized Signature: .....

Name and Title of Signatory: .....

Name of Agency: .....



(vi) **Letter of Acceptance**  
[on letterhead of Employer]

[date]

To: [Name and address of the contractor]

Subject: Contract No. [please specify]

This is to notify you that your Bid dated [date] for execution of the [name of the contract and identification number, as given in the Bid Data Sheet] for the Accepted Contract Amount in the equivalent of [amount in words and figures and name of currency], as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 28 days in accordance with the Conditions of Contract and any additional security required as a result of the evaluation of your bid, using for that purpose the Performance Security Form included in Section 9 (Contract Forms) of the Bidding Document.

Authorized Signature: .....

Name and Title of Signatory: .....

Name of Agency: .....

Attachment: Contract Agreement

## (vii) Contract Agreement

THIS CONTRACT AGREEMENT made the [date] day of [month], [year], between [name of the Employer] (hereinafter “the Employer”), of the one part, and [name of the contractor] (hereinafter “the Contractor”), of the other part:

WHEREAS the Employer desires that the Works known as [name of the contract] should be executed by the Contractor, and has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects therein.

The Employer and the Contractor agree as follows:

1. In this Contract Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Contract Agreement. This Contract Agreement shall prevail over all other Contract documents.
  - (iv)
    - (a) the Contract Agreement;
    - (b) Letter of Acceptance;
    - (c) Letter of Technical Bid;
    - (d) Letter of Price Bid;
    - (e) the Particular Conditions – Part A – Contract Data;
    - (f) the Particular Conditions – Part B – Special Provisions;
    - (g) the Particular Conditions – Part C – Corrupt and Fraudulent Practices;
    - (h) the Particular Conditions – Part D – Environmental, Health, and Safety (EHS) Metrics for Progress Reports;
    - (i) List of Eligible Countries as defined by the Bank;
    - (j) General Conditions of Contract;
    - (k) the Employer’s Requirements, including EMP, EHS, personnel, and equipment requirements;
    - (l) the Schedules, including the Price Activities and Sub-Activities;
    - (m) The Contractor’s Proposal, including the Environmental, Health, and Safety Code of Conduct for Contractor’s Personnel and the Environmental, Health, and Safety Management Plan (EHSMP);
    - (n) the Joint Venture Undertaking (if the Contract is a Joint Venture); and
    - (o) any other documents forming part of the Contract..<sup>19</sup>
  - (v)
3. In consideration of the payments to be made by the Employer to the Contractor as indicated in this Contract Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.
  - (vi)
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

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<sup>19</sup> Tables of Adjustment Data may be added if the contract provides for price adjustment (see GCC 13.7).

IN WITNESS whereof the parties hereto have caused this Contract Agreement to be executed in accordance with the laws of [*name of the borrowing country*] on the day, month, and year indicated above.

Signed by .....  
for and on behalf of the Employer

Signed by .....  
for and on behalf the Contractor

in the presence of

in the presence of

Witness, Name, Signature, Address, Date

Witness, Name, Signature, Address, Date

