

BIDDING DOCUMENT

National Competitive Bidding - NCB
(Two-Envelope Bidding Process with e-Procurement)



Engineering, Procurement and Construction
(EPC) Contract
For
Renovation and Modernization of Existing
Navigational Lock at Farakka,
West Bengal

VOLUME-1

BIDDING DOCUMENT

RFB: IN-IWAI-350002-CW-RFB-2

Issued on Nov 2023

**Employer: Inland Waterways Authority of India,
Ministry of Shipping, Government of India
A-13, Sector -1, Noida**

Country: India

Inland waterways Authority of India
(Ministry of Shipping, Govt of India)
Project: Capacity Augmentation of NW-1 (Jal Marg Vikas)

NATIONAL COMPETITIVE BIDDING

(Engineering, Procurement and Construction (“EPC”) following two envelope Bidding Process with e-Procurement)

RFB No: - IN-IWAI-350002-CW-RFB-2

NAME OF WORK	: Engineering, Procurement and Construction (EPC) Contract for Renovation and Modernization of Existing Navigational Lock at Farakka, West Bengal
PERIOD OF SALE OF BIDDING DOCUMENT	: FROM 25.11.2023 TO 28.12.2023
TIME AND DATE OF HOURS PRE-BID MEETING	: DATE 11.12.2023 TIME 1500 Hrs
LAST DATE AND TIME FOR RECEIPT OF BIDS	: DATE 28.12.2023 TIME 1500 HOURS
* TIME AND DATE OF OPENING OF BIDS – Technical Part	: DATE 28.12.2023 TIME 1530 HOURS
PLACE OF OPENING OF BIDS	: IWAI, A-13, Sector-1, Noida
OFFICER INVITING BIDS	: Project Director (JMVP) Inland Waterways Authority of India, A – 13, Sector – 1, Noida – 201301, Uttar Pradesh – INDIA Telephone No.: (91) 0120-2424544 Email. : vc.iwai@nic.in

** Should be the same as the deadline for submission of bids or promptly thereafter. The firms that qualify technically shall be notified subsequently for opening of the financial part of their bids.*

REQUEST FOR BIDS

(RFB)

REQUEST FOR BIDS (RFB)

E-Procurement Notice

(Engineering, Procurement and Construction (“EPC”) Contract following Two-Envelope Bidding Process with e-Procurement)

NATIONAL COMPETITIVE BIDDING

Name of Project: Capacity Augmentation of NW-1 (Jal Marg Vikas)

Contract Title: Engineering, Procurement and Construction (EPC) Contract for Renovation and Modernization of Existing Navigational Lock at Farakka, West Bengal

Loan No.: 8752-IN

RFB Reference No.: IN-IWAI-350002-CW-RFB-2

Date: 25.11.2023

1. The Inland Waterways Authority of India, Ministry of Shipping, Government of India has received financing from the International Bank for Reconstruction and Development toward the cost of Capacity Augmentation of National Waterway – 1 (Jal Marg Vikas Project) and intends to apply a part of the funds to cover eligible payments under the contract for construction of works as detailed below:
Engineering, Procurement and Construction (EPC) Contract for Renovation and Modernization of Existing Navigational Lock at Farakka, West Bengal
2. Bidding will be conducted through national competitive bidding using a Request for Bids (RFB) as specified in the World Bank’s “Procurement Regulations for IPF Borrowers, July 2016_Revised August 2018” (“Procurement Regulations”), and is open to all Bidders as defined in the Procurement Regulations.
3. Bidders from India should, however, be registered with the Government of West Bengal or other State Governments/Government of India, or State/ Central Government Undertakings. Bidders from India, who are not registered as above, on the date of bidding, can also participate provided they get themselves registered by the time of contract signing, if they become successful bidders.
4. The Inland Waterways Authority of India, Government of India (*Implementing Agency*) now invites online bids from eligible Bidders for the construction of works detailed below in the table. Interested bidders may obtain further information and inspect the bidding document at the address given below during office hours. Bidders are advised to note the clauses on eligibility (Section I Clause 4) and minimum qualification criteria (Section III – Evaluation and Qualification Criteria), to qualify for the award of the contract. In addition, please refer to paragraphs 3.14

and 3.15 of the “Procurement Regulations” setting forth the World Bank’s policy on conflict of interest.

5. The bidding document is available online on NIC e Procurement (*website*) from 25.11.2023 to 28.12.2023 (*dates*) for a non-refundable fee as indicated in the table below, in the form of Demand Draft/RTGS/NEFT on any Scheduled/Nationalized bank payable at *IWAI Fund (Jal Marg Vikas)*, payable at NOIDA. Bidders will be required to register on the website. The bidders would be responsible for ensuring that any addenda available on the website is also downloaded and incorporated.
6. For submission of the bid, the bidder is required to have Digital Signature Certificate (DSC) from one of the Certifying Authorities authorised by Government of India for issuing DSC. Aspiring bidders who have not obtained the user ID and password for participating in e-procurement in this Project, may obtain the same from the website: <https://eprocure.gov.in/eprocure/app>. A non-refundable fee of Rs. 5000/- + Rs. 900 (GST @ 18%) i.e. Rs 5,900/- (inclusive of tax) is required to be paid. The mode of payment shall be in the form of Demand Draft/RTGS/NEFT drawn in favour of *IWAI Fund (Jal Marg Vikas)*, payable at *NOIDA*, from any Scheduled/ Nationalized Bank. Payment documents are to be submitted along with other documents listed in paragraph 7 below before the bid submission deadline.

(a) Name of Bank Account:	IWAI Fund (Jal Marg Vikas)
(b) Bank Name and Address	Canara bank, Sector-18, Morna Branch, Noida
(c) Bank Account Number	87781010014534
(d) IFSC	CNRB0018778

7. Bids comprise two Parts, namely the Technical Part and the Financial Part, and both parts must be submitted simultaneously online on: <https://eprocure.gov.in/eprocure/app> (*website*) on or before 1500 hours on 28.12.2023 and the ‘Technical Part’ of the bids will be publicly opened online on the same day at 1530 hours, in the presence of the bidders’ designated representatives and anyone who choose to attend. The “Financial Part” shall remain unopened in the e-procurement system until the second public Bid opening for the financial part. Any bid or modifications to bid (including discount) received outside e-procurement system will not be considered. If the office happens to be closed on the date of opening of the bids as specified, the bids will be opened on the next working day at the same time and venue. The electronic bidding system would not allow any late submission of bids.
8. All Bids must be accompanied by a bid security of the specified for the work in the table below, drawn in favour of *IWAI Fund (Jal Marg Vikas)*, payable at *NOIDA*. Bid security will have to be in any one of the forms as specified in the bidding document and shall have to be valid for 45 days beyond the validity of the bid. Procedure for submission of bid security is described in Para 7.

9. The bidders are required to submit (a) original payment documents towards the cost of bid document; and registration on e-procurement website (if applicable); (b) original bid security in approved form; and (c) original affidavit regarding correctness of information furnished with bid document with

Project Director

Project Management Unit, Jal Marg Vikas Project

Address: A-13, Sector – 1 Noida, Gautam Buddha Nagar, Uttar Pradesh

PIN: 201301 India

before the bid submission deadline, either by registered post/speed post/courier or by hand, failing which the bids will be declared non-responsive and will not be opened.

10. A pre-bid meeting will be held on 11.12.2023 at 1500 hours at the office of
Project Director, JMVP
Project Management Unit, Jal Marg Vikas Project
Address: A-13, Sector – 1 Noida, Gautam Buddha Nagar, Uttar Pradesh
ZIP Code: 201301 Country: India
to clarify the issues and to answer questions on any matter that may be raised at that stage as stated in ITB Clause 7.4 of ‘Instructions to Bidders’ of the bidding document. Bidders are advised to download the bidding document prior to the pre-bid meeting in order for bidders to have a good understanding of the scope of work under this contract for discussion and clarification at the pre-bid meeting.
11. Other details can be seen in the bidding document. The Employer shall not be held liable for any delays due to system failure beyond its control. Even though the system will attempt to notify the bidders of any bid updates, the Employer shall not be liable for any information not received by the bidder. It is the bidders’ responsibility to verify the website for the latest information related to this bid.
12. The address for communication is as under:
- (a) Name & Designation of Officer: Project Director, JMVP
 - (b) Official Address: Project Management Unit, Jal Marg Vikas Project, A-13, Sector – A-13, Sector – 1 Noida, Gautam Buddha Nagar, Uttar Pradesh, India-201301
 - (c) Email: vc.iwai@nic.in
 - (d) Telephone: +91 120- 2424544

Inland waterways Authority of India (Ministry of Shipping, Ports & Waterways, Govt of India) PROJECT – Capacity Augmentation of NW-1 (Jal Marg Vikas) RFB NO:- IN-IWAI-350002-CW-RFB-2 NATIONAL COMPETITIVE BIDDING				
NAME OF WORK	“Engineering, Procurement and Construction (EPC) Contract for Renovation and Modernization of Existing Navigational Lock at Farakka, West Bengal”			
DOWNLOADING OF BIDDING DOCUMENT	FROM 25.12.2023 to 28.12.2023 [1500 Hrs]			
TIME AND DATE OF PRE-BID CONFERENCE	Date: - 11.12.2023 at 1500 hours			
LAST DATE AND TIME FOR BID SUBMISSION / RECEIPT OF BIDS	Date: - 28.12.2023 TIME 1500 HOURS			
TIME AND DATE OF OPENING: Technical Part	Date: - 28.12.2023 TIME 1530 HOURS			
Place of Bid Opening	Inland Waterways Authority of India Project Management Unit – JMVP Jal Marg Vikas Project; A-13, Sector -1, Noda [UP]			
OFFICER INVITING BIDS	Project Director [JMVP]			
Package No	Name of Work	Bid Security * Rs.	Cost of Document Rs.	Period of Completion
1	2	3	4	5
IN-IWAI-350002-CW-RFB	“Engineering, Procurement and Construction (EPC) Contract for Renovation and Modernization of Existing Navigational Lock at Farakka, West Bengal”	INR 3,20,00,000.00	INR 5900	20 Months

Table of Contents

VOLUME-1: BIDDING DOCUMENT

Descriptions	Page No.
Part 1 – Bidding Procedures	9
Section I. Instructions to Bidders	10
Section II. Bid Data Sheet	35
Section III. Evaluation and Qualification Criteria	45
Section IV. Bidding Forms	56
Section V. Eligible Countries	108
Section VI. Bank Policy - Corrupt and Fraudulent Practices	109
Part 2 - Works Requirements	
Section VII.: Conditions of Contract together with Schedules	112

VOLUME-2: TECHNICAL SPECIFICATION AND DRAWINGS

VOLUME-3: BILL OF QUANTITIES

PART 1-BIDDING PROCEDURES

Section I - Instructions to Bidders

Table of Contents

A. General.....	12
1. Scope of Bid.....	12
2. Source of Funds	12
3. Corrupt and Fraudulent Practices.....	13
4. Eligible Bidders	13
5. Eligible Materials, Equipment and Services	15
B. Contents of Bidding Document.....	16
6. Sections of Bidding Document	16
7. Clarification of Bidding Document, Site Visit, Pre-Bid Meeting.....	16
8. Amendment of Bidding Document	18
C. Preparation of Bids	18
9. Cost of Bidding	18
10. Language of Bid.....	18
11. Documents Comprising the Bid.....	18
12. Process of Bid Submission.....	19
13. Alternative Bids	20
14. Bid Prices and Discounts	20
15. Currencies of Bid and Payment	22
16. Documents Comprising the Technical Proposal.....	22
17. Documents Establishing the Qualifications of the Bidder	22
18. Period of Validity of Bids	22
19. Bid Security	22
20. Format and Signing of Bid.....	24
D. Online Submission and Opening of Bids	24
21. Preparation of Bids	24
22. Deadline for Submission of Bids	26
23. Late Bids	26
24. Withdrawal, Substitution, and Modification of Bids	26
E. Public Opening of Technical Parts of Bids	26
25. Public Opening of Technical Parts of Bids.....	26
F. Evaluation of Bids – General Provisions	27
26. Confidentiality	27
27. Clarification of Bids.....	27
28. Deviations, Reservations, and Omissions.....	28
29. Nonconformities, Errors, and Omissions.....	28
G. Evaluation of Technical Parts of Bids	28
30. Evaluation of Technical Parts	28
31. Determination of Responsiveness.....	28
32. Qualification of the Bidder	29

33.	Subcontractors.....	29
H. Public Opening of Financial Parts of Bids.....		30
34.	Public Opening of Financial Parts	30
I. Evaluation of Financial Parts of Bids		31
35.	Evaluation of Financial Parts	31
36.	Correction of Arithmetical Errors	31
37.	Conversion to Single Currency	32
38.	Margin of Preference	32
39.	Comparison of Financial Parts	32
40.	Unbalanced or Front-Loaded Bids	32
41.	Employer's Right to Accept Any Bid, and to Reject Any or All Bids	32
J. Award of Contract		32
42.	Award Criteria	32
43.	Notification of Award	32
44.	Signing of Contract, Publication of award and Recourse to unsuccessful Bidders	33
45.	Performance Security	33
46.	Adjudicator	34

SECTION I - INSTRUCTIONS TO BIDDERS

A. General

1. **Scope of Bid**
 - 1.1 In connection with the Specific Procurement Notice - Request for Bids (RFB), **specified in the Bid Data Sheet (BDS)**, the Employer, as **specified in the BDS**, issues this bidding document for the provision of Works as specified in Section VII, Works' Requirements. The name, identification and number of lots (contracts) of this RFB are **specified in the BDS**.
 - 1.2 Throughout this bidding document:
 - (a) the term "in writing" means communicated in written form (e.g. by mail, e-mail, and fax, including if **specified in the BDS**, distributed or received through the electronic-procurement system used by the Employer) with proof of receipt;
 - (b) if the context so requires, "singular" means "plural" and vice versa;
 - (c) "Day" means calendar day, unless otherwise specified as "Business Day". A Business Day is any day that is an official working day of the Borrower. It excludes the Borrower's official public holidays; and
 - (d) "ESHS" means environmental, social (including sexual exploitation and abuse (SEA) and gender-based violence (GBV)), health and safety.
2. **Source of Funds**
 - 2.1 The Borrower or Recipient (hereinafter called "Borrower") **specified in the BDS** has received or has applied for financing (hereinafter called "funds") from the International Bank for Reconstruction and Development or the International Development Association (hereinafter called "the Bank") in an amount **specified in the BDS**, toward 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.
 - 2.2 Payment by the Bank will be made only at the request of the Borrower and upon approval by the Bank, and will be subject, in all respects, to the terms and conditions of the Loan (or other financing) Agreement. The Loan (or other financing) Agreement prohibits a withdrawal from the loan account for the purpose of any payment to persons or entities, or for any import of goods, equipment, plant, or materials, if such payment or import is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No

party other than the Borrower shall derive any rights from the Loan (or other financing) Agreement or have any claim to the proceeds of the Loan (or other financing).

3. Fraud and Corruption

- 3.1 The Bank requires compliance with the Bank's Anti-Corruption Guidelines and its prevailing sanctions policies and procedures as set forth in the WBG's Sanctions Framework, as set forth in Section VI.
- 3.2 In further pursuance of this policy, bidders shall permit and shall cause their agents (whether declared or not), subcontractors, sub-consultants, service providers, suppliers, and their personnel, to permit the Bank to inspect all accounts, records and other documents relating to any initial selection process, prequalification process, bid submission, proposal submission, and contract performance (in the case of award), and to have them audited by auditors appointed by the Bank.

4. Eligible Bidders

- 4.1 A Bidder may be a firm that is a private entity, or a state-owned enterprise or institution subject to ITB 4.6, or any combination of them in the form of a joint venture (JV), under an existing agreement, or with the intent to enter into such an agreement supported by a letter of intent, unless otherwise **specified in the BDS**. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the Bidding process and, in the event the JV is awarded the Contract, during contract execution. This authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all members. Unless **specified in the BDS**, there is no limit on the number of members in a JV. The joint venture agreement shall be registered in the place **specified in BDS** so as to be legally valid and binding on members.
- 4.2 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 have a conflict of interest for the purpose of this Bidding process, if the Bidder:
 - (a) directly or indirectly controls, is controlled by or is under common control with another Bidder; or
 - (b) receives or has received any direct or indirect subsidy from another Bidder; or
 - (c) has the same legal representative as another Bidder; or
 - (d) has a relationship with another Bidder, directly or through common third parties, that puts it in a position to influence

the Bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or

- (e) participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which such Bidder is involved. However, this does not limit the inclusion of the same subcontractor in more than one bid; or
- (f) any of its affiliates 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) any of its affiliates has been hired (or is proposed to be hired) by the Employer or Borrower as Engineer for the Contract implementation;
- (h) would be providing goods, works, or non-consulting 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;
- (i) has a close business or family relationship with a professional staff of the Borrower (or of the project implementing 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 the Bank throughout the procurement process and execution of the contract.

4.3 A firm that is a Bidder (either individually or as a JV member) shall not participate in more than one Bid, except for permitted alternative Bids. This includes participation as a Subcontractor in other Bids. Such participation shall result in the disqualification of all Bids in which the firm is involved. A firm that is not a Bidder or a JV member may participate as a subcontractor in more than one Bid.

4.4 A Bidder may have the nationality of any country, subject to the restrictions pursuant to ITB 4.8. A Bidder shall be deemed to have the nationality of a country if the Bidder is constituted, incorporated or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the

nationality of proposed subcontractors or sub-consultants for any part of the Contract including related Services.

- 4.5 A Bidder that has been sanctioned by the Bank, pursuant to the Bank's Anti-Corruption Guidelines, in accordance with its prevailing sanctions policies and procedures as set forth in the WBG's Sanctions Framework as described in Section VI paragraph 2.2 d., shall be ineligible to be prequalified for, initially selected for, bid for, propose for, or be awarded a Bank-financed contract or benefit from a Bank-financed contract, financially or otherwise, during such period of time as the Bank shall have determined. The list of debarred firms and individuals is available at the electronic address **specified in the BDS**.
- 4.6 Bidders that are state-owned enterprises or institutions in the Employer's Country may be eligible to compete and be awarded a Contract(s) only if they can establish, in a manner acceptable to the Bank, that they (i) are legally and financially autonomous (ii) operate under commercial law, and (iii) are not under supervision of the Employer.
- 4.7 A Bidder shall not be under suspension from Bidding by the Employer as the result of the operation of a Bid-Securing or Proposal-Securing Declaration.
- 4.8 Firms and individuals may be ineligible if so indicated in Section V and (a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of goods or the contracting of works or services required; or (b) 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 or contracting of works or services from that country, or any payments to any country, person, or entity in that country. When the Works are implemented across jurisdictional boundaries (and more than one country is a Borrower, and is involved in the procurement), then exclusion of a firm or individual on the basis of ITB 4.8 (a) above by any country may be applied to that procurement across other countries involved, if the Bank and the Borrowers involved in the procurement agree.
- 4.9 A Bidder shall provide such documentary evidence of eligibility satisfactory to the Employer, as the Employer shall reasonably request.

5. Eligible Materials, Equipment and Services

- 5.1 The materials, equipment and services to be supplied under the Contract and financed by the Bank may have their origin in any country subject to the restrictions specified in Section V, Eligible Countries, and all expenditures under the Contract will not contravene such restrictions. At the Employer's request, Bidders

may be required to provide evidence of the origin of materials, equipment and services.

B. Contents of Bidding Document

6. Sections of Bidding Document

- 6.1 The bidding document consists of volumes 1, 2, and 3, which include all the sections specified below, and which should be read in conjunction with any Addenda issued in accordance with ITB 8.

VOLUME-1: BIDDING DOCUMENT

PART 1 Bidding Procedures

- Section I - Instructions to Bidders (ITB)
- Section II - Bid Data Sheet (BDS)
- Section III - Evaluation and Qualification Criteria
- Section IV - Bidding Forms
- Section V - Eligible Countries
- Section VI - Fraud and Corruption

PART 2 Works' Requirements

- Section VII - Works' Requirements: Conditions of Contract together with Schedules.

VOLUME-2: TECHNICAL SPECIFICATION AND DRAWINGS

VOLUME-3: BILL OF QUANTITIES

- 6.2 The Specific Procurement Notice - Request for Bids (RFB) issued by the Employer is not part of this bidding document.
- 6.3 Unless obtained directly from the Employer or downloaded from the official website specified in the 'E-Procurement Notice', the Employer is not responsible for the completeness of the bidding document, responses to requests for clarification, the minutes of the pre-Bid meeting (if any), or Addenda to the bidding document in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Employer or downloaded from the official website specified in the 'E-Procurement Notice' shall prevail.
- 6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding document and to furnish with its Bid all information and documentation as is required by the bidding document.

7. Clarification of Bidding Document, Site

- 7.1 The electronic bidding system **specified in the BDS** provides for online clarifications. A Bidder requiring any clarification on the bidding document may notify the *Employer* online or raise its

Visit, Pre-Bid Meeting

inquiries during the pre-Bid meeting if provided for in accordance with ITB 7.4. Clarifications requested through any other mode shall not be considered by the Employer. The *Employer* will respond to any request for clarification, provided that such request is received prior to the deadline for submission of Bids within a period **specified in the BDS**. Description of clarification sought and the response of the *Employer* shall be uploaded for information of all Bidders without identifying the source of request for clarification. Should the clarification result in changes to the essential elements of the bidding document, the Employer shall amend the bidding document following the procedure under ITB 8 and ITB 22.2. It is the bidder's responsibility to check on the e-procurement system, for any addendum/ amendment/ corrigendum to the bidding document.

- 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 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 upon 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 If so **specified in the BDS**, the Bidder's designated representative is invited to attend a pre-Bid meeting and/or a Site of Works visit. 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 only through the e-procurement portal, not later than one week before the meeting. Clarifications requested through any other mode shall not be considered by the Employer.
- 7.6 Minutes of the pre-Bid meeting, if applicable, including the text of the questions asked by Bidders, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be uploaded online on e-procurement system. 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. It is the bidder's responsibility to check on the e-procurement system, for any addendum/ amendment/

corrigendum to the bidding document. Nonattendance at the pre-Bid meeting will not be a cause for disqualification of a Bidder.

- 8. Amendment of Bidding Document**
- 8.1 At any time prior to the deadline for submission of bids, the *Employer* may amend the bidding document by issuing addenda.
- 8.2 Any addendum issued shall be part of the bidding document and shall be deemed to have been communicated to all the bidders. The addenda will appear on the e-procurement system under “Latest Corrigendum”, and Email notification is also automatically sent to those bidders who have started working on the tender, unless otherwise **specified in the BDS**. The Employer shall not be liable for any information not received by the bidder. It is the bidders’ responsibility to verify the website for the latest information related to this bid.
- 8.3 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 22.2.

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 English. 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 English, 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 Parts, namely the Technical Part and the Financial Part. These two Parts shall be submitted simultaneously.
- 11.2 The Technical Part shall contain the following:
- (a) **Letter of Bid – Technical Part** prepared in accordance with ITB 12 and ITB 14;
 - (b) **Bid Security** in accordance with ITB 19.1;
 - (c) **Alternative Bid – Technical Part**, if permissible, in accordance with ITB 13, the Technical Part of any Alternative Bid;

- (d) **Authorization:** written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 20.3, and in accordance with ITB 20.4 in case of a JV;
- (e) **Bidder's Eligibility:** documentary evidence in accordance with ITB 17 establishing the Bidder's eligibility to Bid;
- (f) **Qualifications:** documentary evidence in accordance with ITB 17 establishing the Bidder's qualifications to perform the contract if its Bid is accepted;
- (g) **Conformity:** a technical proposal in accordance with ITB 16;
- (h) **Construction methodology** as detailed in Para 1.1 of Section III Evaluation Criteria;
- (i) Contractor Registration certificate (as per RFB), if applicable; and
- (j) any other document and schedules **required in the BDS.**

11.3 The **Financial Part** shall contain the following:

- (a) **Letter of Bid – Financial Part:** prepared in accordance with ITB 12 and ITB 14;
- (b) **Alternative Bid - Financial Part:** if permissible in accordance with ITB 13; and
- (c) any other document required **in the BDS.**

11.4 The Technical Part shall not include any information related to the Bid price. Where material financial information related to the Bid price is contained in the Technical Part the Bid shall be declared non-responsive.

11.5 In addition to the requirements under ITB 11.2, Bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful Bid shall be signed by all members and submitted with the Bid, together with a copy of the proposed Agreement.

11.6 The Bidder shall furnish in the Letter of Bid – Financial Part information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid, and to contract execution if the Bidder is awarded the contract.

12. Letters of Bid and Schedules

12.1 The Letter of Bid – Technical Part, Letter of Bid – Financial Part, Schedules, and all documents listed under Clause 11, shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any

alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.3. All blank spaces shall be filled in with the information requested.

13. Alternative Bids

- 13.1 Unless otherwise specified **in the BDS**, alternative Bids shall not be considered.
- 13.2 When alternative times for completion are explicitly invited, a statement to that effect will be included **in the BDS** and the method of evaluating different alternative times for completion will be described in Section III, Evaluation and Qualification Criteria.
- 13.3 Except as provided under ITB 13.4 below, Bidders wishing to offer technical alternatives to the requirements of the bidding document must first price the *Employer's* 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 Bidder with the Most Advantageous Bid conforming to the basic technical requirements shall be considered by the *Employer*.
- 13.4 When specified **in the BDS**, Bidders are permitted to submit alternative technical solutions for specified parts of the Works. Such parts will be identified **in the BDS** and described in Section VII, *Works' Requirements*. The method for their evaluation will be stipulated in Section III, Evaluation and Qualification Criteria.

14. Bid Prices and Discounts

- 14.1 The prices and discounts quoted by the Bidder in the Letter of Bid –Financial Part shall conform to the requirements specified below.
- 14.2 Deleted.
- 14.3 The price to be quoted in the Letter of Bid – Financial Part, in accordance with ITB 12.1, shall be the total price of the Bid, including any discounts offered.
- 14.4 Deleted.
- 14.5 Unless otherwise **specified in the BDS** and the Contract, the prices quoted by the Bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract.
- 14.6 Deleted.
- 14.7 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 prices and the total Bid price submitted by the Bidder.

- 14.8 Bidders may like to ascertain availability of tax/duty exemption benefits available in India. They are solely responsible for obtaining such benefits which they have considered in their bid and in case of failure to receive such benefits for reasons whatsoever, the Employer will not compensate the successful bidder (“Contractor”). The bidder shall furnish along with his bid a declaration to this effect in the Declaration Format provided in Section IV of the bidding document.
- 14.9 Where the bidder has quoted taking into account such benefits, it must give all information required for issue of certificates in terms of the Government of India’s relevant Notifications as per the declaration format. In case the bidder has not provided the required information or has indicated to be furnished later on in the Declaration Format, the same shall be construed that the goods/construction equipment for which certificate is required is Nil.
- 14.10 To the extent the Employer determines the quantities indicated therein are reasonable keeping in view the approved design, work requirements, construction program and methodology, the certificates will be issued within 60 days of signing of the contract and no subsequent changes will be permitted. In case of materials pertaining to Variation items and quantities, the certificate shall be issued only on request from the Contractor when in need and duly certified by the Engineer-in-charge.
- 14.11 No certificate will be issued for items where no quantity/capacity of equipment is indicated in the statement.
- 14.12 If the bidder has considered the tax/duty exemption for materials/construction equipment to be bought for the work, the bidder shall confirm and certify that the Employer will not be required to undertake any responsibilities of the Government of India Scheme or the said exemptions being available during the contract execution, except issuing the required certificate. The bids which do not conform to the above provisions or any condition by the bidder which makes the bid subject to availability of tax/duty exemption for materials/construction equipment or compensation on withdrawal of any variations to the said exemptions will be treated as non-responsive and rejected.
- 14.13 Any delay in procurement of the construction equipment/machinery/goods as a result of the above shall not be a cause for granting any extension of time.

15. Currencies of Bid and Payment

- 15.1 The currency of the bid and the currency of payments shall entirely be Indian Rupees only.

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| 16. Documents
Comprising the
Technical
Proposal | 16.1 The Bidder shall furnish a technical proposal in the Technical Part of the Bid, including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section IV, Bidding Forms, in sufficient detail to demonstrate the adequacy of the Bidders' proposal to meet the work's requirements and the completion time. |
| 17. Documents
Establishing the
Eligibility and
Qualifications of
the Bidder | 17.1 To establish Bidder's eligibility in accordance with ITB 4, Bidders shall complete the Letter of Bid – Technical Part, included in Section IV, Bidding Forms.

17.2 In accordance with Section III, Evaluation and Qualification Criteria, to establish its qualifications to perform the Contract, the Bidder shall provide the information requested in the corresponding information sheets included in Section IV, Bidding Forms. |
| 18. Period of Validity
of Bids | 18.1 Bids shall remain valid for the period specified in the BDS . The Bid Validity period starts from the date fixed for the Bid submission deadline (as prescribed by the Employer in accordance with ITB 22.1). A Bid valid for a shorter period shall be rejected by the <i>Employer</i> as nonresponsive.

18.2 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 19, it shall also be extended for forty five (45) 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, except as provided in ITB 18.3.

18.3 If the award is delayed by a period exceeding fifty-six (56) days beyond the expiry of the initial Bid validity period, the Contract price shall be determined as follows: <ul style="list-style-type: none"> (a) in the case of fixed price contracts, the Contract price shall be the Bid price adjusted by the factor specified in the BDS; (b) in the case of adjustable price contracts, no adjustment shall be made; or (c) in any case, Bid evaluation shall be based on the Bid price without taking into consideration the applicable correction from those indicated above. |
| 19. Bid Security | 19.1 The Bidder shall furnish as part of the Technical Part of its Bid, a Bid Security as specified in the BDS , in original form, and for the amount specified in the BDS .

19.2 Not used. |

- 19.3 *If a Bid Security is specified pursuant to ITB 19.1, the Bid Security shall be a demand guarantee in any of the following forms at the Bidder's option:*
- (a) an unconditional bank guarantee issued by a Nationalized or Scheduled bank located in India;
 - (b) an irrevocable letter of credit issued by a Nationalized or Scheduled bank located in India;
 - (c) a cashier's or certified check or demand draft issued by a Nationalized or Scheduled bank located in India;
 - (d) another security **specified in the BDS**,
- 19.4 In the case of a bank guarantee, the Bid Security shall be submitted using the Bid Security Form included in Section IV, Bidding Forms. The form must include the complete name of the Bidder. The Bid Security shall be valid for forty-five (45) days beyond the original validity period of the Bid, or beyond any period of extension if requested under ITB 18.2.
- 19.5 If a Bid Security is specified pursuant to ITB 19.1, any Bid not accompanied by a substantially *responsive* Bid Security in accordance with ITB 19.3 shall be rejected by the Employer as non-responsive.
- 19.6 If a Bid Security is specified pursuant to ITB 19.1, the Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's signing the Contract and furnishing the Performance Security and if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security pursuant to ITB 50.
- 19.7 The Bid Security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract and furnished the required Performance Security and if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security pursuant to ITB 50.
- 19.8 The Bid Security may be forfeited:
- (a) if a Bidder withdraws/modifies/substitutes its Bid during the period of Bid validity specified by the Bidder on the Letter of Bid - Technical Part and repeated in Letter of Bid - Financial Part, or any extension thereto provided by the Bidder; or
 - (b) if the Bidder does not accept the correction of its Bid Price pursuant to ITB 36; or
 - (c) if the successful Bidder fails to:

- (i) sign the Contract in accordance with ITB 49; or
- (ii) furnish a Performance Security and if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security in accordance with ITB 50.

19.9 The Bid Security of a JV shall be in the name of the JV that submits the Bid. If the JV has not been constituted into a legally enforceable JV, at the time of Bidding, the Bid Security shall be in the names of all future members as named in the letter of intent mentioned in ITB 4.1 and ITB 11.2.

20. Format and Signing of Bid

20.1 The Bidder shall prepare the Bid, in accordance with this Instruction, ITB 11 and ITB 21.

20.2 Bidders shall mark as “CONFIDENTIAL” information in their Bids which is confidential to their business.

20.3 The Bid 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 uploaded along with the Bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Bid where entries or amendments have been made shall be signed or initialed by the person signing the Bid.

20.4 In case the Bidder is a JV, the Bid shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives. Documents establishing authority to sign the bid on behalf of the JV shall be uploaded along with the bid.

20.5 Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialled by the person signing the Bid.

D. Online Submission of Bids

21. Sealing and Marking of Bids

21.1 Bids, both Technical and Financial Parts, shall be submitted online on the e-procurement system specified in BDS 7.1. Detailed guidelines for viewing bids and submission of online bids are given on the website. The Request for Bids under this Project is published on this website. Any citizen or prospective bidder can logon to this website and view the Request for Bids and can view the details of works for which bids are invited. A prospective bidder can submit its bid online; however, the bidder is required to have enrolment/registration in the website, and should have valid Digital Signature Certificate (DSC) in the form of smart card/e-token obtained from any certifying agency authorised by the Government of India (for class of DSC

specified in BDS). The bidder should register in the website using the relevant option available. Then the Digital Signature registration has to be done with the e-token, after logging into the website. The bidder can then login the website through the secured login by entering the password of the e-token & the user id/ password chosen during registration. After getting the bid schedules, the Bidder should go through them carefully and submit the specified documents, along with the bid, otherwise the bid will be rejected. The bidders shall fill up online, the forms that are available for online filling on the e-portal. The rest of the forms shall be download by the bidders and filled up. The filled up pages shall then be scanned and uploaded on the e-procurement portal along with the scanned copies of the supporting documents.

- 21.2 The e-Procurement system will scan the uploaded documents for virus and if a document uploaded by bidder is found to have virus, the system will reject the uploaded file. Bidders shall take due care to ensure that the documents uploaded by them in e-Procurement system are virus free. The e-Procurement system restricts bidders from uploading file attachments larger than the file size **specified in BDS**. Hence, the bidders are informed to restrict the size of file attachments uploaded as part of their bid response to less than this size per file.
- 21.3 The original (a) Bid Security in approved form, (b) Power of Attorney (s), (c) payment documents towards the cost of bid document; and registration on e-procurement website (if applicable), and (d) affidavit regarding correctness of information furnished with bid document, shall be delivered by the Bidder to the office **specified in the BDS** before the bid submission deadline. Hard copy of rest of the bid or any other document are not to be submitted.
- 21.4 In case of non-receipt of these original documents, the bid will be declared non-responsive and will not be opened.
- 21.5 The completed bid comprising of documents indicated in ITB 12, should be uploaded on the e-procurement portal along with scanned copies of requisite certificates as are mentioned in different sections in the bidding document and scanned copy of the bid security.
- 21.6 All the documents are required to be signed digitally by the bidder. After electronic online bid submission, the system generates a unique bid identification number which is time stamped as per server time. This shall be treated as acknowledgement of bid submission.
- 21.7 Physical, e-mail, Telex, Cable or Facsimile bids will be rejected as non-responsive.

22. Deadline for Submission of Bids

22.1 Bids, both Technical and Financial Parts, must be uploaded online no later than the date and time **specified in the BDS**.

22.2 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.

23. Late Bids

23.1 The electronic bidding system would not allow any late submission of bids after due date & time as per server time.

24. Withdrawal, Substitution, and Modification of Bids

24.1 Bidders may modify their bids by using the appropriate option for bid modification on e-procurement portal, before the deadline for submission of bids. For this the bidder need not make any additional payment towards the cost of bid document. For bid modification and consequential re-submission, the bidder is not required to withdraw his bid submitted earlier. The last modified bid submitted by the bidder within the bid submission time shall be considered as the bid. For this purpose, modification/withdrawal by other means will not be accepted. In online system of bid submission, the modification and consequential re-submission of bids is allowed any number of times. A bidder may withdraw his bid by using the appropriate option for bid withdrawal, before the deadline for submission of bids, however, if the bid is withdrawn, re-submission of the bid is not allowed (or allowed **if specified in BDS**).

24.1 Bids requested to be withdrawn in accordance with ITB 24.1 shall not be available in the system, and shall therefore not be opened.

24.2 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 Letter of Bid or any extension thereof. This will result in the forfeiture of the Bid Security pursuant to ITB 19.7.

E. Public Opening of Technical Parts of Bids

25. Public Opening of Technical Parts of Bids

25.1 The Employer shall publicly open Technical Parts of all Bids received by the deadline, at the date, time and place **specified in the BDS**, in the presence of Bidders' designated representatives and anyone who chooses to attend, and this could also be viewed by the bidders online. The Financial Parts of the bids shall remain unopened in the e-procurement system, until the subsequent public opening, following the evaluation of the Technical Parts of the Bids. In all cases, original documents submitted as specified in ITB 21 shall be first scrutinized, and Bids that do not comply with the provisions of ITB 21 will be declared non-responsive and will not be opened. Thereafter, bidders' names, the presence or absence of a Bid Security, if one was required, alternative bids –

technical parts, if any, and such other details as the Employer may consider appropriate will be notified, online by the Employer at the time of bid opening.

In the event of the specified date of bid opening being declared a holiday for the Employer, the bids will be opened at the appointed time and location on the next working day.

- 25.2 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 Technical Parts of Bids, and technical parts of Alternative Bids if any, that are opened at technical Bid opening shall be considered further for evaluation.

F. Evaluation of Bids – General Provisions

26. Confidentiality

- 26.1 Information relating to the evaluation of Bids and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with the Bidding process until information on Intention to Award the Contract is transmitted to all Bidders in accordance with ITB 45. In cases where ITB 45 is not applicable, such information shall not be disclosed until Notification of Award is transmitted in accordance with ITB 47.
- 26.2 Any effort 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.
- 26.3 Notwithstanding ITB 26.2, from the time of Bid opening to the time of Contract award, if a Bidder wishes to contact the *Employer* on any matter related to the Bidding process, it shall do so in writing.

27. Clarification of Bids

- 27.1 To assist in the examination, evaluation, and comparison of the Bids, and qualification of the Bidders, the *Employer* may, at its discretion, ask any Bidder for a clarification of its Bid giving a reasonable time for a response. 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, including any voluntary increase or decrease in the prices or substance of the Bid 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 36.
- 27.2 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.

28. Deviations, Reservations, and Omissions

- 28.1 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.

29. Nonmaterial Nonconformities

- 29.1 Provided that a Bid is substantially responsive, the *Employer* may waive any nonconformities in the Bid which do not constitute a material deviation, reservation or omission.
- 29.2 Provided that a 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 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.

G. Evaluation of Technical Parts of Bids

30. Evaluation of Technical Parts

- 30.1 In evaluating the Technical Parts of each Bid, the Employer shall use the criteria and methodologies listed in this ITB and Section III, Evaluation and Qualification Criteria. No other evaluation criteria or methodologies shall be permitted.

31. Determination of Responsiveness

- 31.1 The *Employer*’s determination of a Bid’s responsiveness is to be based on the contents of the Bid itself, as defined in ITB 11.
- 31.2 A substantially responsive 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.

- 31.3 The Employer shall examine the technical aspects of the Bid submitted in accordance with ITB 16, in particular, to confirm that all requirements of Section VII, Works' Requirements have been met without any material deviation, reservation or omission.
- 31.4 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. Qualification of the Bidder**
- 32.1 The *Employer* shall determine to its satisfaction whether the eligible Bidders that have submitted substantially responsive Bid - Technical Parts meet the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.
- 32.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 17. The determination shall not take into consideration the qualifications of other firms such as the Bidder's subsidiaries, parent entities, affiliates, subcontractors (other than Specialized Subcontractors if permitted in the bidding document), or any other firm different from the Bidder.
- 32.3 If a Bidder does not meet the qualifying criteria specified in Section III, Evaluation and Qualification Criteria, its Bid shall be rejected by the Employer and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.
- 32.4 Only Bids that are both substantially responsive to the bidding document, and meet all Qualification Criteria shall have the Financial Parts of their Bids opened at the second public opening.
- 33. Subcontractors**
- 33.1 Unless otherwise stated **in the BDS**, the Employer does not intend to execute any specific elements of the Works by subcontractors selected in advance by the Employer.
- 33.2 The subcontractor's qualifications shall not be used by the Bidder to qualify for the Works unless their specialized parts of the Works were previously designated by the Employer **in the BDS** as can be met by subcontractors referred to hereafter as 'Specialized Subcontractors', in which case, the qualifications of the Specialized Subcontractors proposed by the Bidder may be added to the qualifications.
- 33.3 Bidders may propose subcontracting up to the percentage of total value of contracts or the volume of works as **specified in the BDS**. Subcontractors proposed by the Bidder shall be fully qualified for their parts of the Works.

H. Public Opening of Financial Parts of Bids

34. Public Opening of Financial Parts

34.1 Following the completion of the evaluation of the Technical Parts of the Bids, and the Bank has issued its no objection (if applicable), the Employer shall notify in writing those Bidders whose Bids were considered non-responsive to the bidding document or failed to meet the Qualification Criteria, advising them of the following information:

- (a) the grounds on which their Technical Part of Bid failed to meet the requirements of the bidding document;
- (b) their Financial Part of Bid shall not be opened; and
- (c) notify them of the date, time, and location for public opening of Financial Parts of the Bids.

34.2 The Employer shall, simultaneously, notify in writing those Bidders whose Technical Part have been evaluated as substantially responsive to the bidding document and met all Qualifying Criteria, advising them of the following information:

- (a) their Bid has been evaluated as substantially responsive to the bidding document and met the Qualification Criteria;
- (b) their Financial Part of Bid will be opened at the public opening of the Financial Parts; and
- (c) notify them of the date, time and location for public opening of the Financial Parts of the Bids, **as specified in the BDS.**

34.3 The opening date should allow Bidders sufficient time to make arrangements for attending the opening. The Financial Part of the Bids shall be opened publicly in the presence of Bidders' designated representatives and anyone who chooses to attend, and this could also be viewed by the bidders online. The bidder's names, the Bid prices, per lot (contract) if applicable, including any discounts and Alternative Bid - Financial Part if any, and such other details as the Employer may consider appropriate, will be notified online by the Employer at the time of bid opening.

In the event of the specified date of bid opening being declared a holiday for the Employer, the bids will be opened at the appointed time and location on the next working day.

34.4 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 Financial Parts of Bids, Financial Parts of Alternative Bids, and discounts that are opened at Bid opening shall be considered further for evaluation.

I. Evaluation of Financial Parts of Bids

35. Evaluation of Financial Parts	<p>35.1 To evaluate the Financial Part, the Employer shall consider the following:</p> <ul style="list-style-type: none"> (a) the Bid price, excluding Provisional Sums, if any; (b) price adjustment for correction of arithmetic errors in accordance with ITB 36.1; (c) price adjustment due to discounts offered in accordance with ITB 14.3; (d) deleted; (e) deleted; and (f) the additional evaluation factors as specified in Section III, Evaluation and Qualification Criteria. <p>35.2 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 Bid evaluation.</p> <p>35.3 Deleted.</p>
36. Correction of Arithmetical Errors	<p>36.1 In evaluating the Financial Part of each Bid, the Employer shall correct arithmetical errors on the following basis:</p> <p>36.2 (a) if in the Letter of Bid – Financial Part, there are errors between the sub-totals and total of the amounts, the former shall prevail and the latter will be corrected accordingly; and</p> <p>36.3 (b) 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) above.</p> <p>36.4 Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with ITB 36.1, shall result in the rejection of the Bid and the Bid Security may be forfeited in accordance with ITB Sub-Clause 19.7.</p>
37. Conversion to Single Currency	<p>37.1 Not used.</p>
38. Margin of Preference	<p>38.1 Not applicable.</p>
39. Comparison of Financial Parts	<p>39.1 The <i>Employer</i> shall compare the evaluated costs of all responsive and qualified Bids to determine the Bid that has the lowest evaluated cost.</p>
40. Abnormally Low Bids	<p>40.1 An Abnormally Low Bid is one where the Bid price, in combination with other constituent elements of the Bid, appears unreasonably low to the extent that the Bid price raises material</p>

concerns as to the capability of the Bidder to perform the Contract for the offered Bid price.

- 40.2 In the event of identification of a potentially Abnormally Low Bid, the Employer, unless otherwise **specified in the BDS**, shall seek written clarifications from the Bidder, including detailed price analyses of its Bid price in relation to the subject matter of the contract, scope, proposed methodology, schedule, allocation of risks and responsibilities and any other requirements of the bidding document.
- 40.3 After evaluation of the price analyses, in the event that the Employer determines that the Bidder has failed to demonstrate its capability to perform the Contract for the offered Bid Price, the Employer shall reject the Bid.

41. Employer's Right to Accept Any Bid, and to Reject And or All Bids

- 41.1 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 documents submitted and specifically, Bid securities, shall be promptly returned to the Bidders.

J. Award of Contract

42. Award Criteria

- 42.1 Subject to ITB 43, the Employer shall award the Contract to the successful Bidder. This is the Bidder whose Bid has been determined to be the Most Advantageous Bid as specified in ITB 42.

43. Notification of Award

- 43.1 Prior to the expiration of the Bid Validity Period, the Employer shall transmit the Letter of Acceptance to the successful Bidder. The Letter of Acceptance shall specify the sum that the Employer will pay the Contractor in consideration of the execution of the contract (hereinafter and in the Conditions of Contract and Contract Forms called "the Contract Price").
- 43.2 Within ten (10) Business Days after the date of transmission of the Letter of Acceptance, the Employer shall publish the Contract Award Notice which shall contain, at a minimum, the following information:
- (a) name and address of the Employer;
 - (b) name and reference number of the contract being awarded, and the selection method used;
 - (c) names of all Bidders that submitted Bids, and their Bid prices as read out at Bid opening, and as evaluated;

- (d) names of all Bidders whose Bids were rejected either as nonresponsive or as not meeting qualification criteria, or were not evaluated, with the reasons therefor; and
- (e) the name of the successful Bidder, the final total contract price, the contract duration and a summary of its scope.

43.3 The Contract Award Notice shall be published on a National website (GoI website <http://tenders.gov.in> or GoI Central Public Procurement Portal <https://eprocure.gov.in/cppp/>) or on the Employer's website, and on the e-procurement system.

43.4 Until a formal contract is prepared and executed, the notification of award shall constitute a binding Contract.

44. Signing of Contract

44.1 The Employer shall send to the successful Bidder the Letter of Acceptance including the Contract Agreement. The Contract Agreement shall incorporate all agreements between the Employer and the successful Bidder.

44.2 Within twenty-eight (28) days of receipt of the Letter of Acceptance, the successful Bidder shall (a) furnish the performance security and if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security in accordance with ITB Clause 50; (b) if the successful bidder is a JV, it shall also furnish the JV agreement duly signed by all the members, if it had submitted only a letter of intent to execute the JV agreement along with the bid; and (c) shall sign, date and return the Agreement to the Employer along with the documents stated at (a) and (b) above.

45. Performance Security

45.1 Within twenty-eight (28) days of the receipt of the Letter of Acceptance from the *Employer*, the successful Bidder shall furnish the Performance Security and if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security in accordance with the General Conditions of Contract, subject to ITB 41.2 (b), using for that purpose the Performance Security and ESHS Performance Security Forms included in Schedule-G. The performance security and if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security of a Joint Venture shall be in the name of the Joint Venture specifying the names of all members.

45.2 Failure of the successful Bidder to submit the above-mentioned Performance Security and if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security or to sign the Contract Agreement shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Employer may award the Contract to the Bidder offering the next Most Advantageous Bid.

- 45.3 Upon the successful Bidder's signing the Agreement and furnishing of the Performance Security and if required in the BDS, the Environmental, Social, Health and Safety (ESHS) Performance Security pursuant to ITB Clause 50.1, the Employer shall promptly notify the name of the winning bidder to each unsuccessful bidder and shall discharge the Bid Securities of the bidders pursuant to ITB Clause 19.5 and 19.6.

46. Adjudicator

- 46.1 The Employer proposes the person **named in the BDS** to be appointed as Adjudicator under the Contract, at the daily fee **specified in the BDS**, plus reimbursable expenses (actual boarding, lodging, travel and other incidental expenses). If the Bidder disagrees with this proposal, the Bidder should so state in his Bid. If, in the Letter of Acceptance, the Employer does not agree on the appointment of the Adjudicator, the Employer will request the Appointing Authority designated in Conditions of Contract Clause 26.2.2 of the Contract Agreement, to appoint the Adjudicator.

SECTION II - BID DATA SHEET (BDS)

ITB Reference	A. General
ITB 1.1	<p>The number of the Request for Bids is: IN-IWAI-350002-CW-RFB-2</p> <p>The Employer is: Inland Waterways Authority of India, Ministry of Ports, Shipping & Waterways (MoPSW), Government of India (GoI)</p> <p>The reference number of the Request for Bids (RFB) is: IN-IWAI-350002-CW-RFB-2</p> <p>The name of the RFB is: Engineering, Procurement and Construction (EPC) Contract for Renovation and Modernization of Existing Navigational Lock at Farakka, West Bengal (“Project”)</p> <p>The number and identification of lots (contracts) comprising this RFB is: the work is not divisible in Lots.</p>
ITB 1.2	The Employer shall use the e-procurement system specified in BDS 7.1.
ITB 2.1	<p>The Borrower is: Government of India. The sub-Borrower is Inland Waterways Authority of India, Ministry of Shipping, Government of India</p> <p>Loan or Financing Agreement amount USD 375 Million under Capacity Augmentation of NW-1 (Jal Marg Vikas)</p>
ITB 4.1	<p>In case of Joint Ventures:</p> <p>(a) Maximum number of members in the Joint Venture (JV) shall be: (3) three. (b) The Bidders to submit a Joint Venture agreement duly signed by each of the members (maximum upto three numbers) & the same to be notarized.</p> <p>(c) A statement to the effect that all members of the joint venture shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms, shall be included in the authorization nominating a Representative or member in charge, as well as in the Bid and in the Agreement [<i>in case of a successful bid</i>].</p> <p>(d) The joint venture agreement should define precisely the division of assignments to each member of JV. All members of JV should have active participation in the execution during the currency of the contract. This should not be varied/ modified subsequently without prior approval of the Employer.</p>
ITB 4.5	A list of debarred firms and individuals is available on the Bank’s external website: http://www.worldbank.org/debarr .
B. Contents of Bidding Document	
ITB 6.1	Modified as:

	<p>The Bidding Documents consist of Volumes 1, 2, and 3, which include all the Sections specified below, and which should be read in conjunction with any Addenda issued in accordance with ITB 8.</p> <p>VOLUME–1: BIDDING DOCUMENT</p> <p>Part 1 – Bidding Procedures</p> <p>Section I. Instructions to Bidders</p> <p>Section II. Bid Data Sheet</p> <p>Section III. Evaluation and Qualification Criteria</p> <p>Section IV. Bidding Forms</p> <p>Section V. Eligible Countries</p> <p>Section VI. Bank Policy - Corrupt and Fraudulent Practices</p> <p>Part 2 – Works Requirements</p> <p>Section VII. Conditions of Contract together with Schedules</p> <p>VOLUME–2: TECHNICAL SPECIFICATION AND DRAWINGS</p> <p>VOLUME–3: BILL OF QUANTITIES</p>
ITB 6.3	<p>Tender fee is required: Yes</p> <p>A fee of Rs 5,900 (Rs. Five Thousand Nine Hundred) is to be paid through Demand Draft/RTGS/NEFT in favor of IWAI Fund (Jal Marg Vikas); payable at Noida On or before date of opening of bids, i.e. 28.12.2023.</p> <p>The method of payment will be Demand Draft/RTGS/NEFT in favor of IWAI Fund (Jal Marg Vikas) payable at Noida.</p> <p>Name of Account: IWAI Fund (Jal Marg Vikas) Bank Name: Canara Bank Address: Sector – 18, Morna Branch, Noida – 201301 Account No.: 87781010014534 IFS Code: CNRB0018778</p>
ITB 7.1	<p>Electronic – Procurement System</p> <p>The Employer shall use the following electronic-procurement system to manage this Bidding process: https://eprocure.gov.in/eprocure/app</p> <p>The electronic-procurement system shall be used to manage the following aspects of the Bidding process: <i>issuing bidding document, submissions of Bids, opening of Bids</i></p> <p>Requests for clarification should be received by the Employer no later than: <i>the Pre-Bid Conference date.</i></p>
ITB 7.4	<p>A Pre-Bid meeting will be held at the following date, time and place:</p> <p>Date: 11.12.2023</p> <p>Time: 1500 Hrs</p>

	<p>Join Zoom Meeting https://us06web.zoom.us/j/89928788115?pwd=UDfav0VViqRn05cvciZlNyMq7ETOBS.1</p> <p>Meeting ID: 899 2878 8115 Passcode: W12B4Z</p> <p>Place: Inland Waterways Authority of India, A-13, Sector-1, Noida - 201301, Uttar Pradesh, India</p>
ITB 7.6	<p>Minutes of pre-bid meeting and Addendum to Bidding Documents will also be hosted on the Employer's e-procurement portal, i.e. https://eprocure.gov.in/eprocure/app</p>
ITB 8.1 & 8.2	<p>Addendum to Bidding Documents will also be hosted on the Employer's e-procurement portal https://eprocure.gov.in/eprocure/app</p> <p>The Addendum/Corrigendum, if any, shall be uploaded on the e-procurement portal and shall be available online. Prospective bidders may keep in touch with the portal for the relevant information.</p>
ITB 8.3	<p>Notification regarding extension of deadline for submission of Bids will also be hosted on the Employer's e-procurement portal https://eprocure.gov.in/eprocure/app</p>
C. Preparation of Bids	
ITB 10.1	<p>The language of the bid is: English</p> <p>All correspondence exchange shall be in English language.</p> <p>Language for translation of supporting documents and printed literature is English. Such translation shall be attested by Apostille/ Embassy of that country in India.</p>
ITB 11.1(h)	<p>The Bidder shall submit with its bid the following additional documents: A scanned copy of an affidavit that the information furnished with the bid document is correct in all respects.</p> <p>The hard copy will be submitted in the envelope containing the original Bid Security, tender fee, JV agreement (if applicable), power of attorney and affidavit that the information furnished with the bid document is correct in all respects.</p>
ITB 11.2 (j)	<p>The Bidder shall submit the following additional documents in its <i>Bid – Technical Part. The list of additional documents should include the following:</i></p> <p>(i) Contractor Registration certificate on e-procurement system as per RFB, if applicable</p> <p>(ii) Code of Conduct (ESHS)</p> <p>The Bidder shall submit its Code of Conduct that will apply to its employees and subcontractors, to ensure compliance with: (a) applicable environmental and social rules and regulation of the Government of India and the Government of West Bengal as applicable to this project; and (b)</p>

	<p>its Environmental, Social, Health and Safety (ESHS) obligations as per law risks to be addressed by the Code in accordance with Section VII-Works' Requirements, especially with respect to risks associated with spread of communicable diseases, sexual harassment, sexual exploitation and abuse, gender-based violence, illicit behavior and crime, and maintaining a safe environment.</p> <p>The Bidder shall detail how this aforesaid Code of Conduct will be implemented, including how it will be introduced into conditions of employment/engagement, what training will be provided, how it will be monitored, how the Contractor proposes to deal with any breaches, and how the Contractor proposes to submit compliance reports in adherence to the applicable rules and regulations of the Government of India and the Government of West Bengal. The Contractor shall be required to implement the agreed Code of Conduct upon contract award.</p> <p>Management Strategies and Implementation Plans (MSIP) to manage the (ESHS) risks</p> <p>The Bidder shall submit Management Strategies and Implementation Plans (MSIP) to manage the following key Environmental, Social, Health and Safety (ESHS) risks.</p> <ul style="list-style-type: none"> • Construction and Traffic Management Plan to ensure safety of local communities from construction activities, and vehicular traffic owing to the construction activities; • Water Resource Protection Plan to prevent contamination of surface water and groundwater, including zero discharge of solid and liquid waste from construction of the work; • Construction Zone Safety Management Plan Boundary Marking and all other required protection actions for mobilization and construction to prevent on-site and offsite adverse impacts; • Strategy for obtaining Consents/Permits prior to the start of relevant works such as opening a quarry or borrow pit. • Gender-based violence and sexual exploitation and abuse (GBV/SEA) prevention and response action plan. • Green Belt Development Plan • Occupational Health & Safety Management Plan • Construction Debris disposal plan • Construction Site and Labour Camp Management plan • Borrow area Management Plan including Redevelopment and Restoration of Temporarily Acquired Borrow Areas <p>The Contractor shall be required to submit for approval, and subsequently implement, the Contractor's Updated Environment and Social Management Plan (C-ESMP), in accordance with the Particular Conditions of Contract Sub-Clause 16.2, that includes the agreed Management Strategies and Implementation Plans described above, and in compliance of the Environmental Management Plan (EMP) for this project prepared by the IWAI. The EMP is attached as Annexure-1.</p>
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ITB 11.3 (c)	The Bidder shall submit the following additional documents in its Bid: that must be submitted with the Bid – Financial Part a. Scanned copy of Volume-3 – Bill of Quantities (duly filled in) b. Schedule of Prices c. Schedule -A d. Schedule-B e. Appendix to Bid - Schedule of Adjustment Data.
ITB 13.1	Alternative Bids <i>NOT APPLICABLE</i> .
ITB 13.2	Alternative times for completion <i>NOT APPLICABLE</i>
ITB 13.3	Not Applicable
ITB 13.4	Alternative technical solutions shall not be permitted for any parts of the Works: Not Permitted.
ITB 14.3	Modified as The price to be quoted in the Letter of Bid, in accordance with ITB 12.1, shall be the total price of the Bid, including any discounts offered.
ITB 14.4	Deleted
ITB 14.5	The prices quoted by the Bidder “ <i>shall be</i> ” subject to adjustment during the performance of the Contract.
ITB 15.1	The currency(ies) of the bid and the payment currency(ies) shall be in INDIAN RUPEE (INR or Rs or Re.)
ITB 18.1	The Bid validity period shall be 120 days
ITB 18.2	The Employer, if required, may request the Bidders to extend validity of their Bid for a specified period prior to expiry of validity period of Bid through registered e-mail id of the Bidder. If a Bidder is interested to extend validity period of his Bid he may do so by submitting a written communication to the Employer under the signature of the authorized person who has signed the original Bid. The said communication along with amendment to the bid security for extension of its validity period shall be delivered by the Bidder to the Employer by 15.00 Hours IST of the last date of validity period of the Bids in his address given in BDS against ITB1.1. Project Director, Jal Marg Vikas Project, Inland Waterways Authority of India, Ministry of Shipping, Government of India A-13, Sector-1 Noida - Uttar Pradesh – India vc.iwai@nic.in
ITB 18.3 (a)	The Bid price shall be adjusted by the following factor: NA
ITB 19.1	A Bid Security of INR 3,20,00,000.00 (Rs. Three Crore Twenty Lakh only) is required.
ITB 19.3 (d)	Other types of acceptable securities are:

	<p>Fixed Deposit/Time Deposit/E-Bank Guarantee certificate issued by a Nationalized or Scheduled Bank located in India for equivalent or higher values are acceptable duly pledged in favour of IWAI NOIDA (Jal Marg Vikas) and such pledging has been noted and suitably endorsed by the bank issuing the certificate.</p> <p>Online cash transfer (if applicable, provide full details) <i>Name of Account: IWAI Fund (Jal Marg Vikas)</i> <i>Bank Name: Canara Bank</i> <i>Bank Address: Sector – 18, Morna Branch, Noida – 201301</i> <i>Account No.: 87781010014534</i> <i>IFS Code: CNRB0018778</i></p>
ITB 20.1	<p>The bidder shall upload the bid at: https://eprocure.gov.in/eprocure/app</p> <p>Possession of valid Digital Signature Certificate (DSC) and enrollment / registration of the contractors / bidders on the eprocurement / etender portal is a prerequisite for e- tendering.</p> <p>In case of non-receipt of these original documents, the bid will be declared non- responsive.</p> <p>The bidders shall submit the following ‘Original Documents’ at the following address before the deadline for bid submission (i.e. 28.12.2023 up to 15:00 hours) either by registered post/speed post/courier or by hand, failing which the bids will be declared non-responsive.</p> <p>The Bidder is solely responsible for to ensure submission of the requisite original documents before the stipulated time and date and the Owner will not be responsible for postal or courier delays.</p> <ul style="list-style-type: none"> a) Original bid security in prescribed format as indicated in ITB 19.1 b) Original written confirmation authorizing the signatory of the Bid to demonstrate the authority of the signatory to sign the bid on behalf of the Bidder as indicated in ITB 20.2 c) JV Agreement (if Any) as indicated in ITB 20.4. c) Original affidavit vouching for the correctness of the information furnished and documents uploaded on the Letter head of the firm;
ITB 20.2	<p>The written confirmation of authorization to sign on behalf of the Bidder shall consist of: legally enforceable Power of Attorney duly attested by the Notary.</p> <p>The scanned copy of this Power of Attorney shall be uploaded along with the Bid.</p>
ITB 20.3	<p>The written confirmation of authorization to sign on behalf of the Bidder shall consist of:</p> <ul style="list-style-type: none"> a. <i>Legally valid Power of Attorney is required to demonstrate the authority of the signatory to sign the Bid; and</i> b. <i>In the case of Bids submitted by an existing or intended JV, if permitted as per ITB 4.1, the authorization shall be evidenced by a Power of Attorney signed by legally authorized signatories of all the members.</i>

D. Online Submission of Bids	
ITB 21.1	Class of DSC required is: Class-II/ III
ITB 21.2	<p>The e-Procurement system restricts bidders from uploading file attachments larger <i>[as per the CPP portal]</i> per file.</p> <p><i>[Note: insert any other system functionality, if required]</i></p>
ITB 21.3	<p>For submission of original documents, the Employer's address is: The Original Documents should be inserted in an envelope and the envelope shall be sealed and addressed to the Owner at the address given below.</p> <p>The envelope shall bear the following identification marks: RFB No. IN-IWAI-350002-CW-RFB-2 Engineering, Procurement and Construction (EPC) contract For Renovation and Modernization of Existing Navigational Lock at Farakka.</p> <p>ii Not to open before: The date and time mentioned above (Date 28.12.2023 Time 03.30 PM.)</p> <p>iii. Addressed to the Owner: The Project Director, Project Management Unit – JMVP, Inland Waterways Authority of India A–13, Sector – 1 : Noida, Gautam Buddha Nagar, Uttar Pradesh ZIP Code: 201301 Country: India Telephone: +91 12022424544 Electronic mail address: vc.iwai@iwai.gov.in</p> <p>iv. Bear the Name and address of the Bidder:</p> <p>If the above envelope containing the original documents is not sealed and marked as required, the Owner will assume no responsibility for the misplacement or premature opening of the envelope.</p>

ITB 22.1	<p>The deadline for bid submission is: Date. 28.12.2023 Time: 15:00 Hrs (IST)</p> <p>Bidders have to submit their bids electronically. The documents comprising the Bid shall be digitally signed by the person duly authorized to sign on behalf of the Bidder. The documents comprising the Bid shall then be uploaded on the e-procurement portal https://eprocure.gov.in/eprocure/app.</p> <p>After electronic on line bid submission, the system generates a unique bid identification number which is time stamped as per server time. This shall be treated as acknowledgement of bid submission.</p>
ITB 23.1	None
ITB 24.1	<p>Re-submission of the bid is “not allowed”, if withdrawn.</p> <p>Bidders may modify their bids by uploading their request for modification before the deadline for submission of bids on https://eprocure.gov.in/eprocure/app.</p> <p>For modification of bids, the bidder need not make any additional payment towards the cost of tender document. For bid modification and consequential re-submission, the bidder is not required to withdraw his bid submitted earlier. The last modified bid submitted by the bidder within the bid submission time shall be considered as the bid. For this purpose, modification/withdrawal by other means will not be accepted. In online system of bid submission, the modification and consequential re-submission of bids is allowed any number of times.</p> <p>PLEASE NOTE: The bidders may withdraw his bid by uploading their request before the deadline for submission of bids, however, if the bid is withdrawn, the re-submission of the bid is not allowed</p>
E. Public Opening of Technical Parts of Bids	
ITB 25.1	<p>The Electronic Envelope I – containing technical proposal along with following details shall be opened for only those bidders, whose original documents stipulated at ITB- 20.1 (a) have been received.</p> <ul style="list-style-type: none"> a) Bid Security, POA, Affidavit, etc. b) JV Agreement (if applicable) c) Qualification Requirements d) Technical Proposal <p>Original documents and the Electronic Bids will be opened on 28.12.2023 at 15:30 hrs. at the following address:</p> <p style="text-align: center;"><i>Project Director (JMVP), Inland Waterways Authority of India, A-13, Sector-1, Noida, Uttar Pradesh, India - 201301.</i></p> <p><i>The Electronic Envelope II – containing Price Proposal</i></p> <p>The Price proposal will be opened for only those bidders who have fulfilled the Qualification Criteria and Technical requirements & Eligibility Criteria. And has been found meeting all the requirements as stipulated in this document, at a later date.</p> <p>The shortlisted bidders shall be informed about such date.</p>

	<p><i>Electronic Envelope-II - Price Proposal</i></p> <p>In the event of the specified date of Bid opening being declared a holiday for the Employer, the Bids will be opened at the appointed time and location on the next working day.</p>
ITB 25.3	Delete “Only discounts and alternative bids read out at bid opening shall be considered for evaluation”.
ITB 25.4	The Employer shall open the bids online and this could be viewed by the bidders also online. The electronic summary of the opening will be generated and kept online. The Employer will also prepare minutes of the Bid opening, including the information disclosed and upload the same for viewing online. Any complaint shall be dealt with in accordance with complaint handling protocol of the Employer.
F. Evaluation of Bids – General Provisions	
ITB 27.2	<p>ITB 27.2 is modified as under:</p> <p>‘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 will be evaluated based on the available information and interpretation of the Employer.’</p>
G. Evaluation of Bids - Technical Parts	
ITB 30	In evaluating the Technical Parts of each Bid, the Employer shall use the criteria and methodologies listed in Section III, Evaluation and Qualification Criteria. No other evaluation criteria or methodologies shall be permitted.
ITB 33.1	At this time the Employer “ <i>does not intend</i> ” to execute certain specific parts of the Works by subcontractors selected in advance.
ITB 33.2	The parts of the Works for which the Employer permits Bidders to propose Specialized Subcontractors are designated :- Not – Applicable
ITB 33.3	<p>(a) Contractor’s proposed subcontracting: Maximum percentage of subcontracting permitted is: <i>25 % of the total contract amount and not whole of works.</i></p> <p>(b) Bidders planning to subcontract more than 10 % of total volume of work shall specify, in the Letter of Bid, the activity (ies) or parts of the Works to be subcontracted along with complete details of the subcontractors and their qualification and experience. The qualification and experience of the sub-contractors must meet the minimum criteria for the relevant work to be subcontracted failing which such sub-contractors will not be permitted to participate.</p> <p>(c) Subcontractors’ qualification and experience will not be considered for evaluation of the Bidder. The Bidder on its own (without taking into account the qualification and experience of the sub-contractor) should meet the qualification criteria.</p> <p><i>[Note-Work should not be split into small parts and sub-contracted].</i></p>
H. Public Opening of Financial Parts	

ITB 34.2 (c)	<p>Following the completion of the evaluation of the Technical Parts of the Bids, the Employer will notify all Bidders of the date, time, and location of the public opening of Financial Parts.</p> <p>The Price proposal will be opened for only those bidders who have fulfilled the Qualification Criteria and Technical requirements & Eligibility Criteria. And has been found meeting all the requirements as stipulated in this document, at a later date.</p> <p>The shortlisted bidders shall be informed about such date.</p> <p>The online bid opening of Financial Parts of Bids shall take place at: <i>Project Director (JMVP), Inland Waterways Authority of India, A-13, Sector-1, Noida, Uttar Pradesh, India - 201301.</i></p> <p>In the event of the specified date of Bid opening being declared a holiday for the Employer, the Bids will be opened at the appointed time and location on the next working day.</p> <p>In addition to the above the Employer shall publish a notice of the public opening of the Financial Parts of the Bid on its website <i>https:// eprocure.gov.in/eprocure/app</i></p>
ITB 38.1	In case of annulment of Bids, the original Bid Security and Power of Attorney(s) only shall be returned to the Bidders
I. Evaluation of Bids - Financial Parts	
ITB 35.1	The lowest bidder (L1) shall be considered for awarding of the contract.
ITB 40.2	Provisions related to Abnormally Low Bids do not apply
ITB 43.1	Insert “or to reduce the scope”, in the first line after the words ‘The Employer reserves the right to accept or reject any Bid’
J. Award of Contract	
ITB 45.2	<p>The successful Bidder shall also be required to submit an Environmental, Social, Health and Safety (ESHS) Performance Security.</p> <p>Throughout this bidding document the term ‘performance security’, unless the context clearly indicates otherwise, means and includes both ‘the performance security and the ESHS performance security’ to be submitted by the successful bidder in the amounts specified in Section VII Conditions of Contract Article 7, Clause 7.1.</p>
ITB 46.1	<p>The Adjudicator proposed by the Employer is: Mr. Ashok Kumar Mishra. The daily fee for this proposed Adjudicator shall be: Rs 10,000/- per day. The biographical data of the proposed Adjudicator shall share shared during signing of the contract.</p> <p>“The Adjudicator proposed by the Employer is: Mr. Ashok Kumar Mishra, and the daily fee payable to Adjudicator is Rs. 10,000/-”</p>

SECTION III - EVALUATION AND QUALIFICATION CRITERIA

SECTION III - EVALUATION AND QUALIFICATION CRITERIA

- 1 Evaluation**
 - 1.1 Assessment of adequacy of Technical Proposal with Requirements**
 - 1.2 Multiple Contracts**
 - 1.3 Alternative Completion Times.**
 - 1.4 Technical Alternative**
 - 1.5 Specialized Subcontractors**
- 2 Qualification**
 - 2.1 Eligibility**
 - 2.2 Historical Contract Performance**
 - 2.3 Financial Situation**
 - 2.4 Experience**
 - 2.5 Personal**
 - 2.6 Equipment**

Section III - Evaluation and Qualification Criteria (Without Prequalification)

This Section contains all the criteria that the Employer shall use to evaluate bids and qualify Bidders. In accordance with ITB 30; 31; 34; 35 and ITB 36, no other factors, methods or criteria shall be used. The Bidder shall provide all the information requested in the forms included in Section IV, Bidding Forms.

The enhancement factors given below shall be multiplied by the Average Annual Turnover values (and other cost of work) of the previous years for converting them to current year (2022-2023) values:

Year	Factor
2022 - 2023	1.00
2021 - 2022	1.07
2020 - 2021	1.16
2019 - 2020	1.25
2018 - 2019	1.35
2017 - 2018	1.46
2016 - 2017	1.55

1. Evaluation

In addition to the criteria listed in ITB 35.2 (a) – (e) the following criteria shall apply:

1.1 Assessment of adequacy of Technical Proposal with Requirements

Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilize key equipment and personnel for the contract consistent with its proposal regarding work methods, scheduling, material sourcing, and quality control/ assurance in sufficient detail and fully in accordance with the requirements stipulated in Section VII (Works Requirements).

1.2 Multiple Contracts, if permitted under ITB 35.4, will be evaluated as follows: Not applicable

1.3 Alternative Completion Times, ... Not Applicable

1.4 Alternative Technical Solutions for specified parts of Works (ITB 13.4) – Not Applicable

1.5 Specialized Subcontractors – Deleted

Eligibility and Qualification Criteria				Compliance Requirements			Document ation
No.	Subject	Requirement	Single Entity	Joint Venture			Submission n Requirements
				All Members Combine d	Each Member	One member	
2.2.1	History of Non-Performing Contracts	Non-performance ¹ of a contract did not occur within the last five (5) years from prior to the deadline for bid submission, based on all information on fully settled disputes or litigation. (A fully settled dispute or litigation is one 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.)	Must meet requirement by itself or as partner to past or existing JVA	Must meet requirements	Must meet requirement by itself or as partner to past or existing JV	N.A	Form CON-2
2.2.2	Suspension Based on Execution of Bid/ Proposal Securing Declaration by the Employer or withdrawal of the Bid within Bid validity period	Not under suspension based on execution of a Bid/ Proposal Securing Declaration pursuant to ITB 4.7 or withdrawal of the Bid pursuant ITB 19.7	Must meet requirement	Must meet requirement	Must meet requirement	² N.A	Letter of Bid
2.2.3	Pending Litigation	All pending litigation ³ shall in total not	Must meet requirement	N/A	Must meet requirement	N.A	Form CON – 2

¹ Non-performance, as decided by the Employer, shall include all contracts where (a) non-performance was not challenged by the contractor, including through referral to the dispute resolution mechanism under the respective contract, and (b) contracts that were so challenged but fully settled against the contractor. Nonperformance shall not include contracts where Employers decision was overruled by the dispute resolution mechanism. Non-performance 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 applicant have been exhausted.

² The Bidder shall provide accurate information on the related Form about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the last five years. A consistent history of awards against the Bidder or any member of a joint venture may result in rejection of Bid

³ The Bidder shall provide accurate information on the related Form about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the last five years. A consistent history of awards against the Bidder or any member of a joint venture may result in rejection of Bid

Eligibility and Qualification Criteria				Compliance Requirements			Document ation
No.	Subject	Requirement	Single Entity	Joint Venture			Submissio n Requirem ents
				All Members Combine d	Each Member	One member	
		represent more than fifty percent (50%) of the Bidder's net worth and shall be treated as resolved against the Bidder.	nt by itself or as partner to past or existing JVA		nt by itself or as partner to past or existing JVA		
2.2.4	Litigation History	No consistent history of court/arbitral award decisions against the Bidder ⁴ since 1 st January 2017	Must meet requirement	Must meet requirement	Must meet requirement	N.A	Form CON – 2
2.2.5	Declaration: Environmental, Social, Health, and Safety (ESHS) past performance	Declare any civil work contracts that have been suspended or terminated and/or performance security called by an employer for reasons related to the non-compliance of any environmental, or social, (including sexual exploitation and abuse (SEA) and gender-based violence (GBV)), or health or safety requirements or safeguard in the past five years ⁵ .	Must make the declaration. Where there are Specialized Sub-contractor /s, the Specialized Sub-contractor /s must also make the declaration.	N/A	Each must make the declaration. Where there are Specialized Sub-contractor /s, the Specialized Sub-contractor /s must also make the declaration.	N.A	Form CON-3 ESHS Performance Declaration
a	ISO-14000 and OSHAS-18000⁶	The bidder should have ISO 14000 & OHSAS certification.	Must meet requirement.			Must meet requirement.	Certificate/declaration
2.3 Financial Situation and Performance							
2.3.1	Financial Capabilities	(i) The Bidder shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of	Must meet requirement	Must meet Requirement	Must meet at least 15% of the requirement as a minimum	Must meet at least 50% of the requirement as a minimum	Form FIN – 3.1, with attachments Form Fin 3.3

⁴ The Bidder shall provide accurate information on the letter of Bid about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the last five years. A consistent history of court/arbitral awards against the Bidder or any member of a joint venture may result in disqualifying the Bidder.

⁵ The Employer may use this information to seek further information or clarifications in carrying out its due diligence.

⁶ If the bidders do not have these, they must pledge to have these within 3 months of contract award, and then prepare and submit a plan to implement these within 4 months after award of contract. In this regard, a declaration to be submitted by the bidder during bid submission.

Eligibility and Qualification Criteria			Compliance Requirements				Document ation
No.	Subject	Requirement	Single Entity	Joint Venture			Submissio n Requirem ents
				All Members Combine d	Each Member	One member	
		any contractual advance payment) sufficient to meet the construction cash flow requirements estimated as Rs. 30 Crore for about 3 months cash flow at peak construction period for the subject contract(s) net of the Bidder’s other commitments					
		(ii) The Bidders shall also demonstrate, to the satisfaction of the Employer, that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.	Must meet requirement	Must meet requirement	N.A	must meet requirement.	
		(iii) The audited balance sheets or, if not required by the laws of the Bidder’s country, other financial statements acceptable to the Employer, for the last five years, i.e., from FY 2017-18 to FY 2021-22 shall be submitted and must demonstrate the current soundness of the Bidder’s financial position and indicate its prospective long-term profitability. “As a minimum, a Bidder’s net worth calculated as the difference between total assets and total liabilities should be positive.”	Must meet requirement	N/A	Must meet requirement	N/A	
Note: The construction cash flow requirement should be for a number of months determined as the total time needed to pay contractor invoice by the employer. The cash flow should not normally exceed 3 months peak contract requirements and availability should be certified by Bank (Nationalized or Scheduled Bank In India) in form Fin 3.3							

Eligibility and Qualification Criteria				Compliance Requirements			Document ation
No.	Subject	Requirement	Single Entity	Joint Venture			Submissio n Requirem ents
				All Members Combine d	Each Member	One member	
2.3. 2	Average Annual Constructio n Turnover	Minimum average Average annual construction turnover of Rs 30 Crore [Rupee Thirty Crore Only], calculated as total certified payments received for contracts in progress and/or completed within the last five financial years, i.e., 1st April 2017 to 31st March 2022 divided by five years.	Must meet requireme nt	Must meet requireme nt	Must meet 15%, (twenty five percent) of the requireme nt	Must meet (fifty 50%, (fifty percent) of the requirement	Form FIN – 3.2
Note: <i>The amount stated should normally not be less than twice the estimated annual turnover or cash flow in the proposed Works contract (based on a straight-line projection of the Employer's estimated cost, over the contract duration).</i>							
2.4 Experience							
2.4. 1 (a)	General Constructio n Experience	Experience under contracts in the role of contractor, subcontractor, or management contractor for at least the last ten [10] years from the bid submission deadline	Must meet requirem ent	Must meet requireme nt	Must meet requireme nt	N.A	Form EXP – 4.1
2.4. 2 (a)	Specific Experience	a) Having executed works as contractor, joint venture member, management contractor, or subcontractor within the last ten (10) years from the bid submission deadline <ul style="list-style-type: none">One similar work* of at least INR 128 crores or <ul style="list-style-type: none">Two similar work* each with the value of at least INR 80 crores or <ul style="list-style-type: none">Three similar work* each with value of at least INR 64 crores that have been successfully and	Must meet requirem ent	Must meet requireme nt	Not Applicabl e	Must meet the requirement for one contract of 50% value	Form EXP 4.2(a)

Eligibility and Qualification Criteria				Compliance Requirements			Document ation
No.	Subject	Requirement	Single Entity	Joint Venture			Submissio n Requirem ents
				All Members Combine d	Each Member	One member	
		<p>substantially completed** and that are similar to the proposed Works with in last ten (10) years from the bid submission deadline. The similarity shall be based on the physical size, complexity, methods / technology or other characteristics as described in Part 2, Employer's Requirements.</p> <p>“Similar Work” means Construction of Jetty or Harbour with pile foundation/ diaphragm wall / retaining wall / bridge / Navigational lock / barrage / RCC dam / hydropower in river / sea.</p> <p>Fabrication/ Installation/ Commissioning of Caisson gates/mitre gates requires special skills. Either a member of JV or sub-contractor should have necessary experience in construction/ installation/ commissioning of gates in Navigational lock s/ hydropower/ dam/ barrage/ irrigation projects</p> <p>*Cost of works of previous years shall be increased by 7% per year</p> <p>**Projects which are 80% completed shall be considered as substantially completed</p>					
2.4.2 (b)	Specific Experience	b) For the above or other contracts executed during the period stipulated in 2.4.2(a) above, a minimum experience in one of the following key	Must meet requirements	Must meet requirements	N.A	Must meet 50% (Fifty percent) of the requirement	Form EXP – 4.2 (b)

Eligibility and Qualification Criteria				Compliance Requirements			Document ation
No.	Subject	Requirement	Single Entity	Joint Venture			Submissio n Requirem ents
				All Members Combine d	Each Member	One member	
		activities: <ul style="list-style-type: none"> • Design of Navigational lock / dry dock / Dam / Barrage / hydropower / Irrigation project with gates of minimum size 6 m x 4 m with remote control system with hydraulic operation/ rope drum hoist arrangement. • He should have either in-house design capability or associate with reputed design consultant for authentication of survey and investigation details and complete design of various components of the lock/gates. 					
In case of JV, the value of contracts completed by its members shall not be aggregated to determine whether the requirement of the minimum value of a single contract has been met. Instead, each contract performed by each member shall satisfy the minimum value of single contract as required for single entity. In determining whether the JV meets the requirement of total number of contracts only the number of contracts by all members each of value equal or more than the minimum value shall be aggregated.							
2.4.2 (c)	Bid Capacity	Available Bid Capacity should be more than value of the Contract applied for	Must meet requirement	Must meet requirement	Must meet 40% of the requirement	Must meet 60% of the requirement	Form FIN 2.4 & EXP 1
<p>Bid Capacity: The available bid capacity will be calculated as under:</p> <p>Assessed Available bid capacity = $(A * N * 1.5 - B)$</p> <p>Where,</p> <p>A = Maximum value of civil engineering works executed in any one year during the last five years (updated to the price level) in INR.</p> <p>B = Value, at the current price level, of existing commitments and on-going works to be completed concurrently with the works specified up to the period of 'N' below.</p> <p>N = 2 (Number of years prescribed for completion of works for which bids are invited)</p>							

2.5 Key Personnel

The Bidder must demonstrate that it has the personnel for the key positions that meet the following requirements:

The Contractor shall require the Employer's consent to substitute or replace the Key Personnel (reference the Particular Conditions of Contract 9.1).

Key Personnel

No .	Position	Qualifications	Total Work Experience (years)	Experience in Similar Works (years)	In case of JV, to be proposed by
1	Project Manager & Team Leader	B.E. / B. Tech (Civil Engg.)	15	10	Lead Member
2	Asst. Project Manager	B.E. / B. Tech (Mechanical Engg.)	10	7	Lead Member
3	Mechanical Engineer	B.E. / B. Tech (Mechanical Engg.)	10	7	Lead Member
4	Electrical Engineer	B.E. / B. Tech (Electrical Engg.)	10	8	Lead Member
5	Hydraulics Engineer	B.E. / B. Tech (Civil Engg.)	8	5	Any Member
6	Structural Engineer	B.E. / B. Tech (Civil Engg.)	10	5	Any Member
7	Planning Engineer	B.E. / B. Tech (Civil Engg.)	10	5	Any Member
8	Geotechnical Engineer	B.E. / B. Tech (Civil Engg.)	10	5	Any Member
9	Billing Engineer	B.E. / B. Tech /Diploma	10	5	Any Member
10	Safety Engineer	B.E. / B. Tech /Diploma	8	5	Any Member
11	QC/QA Engineer- Mech.	B.E. / B. Tech (Mechanical Engg.)	10	5	Any Member
12	QC/QA Engineer- Civil	B.E. / B. Tech (Civil Engg.)	10	5	Any Member

13	Surveyor	B.E. / B. Tech /Diploma	10	5	Any Member
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Note: - All Personnel mentioned above should be having minimum B.E. / B.Tech Degree in Engineering. Only in case of Billing Engineers/Safety Engineers/Surveyors, Personnel having Diploma may be acceptable whose experience requirement shall be increased by 3 years.

The Project Manager proposed must have experience in construction of Navigational lock s/ barrage / dam / hydropower / jetty / berths in river / marine conditions or construction of bridges in river / marine conditions in at least one project. The Bidder shall provide details of the proposed personnel and their experience records using Form PER-1 and PER-2 included in Section IV, Bidding Forms.

2.6 Equipment

The Bidder must demonstrate that it has the key equipment listed hereafter.

Sl. No.	Type of Equipment	Minimum Capacity	Max. Age (Years)	Minimum Number required
1	Crane (Tyre mounted)	100 T	10	1 No.
2	Crane (Tyre mounted)	50 T	10	1 No.
3*	Pile Driving Rigs with minimum 10T winch complete with DMC/Bailor/Chiesel etc.	-	8	1 No.
4*	Hydra	10-12 T	10	4 Nos.
5*	Trailer	-	10	2 Nos.
6*	Winches	10-12 T	10	2 Nos.
7	Concrete Batching Plant	30 cum/hour		As considered necessary by the Engineer
8	Transit Mixer	5 cum		
9	Concrete pump with adequate pipelines	30 cum/hour		
*These equipment must be owned/hired by bidder and by lead member in case of JV				

Notes:

- Bidders are requested to verify latest position in respect of “Duties on Contractor’s Equipment” from Department of Revenue, Ministry of Finance, Government of India.
- The Bidder shall furnish the details of proposed equipment using Form EQU included in Section -IV.

SECTION IV - BIDDING FORMS

Section IV - Bidding Forms			
Table of Forms			
1	Bid Submission Form / letter of Bid & Technical Proposal Form I. Appendix to Bid Schedule of Adjustment Data		
2.	Technical Proposal Form 1. ESHS Management Strategies and Implementation Plans 2. Code of Conduct (ESHS) 3. Site Organizations 4. Method statement 5. Quality Assurance Plan 6. Construction Schedule 7. Mobilization Schedule. 8. Contractor’s Equipment 9. Key Personnel Proposed 10. Bidders Qualification’s 11. Subcontractors& JV details 12. Others		
3	Format	Reference	Content
1.1	Form ELI-1	Section-III QR 2.1	Bidder’s Information Form with attachments
1.2	Form ELI-1.1	Section-III QR 1.1 - 1.4	Bidder’s JV Information Form with attachment
3.1	Form CON-2	Section-III QR 2.1 - 2.2	Historical Contract Non-performance, pending litigation and Litigation history
3.2	CON – 3 Environmental, Social, Health, and Safety Performance Declaration		
3.3	Form FIN-1	Section-III QR 2.3	Financial Situation and Performance
3.4	Form FIN-2	Section-III QR 2.4	Average Turn Over
3.5	Form FIN-3	Section-III QR 2.4	Financial Resources
3.6	Form FIN-4	Section-III QR 2.4	Current Contracts
3.7	Form EXP-1	Section-III QR 2.4	General Construction Experience
3.8	Form EXP-2	Section-III QR 2.4	Specific Construction Experience
3.9	Form EXP-2-b	Section-III QR 2.4	Specific I Construction Experience in Key Activities
3.10	Undertaking towards ITC – Input Tax Credit in GST (as per Clause GCC 19.22 of PCC)		
4	Bid Security (Bank Guarantee)		
5	JV Agreement		
6	Letter of Bid - Finance Part		
Section V. Eligible Countries			
Section VI. Bank Policy – Corrupt and Fraudulent Practices			

Letter of Bid – Technical Part

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE DOCUMENT

The Bidder must prepare this Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and business address.

Note: All italicized text is to help Bidders in preparing these forms.

Date of this Bid submission: *[insert date (as day, month and year) of Bid submission]*

RFB No.: *[insert number of RFB process]*

Alternative No⁷: *[insert identification No. if this is a Bid for an alternative]*

To: *[insert complete name of Employer]*

We, the undersigned, hereby submit our Bid, in two parts, namely:

- (a) the Technical Part, and
- (b) the Financial Part

In submitting our Bid, we make the following declarations:

- (a) **No reservations:** We have examined and have no reservations to the bidding document, including Addenda issued in accordance with ITB 8;
- (b) **Eligibility:** We meet the eligibility requirements and have no conflict of interest in accordance with ITB 4;
- (c) We have not been suspended nor declared ineligible by the Employer based on execution of a Bid Securing Declaration in the Employer's country in accordance with ITB 4.7;
- (d) **Conformity:** We offer to execute in conformity with the bidding document the following Works: *[insert a brief description of the Works]*;
- (e) **Bid Validity Period:** Our Bid shall be valid for a period specified in BDS ITB 18.1 (or as amended if applicable) from the date fixed for the Bid submission deadline specified in BDS 22.1 (or as amended if applicable), and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (f) **Performance Security:** If our Bid is accepted, we commit to obtain a performance security *[and an Environmental, Social, Health and Safety (ESHS) Performance Security, Delete if not applicable]* in accordance with the bidding document;
- (g) **One Bid Per Bidder:** We are not submitting any other Bid(s) as an individual Bidder or as a subcontractor, and we are not participating in any other Bid(s) as a Joint Venture

⁷ Delete if not applicable

member, and meet the requirements of ITB 4.3, other than alternative Bids submitted in accordance with ITB 13;

- (h) **Suspension and Debarment:** We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the World Bank Group or a debarment imposed by the World Bank Group in accordance with the Agreement for Mutual Enforcement of Debarment Decisions between the World Bank and other development banks. Further, we are not ineligible under the Employer's Country laws or official regulations or pursuant to a decision of the United Nations Security Council;
- (i) **State-owned enterprise or institution:** We are not a state-owned enterprise or institution/ We are a state-owned enterprise or institution but meet the requirements of ITB 4.6⁸;
- (j) **Binding Contract:** We understand that this Bid, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- (k) **Not Bound to Accept:** We understand that you are not bound to accept the lowest evaluated cost Bid, the Most Advantageous Bid or any other Bid that you may receive;
- (l) **Fraud and Corruption:** We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf engages in any type of Fraud and Corruption; and
- (m) **Adjudicator:** We accept the appointment of *[insert name proposed in Bid Data Sheet]* as the Adjudicator.

[or]

We do not accept the appointment of *[insert name proposed in Bid Data Sheet]* as the Adjudicator, and propose instead that *[insert name]* be appointed⁹ as Adjudicator, whose daily fees and biographical data are attached.

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

Name of the person duly authorized to sign the Bid on behalf of the Bidder: ***[insert complete name of person duly authorized to sign the Bid]*

Title of the person signing the Bid: *[insert complete title of the person signing the Bid]*

Signature of the person named above: *[insert signature of person whose name and capacity are shown above]*

Date signed *[insert date of signing]* **day of** *[insert month]*, *[insert year]*

⁸ Use one of the two options as appropriate

⁹ In case appointment of Adjudicator was proposed from the list provided by an Institution in ITB 51, the replacement should also be proposed from the list of the same Institution.

*: In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder

**: Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid

Technical Proposal

Technical Proposal Forms

- **Key Personnel Schedule**
 - **Equipment**
 - **Site Organization**
 - **Method Statement**
 - **Mobilization Schedule**
 - **Construction Schedule**
 - **Environmental, Social, Health, and Safety Management (ESHS) Strategies and Implementation Plans**
 - **Code of Conduct (ESHS)**
 - **Sub-contracting elements or works which in aggregate adds to more than 5% of Bid price (*for each the qualifications and experiences on the identified subcontractor in the relevant field should be given*)**
- Note: Work should not be split into small parts and sub-contracted; but sub-contracting specialized elements of works is acceptable.*
- **Others**
 - **Bidder's Qualification**
 - **Form of Bid Security - Bank Guarantee**

Appendix to Technical Part: Personnel

Forms for Personnel

Form PER – 1: Key Personnel Schedule

Bidders should provide the names and details of the suitably qualified Key Personnel to perform the Contract. The data on their experience should be supplied using the Form PER-2 below for each candidate.

Key Personnel

1.	Title of position:	
	Name of candidate:	
	Duration of appointment:	[insert the whole period (start and end dates) for which this position will be engaged]
	Time commitment: for this position:	[insert the number of days/week/months/ that has been scheduled for this position]
	Expected time schedule for this position:	[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]
2.	Title of position: [Environmental Specialist]	
	Name of candidate:	
	Duration of appointment:	[insert the whole period (start and end dates) for which this position will be engaged]
	Time commitment: for this position:	[insert the number of days/week/months/ that has been scheduled for this position]
	Expected time schedule for this position:	[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]
3.	Title of position: [Health and Safety Specialist]	
	Name of candidate:	
	Duration of appointment:	[insert the whole period (start and end dates) for which this position will be engaged]
	Time commitment: for this position:	[insert the number of days/week/months/ that has been scheduled for this position]
	Expected time schedule for this position:	[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]
4.	Title of position: [Social Specialist]	
	Name of candidate:	
	Duration of appointment:	[insert the whole period (start and end dates) for which this position will be engaged]
	Time commitment: for this position:	[insert the number of days/week/months/ that has been scheduled for this position]

	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>
5.	Title of position: <i>[insert title]</i>	
	Name of candidate	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g. attach high level Gantt chart)]</i>

Appendix to Technical Part

Form PER-2:

Resume and Declaration

Key Personnel

Name of Bidder

Position [#1]: <i>[title of position from Form PER-1]</i>		
Personnel information	Name:	Date of birth:
	Address:	E-mail:
	Professional qualifications:	
	Academic qualifications:	
	Language proficiency: <i>[language and levels of speaking, reading and writing skills]</i>	
Details	Name of employer:	
	Address of employer:	
	Telephone:	Contact (manager / personnel officer):
	Fax:	
	Job title:	Years with present employer:

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

Project	Role	Duration of involvement [From - To]	Relevant experience
<i>[main project details]</i>	<i>[role and responsibilities on the project]</i>	<i>[time in role]</i>	<i>[describe the experience relevant to this position]</i>

Declaration

I, the undersigned Key Personnel, 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 as certified in the following table and throughout the expected time schedule for this position as provided in the Bid:

Commitment	Details
Commitment to duration of contract:	<i>[insert period (start and end dates) for which this Key Personnel is available to work on this contract]</i>
Time commitment:	<i>[insert the number of days/week/months/ that this Key Personnel will be engaged]</i>

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

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

Name of Key Personnel: *[insert name]*

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Bidder:

Signature: _____

Date: (day month year): _____

Appendix to Technical Part: Equipment

Form EQU: Forms for Equipment

The Bidder shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Section III (Evaluation and Qualification Criteria). A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Bidder.

Type of Equipment*		
Equipment Information	Name of manufacturer,	Model and power rating
	Capacity*	Year of manufacture*
	Registration number or any other unique identification number	
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	

The following information shall be provided only for equipment not owned by the Bidder.

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

Appendix to Technical Part
Site Organization
[insert Site Organization information]

Appendix to Technical Part

Method Statement

[insert method Statement – A detailed note should be submitted outlining bidders proposed methodology and program of construction including Environmental, Social, Health and Safety Management Strategies and Implementation Plans (ESHS-MSIP), backed with equipment, materials and manpower planning and deployment, duly supported with broad calculations and quality control system/assurance procedures proposed to be adopted, justifying their capability of execution and completion of the work requirements within the stipulated period of completion as per milestones]

Appendix to Technical Part

Mobilization Schedule

[insert Mobilization Schedule]

Appendix to Technical Part
Construction Schedule
[insert Construction Schedule]

Appendix to Technical Part

ESHS Management Strategies and Implementation Plans

(ESHS-MSIP)

The Bidder shall submit comprehensive and concise Environmental, Social, Health and Safety Management Strategies and Implementation Plans (ESHS-MSIP) as required by ITB 11.2 (j) of the Bid Data Sheet. These strategies and plans shall describe in detail the actions, materials, equipment, management processes etc. that will be implemented by the Contractor, and its subcontractors.

In developing these strategies and plans, the Bidder shall have regard to the ESHS provisions of the contract including those as may be more fully described in the Works Requirements in Section VII.

Appendix to Technical Part

Code of Conduct: Environmental, Social, Health and Safety (ESHS)

The Bidder shall submit the Code of Conduct that will apply to the Contractor's employees and subcontractors as required by ITB 11.2 (j) of the Bid Data Sheet. The Code of Conduct shall ensure compliance with the ESHS provisions of the contract, including those as may be more fully described in the Works Requirements in Section VII.

In addition, the Bidder shall submit an outline of how this Code of Conduct will be implemented. This will include: how it will be introduced into conditions of employment/engagement, what training will be provided, how it will be monitored and how the Contractor proposes to deal with any breaches.

Appendix to Technical Part

Form SC-Sub-Contracting

SCHEDULE OF SUBCONTRACTORS

Item	Element of work	% of bid price	Name and address of sub-contractor	Qualification and experience of sub-contractor on similar works of the elements executed

The Bidder shall enter in this schedule a list of the major sections and appropriate value of the work for which he proposed to use subcontractors *[for those costing more than 5% of the bid price for each element]*, together with the names, addresses and experiences of the proposed subcontractors.

The capability of the sub-contractor will also be assessed (on the same lines as for the main Contractor) before according approval to him.

(Work should not be split into small parts and sub-contracted; but sub-contracting specialized elements of works is acceptable).

Appendix to Technical Part Others

Appendix to Technical Part

Bidder's Qualification

To establish its qualifications to perform the contract in accordance with Section III (Evaluation and Qualification Criteria) the Bidder shall provide the information requested in the corresponding Information Sheets included hereunder

Appendix to Technical Part

Form ELI -1.1: Bidder Information Form

Date: _____
RFB No. and title: _____
Page _____ of _____ pages

Bidder's legal name
In case of Joint Venture (JV), legal name of each member:
Bidder's actual or intended country of registration: <i>[indicate country of Constitution]</i>
Bidder's actual or intended year of incorporation:
Bidder's legal address [in country of registration]:
<p>Bidder's authorized representative information</p> <p>Name: _____</p> <p>Address: _____</p> <p>Telephone/Fax numbers: _____</p> <p>E-mail address: _____</p>
<p>1. Attached are copies of original documents of</p> <p><input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITB 4.4.</p> <p><input type="checkbox"/> Authorization to represent the firm or JV named in above, in accordance with ITB 20.</p> <p><input type="checkbox"/> In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1.</p> <p><input type="checkbox"/> In case of state-owned enterprise or institution, in accordance with ITB 4.6 documents establishing:</p> <ul style="list-style-type: none"> • Legal and financial autonomy • Operation under commercial law • Establishing that the Bidder is not under the supervision of the Employer <p>2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.</p>

Appendix to Technical Part

Form ELI -1.2: Information Form for JV Bidders

(Where permitted as per BDS ITB 4.1)
(to be completed for each member of Joint Venture)

Date: _____
RFB No. and title: _____
Page _____ of _____ pages

JV Information
Bidder's Joint Venture legal name:
JV member's legal name:
JV member's country of registration:
JV member's year of constitution:
JV member's legal address in country of constitution:
JV member's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITB 4.4. <input type="checkbox"/> Authorization to represent the firm or JV named in above, in accordance with ITB 20. <input type="checkbox"/> In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and is not under the supervision of the Employer, in accordance with ITB 4.6. 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

Appendix to Technical Part

Form ELI -1.2 A

Specialized Subcontractor's Information Form

(to be completed for each Specialized Subcontractor)

Date: _____

RFB No. and title: _____

Page _____ of _____ pages

Bidder's legal name:

Specialized Subcontractor's legal name:
Specialized Subcontractor's country of registration:
Specialized Subcontractor's year of constitution:
Specialized Subcontractor's legal address in country of constitution:
<p>Specialized Subcontractor's authorized representative information</p> <p>Name: _____</p> <p>Address: _____</p> <p>Telephone/Fax numbers: _____</p> <p>E-mail address: _____</p>
<p>Attached are copies of original documents of</p> <p><input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITB 4.4.</p> <p><input type="checkbox"/> Authorization to represent the Specialized Subcontractor.</p>

Appendix to Technical Part

DETAILS OF PARTICIPATION IN THE JOINT VENTURE

PARTICIPATION DETAILS	FIRM 'A' (Lead Member)	FIRM 'B'	FIRM 'C'
Financial			
Name of the Banker(s)			
Planning			
Construction Equipment			
Key Personnel			
Execution of Work (Give details on proposed contribution of each)			

The Joint Venture should indicate the details of participation as above.

Appendix to Technical Part

Form CON – 2: Historical Contract Non-Performance, Pending Litigation and Litigation History

[to be completed for the Bidder and for each member of a Joint Venture]

Bidder's Name: _____

Date: _____

Joint Venture Member's Name _____

RFB No. and title: _____

Page _____ of _____ pages

Non-Performed Contracts in accordance with Section III, Evaluation and Qualification Criteria			
<input type="checkbox"/> Contract non-performance did not occur since 1 st January <i>[insert year]</i> specified in Section III, Evaluation and Qualification Criteria, Sub-Factor 2.1.			
<input type="checkbox"/> Contract(s) not performed since 1 st January <i>[insert year]</i> specified in Section III, Evaluation and Qualification Criteria, requirement 2.1			
Year	Non-performed portion of contract	Contract Identification	Total Contract Amount (Rs.)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for non-performance: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>
Pending Litigation, in accordance with Section III, Evaluation and Qualification Criteria			
<input type="checkbox"/> No pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3.			
<input type="checkbox"/> Pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3 as indicated below.			

Year of dispute	Amount in dispute (Rs.)	Contract Identification	Total Contract Amount (Rs.)
<i>[insert year]</i>	<i>[insert amount]</i>	Contract Identification: <i>[indicate complete contract name, number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Matter in dispute: <i>[indicate main issues in dispute]</i> Party who initiated the dispute: <i>[indicate "Employer" or "Contractor"]</i> Status of dispute: <i>[Indicate if it is being treated by the Adjudicator, under Arbitration or being dealt with by the Judiciary]</i>	<i>[insert amount]</i>
<i>[insert year]</i>	<i>[insert amount]</i>	Contract Identification: <i>[indicate complete contract name, number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Matter in dispute: <i>[indicate main issues in dispute]</i> Party who initiated the dispute: <i>[indicate "Employer" or "Contractor"]</i> Status of dispute: <i>[Indicate if it is being treated by the Adjudicator, under Arbitration or being dealt with by the Judiciary]</i>	<i>[insert amount]</i>
Litigation History in accordance with Section III, Evaluation and Qualification Criteria			
<input type="checkbox"/> No Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4. <input type="checkbox"/> Litigation History in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.4 as indicated below.			
Year of award	Outcome as percentage of Net Worth	Contract Identification	Total Contract Amount (Rs.)

<i>[insert year]</i>	<i>[insert percentage]</i>	<p>Contract Identification: [indicate complete contract name, number, and any other identification]</p> <p>Name of Employer: <i>[insert full name]</i></p> <p>Address of Employer: <i>[insert street/city/country]</i></p> <p>Matter in dispute: <i>[indicate main issues in dispute]</i></p> <p>Party who initiated the dispute: <i>[indicate “Employer” or “Contractor”]</i></p> <p>Reason(s) for Litigation and award decision <i>[indicate main reason(s)]</i></p>	<i>[insert amount]</i>
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Appendix to Technical Part

Form CON – 3: Environmental, Social, Health, and Safety Performance Declaration

[The following table shall be filled in for the Bidder, each member of a Joint Venture and each Specialized Subcontractor]

Bidder's Name: _____ *[insert full name]*
 Date: _____ *[insert day, month, year]*
 Joint Venture Member's or Specialized Subcontractor's Name: _____ *[insert full name]*
 RFB No. and title: _____ *[insert RFB number and title]*
 Page _____ *[insert page number]* of _____ *[insert page number]* pages

Environmental, Social, Health, and Safety Performance Declaration in accordance with Section III, Qualification Criteria, and Requirements			
<input type="checkbox"/> No suspension or termination of contract: An employer has not suspended or terminated a contract and/or called the performance security for a contract for reasons related to Environmental, Social, Health, or Safety (ESHS) performance since the date specified in Section III, Qualification Criteria, and Requirements, Sub-Factor 2.5.			
<input type="checkbox"/> Declaration of suspension or termination of contract: The following contract(s) has/have been suspended or terminated and/or Performance Security called by an employer(s) for reasons related to Environmental, Social, Health, or Safety (ESHS) performance since the date specified in Section III, Qualification Criteria, and Requirements, Sub-Factor 2.5. Details are described below:			
Year	Suspended or terminated portion of contract	Contract Identification	Total Contract Amount (Rs.)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for suspension or termination: <i>[indicate main reason(s) e.g. for GBV/ SEA breaches]</i>	<i>[insert amount]</i>
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for suspension or termination: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>
...	...	<i>[list all applicable contracts]</i>	...
Performance Security called by an employer(s) for reasons related to ESHS performance			

Year	Contract Identification	Total Contract Amount (Rs.)
<i>[insert year]</i>	<p>Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i></p> <p>Name of Employer: <i>[insert full name]</i></p> <p>Address of Employer: <i>[insert street/city/country]</i></p> <p>Reason(s) for calling of performance security: <i>[indicate main reason(s) e.g. for GBV/ SEA breaches]</i></p>	<i>[insert amount]</i>

Appendix to Technical Part

Form FIN – 3.1: Financial Situation and Performance

[To be completed by the Bidder and by each member of a Joint Venture]

Bidder's Legal Name: _____

Date: _____

Joint Venture Member's Legal Name _____

RFB No. and title: _____

Page _____ of _____ pages

1. Financial data

Type of Financial information in (Rs.)	Historic information for previous _____ years, (amount in Rs.)				
	Year 1	Year 2	Year 3	Year 4	Year 5
Statement of Financial Position (Information from Balance Sheet)					
Total Assets (TA)					
Total Liabilities (TL)					
Total Equity/Net Worth (NW)					
Current Assets (CA)					
Current Liabilities (CL)					
Working Capital (WC)					
Shareholder's Funds (Net Worth)=(Paid up equity +Reserves)-(revaluation reserves + Miscellaneous expenditure not written off)					
Depreciation					
Information from Income Statement					
Total Revenue (TR)					

Profits Before Taxes (PBT)					
Cash Flow Information					
Cash Flow from Operating Activities					
Net cash accruals= Profit after Tax + depreciation					
This information should be extracted from the Annual Financial Statements/ Balance sheets, which should be enclosed. Year 1 will be the latest year for which audited financial statements are available. Year 2 shall be the year immediately preceding year 1 and year 3 shall be the year immediately preceding Year 2.					

2. Sources of Finance

Specify sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.

No.	Source of finance	Amount (Rs.)
1		
2		
3		

3. Financial documents

The Bidder and its parties shall provide copies of financial statements for _____ years pursuant Section III, Evaluation and Qualifications Criteria, Sub-factor 3.2. The financial statements shall:

- (a) reflect the financial situation of the Bidder or in case of JV member, and not an affiliated entity (such as parent company or group member).
- (b) be independently audited or certified in accordance with local legislation. In case of Indian bidders, the financial statements shall be audited by a certified chartered accountant.
- (c) be complete, including all notes to the financial statements.
- (d) correspond to accounting periods already completed and audited.

- ☐ Attached are copies of financial statements¹⁰ (balance sheets, including all related notes, and income statements) for the _____ years required above; and complying with the requirements. (If the most recent set of financial statements is for a period earlier than 12 months from the date of bid, the reason for this should be justified)
- ☐ Attached is a copy of certificate given from the commercial bank assuring cash flow (working capital for the subject contract) in the format attached.

¹⁰ If the most recent set of financial statements is for a period earlier than 12 months from the date of bid, the reason for this should be justified.

Appendix to Technical Part

Form FIN - 3.2: Average Annual Construction Turnover

[To be completed by the Bidder and by each member of a Joint Venture]

Bidder's Legal Name: _____

Date: _____

Joint Venture Member's Legal Name _____

RFB No. and title: _____

Page _____ of _____ pages

Annual turnover data (construction only)	
Year	Amount in Rs.
<i>[indicate year]</i>	<i>[insert amount]</i>
Average Annual Construction Turnover *	

- * See Section III, Evaluation and Qualification Criteria, Sub-Factor 3.2. Annual construction turnover calculated as total certified payments received for work in progress or completed, for 5 years. This should be certified by a Chartered Accountant.

Appendix to Technical Part

JOINT VENTURE

Names of all members of a joint venture
1. Member in charge
2. Member
3. Member

Total value of annual construction turnover, in terms of work billed to clients, in Rupees

Annual Turnover Data (construction only; in Rs. *)							
Member	Form 2 page no.	Year 1	Year 2	Year 3	Year 4	Year 5	Average
1. Member in charge							
2. Member							
3. Member							
TOTALS							

*** To be certified by a chartered accountant**

Name and address of Bankers to the Joint Venture

Provide details regarding financial responsibility and participation (percentage share in the total) of each firm in the Joint Venture. Attach a Memorandum of Understanding for the Proposed Agreement of joint Venture which should lay down responsibility regarding work and financial arrangements in respect of each of the firm in the Joint Venture (Refer also ITB Clause 4.1).

Appendix to Technical Part

Form FIN - 3.3: Financial Resources

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract or contracts as specified in Section III, Evaluation and Qualification Criteria.

Source of financing	Amount (Rs.)
1.	
2.	
3.	
4.	

FORMAT FOR EVIDENCE OF ACCESS TO OR AVAILABILITY OF CASH FLOW

[To be given from a Nationalized or Scheduled Bank in India]

Clause 3.1(ii) of Section III – Qualification Criteria

(1) AVAILABILITY OF CASH FLOW (WORKING CAPITAL)

This is to certify that M/s. _____ is a reputed company with a good financial standing.

If the contract for the works, namely _____ [funded by the World Bank] is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs. _____ to meet their capital requirements for executing the above contract.

-- Sd. --

Name of Bank Manager

Senior Bank Manager

Address of the Bank

<p>* Change the text as follows for Joint venture:</p>

This is to certify that M/s. who has formed a JV with M/s. and M/s. for participating in this bid, is a reputed company with a good financial standing.

If the contract for the work, namely [funded by the World Bank] is awarded to the above Joint Venture, we shall be able to provide overdraft/credit facilities to the extent of Rs. to meet the working capital requirements for executing the above contract.

[This should be given by the JV members in proportion to their financial participation.]

Appendix to Technical Part

Form FIN – 3.4: Current Contract Commitments / Works in Progress

Bidders and each member of a JV should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

(A) Existing commitments and on-going works:

Description of Work	Place & State	Contract No. & Date	Name and Address of Employer	Value of Contract (Rs. equivalent in million)	Stipulated period of completion	Value of works ¹¹ remaining to be completed (Rs. equivalent in million)	Anticipated date of completion	Average Monthly Invoicing Over Last Six Months (Rs./month) Equivalent in millions)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

¹¹ Attach certificate(s) from the Engineer(s)-in-Charge.

(B) Works for which bids already submitted and likely to be awarded – expected additional commitment.

Description of Work	Place & State	Name and Address of Employer	Estimated value of Works (Rs. equivalent in million)	Stipulated period of completion	Date when decision is expected	Remarks, if any
(1)	(2)	(3)	(4)	(5)	(6)	(7)

Appendix to Technical Part

Form EXP - 4.1: General Construction Experience

[The following table shall be filled in for the Bidder and for each member of a Joint Venture]

Bidder's Legal Name: _____

Date: _____

Joint Venture Member's Legal Name _____

RFB No. and title: _____

Page _____ of _____ pages

[Identify contracts that demonstrate continuous construction work over the past [5] years pursuant to Section III, Qualification Criteria and Requirements, Sub-Factor 4.1. List contracts chronologically, according to their commencement (starting) dates.]

Starting Month/ Year	Ending Month/ Year	Contract Identification	Role of Bidder [“Contractor” or “JV Member” or “Subcontractor” or “Contract Manager”]
		Contract name: _____ Brief Description of the Works performed by the Bidder: _____ Amount of contract: _____ Name of Employer: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Bidder: _____ Amount of contract: _____ Name of Employer: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Bidder: _____ Amount of contract: _____ Name of Employer: _____ Address: _____	

Appendix to Technical Part

Form EXP - 4.2(a): Specific Construction and Contract Management Experience

[The following table shall be filled in for contracts performed by the Bidder, each member of a Joint Venture, and specialist sub-contractors]

Bidder's Legal Name: _____

Date: _____

Joint Venture Member's Legal Name _____

RFB No. and title: _____

Page _____ of _____ pages

(A) Work performed as prime Contractor or JV Member or Sub-Contractor or Management Contractor (in the same name and style) on construction works of a similar nature and volume over the last five years¹². *[Attach certificate from the 'Engineer-in-charge'.]*

Similar Contract No.	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub- contractor <input type="checkbox"/>
Total Contract Amount			Rs. *	
If member in a JV or subcontractor, specify participation in total Contract amount (% of Total)			*	
Employer's Name:				
Address:				
Telephone/fax number				
E-mail:				

¹² Immediately preceding the financial year in which bids are received.

Appendix to Technical Part

Form EXP - 4.2(a) (cont.)

Specific Construction and Contract Management Experience (cont.)

Similar Contract No.	Information
Description of the similarity in accordance with Sub-Factor 4.2(a) of Section III:	
1. Amount	
2. Physical size of required works items	
3. Complexity	
4. Methods/Technology	
5. Construction rate for key activities	
6. Other Characteristics	

Appendix to Technical Part

Form EXP - 4.2(b): Construction Experience in Key Activities

[The following table shall be filled in for contracts performed by the Bidder, each member of a Joint Venture, and specialist sub-contractors]

Bidder's Legal Name: _____

Date: _____

Joint Venture Member's Legal Name _____

Subcontractor's Legal Name¹³ (as per ITB 33.2 and 33.3): _____

RFB No. and title: _____

Page _____ of _____ pages

Subcontractor's Name (as per ITB 33.2 and 33.3): _____

All subcontractors for key activities must complete the information in this form as per ITB 33.2 and 33.3 and Section III, Qualification Criteria and Requirements, Sub-Factor 4.2.

(B) Quantities of work executed as prime contractor or Sub-Contractor (in the same name and style) in the last five years:¹⁴ *[Attach certificate from the 'Engineer-in-charge'.]*

1. Key Activity No One: _____

Information				
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub-contractor <input type="checkbox"/>
Total Contract Amount			Rs.	
Quantity (Volume, number or rate of production, as applicable) performed under the contract per year or part of the year in the last 5 years	Total quantity in the contract (i)	Percentage participation (ii)		Actual Quantity Performed (i) x (ii)
Year 1				

¹³ If applicable.

¹⁴ Immediately preceding the financial year in which bids are received.

Year 2			
Year 3			
Year 4			
Year 5			
Employer's Name:			
Address:			
Telephone/fax number			
E-mail:			

2. Activity No. Two

3.

	Information
Description of the key activities in accordance with Sub-Factor 4.2(b) of Section III:	

Appendix to Bid Technical Part

Form EXP – 4.2(c): Specific Design Experience

[The following table shall be filled in for the Bidder, each member of Joint Venture, and Specialized Subcontractors]

Bidder's Name: _____
 Date: _____
 Joint Venture Member's Name _____
 RFB No. and title: _____
 Page _____ of _____ pages

Sub-contractor's Name (as per ITB 33.2 and 33.3): _____

All Sub-contractors for key activities must complete the information in this form as per ITB 33.2 and 33.3 and Section III, Evaluation and Qualification Criteria, Sub-Factor 4.2.

(C) Quantities of work executed as prime contractor or Sub-Contractor (in the same name and style) in the last five years:¹⁵ *[Attach certificate from the 'Engineer-in-charge'.]*

1. ¹⁶Key Activity No One: _____ *[repeat if applicable, for each activity specified in Section III: Qualification Criteria]*

	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub-contractor <input type="checkbox"/>
Total Contract Amount	Rs.			
Quantity (Value) performed under the contract per year or part of the year	Total quantity in the contract (i)	Percentage participation (ii)	Actual Quantity Performed (i) x (ii)	
Year 1				
Year 2				
Year 3				
Year 4				

¹⁵ Immediately preceding the financial year in which bids are received.

¹⁶ Activities for which data is requested should tally with those specified in Section III: Qualification Criteria

Employer's Name:	
Address:	
Telephone/fax number	
E-mail:	

Appendix to Technical Part

Form.....

(Name of the Project)

(Declaration regarding tax/duty exemption for materials/construction equipment bought for the work)

(Bidder's Name and Address)

To:
(Name of the
Employer & address)

Dear Sir:

Re: [Name of Work].....

Certificate for Import/Procurement of Goods/Construction Equipment
Government Order/Circular Number under which tax/duty Exemption is being sought: ...

1. We confirm that we are solely responsible for obtaining tax/duty waivers which we have considered in our bid and in case of failure to receive such waivers for reasons whatsoever, the employer will not compensate us.
2. We are furnishing below the information required by the Employer for issue of the necessary certificates in terms of the Government of India's relevant Notifications.
3. The goods/construction equipment for which certificates are required are as under:

Items (modify the list suitably for each specific work)*	Make/ Brand Name	Capacity [where applicable]	Quantity	Value	State whether it will be procured locally or imported [if so from which country]	Remarks regarding justification for the quantity and their usage in works.
Goods						
[a] Bitumen						
[b] Cement						
[c] Steel						
Construction Equipment						

4. We agree that no modification to the above list is permitted after bids are opened.
5. We agree that the certificate will be issued only to the extent considered reasonable by the Employer for the work, based on the approved design, work requirements

and the construction program and methodology as furnished by us along with the bid.

6. We confirm that the above goods and construction equipment will be exclusively used for the construction of the above work and the construction equipment will not be sold or otherwise disposed of in any manner for a period of five years from the date of acquisition.

Date: _____

(Signature)_____

Place:_____

(Printed Name)_____

(Designation)_____

(Common Seal) _____

[This certificate will be issued within 60 days of signing of contract and no subsequent changes will be permitted.]

**** Modify the above to suit the requirements given in Government of India's Notifications as current of date of bidding.***

Appendix to Technical Part: Bid Security

Form of Bid Security - Bank Guarantee

[Guarantor letterhead or SWIFT identifier code]

Bank Guarantee No.....[insert guarantee reference number]

Date.....[insert date of issue of the guarantee]

WHEREAS, _____ [name of Bidder]¹⁷ (hereinafter called "the Applicant") has submitted his Bid dated _____ [date] or will submit his Bid for the construction of _____ [name of Contract] (hereinafter called "the Bid") under Request for Bids No.....[insert number] (hereinafter called "the RFB")

KNOW ALL PEOPLE by these presents that We _____ [name of bank] of _____ [name of country] having our registered office at _____ (hereinafter called "the Bank") are bound unto _____ [name of Employer] (hereinafter called "the Employer") in the sum of _____¹⁸ for which payment well and truly to be made to the said Employer the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of _____ 20____.

THE CONDITIONS of this obligation are:

(1) If after Bid opening the Applicant (a) withdraws his bid during the period of Bid validity specified in the Letter of Bid, ("the Bid Validity Period"); or (b) does not accept the correction of the Bid Price pursuant to ITB 36;

Or

(2) If the Applicant having been notified of the acceptance of his bid by the Employer during the period of Bid validity:

- (a) fails or refuses to execute the Contract Agreement in accordance with the Instructions to Bidders, if required; or
- (b) fails or refuses to furnish the Performance Security and if required, the Environmental, Social, Health and Safety (ESHS) Performance Security, in accordance with the Instruction to Bidders.

¹⁷ Insert name of the Bidder, which in the case of a joint venture shall be (a) the name of the joint venture that submits the bid if the JV has been constituted into a legally enforceable JV, or (b) the names of all future members of the JV as named in the letter of intent to execute the JV Agreement submitted by the bidder along with its bid.

¹⁸ The Applicant should insert the amount of the guarantee in words and figures denominated in Indian Rupees. This figure should be the same as shown in Clause 19.1 of the Instructions to Bidders.

we undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of one or any of the four conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date _____¹⁹days after the deadline for submission of Bids as such deadline is stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this guarantee should reach the Bank not later than the above date.

DATE _____ SIGNATURE OF THE BANK _____

WITNESS _____ SEAL _____

[signature, name, and address]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

¹⁹ 45 days after the end of the validity period of the Bid.

Letter of Bid - Financial Part

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE DOCUMENT

The Bidder must prepare this Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and business address.

Note: All italicized text in black font is to help Bidders in preparing this form.

Date of this Bid submission: *[insert date (as day, month and year) of Bid submission]*

Request for Bid No.: *[insert identification]*

Alternative No.²⁰: *[insert identification No if this is a Bid for an alternative]*

To: *[insert complete name of Employer]*

We, the undersigned, hereby submit the second part of our Bid, the Bid Price. This accompanies the Letter of Bid - Technical Part.

In submitting our Bid, we make the following additional declarations:

(a) **Bid Validity Period:** Our Bid shall be valid for a period specified in BDS 18.1 (or as amended if applicable) from the date fixed for the Bid submission deadline specified in BDS 22.1 (or as amended if applicable), and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(b) **Bid Price:** The total price of our Bid, including any discounts offered is:

Total price is: *[insert the total price of the Bid in Rs. in words and figures];*

(c) **Commissions, gratuities and fees:** We have paid, or will pay the following commissions, gratuities, or fees with respect to the Bidding process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity].*

Name of Recipient	Address	Reason	Amount

(If none has been paid or is to be paid, indicate "none.")

²⁰ Delete if not applicable

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

Name of the person duly authorized to sign the Bid on behalf of the Bidder: ** [insert complete name of person duly authorized to sign the Bid]

Title of the person signing the Bid: [insert complete title of the person signing the Bid]

Signature of the person named above: [insert signature of person whose name and capacity are shown above]

Date signed [insert date of signing] **day of** [insert month], [insert year]

*: In the case of the Bid submitted by a Joint Venture specify the name of the Joint Venture as Bidder.

**: Person signing the Bid shall have the power of attorney given by the Bidder. The power of attorney shall be attached with the Bid Schedules

Appendix to Financial Part: Schedules Form SC-Sub-contracting

SCHEDULE OF SUBCONTRACTORS

[Note: Entries in this Schedule shall be the same as included in the same Schedule in the technical part of the bid, except for the column on 'Approximate value of subcontract' added in the table below]

Item	Element of work	Approximate value of subcontract	% of bid price	Name and address of sub-contractor	Qualification and experience of sub-contractor on similar works of the elements executed

The Bidder shall enter in this schedule a list of the major sections and appropriate value of the work for which he proposed to use subcontractors *[for those costing more than 5% of the bid price for each element]*, together with the names, addresses and experiences of the proposed subcontractors.

The capability of the subcontractor will also be assessed (on the same lines as for the main Contractor) before according approval to him.

(Work should not be split into small parts and subcontracted; but subcontracting specialized elements of works is acceptable).

SECTION V - ELIGIBLE COUNTRIES

Eligibility for the Provision of Goods, Works and Non-consulting Services in Bank-Financed Procurement

In reference to ITB 4.8, and 5.1, for the information of the Bidders, at the present time firms, goods and services from the following countries are excluded from this Bidding process:

Under ITB 4.8 (a) and 5.1 : *None*

Under ITB 4.8 (b) and 5.1 : *None*

SECTION VI - FRAUD AND CORRUPTION

(Section VI shall not be modified)

1. Purpose

1.1 The Bank's Anti-Corruption Guidelines and this annex apply with respect to procurement under Bank Investment Project Financing operations.

2. Requirements

2.1 The Bank requires that Borrowers (including beneficiaries of Bank financing); bidders (applicants/proposers), consultants, contractors and suppliers; any sub-contractors, sub-consultants, service providers or suppliers; any agents (whether declared or not); and any of their personnel, observe the highest standard of ethics during the procurement process, selection and contract execution of Bank-financed contracts, and refrain from Fraud and Corruption.

2.2 To this end, the Bank:

a. Defines, for the purposes of this provision, the terms set forth below as follows:

- i. "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
- ii. "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;
- iii. "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- iv. "coercive practice" is 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;
- v. "obstructive practice" is:
 - (a) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
 - (b) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 2.2 e. below.

- b. Rejects a proposal for award if the Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- c. In addition to the legal remedies set out in the relevant Legal Agreement, may take other appropriate actions, including declaring misprocurement, if the Bank determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement process, selection and/or execution of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- d. Pursuant to the Bank's Anti- Corruption Guidelines and in accordance with the Bank's prevailing sanctions policies and procedures, may sanction a firm or individual, either indefinitely or for a stated period of time, including by publicly declaring such firm or individual ineligible (i) to be awarded or otherwise benefit from a Bank-financed contract, financially or in any other manner;²¹ (ii) to be a nominated²² sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract; and (iii) to receive the proceeds of any loan made by the Bank or otherwise to participate further in the preparation or implementation of any Bank-financed project;
- e. Requires that a clause be included in bidding/request for proposals documents and in contracts financed by a Bank loan, requiring (i) bidders (applicants/proposers), consultants, contractors, and suppliers, and their sub-contractors, sub-consultants, service providers, suppliers, agents personnel, permit the Bank to inspect²³ all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the Bank.

²¹ For the avoidance of doubt, a sanctioned party's ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and bidding, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

²² A nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider (different names are used depending on the particular bidding document) is one which has been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

²³ Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Bank or persons appointed by the Bank to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.

PART 2 – Works' Requirements

SECTION VII - WORKS' REQUIREMENTS: CONDITIONS OF CONTRACT TOGETHER WITH SCHEDULES

Work's Requirements

Notes on preparing the Work's Requirements

This Section together with Part 3 – Drawings, contains the Scope, site information, the Specifications, the Drawings, the ESHS requirements, and other Information that describe the Works to be executed by the Bidders.

Engineering, Procurement, Construction (“EPC”) contract is a “single responsibility contract”, and the Employer is not expected to invite Bids with detailed design and technical specifications. However, the Employer does and must know what it wants and must communicate its needs adequately. This section on Work's Requirements replaces the usual Technical Specifications of a more traditional approach.

The Employer should specify the purpose for which the Works are intended, the requirements for the completed Works, and the tests that will be carried out on completion of the Works to verify compliance with the specified requirements.

The Employer may perform appropriate front-end tasks (such as geotechnical/ environmental investigations and permit acquisitions) to enable the Employer to: (a) develop a realistic understanding of the contract's scope and budget; and (b) furnish Bidders with information that they can reasonably rely upon in establishing their price and other commercial decisions. The Employer shall make available to Bidders all relevant information in the Employer's possession on the topography of the Site and on sub-surface, hydrological, climatic and environmental conditions at the Site etc. It should however, be made clear that the Employer shall have no responsibility for the accuracy, sufficiency or completeness of such data.

While defining the Work's Requirements, care must be taken to avoid over specifying details to the extent that the flexibility and potential benefits associated with a “single responsibility” approach is seriously eroded or threatened. As the contractor is expected to do the engineering, procurement and construction, the Employer should provide the quality, design and/or other performance parameters, technical and evaluation criteria, functional requirements, fixtures, fittings, equipment, supply of certain items, such as consumables, the key personnel (if any), and requirements for the completed works, and any limitations which the Employer wishes to impose.

The Employer's Requirements should clarify the extent to which the Works are to be fully equipped, ready for operation, with spare parts and consumables provided for operation (for a specified period), typically by the Employer. The Contractor may also be required to operate the Works for a specified period.

The Employer's Requirements must be drawn up to permit the widest, possible competition and, at the same time, present a clear statement of the required standards of workmanship, materials performance and/or functions of the Works. The Employer's Requirements should stipulate that all goods and materials to be incorporated in the Works are new, unused, of the most recent or current models and incorporate all recent improvements in design and materials.

Care must be taken when drafting the Employer's Requirements to ensure that the requirements are not restrictive. Country's technical standards, building, construction and environmental Laws, Laws applicable to the product being produced from the Works, and other standards applicable to the Works, or defined by applicable Laws should be specified in the Employer's Requirements. It should be stated that goods, materials and workmanship meeting other authoritative standards and which promise to ensure equal or higher quality than the standards specified, will also be acceptable.

Any portions of the Employer's Requirements, and/or data and information provided by (or on behalf on the Employer), which are to be immutable or are to be the responsibility of the Employer, should be clearly stated in the Employer's Requirements. If the requirements include some Works that e.g. fall within the municipal limits of a town or within any area falling in a reserved forest or wildlife sanctuary and require requisite clearances or approvals before for commencing construction, these should to the extent possible, be identified at the time of bidding itself, and separate prices requested for them (Refer Article 8, sub-clause 8.3.3).

Any additional sustainable procurement technical requirements (beyond the ESHS requirements stated in the Environmental, Social, Health and Safety Requirements section below) shall be clearly specified, and in a manner that enables proper evaluation of such requirements.

Environmental, Social, Health and Safety Requirements

The Contractor should use the service of the suitably qualified environmental, social, health & safety specialist to prepare the specifications for ESHS.

ESHS policy is required (as per condition of contract), the contractor may refer the following guidelines in drafting & appropriate policy for the works.

SUGGESTED CONTENT FOR AN ENVIRONMENTAL AND SOCIAL POLICY (STATEMENT)

The Works' policy goal, as a minimum, should be stated to integrate environmental protection, occupational and community health and safety, gender, equality, child protection, vulnerable people (including those with disabilities), sexual harassment, gender-based violence (GBV), sexual exploitation and abuse (SEA), HIV/AIDS awareness and prevention and wide stakeholder engagement in the planning processes, programs, and activities of the parties involved in the execution of the Works. The Employer is advised to consult with the World Bank to agree the issues to be included which may also address: climate adaptation, land acquisition and resettlement, indigenous people, etc. The policy should set the frame for monitoring, continuously improving processes and activities and for reporting on the compliance with the policy.

The policy shall include a statement that, for the purpose of the policy and/or code of conduct, the term "child" / "children" means any person(s) under the age of 18 years.

The policy should, as far as possible, be brief but specific and explicit, and measurable, to enable reporting of compliance with the policy in accordance with the Conditions of the Contract and Appendix B to the Conditions of Contract.

As a minimum, the policy is set out to the commitments to:

- 1. apply good international industry practice to protect and conserve the natural environment and to minimize unavoidable impacts;*
- 2. provide and maintain a healthy and safe work environment and safe systems of work;*
- 3. protect the health and safety of local communities and users, with particular concern for those who are disabled, elderly, or otherwise vulnerable;*
- 4. ensure that terms of employment and working conditions of all workers engaged in the Works meet the requirements of the ILO labour conventions to which the host country is a signatory;*
- 5. be intolerant of, and enforce disciplinary measures for illegal activities. To be intolerant of, and enforce disciplinary measures for GBV, inhumane treatment, sexual activity with children, and sexual harassment;*
- 6. incorporate a gender perspective and provide an enabling environment where women and men have equal opportunity to participate in, and benefit from, planning and development of the Works;*
- 7. work co-operatively, including with end users of the Works, relevant authorities, contractors and local communities;*

8. *engage with and listen to affected persons and organisations and be responsive to their concerns, with special regard for vulnerable, disabled, and elderly people;*
9. *provide an environment that fosters the exchange of information, views, and ideas that is free of any fear of retaliation, and protects whistle blowers;*
10. *minimise the risk of HIV transmission and to mitigate the effects of HIV/AIDS associated with the execution of the Works;*

The policy should be signed by the senior manager of the Employer. This is to signal the intent that it will be applied rigorously.

MINIMUM CONTENT OF ESHS REQUIREMENTS

In preparing detailed specifications for ESHS requirements, the specialists should refer to and consider:

- *project reports e.g. ESIA/ESMP (ESMP Attached as Annexure-1)*
- *consent/permit conditions*
- *required standards including World Bank Group EHS Guidelines*
- *relevant international conventions or treaties etc., national legal and/or regulatory requirements and standards (where these represent higher standards than the WBG EHS Guidelines)*
- *relevant international standards e.g. WHO Guidelines for Safe Use of Pesticides*
- *relevant sector standards e.g. EU Council Directive 91/271/EEC Concerning Urban Waste Water Treatment*
- *grievance redress mechanism including types of grievances to be recorded and how to protect confidentiality e.g. of those reporting allegations of GBV/SEA*
- *GBV/SEA prevention and management*

The detail specification for ESHS should, to the extent possible, describe the intended outcome rather than the method of working.

The ESHS requirements should be prepared in manner that does not conflict with the relevant Conditions of Contract, and in particular conditions related to:

- Language and Law
- Subcontracting
- Other Contractors
- Personnel and Equipment
- Contractor's Risks
- Public Health and Safety
- Protection of environment
- Discoveries
- Material Adverse Effect warning
- Payments

MINIMUM REQUIREMENTS FOR THE BIDDER'S CODE OF CONDUCT

[A minimum requirement for the Code of Conduct should be set out by the Employer, taking into consideration the issues, impacts, and mitigation measures identified, for example, in:

- *project reports e.g. ESIA/ESMP*
- *any particular GBV/SEA requirements*
- *consent/permit conditions (regulatory authority conditions attached to any permits or approvals for the project)*
- *required standards including World Bank Group EHS Guidelines*
- *relevant international conventions, standards or treaties, etc., national legal and/or regulatory requirements and standards (where these represent higher standards than the WBG EHS Guidelines)*
- *relevant standards e.g. Workers' Accommodation: Process and Standards (IFC and EBRD)*
- *relevant sector standards e.g. workers accommodation*
- *grievance redress mechanisms.*

The types of issues identified could include. risks associated with: labor influx, spread of communicable diseases, sexual harassment, gender-based violence, illicit behavior and crime, and maintaining a safe environment etc.]

[Amend the following instructions to the Bidder taking into account the above considerations.]

A satisfactory code of conduct will contain obligations on all Contractor's personnel (including sub-contractors and day workers) that are suitable to address the following issues, as a minimum. Additional obligations may be added to respond to particular concerns of the region, the location and the project sector or to specific project requirements. The code of conduct shall contain a statement that the term "child" / "children" means any person(s) under the age of 18 years.

The issues to be addressed include:

1. Compliance with applicable laws, rules, and regulations
2. Compliance with applicable health and safety requirements to protect the local community (including vulnerable and disadvantaged groups), the Employer's and Engineer-in-charge's personnel, and the Contractor's personnel, including sub-contractors and day workers, (including wearing prescribed personal protective equipment, preventing avoidable accidents and a duty to report conditions or practices that pose a safety hazard or threaten the environment)
3. The use of illegal substances
4. Non-Discrimination in dealing with the local community (including vulnerable and disadvantaged groups), the Employer's and Engineer-in-charge's personnel, and the Contractor's personnel, including sub-contractors and day workers (for example on the basis of family status, ethnicity, race, gender, religion, language,

marital status, age, disability (physical and mental), sexual orientation, gender identity, political conviction or social, civic, or health status)

5. Interactions with the local community(ies), members of the local community (ies), and any affected person(s) (for example to convey an attitude of respect, including to their culture and traditions)
6. Sexual harassment (for example to prohibit use of language or behavior, in particular towards women and/or children, that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate)
7. Violence including sexual and/or gender-based violence (for example acts that inflict physical, mental or sexual harm or suffering, threats of such acts, coercion, and deprivation of liberty)
8. Exploitation including sexual exploitation and abuse (for example the prohibition of the exchange of money, employment, goods, or services for sex, including sexual favors or other forms of humiliating, degrading behavior, exploitative behavior or abuse of power)
9. Protection of children (including prohibitions against sexual activity or abuse, or otherwise unacceptable behavior towards children, limiting interactions with children, and ensuring their safety in project areas)
10. Sanitation requirements (for example, to ensure workers use specified sanitary facilities provided by their employer and not open areas)
11. Avoidance of conflicts of interest (such that benefits, contracts, or employment, or any sort of preferential treatment or favors, are not provided to any person with whom there is a financial, family, or personal connection)
12. Respecting reasonable work instructions (including regarding environmental and social norms)
13. Protection and proper use of property (for example, to prohibit theft, carelessness or waste)
14. Duty to report violations of this Code
15. Non-retaliation against workers who report violations of the Code, if that report is made in good faith.

The Code of Conduct should be written in plain language and signed by each worker to indicate that they have:

- received a copy of the code;
- had the code explained to them;
- acknowledged that adherence to this Code of Conduct is a condition of employment; and
- understood that violations of the Code can result in serious consequences, up to and including dismissal, or referral to legal authorities.

A copy of the code shall be displayed in a location easily accessible to the community and project affected people. It shall be provided in languages comprehensible to the local community, Contractor's personnel (including sub-contractors and day workers), Employer's and Engineer-in-charge's personnel, and affected persons.

PAYMENT FOR ESHS REQUIREMENTS

The Employer's ESHS and procurement specialists should consider how the Contractor payments shall be linked to the ESHS (including sexual exploitation and abuse (SEA) and gender-based violence (GBV)) requirements. Payment for the delivery of ESHS requirements is a subsidiary obligation of the Contractor and is covered within the quoted EPC prices. Contractors obligations under the ESHS requirements should accordingly be required to be complied with before release of Interim/ Stage Payments.

Model Agreement And Letter of Acceptance

Contents

Article No	Content
PART I - Preliminary	
	Letter of Acceptance
	Recitals
Article 1	Definitions and Interpretation
PART II - Scope of the Project	
Article 2	Scope of the Project
Article 3	Obligations of the Contractor
Article 4	Obligations of the Employer
Article 5	Representations and Warranties
Article 6	Disclaimer
Part III - Construction and Maintenance	
Article 7	Performance Security
Article 8	Right of Way
Article 9	Utilities and Trees
Article 10	Design and Construction of the Project
Article 11	Quality Assurance, Monitoring and Supervision
Article 12	Completion Certificate
Article 13	Change of Scope
Article 14	Maintenance
Article 15	Supervision and Monitoring During Maintenance
Article 16	Traffic Regulation
Article 17	Defects Liability
Article 18	Engineer-in-charge
Part IV - Financial Covenants	
Article 19	Payments
Article 20	Insurance
Part V - Force Majeure and Termination	
Article 21	Force Majeure
Article 22	Suspension of Contractor's Rights
Article 23	Termination

Part VI - Other Provisions	
Article 24	Assignment and Charges
Article 25	Liability and Indemnity
Article 26	Dispute Resolution
Article 27	Miscellaneous
Article 28	Definitions
Appendix	Bank's Policy- Corrupt and Fraudulent Practices
Appendix A	Adjudicator
Appendix B	ESHS Metrics for Progress Reports
Schedules	
Schedule-A	Site of the Project
Schedule-B	Development of the Project
Schedule-C	Project Facilities
Schedule-D	Specifications and Standards
Schedule-E	Maintenance Requirements
Schedule-F	Applicable Permits
Schedule-G	Form of Bank Guarantee
Schedule-H	Contract Price Weightages
Schedule-I	Drawings
Schedule-J	Project Completion Schedule
Schedule-K	Tests on Completion
Schedule-L	Provisional/ Completion Certificate
Schedule-M	Payment reduction for non-compliance with the Maintenance Requirements
Schedule-N	Selection of Engineer-in-charge
Schedule-O	Forms of Payment Statements
Schedule-P	Insurance
Schedule-Q	Tests on Completion of Maintenance Period
Schedule-R	Taking Over Certificate
Schedule-S	Performance Certificate
Schedule-T	Payment Currencies

Part I Preliminary

NOTIFICATION OF AWARD

Letter of Acceptance

[on letterhead paper of the Employer]

[The Letter of Acceptance shall be the basis for formation of the Contract as described in ITB Clause 47. This Standard Form of Letter of Acceptance shall be filled in and sent to the successful Bidder only after evaluation of bids has been completed, subject to any review by the World Bank required under the Loan Agreement.]

..... *[date]*

To: *[name and address of the Contractor]*

Subject: *[Notification of Award Contract No.]*

This is to notify you that your Bid dated *[insert date]* for execution of the *[insert name of the contract and identification number]* for the Accepted Contract Amount of *[insert amount in numbers and words]*, as corrected and modified²⁴ in accordance with the Instructions to Bidders is hereby accepted by our Agency.

You are requested to furnish the Performance Security and an Environmental, Social, Health and Safety Performance Security *[Delete ESHS Performance Security if it is not required under the contract]* in the form detailed in ITB Clause 50 for amounts²⁵ of Rs., and Rs. specified therein and sign the contract within 28 days of the receipt of this letter of acceptance, failing which action as stated in ITB Clause 50.2 will be taken, in accordance with the Conditions of Contract. The securities shall be valid up to 28 days from the date of completion i.e. up to and shall be as per the Performance Security Form and the ESHS Performance Security Form *[Delete reference to the ESHS Performance Security Form if it is not required under the contract]*, included in Schedule-G: Form of Bank Guarantee.

[Choose one of the following statements:]

We accept that _____ *[insert the name of Adjudicator proposed by the Bidder]* be appointed as the Adjudicator²⁶.

²⁴ Delete "corrected and" or "and modified" if not applicable. See Notes on Standard Form of Agreement, next page.

²⁵ Insert amounts for (i) Performance Security; and (ii) ESHS Performance Security respectively.

²⁶ To be used only if the Contractor disagrees in the Bid with the Adjudicator proposed by the Employer in the Instructions to Bidders, and has accordingly offered another candidate.

[or]

We do not accept that _____ *[insert the name of the Adjudicator proposed by the Bidder]* be appointed as the Adjudicator, and by sending a copy of this Letter of Acceptance to _____ *[insert name of the Appointing Authority]*, the Appointing Authority, we are hereby requesting such Authority to appoint the Adjudicator in accordance with ITB 51.1 and Conditions of Contract Clause 26.2.2 of the Contract Agreement²⁷.

We note that as per your bid, you do not intend to subcontract any component of work.

[OR]

We note that as per your bid, you propose to employ M/s. as sub-contractor for executing

[Delete whatever is inapplicable]

Authorized Signature:

Name and Title of Signatory:

Name of Agency:

Attachment: Contract Agreement

²⁷ To be used only if the Contractor disagrees in the Bid with the Adjudicator proposed by the Employer in the ITB, has accordingly offered another candidate, and the Employer does not accept the counterproposal.

ENGINEERING, PROCUREMENT AND CONSTRUCTION AGREEMENT

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

BETWEEN

Inland Waterways Authority of India, Ministry of Shipping, Government of India (hereinafter referred to as the “**Employer**” which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of One Part;

AND

{-----}, means the selected bidder *{single entity or the joint venture which is the selected bidder under the RFB No.....having its registered office atand at(in case of JV),* (hereinafter referred to as the “**Contractor**” which expression shall, unless repugnant to the context or meaning thereof, include its successors and permitted assigns) of the Other Part.

WHEREAS:

- (A) **Inland Waterways Authority of India, Ministry of Shipping, Government of India** has intended to take up the Capacity Augmentation of National Waterway – 1.
- (B) The Employer had resolved to take up the work “**Engineering, Procurement, Construction (EPC) Contract for Renovation and Modernization of Existing Navigational Lock at Farakka, West Bengal**” on Engineering, Procurement, Construction (“**EPC**”) basis in accordance with the terms and conditions to be set forth in an agreement to be entered into.
- (C) The Employer had prescribed the technical and commercial terms and conditions, and invited bids RFB No..... from all bidders having required eligibility and qualification criteria for undertaking the Project.
- (D) After evaluation of the bids received, the Employer had accepted the bid of the selected bidder and issued its Letter of Acceptance No. dated (hereinafter called the “**LOA**”) to the selected bidder for the work “**Engineering, Procurement, Construction (EPC) Contract for Renovation and Modernization of Existing Navigational Lock at Farakka, West Bengal**” at the contract price specified hereinafter, requiring the selected bidder to inter alia:
 - (i) deliver to the Employer a legal opinion from the legal counsel of the selected bidder with respect to the authority of the selected bidder to enter into this Agreement and the enforceability of the provisions thereof, within 10 (ten) days of the date of issue of LOA; and
 - (ii) Execute this Agreement within 28 (twenty eight) days of the date of issue of LOA.
- (E) The Contractor has fulfilled the requirements specified in Recital (D) above;

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

ARTICLE 1

DEFINITIONS AND INTERPRETATION

1.1 Definitions

The words and expressions beginning with capital letters and defined in this Agreement (including those in Article 28) 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.

1.2 Interpretation

1.2.1 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, 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 the State 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 Subclause shall not operate so as to increase liabilities or obligations of the Employer hereunder or pursuant hereto in any manner whatsoever;
- (t) any agreement, consent, approval, authorisation, notice, communication, information or report required under or pursuant to this Agreement from or by any Party or the Engineer-in-charge shall be valid and effective only if it is in writing under the hand of a duly authorised representative of such Party or the Engineer-in-charge, 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 (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.

(y) References to “World Bank” shall mean the International Bank for Reconstruction and Development (The Bank). The Bank is the financing institution which has provided funds toward a part of the cost of the Project. Payments by the World Bank will be made only at the request of the Borrower (IWAI) of the funds and upon approval by the World Bank in accordance with the terms and conditions of the financing agreement (Loan Agreement) and will be subject in all respects to the terms and conditions of that Loan Agreement. The Loan (or other financing) Agreement prohibits a withdrawal from the Loan (or other financing) account for the purpose of any payment to persons or entities, or for any import of goods, equipment, plant, or materials, if such payment or import, is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Borrower shall derive any rights from the Loan Agreement or have any claim to the proceeds of the Loan (or other financing).”

- 1.2.2 Unless expressly provided otherwise in this Agreement, any Documentation required to be provided or furnished by the Contractor to the Employer shall be provided free of cost and in three copies, and if the Employer is required to return any such Documentation with its comments and/or approval, it shall be entitled to retain two copies thereof.
- 1.2.3 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.
- 1.2.4 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

- 1.4.1 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) Corrigendum to Conditions of Contract together with Schedules (issued if any)
- (b) this Agreement including Conditions of Contract together with Schedules; and
- (c) all other agreements and documents forming part hereof or referred to herein; i.e. this Agreement at (b) above shall prevail over the agreements and documents at (c).

1.4.2 Subject to the provisions of Clause 1.4.1, in case of ambiguities or discrepancies within this Agreement, the following shall apply:

- (a) between a Clause of this Agreement and Corrigendum, the provisions of Corrigendum
- (b) 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;
- (c) between the Clauses of this Agreement and the Schedules, the Clauses shall prevail and between Schedules and Annexes, the Schedules shall prevail;
- (d) between any two Schedules, the Schedule relevant to the issue shall prevail;
- (e) between the written description on the Drawings and the Specifications & Standards, the latter shall prevail;
- (f) between the dimension scaled from the Drawing and its specific written dimension, the latter shall prevail; and
- (g) between any value written in numerals and that in words, the latter shall prevail.

1.5 Joint and several liability

1.5.1 If the Contractor has formed a Joint Venture (JV) of two or more entities for implementing the Project:

- (a) these entities shall, without prejudice to the provisions of this Agreement, be deemed to be jointly and severally liable to the Employer for the performance of the Agreement; and
- (b) the Contractor shall ensure that no change in the composition of the Joint Venture (JV) is effected without the prior consent of the Employer.

1.5.2 Without prejudice to the joint and several liability of all the members of the Joint Venture (JV), the Lead Member shall represent all the members of the Joint Venture (JV) and shall at all times be liable and responsible for discharging the functions and obligations of the Contractor. The Contractor shall ensure that each member of the Joint Venture (JV) shall be bound by any decision, communication, notice, action or inaction of the Lead Member on any matter related to this Agreement and the Employer shall be entitled to rely upon any such action, decision or communication of the Lead Member. The Employer shall release the payment only to the Joint Venture (JV).

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) Engineering, Procurement & Construction (EPC) as specified in the title of RFB/ bidding document/ contracts, means the Contractor shall be responsible for design, engineering, third party vetting of designs & drawings, procurement, supply, construction, installation, testing, commissioning & trial run of all the civil, electro-mechanical, plumbing, electronics, instrumentation & other allied works/ services (dismantling, renovation, modernization, dewatering etc- as applicable to the specific works/ items) for successful completion of the Scope of work/ Employer’s requirement & Technical Specifications specified in Volume 2 under this contract.
- (b) Implementation of the Project 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 Volume-II of bidding document;
- (c) Performance and fulfilment of all other obligations of the Contractor in accordance with the provisions of this Agreement and matters incidental thereto or necessary for the performance of any or all of the obligations of the Contractor under this Agreement.

ARTICLE 3

OBLIGATIONS OF THE CONTRACTOR

3.1 Obligations of the Contractor

- 3.1.1 Subject to and on the terms and conditions of this Agreement, the Contractor shall undertake the survey, investigation, design, engineering, procurement, construction of the Project and observe, fulfill, comply with and perform all its obligations set out in this Agreement or arising hereunder.
- 3.1.2 The Contractor shall comply with all Applicable Laws and Applicable Permits (including renewals as required) in the performance of its obligations under this Agreement. The Contractor shall comply with (a) all environmental clearances required (if any) during construction including implementation of Environmental and Social Management Plan (ESMP); (b) ESHS Management Strategies and Implementation Plans; and (c) Code of Conduct (ESHS).
- 3.1.3 Save and except as otherwise provided in this Agreement or Applicable Laws, as the case may be, the Contractor shall, in discharge of all its obligations under this Agreement, conform with and adhere to Good Industry Practice at all times.
- 3.1.4 The Contractor shall remedy any and all loss or damage to the Project occurring 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 or damage shall have arisen from any default or neglect of the Employer or on account of a Force Majeure Event in which case the provisions of Clause 21 shall apply.
- 3.1.5 The Contractor shall remedy any and all loss or damage to the Project during the Defects Liability Period at the Contractor's cost to the extent that such loss or damage shall have arisen out of the reasons specified in Clause 17.3.
- 3.1.6 Deleted
- 3.1.7 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;
 - (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 be violative of any of the provisions of this Agreement;
- (f) support, cooperate with and facilitate the Employer in the implementation and operation of the Project in accordance with the provisions of this Agreement;
- (g) ensure that the Contractor and its Sub-contractors comply with the safety and welfare measures for labour in accordance with the Applicable Laws and Good Industry Practice;
- (h) keep, on the 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 Engineer-in-charge 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 Employer 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 the existing facilities within the Right of Way, irrespective of whether they are public or in the possession of the Employer or of others.
- (k) shall ensure that all the rights/ licences/ warranties/ guarantees/ certificates/ etc. are transferred in the name of the employer before the request of provisional/completion certificate.

3.1.8 The Contractor shall undertake all necessary superintendence to plan, arrange, direct, manage, inspect and test the Works.

3.1.9 Inspections and Audit by the World Bank

The Contractor shall permit, and shall cause its Subcontractors and sub-consultants to permit, the World Bank and/or persons appointed by the World Bank to inspect the Site and all accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the World Bank if requested by the World Bank. The Contractor's and its Subcontractors' and sub-consultants' attention is drawn to Clause 3.9 [Corrupt or Fraudulent Practices] which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under Clause 11.6.1 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the World Bank's prevailing sanctions procedures).

3.2 Obligations relating to sub-contracts and any other agreements

- 3.2.1 The Contractor shall not sub-contract any Works in more than 40% (forty per cent) of the contract price and shall carry out Works directly under its own supervision and through its own personnel in at least 60% (sixty per cent) of the contract price. 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, safety devices and labour, as the case may be, for such Works. The Parties further agree that all obligations and liabilities under this Agreement for the entire Project shall at all times remain with the Contractor. {The Parties also agree that obligation of the Contractor to carry out Works directly in at least 60% (sixty per cent) of the contract price}.
- 3.2.2. 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 Employer prior to entering into any such sub-contract. The Employer 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.
- 3.2.3 In the event any sub-contract referred to in Clause 3.2.2 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 80% (eighty 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 80% (eighty per cent), the Employer 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.
- 3.2.4 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 hereunder.

3.3 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 and will always be of 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 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.

3.4 Contractor's personnel

- 3.4.1 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 qualified, skilled and experienced in their respective functions in conformity with Good Industry Practice. The Contractor shall give preference to the local villagers for unskilled labour requirement and provide a quarterly report to the Engineer-in-charge on the details of person days of employment provided to the local villagers (for both men and women separately).
- 3.4.2 The Engineer-in-charge 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 Engineer-in-charge shall specify the reasons for the removal of such person. The reasons to remove a person also include amongst others, behavior which breaches the Code of Conduct (ESHS) (e.g. spreading communicable diseases, sexual harassment, gender-based violence, (GBV), sexual exploitation or abuse, illicit activity or crime.
- 3.4.3 The Contractor shall on receiving such a direction from the Engineer-in-charge 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 3.4.2. 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 within 28 days from the date of such direction to remove, all at the Contractor's cost.

3.5 Advertisement on Project

The Contractor shall not use the Project or any part thereof in any manner to advertise any commercial product or services or companies.

3.6 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 Provisional Certificate (with respect to the Works completed prior to the issuance of the Provisional Certificate) and/or Completion Certificate (with respect to the Works referred to in the Punch List), save and except to the extent that any such loss or damage shall have arisen from any default or neglect of the Employer.

3.7 Electricity, water and other services

The Contractor shall be responsible for procuring of all power, water and other services that it may require.

3.8 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.

3.9 Corrupt or Fraudulent Practices

The Bank requires compliance with the Bank's Anti-Corruption Guidelines and its prevailing sanctions policies and procedures as set forth in the WBG's Sanctions Framework, as set forth in Appendix to the Conditions of Contract.

ARTICLE 4

OBLIGATIONS OF THE EMPLOYER

4.1 Obligations of the Employer

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

4.1.2 The Employer shall be responsible for the correctness of the Scope of the Project, Project Facilities, Specifications & Standards and the criteria for testing of the completed Works.

4.1.3 The Employer shall provide to the Contractor:

(a) upon receiving the Performance Security and the Environmental, Social, Health and Safety (ESHS) Performance Security under Clause 7.1.1, the Right of Way in accordance with the provisions of Clauses 8.2 and 8.3, as specified in Schedule A;

(b) Deleted.

(c) Environmental clearances are not required but proposed Environment and Social Management Plan (ESMP) is to be implemented.

4.1.4 Delay in providing the Right of Way in accordance with the provisions of Clause 4.1.3 shall entitle the Contractor to Time Extension in accordance with the provisions of Clause 10.5 of this Agreement.

4.1.5 Deleted

Both the parties agree that payment of these 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 Employer and both parties further agree this as final cure against delays of the Employer.

4.1.6 The Employer 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 by any Government Instrumentality or persons claiming through or under it, except for reasons of Emergency, national security, or law and order;
- (d) not do or omit to do any act, deed or thing which may in any manner be violative of any of the 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 3.3, provide reasonable assistance to the Contractor and any expatriate personnel of the Contractor or its Sub-contractors to obtain applicable visas and 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.
- (g) upon written request from the Contractor and subject to the provisions of the Contract, shall issue tax/duty exemption certificate for materials used in the work as per the latest government notifications and based on the work requirements.

4.2 Maintenance obligations prior to the Appointed Date

Deleted.

4.3 Environmental Clearances

The Employer represents and warrants that the environmental clearances are not required for construction of the Project but the proposed ESMP is to be implemented by the Contractor. The ESMP is attached as Annexure-1.

ARTICLE 5

REPRESENTATIONS AND WARRANTIES

5.1 Representations and warranties of the Contractor

The Contractor represents and warrants to the Employer 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 obligations 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 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, result in the breach of, 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 Employer 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 Employer in connection therewith;
- (l) all information provided by the {selected bidder/ members of the JV} in response to the RFB No. or otherwise, is to the best of its knowledge and belief, true and accurate in all material respects; and
- (m) nothing contained in this Agreement shall create any contractual relationship or obligation between the Employer and any Sub-contractors, designers, consultants or agents of the Contractor.

5.2 Representations and warranties of the Employe

The Employer 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 Employer'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 the Project as per Schedule A.

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

- 6.1.1 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 Bids, Scope of the Project, Specifications and Standards of design, construction and maintenance, Site, local conditions, physical qualities of ground, subsoil and geology, suitability and availability of access routes to the Site and all information provided by the Employer 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 4.1.2 and Clause 5.2, the Employer 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 Employer in this regard.
- 6.1.2 The Contractor acknowledges and hereby accepts to have satisfied itself as to the correctness and sufficiency of the Contract Price stated in the Contract Agreement.
- 6.1.3 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 6.1.1 above and hereby acknowledges and agrees that the Employer 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.
- 6.1.4 The Parties agree that any mistake or error in or relating to any of the matters set forth in Clause 6.1.1 above shall not vitiate this Agreement, or render it voidable.
- 6.1.5 In the event that either Party becomes aware of any mistake or error relating to any of the matters set forth in Clause 6.1.1 above, that Party shall immediately notify the other Party, specifying the mistake or error.
- 6.1.6 Except as otherwise provided in this Agreement, all risks relating to the Project shall be borne by the Contractor; and the Employer 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

- 7.1.1 The Contractor shall, for the performance of its obligations hereunder during the Construction Period, provide to the Employer, within 28 (twenty eight) days of the date of this Agreement, Performance Security and an Environmental, Social, Safety and Health (ESHS) Performance Security. The standard forms of Performance Security and ESHS Security shall be irrevocable and unconditional guarantees from Scheduled/ Nationalized Banks in the forms set forth in Schedule-G (the “Performance Security” and “ESHS Performance Security”). The Performance Security amount is equal to 9% of the Contract Price, and Environmental, Social, Safety and Health (ESHS) Performance Security amount is 1 percent of Contract Price. The Contractor has the option of submitting two guarantees of equal amount towards Performance Security totalling to 10 % (10 percent) of the Contract Price. The Performance Security and ESHS Performance Security shall be valid until 60 (sixty) days after the Defects Liability Period. Until such time the Performance Security and ESHS Performance Security are provided by the Contractor pursuant hereto and the same come into effect, the Bid Security shall remain in force and effect, and upon such provision of the Performance Security and ESHS Performance Security, the Employer shall release the Bid Security to the Contractor.
- 7.1.2 Notwithstanding anything to the contrary contained in this Agreement, the Parties agree that in the event of failure of the Contractor to provide the Performance Security and ESHS Performance Security in accordance with the provisions of Clause 7.1.1 and within the time specified therein or such extended period as may be provided by the Employer, the Employer may encash the Bid Security and appropriate the proceeds thereof as Damages, and thereupon all 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 with the concurrence of the Contractor, and this Agreement shall be deemed to have been terminated by mutual agreement of the Parties.
- 7.1.3 In the event the Contractor fails to provide the Performance Security within 28 (twenty eight) days of LOA, it may seek extension of time for a period not exceeding 20 (Twenty) days on payment of Damages for such extended period in a sum calculated at the rate of 0.05% (zero point zero five per cent) of the Contract Price for each day until the Performance Security is provided.

7.2 Extension of Performance Security – Deleted

~~The Contractor may initially provide the Performance Security and ESHS 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 Employer 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

- 7.3.1 Upon occurrence of a Contractor's Default, the Employer 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.
- 7.3.2 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 Employer shall be entitled to terminate the Agreement in accordance with Article 23. Upon replenishment or furnishing of a fresh Performance Security, as the case may be, as aforesaid, the Contractor shall be entitled to an additional Cure Period of 30 (thirty) days for remedying the Contractor's Default, and in the event of the Contractor not curing its default within such Cure Period, the Employer 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

The Employer shall return the Performance Security to the Contractor within 60 (60) days of the later of the expiry of the Defects Liability Period or the extended Defects Liability Period, as the case may be, under this Agreement. Notwithstanding the aforesaid, the Parties agree that the Employer shall not be obliged to release the Performance Security until all Defects identified during the Defects Liability Period or the extended Defects Liability Period, as the case may be, have been rectified. In case the Contractor has provided two bank guarantees in accordance with Clause 7.1.1, the Employer shall return one of the guarantees to the Contractor 2 (two) years after completion of construction.

7.5 Retention Money

- 7.5.1 From every payment for Works due to the Contractor in accordance with the provisions of Clause 19.5, the Employer 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.
- 7.5.2 Upon occurrence of a Contractor's Default, the Employer 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.
- 7.5.3 The Contractor may, upon furnishing an irrevocable and unconditional bank guarantee substantially in the form provided at Annex-II of Schedule-G, require the Employer to refund the Retention Money deducted by the Employer under the provisions of Clause 7.5.1. Provided that the refund hereunder shall be made in tranches of not less than 1% (one per cent) of the Contract Price.

- 7.5.4 Within 15 (fifteen) days of the date of issue of the Completion Certificate, the Employer shall discharge the bank guarantees furnished by the Contractor under the provisions of Clause 7.5.3 and refund the balance of Retention Money remaining with the Employer after adjusting the amounts appropriated under the provisions of Clause 7.5.2 and the amounts refunded under the provisions of Clause 7.5.3.
- 7.5.5 The Parties agree that in the event of Termination of this Agreement due to Contractor's default, the Retention Money and the bank guarantees specified in this Clause 7.5 shall be treated as if they are Performance Security and shall be reckoned as such for the purposes of Termination Payment under Clause 23.6.

ARTICLE 8

RIGHT OF WAY

8.1 The Site

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

- (a) acquiring and providing Right of Way on the Site in accordance with the plan finalised by the Employer, 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.

8.2 Procurement of the Site

- 8.2.1 The Employer Representative and the Contractor shall, within 15 (fifteen) days of the date of this Agreement, inspect the Site and prepare a 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. Subject to the provisions of Clause 8.2.3, such 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. Signing of the memorandum, in two 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 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.

Whenever the Employer is ready to hand over any part or parts of the Site included in the Appendix, it shall inform the Contractor, by notice, the proposed date and time such of handing over. The Employer 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. Signing of the memorandum, in two 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.

- 8.2.2 The Employer 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, or no later than 90 (ninety) days of the Appointed Date for those parts of the Site which have not been specified in Schedule-A, 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.

- 8.2.3 Notwithstanding anything to the contrary contained in this Clause 8.2, the Employer 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 8.2.1. 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 Employer to provide the Right of Way for and in respect of the width of the roadway and its embankment.

8.3 Damages for delay in handing over the Site

8.3.1 Deleted

- 8.3.2 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 is granted within 90 (ninety) days of 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 per Schedule A, 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 8.3.1.

- 8.3.3 Notwithstanding anything to the contrary contained in this Agreement, the Employer 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 Article 19, equal to 10% (10 per cent) percent of the Contract Price.

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, as the case may be, because the requisite clearances or approvals for commencing construction of Works therein have not been given within 240 (two hundred and forty) days of the Appointed date, the affected Works shall be deemed to be withdrawn under the provisions of this Clause 8.3.3 unless the Parties agree to the contrary, and such Works shall not be computed for the purposes of the aforesaid ceiling of 10% (ten per cent) hereunder.

- 8.3.4 In the event of withdrawal of Works under Clause 8.3.3, the Contract Price shall be reduced by an amount equal to 90% (ninety) per cent of the value of the Works withdrawn and the Contractor shall not be entitled to any other compensation or Damages for the withdrawal of Works.

Provided that if any Works are withdrawn after commencement of the Construction of such works, the Employer shall pay to the Contractor 110% (one hundred and ten per cent) of the fair value of the work done, as assessed by the Engineer-in-charge in accordance with Article 13.2.3 (a).

8.4 Site to be free from Encumbrances

Subject to the provisions of Clause 8.2, the Site shall be made available by the Employer to the Contractor pursuant hereto free from all Encumbrances and occupations and without the Contractor being required to make any payment to the

Employer on account 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 8.2.1, 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 thereon takes place. 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 Employer 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 and the performance of its obligations under this Agreement.

8.7 Access to the Employer and the Engineer-in-charge

- 8.7.1 The Right of Way given to the Contractor hereunder shall always be subject to the right of access of the Employer and the Engineer-in-charge and their employees and agents for inspection, viewing and exercise of their rights and performance of their obligations under this Agreement.
- 8.7.2 The Contractor shall ensure, subject to all relevant safety procedures, that the Employer has unrestricted access to the Site during any emergency situation, as decided by the Engineer-in-charge.

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 Employer 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 Employer 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 Employer. It is also agreed that the Employer 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, the Contractor shall ensure that the respective entities owning the existing roads, right of way, 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, in accordance with Applicable Laws and with assistance of the Employer, shift any utility (including electric lines, water pipes, telephone cables etc.) to an appropriate location or alignment, if such utility or obstruction adversely affects the execution of Works or Maintenance of the existing Navigational Lock in accordance with this Agreement. The Contractor shall engage registered contractors of concerned utility Agency for such shifting. For the purpose contractors enlisted as class A or B shall be employed. The actual cost of such shifting, based on executed BOQ basis on rates estimated and corrected by the utility agency, less supervision charges of Agency plus 10% towards Contractor's overhead shall be paid by the Employer to the Contractor separately in addition to the Contract Price. However, the Employer will assist in obtaining required permissions for such shifting from the concerned utility Agency including submission of application on Employer name. The works shall be carried out in close coordination with utility agency and all precaution / conditions stipulated by the agency shall be diligently followed.

9.3 New utilities

- 9.3.1 The Contractor shall allow, subject to such conditions as the Employer may specify, access to, and use of the Site for laying telephone lines, water pipes, electric 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 Works in accordance with this Agreement and any damage caused by such use shall be restored forthwith at the cost of the Employer.
- 9.3.2 In the event the 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 Engineer-in-charge in accordance with Article 10.5.

9.4 Felling of trees

The Employer shall assist the Contractor in obtaining the Applicable Permits for felling and disposal of trees to be identified by the Contractor for this purpose if and only if such trees cause a Material Adverse Effect on the construction or

maintenance of the Project. The cost of such felling, stacking and disposal shall be included in the Contract price. The Parties hereto agree that all produce from such cutting of trees by the contractor shall remain the property of Government and shall be properly stacked at site, approved by the Engineer-in-Charge. If any produce from such cutting is not handed over to the Government by the contractor, he shall be charged for the same at the rates estimated by the Forest Department, Government of West Bengal and shall be disposed in such manner and subject to such conditions of the concerned Department. The recovery of this amount shall be made in full from the intermediate bill that follows. However, the Employer will assist in obtaining applicable permits for felling of trees.

9.4 Preservation of trees

All trees and shrubbery which are not specifically required to be cleared or removed for construction purposes shall be preserved and shall be protected from any damage that may be caused by the contractor's construction operation and equipment. Special care shall be exercised where trees or shrubs are exposed to injuries by construction equipment, blasting, excavating, dumping, chemical damage or other operation and the contractor shall adequately protect such trees by use of protective barriers or other methods approval by the Engineer-in-Charge. Trees shall not be used for anchorages. The contractor shall be responsible for injuries to trees and shrubs on or adjacent to the Site caused by his operations. The term "injury" shall include, without limitation bruising, scarring, tearing and breaking of roots, trunks or branches. All injured trees and shrubs be restored as nearly as practicable without delay to their original condition at the contractor's expense.

ARTICLE 10

DESIGN AND CONSTRUCTION OF THE PROJECT

10.1 Obligations prior to commencement of Works

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

- (a) appoint its representative, duly authorised to deal with the Employer in respect of all matters under or arising out of or relating to this Agreement;
- (b) appoint a Design Consultant (either in-house or an Associate) 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;

The details of Detailed Design Unit for the project is as under:

S. No.	Description of Post	Nos.	Minimum Qualification & Experience
1.	Head of Design Team	1	M.E. / M. Tech (Structure) with minimum 20 years' experience in designing the structures.
2.	Civil Engineer	1	B.E. / B. Tech (Civil) with minimum 10 years' experience in designing of RCC Structures.
3.	Hydraulic Engineer	1	B.E. / B. Tech (Civil) with minimum 10 years' experience in designing of hydraulic structures such Barrages, Dams, Gates etc.
4.	Geo-technical Expert	1	M.E. / M. Tech in Geotechnical/soil mechanics with 5 years' of experience or B.E. / B. Tech (Civil) with 10 years' experience in geo-technical investigations.
6.	Electrical Engineer	1	B. Tech / B.E. (Electrical) with 5 years' or Diploma (with 10 years') experience of electric supply and internal distribution system.
7.	Mechanical Engineer	1	M. Tech / M.E. (Mechanical) with 5 years' or B. Tech/B.E. (Mechanical) with 10 years' experience in design of Radial and Miter gates.

Design team can be in-house capability of the contractor or he can engage an Associate consulting firm with commitment to work with him on the project.

- (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 materials needed for the Project under and in accordance with the Applicable Laws and Applicable Permits. The responsibility for procuring land for the borrow area rests with the Contractor at his cost, and no separate payment will be made for this purpose. The Contractor's quoted rate will be inclusive of land cost of borrow area.
- (e) Prepare construction zone and Camp Site safety checklist.
- (f) Prepare updated Environmental and Social Management Plan (ESMP) (if required) including the action plan and checklist.

- 10.1.2 The Employer shall, within 15 (fifteen) days of the date of this Agreement, appoint an engineer (the “**Engineer-in-charge**”) 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 Engineer-in-charge forthwith.
- 10.1.3 Within 30 (thirty) days of the Appointed Date, the Contractor shall submit to the Employer and the Engineer-in-charge a programme (the “**Programme**”) for the Works, developed using networking techniques (in MS-Project) giving the following details:

Part I Contractor’s organisation for the Project, the general methods and arrangements for design and construction, environmental and social management plan and ESHS-MSIP, Quality Assurance Plan including design quality plan, safety plan covering safety of users and workers during construction, Contractor’s key personnel and equipment.

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

- (a) the order in which the Contractor intends to carry out the Works, including the anticipated timing of design and stages of Works;
- (b) the periods for reviews under Clause 10.2;
- (c) the sequence and timing of inspections and tests specified in this Agreement.

The Contractor shall submit a revised programme whenever the previous programme is inconsistent with the actual progress or with the Contractor’s obligations. The revised Program shall include ESMP and ESHS-MSIP for the Works.

Part III Monthly cash flow forecast.

- 10.1.4 The Contractor shall compute, on the basis of the Designs and Drawings prepared in accordance with Clause 10.2.4, and provide to the Engineer-in-charge, detailed estimate along with BOQs, in respect of the various items of work specified in Schedule-B 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.
- 10.1.5 Within 20 (twenty) days of the appointment date, the Contractor shall appoint a safety consultant (the “**Safety Consultant**”) to carry out safety audit at the design stage of the Project in accordance with the Applicable Laws and Good Industry Practice. The Safety Consultant shall also be required to undertake half yearly inspections, audits for checking of the calibration and upkeep of instruments/equipments installed at the site. Such safety audits shall be carried out mandatorily after any occurrence of natural calamity. The Safety Consultant shall be

appointed after proposing to the Employer a panel of three names of qualified and experienced firms from whom the Employer may choose one to be the Safety Consultant. Provided, however, that if the panel is not acceptable to the Employer and the reasons for the same are furnished to the Contractor, the Contractor shall propose to the Employer a revised panel of three names for obtaining the consent of the Employer. The Contractor shall also obtain the consent of the Employer for the key personnel of the Safety Consultant who shall have adequate experience and qualifications in safety audit of similar projects. The Employer 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.

- 10.1.6 The safety audit pursuant to Clause 10.1.5 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 and the Contractor shall forward to the Engineer-in-charge 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 Employer 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

- 10.2.1 Design and Drawings shall be developed in conformity with the Specifications & 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 of the Engineer-in-charge.
- 10.2.2 Within 20 (twenty) days of appointment date, the Contractor shall appoint a proof check consultant (the “**Proof Consultant**”) out of the alternatives if any suggested by the Employer or after proposing to the Employer a panel of three names of qualified and experienced firms from whom the Employer may choose one to be the Proof Consultant. Provided, however, that if the panel is not acceptable to the Employer and the reasons for the same are furnished to the Contractor, the Contractor shall propose to the Employer a revised panel of three names for obtaining the consent of the Employer. The Contractor shall also obtain the consent of the Employer for two key personnel of the Proof Consultant who shall have adequate experience in similar works. The Employer 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.
- 10.2.3 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.

10.2.4 In respect of the Contractor's obligations with respect to the Design and Drawings of the Project 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 copies each of the design and Drawings, duly certified by the Proof Consultant, to the Engineer-in-charge for review. Provided, however, that the Engineer-in-charge may require additional drawings for its review in accordance with Good Industry Practice.
- (b) by submitting the Drawings for review to the Engineer-in-charge, 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 Engineer-in-charge shall review the same and convey its observations to the Contractor with particular reference to their conformity or otherwise with the Scope of the Project and the Specifications and Standards. The Contractor shall not be obliged to await the observations of the Engineer-in-charge on the Drawings submitted pursuant hereto beyond the said period of 15 (fifteen) days and may begin or continue Works at its own discretion and risk.
- (d) if the aforesaid observations of the Engineer-in-charge indicate that the Drawings are not in conformity with the Scope of the Project or the Specifications & Standards, such Drawings shall be revised by the Contractor in conformity with the provisions of this Agreement and resubmitted to the Engineer-in-charge for review. The Engineer-in-charge 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 Engineer-in-charge for review as aforesaid, the Engineer-in-charge may withhold the payment for the affected works in accordance with the provisions of Clause 19.5.4. If the Contractor disputes any decision, direction or determination of the Engineer-in-charge hereunder, the Dispute shall be resolved in accordance with the Dispute Resolution Procedure;
- (e) no review and/or observation of the Engineer-in-charge and/or its failure to review 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 Engineer-in-charge or the Employer 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 review 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 Employer; 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 Employer against any damage, expense, liability, loss or claim, which the Employer 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 get the layout and plan approved from Statutory department, Local planning authority etc.

10.2.5 Any cost or delay in construction arising from review by the Engineer-in-charge shall be borne by the Contractor.

10.2.6 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 observations of the Engineer-in-charge thereon as communicated pursuant to the provisions of Clause 10.2.4 (d). Such Drawings shall not be amended or altered without prior written notice to the Engineer-in-charge. 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.

10.2.7 Within 90 (ninety) days of the Project Completion Date, the Contractor shall furnish to the Employer and the Engineer-in-charge a complete set of as-built Drawings at appropriate scales as approved by the Engineer-in-charge in 2 (two) hardcopies in A 2 size sheet on polyester film of quality to be approved by the Engineer-in-charge and soft copy in electronic format (CD/DVD-ROM) or in such other medium as may be acceptable to the Employer, reflecting the Project as actually designed, engineered and constructed.

10.3 Construction of the Project

10.3.1 The Contractor shall construct the Project 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 scheduled completion period shall be 20 (Twenty) Months from the Appointed 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.

The Contractor shall not carry out any Works, including advance and/or pre-construction activities (e.g. site accesses and work site establishment, geotechnical investigations or investigations to select ancillary features), unless the Engineer-in-charge is satisfied that appropriate measures are in place to address environmental, social, health and safety risks and impacts. At a minimum, the Contractor shall apply the Management Strategies and Implementation Plans and Code of Conduct, submitted as part of the Bid and agreed as part of the Contract. The Contractor shall submit, on a continuing basis, for the Engineer-in-charge's prior approval, such

supplementary Management Strategies and Implementation Plans as are necessary to manage the ESHS risks and impacts of ongoing works. These Management Strategies and Implementation Plans collectively comprise the Contractor's Environmental and Social Management Plan (C-ESMP). The C-ESMP shall be approved prior to the commencement of construction activities (e.g. excavation, earth works, structure works, extraction of materials etc.). The approved C-ESMP shall be reviewed, periodically (but not less than every six (6) months), and updated in a timely manner, as required, by the Contractor to ensure that it contains measures appropriate to the Works activities to be undertaken. The updated C-ESMP shall be subject to prior approval by the Engineer-in-charge.

10.3.2 The Contractor shall construct the Project 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 Employer, it shall pay Damages to the Employer of a sum calculated at the rate of 0.5% (zero point five percent) of the Contract Price for delay of each week reckoned from the date specified in Schedule –J and until such Project Milestone is achieved or the Works are 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 Works are completed within or before the Scheduled Completion Date including any Time Extension, applicable for that work or section, the Damages paid under this Clause 10.3.2 shall be refunded by the Employer to the Contractor, but without any interest thereon. For the avoidance of doubt, it is agreed that recovery of Damages under this Clause 10.3.2 shall be without prejudice to the rights of the Employer 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 10.5.2.

10.3.3 The Employer 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 Employer 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 10.3.2 shall not exceed 10% (ten percent) of the Contract Price.

10.4 Maintenance during Construction Period

During the Construction Period, the Contractor shall ensure traffic worthiness of the existing lane(s) of the New Navigational Lock and safety thereof for the movement of vessels and is not hampered by any of the activities carried out at the site so that the traffic worthiness and safety thereof are at no time materially inferior as compared to their condition 10 (ten) days prior to the date of this Agreement, 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 Employer'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 providing safe operating conditions for the movement of vessels through the New Navigational Lock.

10.5 Extension of time for completion

10.5.1 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, environmental clearances or approval of authorities, specified in Clause 4.1.4;
- (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 Employer, the Employer's personnel or the Employer'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.

10.5.2 The Contractor shall, no later than 15 (fifteen) business days from the occurrence of an event or circumstance specified in Clause 10.5.1, inform the Engineer-in-charge by notice in writing, with a copy to the Employer, 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.

10.5.3 In the event of the failure of the Contractor to issue to the Engineer-in-charge a notice in accordance with the provisions of Clause 10.5.2 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 10.5.3, the Employer shall be discharged from all liability in connection with the claim.

10.5.4 The Engineer-in-charge shall, on receipt of the claim in accordance with the provisions of Clause 10.5.2, examine the claim expeditiously within the time frame specified herein. In the event the Engineer-in-charge requires any clarifications to examine the claim, the Engineer-in-charge 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 Engineer-in-charge requesting for clarification, furnish the same to the Engineer-in-charge within 10 (ten) days thereof. The Engineer-in-charge shall, within a period of 60 (sixty) 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 Engineer-in-charge shall review previous determinations and may increase, but shall not decrease, the total Time Extension.

10.5.5 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 Engineer-in-charge 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 Engineer-in-charge shall examine the same in accordance with the provisions of Clause 10.5.4 within a period of 60 (sixty) 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 Employer in accordance with the provisions of Clause 10.3.2 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 Employer under this Agreement including the right to termination under Clause 23.1.

10.7 Operation Manual(s)

No later than 60 (sixty) days prior to the Project Completion Date, the Contractor shall, in consultation with the Engineer-in-charge, evolve an operation manual(s) (the "Operation Manual(s)") for the operation of the Project facilities, equipment, installations, safety etc. in conformity with the Specifications and Standards, safety requirements and Good Industry Practice, and shall provide 5 (five) copies thereof to the Engineer-in-charge. The Engineer-in-charge shall review the Operation Manual within 15 (fifteen) days of its receipt and communicate its comments to the Contractor for necessary modifications, if any.

10.8 Maintenance Manual(s)

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

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

11.2.1 The Contractor shall establish a quality control mechanism to ensure compliance with the provisions of this Agreement (the “**Quality Assurance Plan**” or “**QAP**”), and shall designate a Quality Assurance Manager (QA Manager) who shall be responsible for overseeing the implementation of the overall QAP.

Design, procurement, construction, installation, commissioning or maintenance activity shall not commence unless a suitable Quality Plan has been submitted to the Employer for No Objection.

11.2.2 The Contractor shall, within 30 (thirty) days of the Appointed Date, submit to the Engineer-in-charge 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 and Standards, and Good Industry Practice;
- (c) a Quality Plan that shall incorporate a comprehensive and documented approach to achieve the Project quality requirements that is capable of ensuring that all aspects of the Works, including but not limited to, design, procurement, fabrication, installation, inspection, construction and modifications will comply with the requirements of the Contract; and
- (d) internal quality audit system.

The Engineer-in-charge shall convey its comments 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.

11.2.3 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, Materials and workmanship in accordance with the Quality Assurance Plan.

- 11.2.4 The cost of testing of Construction, Materials and workmanship under this Article 11 shall be borne by the Contractor.
- 11.2.5 The Contractor shall not delegate or subcontract the Quality Assurance Requirements to subcontractors, consultants, sub-consultants or suppliers, unless agreed to in writing by the Employer.
- 11.2.6 The Contractor shall submit and also show proof of owning quality lab or tie-up with an established quality lab. If so required by the Employer, a fully equipped concrete laboratory shall be installed at Site.
- 11.2.7 The Quality Control System documentation shall include, but not limited to (i) Quality Plan, identifying its Quality Procedures; (ii) Manufacturing Quality Plan; (iii) Design Quality Plan; and (iv) Method Statements.
- 11.2.8 Quality Assurance Manager shall not report to the Contractor's Project Manager, and shall be provided adequate resources and authority for effective management of quality.
- 11.2.9 The Employer may designate Quality "Hold Points" into the Inspection and Test Plans for the Employer to attend, on a case-by-case basis at its discretion.

11.3. Methodology

The Contractor shall, at least 15 (fifteen) days prior to the commencement of the construction, submit to the Engineer-in-charge for review the methodology proposed to be adopted for executing the Works, giving details of equipment to be deployed, management and measures for ensuring safety. The Engineer-in-charge shall complete the review 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.

11.4. Inspection and technical audit by the Employer

The Employer or any representative authorised by the Employer in this behalf may inspect and review the progress and quality of the construction of Works and issue appropriate directions to the Engineer-in-charge 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

At any time during construction, the Employer may appoint an external technical auditor to conduct an audit of the quality of the Works. The findings of the audit, to the extent accepted by the Employer, shall be notified to the Contractor and the Engineer-in-charge for taking remedial action in accordance with this Agreement. 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 Engineer-in-charge under this Agreement.

11.6 Inspection of construction records

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

11.6.1 Inspection and Audit by the World Bank

The World Bank and/or persons appointed by the World Bank shall have the right to inspect the Site and all accounts and records of the Contractor, its sub-contractors and sub-consultants relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the World Bank if requested by the World Bank. The Contractor's and its Subcontractors' and sub-consultants' attention is drawn to Clause 3.9 [Corrupt or Fraudulent Practices] which provides, inter alia, that acts intended to materially impede the exercise of the World Bank's inspection and audit rights provided under this Clause 11.6.1 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the World Bank's prevailing sanctions procedures).

11.7 Monthly progress reports

During the Construction Period, the Contractor shall, no later than 07 (Seven) days after the close of each month, furnish to the Employer and the Engineer-in-charge a monthly report on progress of the Works and shall promptly give such other relevant information as may be required by the Engineer-in-charge. This report will also include progress on the ESHS Management Strategies and Implementation Plans (ESHS-MSIP), and compliance to the applicable Laws/ Rules/ Regulations for protection of environment, public health and safety, and the applicable parts of the Environment and Social Management Plan of the project.

In addition to the progress report the Contractor shall also provide a report on the Environmental, Social, Health and Safety (ESHS) metrics set out in Appendix B. In addition to Appendix B reports, the Contractor shall also provide immediate notification to the Engineer-in-charge of incidents in the following categories. Full details of such incidents shall be provided to the Engineer-in-charge within the timeframe agreed with the Engineer-in-charge.

- (a) confirmed or likely violation of any law or international agreement;
- (b) any fatality or serious (lost time) injury;
- (c) significant adverse effects or damage to private property (e.g. vehicle accident, damage from fly rock, working beyond the boundary)
- (d) major pollution of drinking water aquifer or damage or destruction of rare or endangered habitat (including protected areas) or species; or
- (e) any allegation of gender-based violence (GBV), sexual exploitation or abuse, sexual harassment or sexual misbehaviour, rape, sexual assault, child abuse, or defilement, or other violations involving children.

11.8 Inspection

11.8.1 The Engineer-in-charge 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.

11.8.2 The Contractor shall give the Engineer-in-charge and its authorised agents access, facilities and safety equipment for carrying out their obligations under this Agreement.

11.8.3 The Engineer-in-charge shall submit a monthly inspection report (the “**Inspection Report**”) to the Employer 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 Engineer-in-charge 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 Engineer-in-charge for pre-construction review:

- (a) manufacturer's test reports and standard samples of manufactured Materials; and
- (b) samples of such other Materials as the Engineer-in-charge may require.

11.10 Tests

11.10.1 For determining that the Works conform to the Specifications and Standards, the Engineer-in-charge shall require the Contractor to carry out or cause to be carried out tests, at such time and frequency and in such manner as specified in this Agreement, and in accordance with Good Industry Practice for quality assurance. The checks by the Engineer-in-charge shall comprise of 100% (hundred percent) of all the quantity or number of tests prescribed for each category or type of test for quality control by the Contractor.

11.10.2 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 Engineer-in-charge in this behalf. The Engineer-in-charge 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.

11.10.3 Wherever required, laboratories accredited by NABL (National Accreditation Board of Testing and Calibration Laboratories) or internationally accredited laboratory to ISO 17025: 2005 only shall be used for testing of samples.

11.10.4 The Employer may require the Contractor to stop using a particular laboratory and find an alternative if it has reasonable grounds to be dissatisfied with the performance of the lab.

11.11 Examination of work before covering up

In respect of the work which the Engineer-in-charge 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 Engineer-in-charge whenever any such work is ready and before it is covered up. The Engineer-in-charge shall then either carry out the examination, inspection or testing without unreasonable delay, or promptly give notice to the Contractor that the Engineer-in-charge 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 Engineer-in-charge 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 Engineer-in-charge within a period of 3 (three) business days from the date on which the Contractor's notice hereunder is delivered to the Engineer-in-charge, the Contractor shall be entitled to assume that the Engineer-in-charge 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 Engineer-in-charge 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 Engineer-in-charge 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 Employer to incur any additional costs, such cost shall be recoverable by the Employer from the Contractor; and may be deducted by the Employer from any monies due to be paid to the Contractor.

11.13 Remedial work

11.13.1 Notwithstanding any previous test or certification, the Engineer-in-charge 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, 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.

11.13.2 If the Contractor fails to comply with the instructions issued by the Engineer-in-charge under Clause 11.13.1, within the time specified in the Engineer-in-charge's notice or as mutually agreed, the Engineer-in-charge may advise the Employer to have the work executed by another agency. The cost so incurred by the Employer for undertaking such work shall, without prejudice to the rights of the Employer to recover Damages in accordance with the provisions of this Agreement, be recoverable from the Contractor and may be deducted by the Employer from any monies due to be paid to the Contractor.

11.14 Delays during construction

Without prejudice to the provisions of Clause 10.3.2, in the event the Contractor does not achieve any of the Project Milestones or the Engineer-in-charge shall have reasonably determined that the rate of progress of Works is such that Completion of the Project 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 Engineer-in-charge 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 to the Engineer-in-charge a copy of all its quality control records and documents before the Completion Certificate is issued pursuant to Clause 12.2.

11.16 Video recording

During the Construction Period, the Contractor shall provide to the Employer for every calendar quarter, a video recording, which will be compiled into a 3 (three)-hour compact disc or digital video disc, as the case may be, covering the status and progress of Works in that quarter. The video recording shall be provided to the Employer no later than 15 (fifteen) days after the close of each quarter after the Appointed Date.

11.17 Suspension of unsafe Construction Works

- 11.17.1 Upon recommendation of the Engineer-in-charge to this effect, the Employer may by notice require the Contractor to suspend forthwith the whole or any part of the Works if, in the reasonable opinion of the Engineer-in-charge, such work threatens the safety of the Users and or other persons on or about the Project.
- 11.17.2 The Contractor shall, pursuant to the notice under Clause 11.17.1, suspend the Works or any part thereof for such time and in such manner as may be specified

by the Employer and thereupon carry out remedial measures to secure the safety of suspended works, the Users, other persons and vehicles on or about the Project including pedestrians. The Contractor may by notice require the Engineer-in-charge to inspect such remedial measures forthwith and make a report to the Employer recommending whether or not the suspension hereunder may be revoked. Upon receiving the recommendations of the Engineer-in-charge, the Employer 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 Employer, and the procedure set forth in this Clause 11.17 shall be repeated until the suspension hereunder is revoked.

11.17.3 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 Employer, the Preservation Costs shall be borne by the Employer.

11.17.4 If suspension of Works is for reasons not attributable to the Contractor, the Engineer-in-charge shall determine any Time Extension to which the Contractor is reasonably entitled.

11.18 Protection of Environment

The Contractor shall ensure that during continuance of the contract, the Contractor and his Subcontractor(s) shall abide at all times by all existing enactments on environmental protection and rules made thereunder, regulations, latest notifications and bye-laws of the State or Central Government, or local authorities and any other law, bye-law, regulations that may be passed or notification that may be issued in this respect in future by the State or Central Government or the local authority. Salient features of some of the major laws that are applicable are given below:

1. The Environment (Protection) Act, 1986 and as amended: This provides for the protection and improvement of environment and for matters connected therewith, and the prevention of hazards to human beings, other living creatures, plants and property. ‘Environment’ includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property.
2. The Forest Conservation Act, 1980, as amended, and Forest (Conservation) Rules, 1981 as amended: These provides for protection of forests by restricting conversion of forested areas into non- forested areas and prevention of deforestation, and stipulates the procedures for cutting any trees that might be required by the applicable rules. Permissions under the Act also stipulates the norms and compliance requirements of the employer and any contractor on behalf of the employer.
3. State Tree Preservation Acts as may be in force: These provide for protection of trees of important species. Contractors will be required to obtain prior permission for full or partial cutting, uprooting, or pruning of any such trees.

4. The Wildlife (Protection) Act, 1972, and as amended: This provides for protection of wildlife through notifying National Parks and Sanctuaries and buffer areas around these zones; and to protect individuals of nationally important species listed in the Annex of the Act.
5. The Biological Diversity Act, 2002: This provides for conservation of biological diversity, sustainable use of components of biological diversity, and fair and equitable sharing of the benefits arising out of the use of biological resources, knowledge and for matters connected therewith or incidental thereto.
6. The Public Liability Insurance Act, 1991 as amended and The Public Liability Insurance Rules, 1991 as amended: These provide for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling hazardous substances and for matters connected herewith or incidental thereto. Hazardous substance means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act 1986, and exceeding such quantity as may be specified by notification by the Central Government.
7. The Ancient Monuments and Archaeological Sites and Remains Act, 1958 and the Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010, the Ancient Monuments and Archaeological Sites and Remains Rules, 1959 amended 2011, the National Monuments Authority Rules, 2011 and the similar State Acts: These provide for conservation of cultural and historical remains found in India. Accordingly, area within the radii of 100m and 300m from the “protected property” are designated as “protected area” and “controlled area” respectively. No development activity (including building, mining, excavating, blasting) is permitted in the “protected area” and development activities likely to damage the protected property is not permitted in the “controlled area” without prior permission of the Archaeological Survey of India (ASI) or the State Departments of Art and Culture or Archaeology as applicable.
8. The Environmental Impact Assessment Notification, 2006 and as amended: This provides for prior environmental clearance for new, modernization and expansion projects listed in Schedule 1 of the Notification. Contractors will be required to ensure that no work starts until applicable clearances under the Notification is not available. Contractors will be responsible for implementation of any environmental management plan stipulated as per the permission under this Notification; and will be required to prepare and submit to the employer and compliance report stipulated in the permission under the Notification.
9. The Water (Prevention and Control of Pollution) Act, 1974 as amended, and the Water (Prevention and Control of Pollution) Rules, 1975 as amended: These provide for the prevention and control of water pollution and the maintaining and restoring of wholesomeness of water. ‘Pollution’ means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms. Contractors will need to obtain consent for establishment and consent for operation of any item of work or installation of equipment that generates waste water, and observe the required standards of establishment and operation of these items of work or installations; as well as install and operate all required waste water treatment facilities.

10. The Water (Prevention and Control of Pollution) Cess Act, 1977 and The Water (Prevention and Control of Pollution) Cess Rules, 1978: These provide for the levy and collection of a cess on water consumed by persons carrying on certain industries and by local authorities, with a view to augment the resources of the Central Board and the State Boards for the prevention and control of water pollution under the Water (Prevention and Control of Pollution) Act, 1974.
11. The Air (Prevention and Control of Pollution) Act, 1981 as amended, and the Air (Prevention and Control of Pollution) Rules, 1982: These provides for prevention, control and abatement of air pollution. 'Air Pollution' means the presence in the atmosphere of any 'air pollutant', which means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment. Contractors will need to obtain consent for establishment and consent for operation of any item of work or installation of equipment that generates air pollution such as batching plants, hot mix plants, power generators, backup power generation, material handling processes, and observe the required standards of establishment and operation of these items of work or installations.
12. Noise Pollution (Control and Regulation) Rules, 2000, and as amended: This provides for standards for noise for day and night for various land uses and specifies special standards in and around sensitive receptors of noise such as schools and hospitals. Contractors will need to ensure compliance to the applicable standards, and install and operate all required noise control devices as may be required for all plants and work processes.
13. Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996: This provides for Requirement of preparation of on-site and off-site Disaster Management Plans for accident-prone areas.
14. The Explosives Act 1884 and the Explosives Rules, 2008: These provide for safe manufacture, possession, sale, use, transportation and import of explosive materials such as diesel, Oil and lubricants etc.; and also for regulating the use of any explosives used in blasting and/or demolition. All applicable provisions will need compliance by the contractors.
15. The Petroleum Rules, 2002: This provides for safe use and storage of petroleum products, and will need to be complied by the contractors.
16. The Gas Cylinder Rules 2004 and amendments: This provides for regulations related to storage of gas, and possession of gas cylinder more than the exempted quantity. Contractors should comply with all the requirements of this Rule.
17. Manufacture, Storage and Import of Hazardous Chemical Rules of 1989 and as amended: These provide for use and storage of hazardous material such as highly inflammable liquids like HSD/LPG. Contractors will need to ensure compliance to the Rules; and in the event where the storage quantity exceeds the regulated threshold limit, the contractors will be responsible for regular safety audits and other reporting requirements as prescribed in the Rules.
18. Hazardous & Other Wastes (Management and Transboundary Movement) Rules, 2016: These provide for protection of general public from improper handling storage and disposal of hazardous waste. The rules prescribe the management requirement of hazardous wastes from

its generation to final disposal. Contractors will need to obtain permission from the State Pollution Control Boards and other designated authorities for storage and handling of any hazardous material; and will to ensure full compliance to these rules and any conditions imposed in the permit.

19. The Bio Medical Waste Management Rules, 2016: This provides for control, storage, transportation and disposal of bio-medical wastes. As and where the contractor has any first aid facility and dispensaries, established in either temporary or permanent manner, compliance to these Rules are mandatory.
20. Construction and Demolition Waste Management Rules, 2016: This provides for management of construction and demolition waste (such as building materials possible to be reused, rubble and debris or the like); and applies to all those waste resulting from construction, re-modelling, repair or demolition of any civil structure. Contractor will need to prepare a waste disposal plan and obtain required approval from local authorities, if waste generation is more than 20 tons in any day or 300 tons in any month during the contract period; and ensure full compliance to these rules and any conditions imposed in the regulatory approval.
21. The E-Waste (Management) Rules, 2016: This provides for management of E-wastes (but not covering lead acid batteries and radio-active wastes) aiming to enable the recovery and/or reuse of useful material from e-waste, thereby reducing the hazardous wastes destined for disposal and to ensure the environmentally sound management of all types of waste of electrical and electronic equipment. This Rule applies to every manufacturer, producer, consumer, bulk consumer, collection centres, dealers, e-retailer, refurbisher, dismantler and recycler involved in manufacture, sale, transfer, purchase, collection, storage and processing of e-waste or electrical and electronic equipment listed in Schedule I, including their components, consumables, parts and spares which make the product operational.
22. Plastic waste Management Rules, 2016: This provides for control and management of the plastic waste generated from any activity. Contractors will ensure compliance to this Rule.
23. The Batteries (Management and Handling) Rules 2001: This provides for ensuring safe disposal and recycling of discarded lead acid batteries likely to be used in any equipment during construction and operation stage. Rules require proper control and record keeping on the sale or import of lead acid batteries and recollection of the used batteries by registered recyclers to ensure environmentally sound recycling of used batteries. Contractors will ensure compliance to this Rule.
24. The Ozone Depleting Substances (Regulation and Control) Rules, 2000 and as amended: This provides for regulation of production and consumption of ozone depleting substances in the country, and specifically prohibits export to or import from countries not specified in the Rules, and prohibits unless specifically permitted, any use of ozone depleting substance.
25. The Coastal Regulation Zone Notifications, 1991 and as amended: This provides for regulation of development activities within the 500m of high tide line in coastal zone and 100m of stretches of rivers and estuaries influenced by tides. Contractors will be required to ensure that no work starts until applicable clearances under the Notification is not available. Contractors will be responsible for implementation of any plan stipulated as per the permission

- under this Notification; and will be required to prepare and submit to the employer and compliance report stipulated in the permission under the Notification.
26. The Motor Vehicle Act 1988 as amended (and State Motor Vehicle Acts as may be in force) and the Motor Vehicle Rules, 1989, and as amended (and State Motor Vehicle Rules as may be in force): To minimize the road accidents, penalizing the guilty, provision of compensation to victim and family and check vehicular air and noise pollution. Contractors will be required to ensure full compliance to these rules.
 27. Easement Act, 1882: This provides for the rights of landowners on groundwater. Contractors will need to ensure that other landowners' rights under the Act is not affected by any groundwater abstraction by the contractors.
 28. State Groundwater Acts and Rules as may be in force and the Guidelines for Groundwater Abstraction for drinking and domestic purposes in Notified Areas and Industry/Infrastructure project proposals in Non-Notified areas, 2012: These provide for regulating extraction of ground water for construction/industrial and drinking and domestic purposes. Contractors will need to obtain permission from Central/State Groundwater Boards prior to groundwater abstraction through digging any bore well or through any other means; and will to ensure full compliance to these rules and any conditions imposed in the permit.
 29. The Mines Act, 1952 as amended; the Minor Mineral and concession Rules as amended; and the State Mineral (Rights and Taxation) Acts as may be in force: These provide for safe and sound mining activity. The contractors will procure aggregates and other building materials from quarries and borrow areas approved under such Acts. In the event the contractors open any new quarry and/or borrow areas, appropriate prior permission from the State Departments of Minerals and Geology will need to be obtained. Contractors will also need to ensure full compliance to these rules and any conditions imposed in the permit.
 30. The Insecticides Act, 1968 and Insecticides Rules, 1971 and as amended: These provide for regulates the manufacture, sale, transport, distribution, export, import and use of pesticides to prevent risk to human beings or animals, and for matters connected therewith. No one should import or manufacture; sell, stock or exhibit for sale; distribute, transport, use: (i) any misbranded insecticides, (ii) any insecticide the sale, distribution or use of which is for the time being prohibited under the Act; and (iii) any insecticide except in accordance with the condition on which it was registered under the Act.
 31. National Building Codes of India, 2005 and as amended: This provides guidelines for regulating the building construction activities in India. The code mainly contains administrative regulations, development control rules and general building requirements; stipulations regarding materials, structural design and construction; and building and plumbing services. Contractors will be required to comply with all Bureau of Indian Standards Codes dealing with: (i) use and disposal of asbestos containing materials in construction; (ii) paints containing lead; (iii) permanent and temporary ventilations in workplace; (iv) safety, and hygiene at the workplace; (v) prevention of fire; (vi) prevention of accidents from faulty electrical gadgets, equipment and accessories; and all other such codes incidental to the Contract.

The reference to above mentioned Acts is only illustrative and not exhaustive. Bidders and Contractors are responsible for checking the correctness and completeness of the list. The law as current on the date of bid opening will apply.

The Contractor shall follow and implement the Environmental and Social Management Plan given at Specification and also the updates if any.

The contractor shall develop Environmental and Social Management Systems that covers all its operations and shall be certified to ISO 14001 within one year from the award of the contract.

The contractor shall develop Occupational Health & Safety Management Systems that cover all its activities / operations and shall be certified to OHSAS 18001 within one year from the award for contract.

The Contractor shall implement all mitigation measures for which responsibility is assigned to him as stipulated in the Environmental and Social Management *[Plan/Framework (strike out whichever is not applicable)]*, and the conditions stipulated in Section VII-Work Requirements: Conditions of Contract together with Schedules, of this Bidding Document, even if not explicitly covered under the ESHS-MSIP submitted by the bidder and made part of the Contract Document.

11.19 Labour Laws

The Contractor and its Subcontractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of Government and Government Instrumentality and any other labour law (including rules), regulations, byelaws that may be passed or notification that may be issued under any labour law in future either by the Government and Government Instrumentality.

The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications / bye-laws / acts / rules / regulations including amendments, if any, on the part of the Contractor, the Employer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

The Contractor is expected to be acquainted with all the latest applicable Laws, including those concerning safety at work. Salient features of some of the major laws that are applicable are given below. The list is illustrative and not exhaustive. Bidders and Contractors are responsible for checking the correctness and completeness of the list. The law as current on the date of bid opening will apply.

- (a) Employees Compensation Act 1923: The Act provides for compensation in case of injury, disease or death arising out of and during the course of employment.
- (b) Payment of Gratuity Act 1972: gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years' service or more or on death at the rate of 15 days wages for every completed

year of service. The Act is applicable to all establishments employing 10 or more employees.

- (c) Employees P.F. and Miscellaneous Provision Act 1952 (since amended): The Act provides for monthly contribution by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are:
 - (i) Pension or family pension on retirement or death, as the case may be.
 - (ii) Deposit linked insurance on the death in harness of the worker.
 - (iii) Payment of P.F. accumulation on retirement/death etc.
- (d) Maternity Benefit Act 1961: The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- (e) Sexual Harassment of Women at the Workplace (Prevention, Prohibition and Redressal) Act, 2013: This Act defines sexual harassment in the workplace, provides for an enquiry procedure in case of complaints and mandates the setting up of an Internal Complaints Committee or a Local Complaints Committee
- (f) Contract Labour (Regulation & Abolition) Act 1970: The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by law. The Principal Employer is required to take Certificate of Registration and the Contractor is required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ 20 or more contract labour.
- (g) Minimum Wages Act 1948: The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of Buildings, Roads, Runways are scheduled employments.
- (h) Payment of Wages Act 1936: It lays down the mode, manner and by what date the wages are to be paid, what deductions can be made from the wages of the workers.
- (i) Equal Remuneration Act 1976: The Act provides for payment of equal wages for work of equal nature to male and female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.
- (j) Payment of Bonus Act 1965: The Act is applicable to all establishments employing 20 or more employees. Some of the State Governments have reduced this requirement from 20 to 10. The Act provides for payments of annual bonus subject to a minimum of 8.33% of the wages drawn in the relevant year. It applies to skilled or unskilled manual, supervisory, managerial, administrative, technical or clerical work for hire or reward to employees who draw a salary of Rs. 10,000/- per month or less. To be eligible for bonus, the employee should have worked in the establishment for not less than 30 working days in the relevant year. The Act does not apply to certain establishments.

- (k) Industrial Disputes Act 1947: the Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations, a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.
- (l) Trade Unions Act 1926: The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.
- (m) Child Labour (Prohibition & Regulation) Act 1986: The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of Child Labour is prohibited in the Building and Construction Industry.
- (n) Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979: The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, traveling expenses from home up to the establishment and back, etc.
- (o) The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1996 and the Building and Other Construction Workers Welfare Cess Act, 1996 (BOCWW Cess Act): All the establishments who carry on any building or other construction work and employ 10 or more workers are covered under these Acts. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be notified by the Government. The Employer of the establishment is required to provide safety measures at the building or construction work and other welfare measures, such as Canteens, First – Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.
- (p) Factories Act 1948: the Act lays down the procedure for approval of plans before setting up a factory engaged in manufacturing processes, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power.
- (q) Weekly Holidays Act -1942
- (r) Bonded Labour System (Abolition) Act, 1976: The Act provides for the abolition of bonded labour system with a view to preventing the economic and physical exploitation of weaker sections of society. Bonded labour covers all forms of forced labour, including that arising out of a loan, debt or advance.

- (s) Employer's Liability Act, 1938: This Act protects workmen who bring suits for damages against employers in case of injuries endured in the course of employment. Such injuries could be on account of negligence on the part of the employer or persons employed by them in maintenance of all machinery, equipment etc. in healthy and sound condition.
- (t) Employees State Insurance Act 1948: The Act provides for certain benefits to insured employees and their families in case of sickness, maternity and disablement arising out of an employment injury. The Act applies to all employees in factories (as defined) or establishments which may be so notified by the appropriate Government. The Act provides for the setting up of an Employees' State Insurance Fund, which is to be administered by the Employees State Insurance Corporation. Contributions to the Fund are paid by the employer and the employee at rates as prescribed by the Central Government. The Act also provides for benefits to dependents of insured persons in case of death as a result of an employment injury.
- (u) The Personal Injuries (Compensation Insurance) Act, 1963: This Act provides for the employer's liability and responsibility to pay compensation to employees where workmen sustain personal injuries in the course of employment.
- (v) Industrial Employment (Standing Order) Act 1946: It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.

ARTICLE 12

COMPLETION CERTIFICATE

12.1 Tests on completion

- 12.1.1 At least 30 (thirty) days prior to the likely completion of the Project, or a Section thereof, the Contractor shall notify the Engineer-in-charge of its intent to subject the Project or a Section thereof, to Tests. The date and time of each of the Tests shall be determined by the Engineer-in-charge in consultation with the Contractor, and notified to the Employer who may designate its representative to witness the Tests. The Contractor shall either conduct the Tests as directed by the Engineer-in-charge or provide such assistance as the Engineer-in-charge may reasonably require for conducting the Tests. In the event of the Contractor and the Engineer-in-charge 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 Engineer-in-charge.
- 12.1.2 All Tests shall be conducted in accordance with Schedule-K. The Engineer-in-charge 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 or a Section thereof, with Specifications and Standards and if it is reasonably anticipated or determined by the Engineer-in-charge during the course of any Test that the performance of the Project 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 Engineer-in-charge shall provide to the Contractor and the Employer copies of all Test data including detailed Test results. For the avoidance of doubt, it is expressly agreed that the Engineer-in-charge 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 or Section thereof with the Specifications and Standards.
- 12.1.3 Tests on completion shall not commence unless the Contractor has submitted to the Employer provisional operation and maintenance manuals in sufficient detail for review. The Works shall not be considered to be completed for the purpose of taking over until the Employer has received final Operation and Maintenance Manuals and other manuals as specified in the contract documents.

12.2 Provisional Certificate

- 12.2.1 Subject to the provisions of Clause 12.2.5, upon completion of all Works forming part of the Project, save and except the Works for which Time Extension has been granted under Clause 10.5, the Engineer-in-charge shall, at the request of the Contractor, issue a provisional certificate of completion substantially in the form set forth in Schedule-L (the “**Provisional Certificate**”) if the Tests for and in respect of the completed Works are successful. The Provisional Certificate shall have appended thereto a list of outstanding items of work (the “**Punch List**”) that need to be completed in accordance with the provisions of this Agreement. The Contractor undertakes to complete the minor outstanding items of works in

respect of those Sections of the existing Navigational lock for which the Provisional Certificate has been issued, within a period of 30 (thirty) days of the date of Provisional Certificate, and those parts of the Works in respect of which Time Extension has been granted, within the extended period thereof. For the avoidance of doubt, the Parties agree that the Punch List shall include all Works for which Time Extension has been granted and shall also include any minor outstanding items of work forming part of the completed Sections if such works do not materially affect the use of the completed Sections for their intended purpose. The Parties further agree that Provisional Certificate shall not be issued if the completed Works cannot be safely and reliably placed in service of the Users thereof.

- 12.2.2 Upon issue of Provisional Certificate, the provisions of Articles 14 and 17 shall apply to the completed parts of the Project and the property and ownership of all such completed Works shall vest in the Employer.
- 12.2.3 If the Engineer-in-charge determines that the Project or any completed part thereof does not conform to the provisions of this Agreement and cannot be safely and reliably placed in operation, it shall forthwith make a report in this behalf and send copies thereof to the Employer and the Contractor and withhold issuance of the Provisional Certificate until the Defects or deficiencies are rectified by the Contractor and Tests are successful in accordance with this Article 12.
- 12.2.4 Notwithstanding anything to the contrary contained in Clause 12.2.3, the Employer may, at any time after receiving a report from the Engineer-in-charge under that Clause, direct the Engineer-in-charge to issue a Provisional Certificate under Clause 12.2.1 and such direction shall be complied forthwith.
- 12.2.5 No Provisional Certificate shall be issued under the provisions of this Clause 12.2 until the Contractor has submitted valid claims for payment of at least 80% (eighty per cent) of the amount arrived at after reducing the lump sum price specified in Clause 19.1.1 by the amount attributable to works which have been withdrawn under the provisions of Clause 8.3.3. For the avoidance of doubt and by way of illustration, the Parties agree that if the Contract Price specified in Clause 19.1.1 is Rs. 105 cr. (Rs. one hundred and five crore) and the works withdrawn under Clause 8.3.3 have a value of Rs. 5 cr. (Rs. five crore), a Provisional Certificate shall not be issued until valid claims for payment of an amount of Rs. 80 cr. (Rs. eighty crore) have been submitted by the Contractor in accordance with the provisions of this Agreement. It is further agreed that all price adjustments made in pursuance of Clause 19.10 shall not be reckoned for computation of the claims for payments referred to in this Clause 12.2.5.

12.3 Completion of remaining Works

All items in the Punch List shall be completed by the Contractor in accordance with the provisions of this Agreement. For any delay in their completion other than for the reasons solely attributable to the Employer or due to Force Majeure, the Employer shall be entitled to recover Damages from the Contractor in accordance with the provisions of Clause 10.3.2 of this Agreement.

12.4 Completion Certificate

- 12.4.1 Upon completion of all Works, including the items specified in the Punch List, and the Engineer-in-charge determining the Tests to be successful, it shall forthwith issue to the Contractor and the Employer a certificate substantially in the form set forth in Schedule-L (the “**Completion Certificate**”).
- 12.4.2 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 Employer 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 Employer.
- 12.4.3 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 shall vest in the Employer.

12.5 Rescheduling of Tests

If the Engineer-in-charge certifies to the Employer and the Contractor that it is unable to issue the Completion Certificate or Provisional 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

13.1.1 The Employer may, notwithstanding anything to the contrary contained in this Agreement, require the Contractor to make modifications/alterations to the Works (“**Change of Scope**”) before the issue of the Completion Certificate either by giving an instruction or by requesting the Contractor to submit a proposal for 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.

13.1.2 Change of Scope shall mean:

- (a) change in specifications of any item of Works;
- (b) omission of any work from the Scope of the Project except under Clause 8.3.3; provided that, subject to Clause 13.5, the Employer 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.

13.1.3 If the Contractor determines at any time that a Change of Scope will, if adopted, (i) accelerate completion, (ii) reduce the cost to the Employer of executing, maintaining or operating the Project, (iii) improve the efficiency or value to the Employer of the completed Project, or (iv) otherwise be of benefit to the Employer, it shall prepare a proposal with relevant details at its own cost. The Contractor shall submit such proposal, supported with the relevant details and the amount of reduction in the Contract Price to the Employer through the Engineer-in-charge to consider such Change of Scope. The Employer shall, within 15 (fifteen) days of receipt of such proposal, either accept such Change of Scope with modifications, if any, and initiate proceedings therefore in accordance with this Article 13 or reject the proposal and inform the Contractor of its decision. For the avoidance of doubt, the Parties agree that the Contractor shall not undertake any Change of Scope without the express consent of the Employer, save and except any Works necessary for meeting any Emergency.

13.1.4 Entrustment of the additional items contingent to the main work and within the scope of contract will be authorized by the Employer and the contractor shall be bound to execute such items at no extra cost to the Employer and the cost of such items shall be deemed to have been included in the contract price quoted.

13.2 Procedure for Change of Scope

13.2.1 In the event of the Employer determining that a Change of Scope is necessary, it may direct the Engineer-in-charge to issue to the Contractor a notice specifying in reasonable detail the works and services contemplated thereunder (the “**Change of Scope Notice**”).

13.2.2 Upon receipt of a Change of Scope Notice, the Contractor shall, with due diligence, provide to the Employer and the Engineer-in-charge such information as is necessary, together with preliminary documentation 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 down of the quantities, unit rates and cost for different items of work;
 - (ii) proposed design for the Change of Scope; and
 - (iii) proposed modifications, if any, to the Project Completion Schedule of the Project.

For the avoidance of doubt, the Parties expressly agree that, subject to the provisions of Clause 13.4.2, the Contract Price shall be increased or decreased, as the case may be, on account of Change of Scope.

13.2.3 The Contractor's quotation of costs for the Change of Scope shall be determined on the following principles:

- (a) For works of similar nature compared to the Works being executed, the quotation shall be based on the rate for the work inclusive of all labour, Materials, equipment, incidentals, overheads and profit derived in accordance with the provisions of Clause 17.3; and the price adjustment in accordance with Clause 17.8 shall apply to the rates so worked out.
- (b) For works not similar in nature to the Works being executed, the cost of work shall be derived on the basis of the applicable schedule of rates for the relevant circle, as published by the respective State Government and such rates shall be indexed with reference to the WPI once every year, with the base being the month and year of the publication of the said schedule of rates; provided, however, that for any item not included in the schedule of rates, the prevailing market rates as determined by the Engineer-in-charge shall apply.

13.2.4 Upon reaching an agreement, the Employer shall issue an order (the “**Change of Scope Order**”) requiring the Contractor to proceed with the performance thereof. In the event that the Parties are unable to agree, the Employer 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 Employer till the matter is resolved in accordance with Article 26; or
- (b) proceed in accordance with Clause 13.5.

- 13.2.5 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

- 13.4.1 No Change of Scope shall be executed unless the Employer has issued the Change of Scope Order save and except any Works necessary for meeting any Emergency.
- 13.4.2 Unless the Parties mutually agree to the contrary, the total value of all Change of Scope Orders shall not exceed 10 (ten) per cent of the Contract Price.
- 13.4.3 Notwithstanding anything to the contrary in this Article 13, no change made necessary because of any default of the Contractor in the performance of its obligations under this Agreement shall 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 Employer to undertake works

- 13.5.1 In the event the Parties are unable to agree to the proposed Change of Scope Orders in accordance with Clause 13.2, the Employer may, after giving notice to the Contractor and considering its reply thereto, get these executed through agencies selected by the Employer in accordance with its own relevant rules and regulations. The Contractor shall provide assistance and cooperation to the Agency that undertakes the works or services hereunder, but shall not be responsible for rectification of any Defects and/ or maintenance of works carried out by other agencies.
- 13.5.2 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. 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****DELETED**

ARTICLE 15
SUPERVISION AND MONITORING DURING MAINTENANCE

DELETED

ARTICLE 16

TRAFFIC REGULATION

16.1 Traffic Regulation by the Contractor

- 16.1.1 The Contractor shall take all the required measures and make arrangements for the safety of Users during the construction and maintenance of the Navigational Lock or a Section thereof in accordance with the provisions of Standard 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.
- 16.1.2 All works shall be carried out in a manner creating least interference to traffic passing through the Navigational Lock compound or a Section thereof. The Contractor shall take prior approval of the Employer'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

17.1.1 The Contractor shall be responsible for all the Defects and deficiencies, except usual wear and tear in the Project or any Section thereof, till the expiry of a period of 12 months commencing from the date of Provisional Certificate or expiry of a period of 12 months from the date of Completion Certificate, whichever is later (the “**Defects Liability Period**”). Provided that in the event no Provisional Certificate is issued, the Defects Liability Period shall commence from the date of the Completion Certificate. For the avoidance of doubt, any repairs or restoration on account of usual wear or tear in the Project shall form a part of the Maintenance obligations of the Contractor as specified in Article 14.

17.1.2 Deleted

17.2 Remedying Defects

17.2.1 Save and except as provided in Clause 14.1.2, the Contractor shall repair or rectify all Defects and deficiencies observed by the Engineer-in-charge during the Defects Liability Period within a period of 15 (fifteen) days from the date of notice issued by the Engineer-in-charge in this behalf, or within such reasonable period as may be determined by the Engineer-in-charge at the request of the Contractor, in accordance with Good Industry Practice.

17.2.2 The Contractor shall also deploy adequate number of competent, qualified, persons (licensed wherever required) till the expiry of defects liability period.

17.3 Cost of remedying Defects

For the avoidance of doubt, 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) Works, Plant, Materials or workmanship not being in accordance with this Agreement and the Specifications and Standards; and/ or
- (c) failure by the Contractor to comply with any other obligation under this Agreement.

17.4 Contractor’s failure to rectify Defects

In the event that the Contractor fails to repair or rectify such Defect or deficiency within the period specified in Clause 17.2, the Employer shall be entitled to get the same repaired, rectified or remedied at the Contractor’s cost so as to make the Project conform to the Specifications and Standards and the provisions of this

Agreement. All costs consequent thereon shall, after due consultation with the Employer and the Contractor, be determined by the Engineer-in-charge. The cost so determined and an amount equal to twenty percent of the cost as Damages shall be recoverable by the Employer from the Contractor and may be deducted by the Employer from any monies due to the Contractor.

17.5 Contractor to search cause

- 17.5.1 The Engineer-in-charge may instruct the Contractor to examine the cause of any Defect in the Works or part thereof before the expiry of the Defects Liability Period.
- 17.5.2 In the event any Defect identified under Clause 17.5.1 is attributable to the Contractor, the Contractor shall rectify such Defect within the period specified by the Engineer-in-charge, and shall bear the cost of the examination and rectification of such Defect.
- 17.5.3 In the event such Defect is not attributable to the Contractor, the Engineer-in-charge shall, after due consultation with the Employer and the Contractor, determine the costs incurred by the Contractor on such examination and notify the same to the Contractor, with a copy to the Employer, and the Contractor shall be entitled to payment of such costs by the Employer.

17.6. 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.

17.7 Performance Certificate

- 17.7.1 Performance of the Contractor's obligations shall not be considered to have been completed until the Engineer-in-charge has issued the Performance Certificate to the Contractor, stating the date on which the Contractor completed its obligations with regard to any remedial or other work required as a result of any defect in the Works, as identified under Clause 17.1, to the satisfaction of the Engineer-in-charge.
- 17.7.2 The Engineer-in-charge shall issue the Performance Certificate substantially in the format set forth in Schedule-S within 28 (twenty eight) days after the latest of the expiry dates of the Defects Liability Period, or as soon thereafter as the Contractor has supplied all the Contractor's documents, completed and tested all the Works, including remedying any defects.

ARTICLE 18

ENGINEER-IN-CHARGE

18.1 Appointment of the Engineer-in-charge

- 18.1.1 The Employer shall appoint a consulting engineering firm substantially in accordance with the selection criteria set forth in Schedule-N, to be the engineer under this Agreement (the “**Engineer-in-charge**”).
- 18.1.2 The appointment of the Engineer-in-charge shall be made no later than 15 (fifteen) days from the date of this Agreement. The Employer shall notify the appointment or replacement of the Engineer-in-charge to the Contractor. In the event of any replacement or termination of Engineer-in-charge, the Employer shall appoint its representative to act as Engineer-in-charge till such replacement.
- 18.1.3 The staff of the Engineer-in-charge shall include suitably qualified engineers and other professionals who are competent to assist the Engineer-in-charge to carry out its duties.

18.2 Duties and authority of the Engineer-in-charge

- 18.2.1 The Engineer-in-charge 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 Annex 1 of Schedule N, but subject to obtaining prior written approval of the Employer before determining:
- (a) any Time Extension;
 - (b) any additional cost to be paid by the Employer to the Contractor;
 - (c) the Termination Payment; or
 - (d) Any other matter which is not specified in (a), (b) or (c) above and which creates an obligation or liability on either Party for a sum exceeding 0.2% of Contract price.
- 18.2.2 No decision or communication of the Engineer-in-charge shall be effective or valid unless it is accompanied by an attested true copy of the approval of the Employer for and in respect of any matter specified in Clause 18.2.1.
- 18.2.3 The Engineer-in-charge shall submit regular periodic reports, at least once every month, to the Employer in respect of its duties and functions under this Agreement. Such reports shall be submitted by the Engineer-in-charge within 10 (ten) days of the beginning of every month. For the avoidance of doubt, the Engineer-in-charge shall include in its report, compliance of the recommendations of the Safety Consultant.

18.3 Delegation by the Engineer-in-charge

- 18.3.1 The Engineer-in-charge may, by order in writing, delegate any of his duties and responsibilities to suitably qualified and experienced personnel who are accountable to Engineer-in-charge, or may revoke any such delegation, under intimation to the Employer and the Contractor. Provided, however, that the Engineer-in-charge shall be responsible and liable for all actions and omissions of such personnel.
- 18.3.2 Any failure of the Engineer-in-charge to disapprove any work, Plant or Materials shall not constitute approval, and shall therefore not prejudice the right of the Employer to reject the work, Plant or Materials, which is not in accordance with the provisions of this Agreement and the Specifications and Standards.
- 18.3.3 Notwithstanding anything stated in Clause 18.3.1 above, the Engineer-in-charge shall not delegate the authority to refer any matter for the Employer's prior approval wherever required in accordance with the provisions of Clause 18.2.

18.4 Instructions of the Engineer-in-charge

- 18.4.1 The Engineer-in-charge may issue to the Contractor instructions for remedying any Defect. The Contractor shall take such instructions from the Engineer-in-charge, or from an assistant to whom appropriate authority has been delegated under Clause 18.3.
- 18.4.2 The instructions issued by the Engineer-in-charge shall be in writing. However, if the Engineer-in-charge issues any oral instructions to the Contractor, it shall confirm in writing the oral instructions within 2 (two) working days of issuing them.
- 18.4.3 In case the Contractor does not receive the confirmation of the oral instruction within the time specified in Clause 18.4.2, the Contractor shall seek the written confirmation of the oral instructions from the Engineer-in-charge. The Contractor shall obtain acknowledgement from the Engineer-in-charge of the communication seeking written confirmation. In case of failure of the Engineer-in-charge 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 instruction.
- 18.4.4 In case of any dispute on any of the instructions issued by the delegated assistant, the Contractor may refer the dispute to the Engineer-in-charge, who shall then confirm, reverse or vary the instructions within 7 (seven) business days of the dispute being referred.

18.5 Determination by the Engineer-in-charge

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

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

18.6 Remuneration of the Engineer-in-charge

The remuneration, cost and expenses of the Engineer-in-charge shall be paid by the Employer.

18.7 Termination of the appointment of Engineer-in-charge

The Employer may, in its discretion, replace the Engineer-in-charge at any time, but only after appointment of another Engineer-in-charge in accordance with Clause 18.1.

18.8 Resolution of issues between Engineer-in-charge and Contractor

If the Contractor has reasons to believe that the Engineer-in-charge is not discharging its duties and functions in accordance with the provisions of this Agreement, it may make a written representation to the Employer. Upon receipt of such representation, the Employer shall hold a tripartite meeting with the Contractor and Engineer-in-charge and make best efforts for an amicable resolution of the representation. If the issue is not resolved at this stage, then the Employer shall take up this matter to the top management of the Engineer-in-charge and the Contractor for resolution. If still remains unresolved, then the decision of the Employer in this regard is final and binding.

Part IV

Financial Covenants

ARTICLE 19

PAYMENTS

19.1 Contract Price

- 19.1.1 The Employer shall make payments to the Contractor for the Works on the basis of the lump sum price accepted by the Employer in consideration of the obligations specified in this Agreement for an amount of Rs. (Rs.) (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 which shall be paid separately in accordance with the provisions of Clause 19.7. 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.
- 19.1.2 The Contract Price includes all duties, taxes, royalty, 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.
- 19.1.3 The Contract Price shall not be adjusted for any change in costs stated in Clause 19.1.2 above, except as stated in Clauses 19.10 and 19.17.
- 19.1.4 The Contract Price shall not be adjusted to take account of any unforeseen difficulties or costs, unless otherwise provided for in this Agreement.
- 19.1.5 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.
- 19.1.6 The Contract Price shall be paid in Indian Rupees as per the Schedule-T of this Agreement.

19.2 Advance Payment

- 19.2.1 The Employer shall make an interest-free advance payment (the “**Advance Payment**”), equal in amount to 10 (ten) percent of the Contract Price, for mobilisation expenses and for acquisition of equipment. The Advance Payment shall be made in two instalments,
- the first instalment shall be an amount equal to 5% (five percent) of the contract price on contract agreement and
 - the second instalment shall be an amount equal to 5% (five percent) of the Contract Price on submission of utilization certificate of the first installment of advance.

However, the recovery of the same shall be made from the 5th to 18th Month against monthly RA bills in equal instalments.

Full recovery of the advance shall be made upto 18th Month 19.2.2 The Contractor may apply to the Employer for the first installment 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 percent) of such installment, in the form provided at Annex-III of Schedule-G, to remain effective till the complete and full repayment thereof.

19.2.3 At any time after the submission of utilization certificate of the first installment of advance, the Contractor may apply for the second installment of the Advance Payment along with an irrevocable and unconditional guarantee from a Bank for an amount equivalent to 110% (one hundred and ten percent) of such installment, in the form provided at Annex-III of Schedule-G, to remain effective till the complete and full repayment thereof. The application shall also include the details of utilization of earlier advances.

~~19.2.4 At any time, after 120 (one hundred and twenty) days from the Appointed Date, the Contractor may apply to the Employer for the third installment of the Advance Payment along with an irrevocable and unconditional guarantee from a Bank for an amount equivalent to 110% (one hundred and ten percent) of such installment, in the form provided at Annex-III of Schedule-G, to remain effective till the complete and full repayment thereof. The application shall also include the details of utilization of earlier advances.~~

19.2.5 The installment shall be paid by the Employer to the Contractor within 15 (fifteen) days of the receipt of its respective requests in accordance with the provisions of this Clause 19.2.

~~19.2.6 Each instalment of Advance Payment shall be repaid by the Contractor to the Employer no later than 365 (three hundred and sixtyfive) days from the respective date of Advance Payment.~~

The advance payment shall be recovered from the monthly RA Bills starting from the 5th month to 18th Month in equal monthly installments from the RA bills payable to the contractor by the employer within 18th months. In case, if approved invoice amount is less than the recovery installment amount, the same shall be adjusted in the next RA bill

19.2.7 In case the total installments are not recovered till 18th month, the Contractor shall pay the balance installment amount to the Employer, failing which, the Employer shall be entitled to encash the Bank guarantee for recovering the Advance Payment.”.

19.2.8 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 Employer. Without prejudice to the provisions of Clause 19.2.7, in the event of Termination for Contractor Default, the Advance Payment shall be deemed to carry interest at the rate of 10% (ten per cent) 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 each instalment of the Advance Payment, regardless of whether the instalment or any part thereof has been repaid to the Employer prior to Termination.

19.3 Procedure for estimating the payment for the Works

- 19.3.1 The Employer shall make interim payments to the Contractor as certified by the Engineer-in-charge on completion of works, in a length, area, volume, weight, or number as specified and valued in accordance with the proportion of the Contract Price assigned to each item as per Volume III of BOQ.
- 19.3.2 The Contractor shall base its claim for interim payment for the works completed till the end of the month for which the payment is claimed, valued in accordance with Clause 19.3.1, supported with necessary particulars and documents in accordance with this Agreement.
- 19.3.3 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. 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 copies, by the 7th (seventh) day of the month to the Engineer-in-charge in the form set forth in monthly RA Bill in Schedule B of Volume III, showing the amount calculated in accordance with Clause 19.3 to which the Contractor considers himself entitled for completed 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

- 19.5.1 Within 10 (ten) days of receipt of the Stage Payment Statement from the Contractor pursuant to Clause 19.4, the Engineer-in-charge shall broadly determine the amount due to the Contractor and recommend the release of 75 (seventy five) percent of the amount so determined as part payment against the Stage Payment Statement, pending issue of the Interim Payment Certificate by the Engineer-in-charge. Within 10 (ten) days of the receipt of recommendation of the Engineer-in-charge, the Employer shall make electronic payment directly to the Contractor’s bank account.
- 19.5.2 Within 15 (fifteen) days of the receipt of the Stage Payment Statement referred to in Clause 19.4, the Engineer-in-charge shall determine and shall deliver to the Employer 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.

19.5.3 In cases where there is a difference of opinion as to the value of any stage, the Engineer-in-charge'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.

19.5.4 The Engineer-in-charge 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 Engineer-in-charge had notified the Contractor; and
- (b) the estimated cost of rectification of work done being not in accordance with this Agreement.

19.5.5 if the Contractor was, or is, failing to perform any ESHS obligations or work under the Contract, the value of this work or obligation, as determined by the Engineer-in-charge, may be withheld until the work or obligation has been performed, and/or the cost of rectification or replacement, as determined by the Engineer-in-charge, may be withheld until rectification or replacement has been completed. Failure to perform includes, but is not limited to the following:

- (i) failure to comply with any ESHS obligations or work described in the Works' Requirements which may include: working outside site boundaries, excessive dust, failure to keep public in a safe usable condition, damage to offsite vegetation, pollution of water courses from oils or sedimentation, contamination of land e.g. from oils, human waste, damage to archaeology or cultural heritage features, air pollution as a result of unauthorized and/or inefficient combustion;
- (ii) failure to regularly review C-ESMP and/or update it in a timely manner to address emerging ESHS issues, or anticipated risks or impacts;
- (iii) failure to implement the C-ESMP e.g. failure to provide required training or sensitization;
- (iv) failing to have appropriate consents/permits prior to undertaking Works or related activities;
- (v) failure to submit ESHS report/s (as described in Appendix B), or failure to submit such reports in a timely manner;

failure to implement remediation as instructed by the Engineer-in-charge within the specified timeframe (e.g. remediation addressing non-compliance/s).

19.5.6 Payment by the Employer shall not be deemed to indicate the Employer's acceptance, approval, consent or satisfaction with the work done.

19.6 Monthly Maintenance Statement of the Project (DELETED)

~~19.6.1 The Contractor shall submit to the Engineer-in-charge a monthly maintenance statement (“Monthly Maintenance Statement”) in 3 (three) copies by the 7th (seventh) day of each month in the format set forth in Schedule O for the Maintenance of the Project during the previous month.~~

~~19.6.2 The monthly lump sum amount payable for Maintenance shall be 1/12th (one-twelfth) of the annual cost of Maintenance as specified in Clause 14.1.1.~~

19.7 Payment for Maintenance of the Project (DELETED)

19.8 Payment of Damages

19.8.1 The Contractor may claim Damages due and payable to it in accordance with the provisions of this Agreement.

19.8.2 The Engineer-in-charge shall issue the IPC within 15 (fifteen) days of the receipt of the claim under Clause 19.8.1, after making adjustments in accordance with the provisions of this Agreement. The Employer 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 Employer to make payment to the Contractor within the specified time, the Employer 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

19.9.1 The Employer shall pay to the Contractor any amount due under any payment certificate issued by the Engineer-in-charge 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 Engineer-in-charge 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 Engineer-in-charge within the aforesaid period of 30 (thirty) days, the Employer 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 45 (forty five) days from the date of submission of the Final Payment Certificate for Works along with the discharge submitted to the Engineer-in-charge in accordance with the provisions of Clause 19.15 for certification.

19.9.2 In the event of the failure of the Employer to make payment to the Contractor within the time period stated in this Clause 19.9, the Employer shall be liable to pay to the Contractor interest at the State Bank of India Base Rate plus 2% (two percent), calculated at quarterly rests, on all sums remaining unpaid from the date on which the same should have been paid, calculated in accordance with the provisions of Clause 19.9.1(a) and (b) and till the date of actual payment.

19.10. Price adjustment for the Works

19.10.1 The amounts payable to the Contractor for Works shall be adjusted in accordance with the provisions of this Clause 19.10.

19.10.2 Subject to the provisions of Clause 19.10.3, the amounts payable to the Contractor for Works, shall be adjusted in the IPC issued by the Engineer-in-charge 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 19.10.4.

19.10.3 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.

19.10.4 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 Volume III of BOQ;
- (b) Adjustment for each item of work/stage shall be made separately.
- (c) The following expressions and meanings are assigned to the value of the work done:

RW= Value of work done for the completion of a stage under the following items of Volume III of BOQ:

Ancillary Structure

AW = Value of work done for the completion of a stage under the Ancillary Structures

- (d) Price adjustment for changes in cost shall be paid in accordance with the following formulae:

$$(i) \quad VRW = 0.85 RW \times PL \times (LI - LO)/LO + PA \times (AI - AO)/AO + PF \times (FI - FO)/FO + PM \times (MI - MO)/MO + PC \times (CI - CO)/CO + PS \times (SI - SO)/SO$$

$$(ii) \quad VBR = 0.85 BR \times PL \times (LI - LO)/LO + PA \times (AI - AO)/AO + PF \times (FI - FO)/FO + PM \times (MI - MO)/MO + PC \times (CI - CO)/CO + PS \times (SI - SO)/SO$$

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)

PC, PL, PM, and PS are the percentages of cement, labour, other materials, and reinforcement steel /structural steel 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 (2004-05 series) as published by the Ministry of Commerce & Industry, Government of India (hereinafter called “WPI”) for construction machinery for the month of the Base Date.

AI = The WPI (2004-05 series) for construction machinery for the month three months prior to the month to which the IPC relates.

CO = The WPI (2004-05 series) for grey cement for the month of the Base Date.

CI = The WPI (2004-05 series) for grey 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”) nearest to the project road if not available on the project road on the Base Date.

FI = The official retail price of HSD at the existing consumer pumps of IOC nearest to the project road if not available on the project road 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 Farakka, Murshidabad in the State of West Bengal, 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 (2004-05 series) for all commodities for the month of the Base Date.

MI = The WPI (2004-05 series) for all commodities for the month three months prior to the month to which the IPC relates.

SO = The WPI (2004-05 series) for steel (rebars) for the month of the Base Date.

SI = The WPI (2004-05 series) for steel (rebars) 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:

Components	Structures
Labour (PL)	15%
Cement (PC)	20%
Steel(PS)	15%
Fuel and lubricants (PF)	15%
Other Materials (PM)	15%
Plant, machinery and spares. (PA)	20%
Total	100%

- (f) In case an IPC relates to a month which is within 3 (three) months from the Base Date, no price adjustment shall be applicable.

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 (DELETED)

19.13 Final Payment Statement

19.13.1 Within 60 (sixty) days after receiving the Completion Certificate under Clause 12.4, the Contractor shall submit to the Engineer-in-charge for consideration 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 Engineer-in-charge:

- (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 Employer against each claim; and
- (c) any further sums which the Contractor considers due to it from the Employer.

If the Engineer-in-charge disagrees with or cannot verify any part of the Final Payment Statement, the Contractor shall submit such further information as the Engineer-in-charge may reasonably require. The Engineer-in-charge shall deliver to the Employer:

- (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.

19.13.2 If the Engineer-in-charge does not prescribe the form referred to in Clause 19.13.1 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 Employer, with a copy to the Engineer-in-charge, 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

19.15.1 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 Engineer-in-charge shall deliver to the Employer, with a copy to the Contractor, a final payment certificate (the “**Final Payment Certificate**”) stating the amount which, in the opinion of the Engineer-in-charge, is finally due under this Agreement or otherwise. For the avoidance of doubt, before issuing the Final Payment Certificate, the Engineer-in-charge shall ascertain from the Employer all amounts previously paid by the Employer and for all sums to which the Employer is entitled, the balance, if any, due from the Employer to the Contractor or from the Contractor to the Employer, as the case may be.

19.15.2 The Employer 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 (DELETED)

19.17 Change in law

19.17.1 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 Employer with a copy to the Engineer-in-charge of such additional cost due to Change in Law.

19.17.2 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) from the date it becomes reasonably aware of such reduction in cost, notify the other Party with a copy to the Engineer-in-charge of such reduction in cost due to Change in Law.

19.17.3 The Engineer-in-charge shall, within 15 (fifteen) days from the date of receipt of the notice from the Contractor or the Employer, 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 Engineer-in-charge may by an Interim Payment Certificate make any correction or modification in any previous Interim Payment Certificate issued by the Engineer-in-charge.

19.19 Employer's claims

If the Employer 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 3% (three 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 Contract Price shall always be deemed to be the amount specified in Clause 19.1.1, and shall exclude any revision thereof for any reason. The Parties also agree that bonus shall be payable only if each work for which Extension of Time has been granted is completed within respective Extended Time

ARTICLE 20

INSURANCE

20.1 Insurance for Works and Maintenance

20.1.1 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.

20.1.2 Subject to the provisions of Clause 21.6, the Employer 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.

20.1.3 Subject to the exceptions specified in Clause 20.1.4 below, the Contractor shall, save and except as provided for in this Agreement, fully indemnify, hold harmless and defend the Employer 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.

20.1.4 Notwithstanding anything stated above in Clause 20.1.3, the Employer 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 Employer;
- (b) 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
- (c) the death of or injury to persons or loss of or damage to property resulting from any act or neglect of the Employer, 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 Employer 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 Employer, its servants or agents or other contractors not associated with the Contractor in such injury or damage.

20.1.5 Without prejudice to the obligations of the Parties as specified under Clauses 20.1.3 and 20.1.4, the Contractor shall maintain or effect such third party insurances as may be required under the Applicable Laws.

- 20.1.6 The Contractor shall provide to the Employer, 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 Employer

No later than 15 (fifteen) days after the date of this Agreement, the Contractor shall by notice furnish to the Employer, 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 Employer 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

- 20.3.1 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 Employer notarised true copies of the certificate(s) of insurance, copies of insurance policies and premia payment receipts in respect of such insurance, and no such insurance shall be cancelled, modified, or allowed to expire or lapse until the expiration of at least 45 (forty-five) days after notice of such proposed cancellation, modification or non-renewal has been delivered by the Contractor to the Employer. Provided that the Contractor shall produce to the Employer the insurance policies in force and the receipts for payment of the current premia.

- 20.3.2 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 Employer shall have the option to either keep in force any such insurances, and pay such premia and recover the costs thereof from the Contractor, or in the event of computation of a Termination Payment, treat an amount equal to the Insurance Cover as deemed to have been received by the Contractor.

20.5 Waiver of subrogation

All insurance policies in respect of the insurance obtained by the Contractor pursuant to this Article 20 shall include a waiver of any and all rights of subrogation or recovery of the insurers thereunder against, inter alia, the Employer, 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 Employer 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 Employer 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 Employer 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 default of the Employer, its agents or servants. The Contractor shall indemnify and keep indemnified the Employer 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 defaults for which the Employer 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 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 Employer is indemnified under the policy. The Contractor shall require such Sub-contractor to produce before the Employer, 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 Employer.

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 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

The Contractor hereby expressly agrees to fully indemnify the Employer from and against all losses and claims arising from the Contractor's failure to comply with conditions imposed by the insurance policies effected in accordance with 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 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 Employer or (v) breach of its obligations by the Contractor under its subcontracts;
- (e) the discovery of geological conditions, toxic contamination or archaeological remains on the Site that could not reasonably have been expected to be discovered through a site inspection; or
- (f) any event or circumstances of a nature analogous to any of the foregoing.

21.3 Indirect Political Event

An Indirect Political Event shall mean one or more of the following acts or events:

- (a) an act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, riot, insurrection, terrorist or military action, civil commotion or politically motivated sabotage;
- (b) industry-wide or State-wide strikes or industrial action for a continuous period of 24 (twenty-four) hours and exceeding an aggregate period of 10 (ten) days in an Accounting Year;
- (c) any civil commotion, boycott or political agitation which prevents construction of the Project by the Contractor for an aggregate period exceeding 10 (ten) days in an Accounting Year;
- (d) any failure or delay of a Sub-contractor to the extent caused by any Indirect Political Event;
- (e) any Indirect Political Event that causes a Non-Political Event; or
- (f) any event or circumstances of a nature analogous to any of the foregoing.

21.4 Political Event

A Political Event shall mean one or more of the following acts or events by or on account of any Government Instrumentality:

- (a) Change in Law, only if consequences thereof cannot be dealt with under and in accordance with the provisions of Clause 19.17;
- (b) compulsory acquisition in national interest or expropriation of any Project Assets or rights of the Contractor or of the Sub-Contractors;
- (c) unlawful or unauthorised or without jurisdiction revocation of, or refusal to renew or grant without valid cause, any clearance, licence, permit, authorisation, no objection certificate, consent, approval or exemption required by the Contractor or any of the Sub-contractors to perform their respective obligations under this Agreement; provided that such delay, modification, denial, refusal or revocation did not result from the Contractor's or any Sub-contractor's inability or failure to comply with any condition relating to grant, maintenance or renewal of such clearance, licence, authorisation, no objection certificate, exemption, consent, approval or permit;
- (d) any failure or delay of a Sub-contractor but only to the extent caused by another Political Event; or
- (e) any event or circumstances of a nature analogous to any of the foregoing.

21.5 Duty to report Force Majeure Event

21.5.1 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.

21.5.2 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.

21.5.3 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 21.5.1, 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

21.6.1 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 Employer 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 Employer to the Contractor.

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.

- 21.6.2 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.
- 21.6.3 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, as may be determined by the Engineer-in-charge.
- 21.6.4 Force Majeure costs for any event which results in any offsetting compensation being payable to the Contractor by or on behalf of its Sub-contractors shall be reduced by such amounts that are payable to the Contractor by its Sub-contractors.

21.7 Termination Notice for Force Majeure Event

- 21.7.1 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

- 21.8.1 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 Engineer-in-charge shall only determine the value of Works associated with Maintenance.

- 21.8.2 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 Engineer-in-charge, of the Plant and Materials procured by the Contractor and transferred to the Employer 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 Engineer-in-charge shall only determine the value of Works associated with Maintenance.

- 21.8.3 If Termination is on account of a Political Event, the Employer shall make a Termination Payment to the Contractor in an amount that would be payable under Clause 23.6.2 as if it were an Employer Default.

21.9 Dispute resolution

In the event that the Parties are unable to agree in good faith about the occurrence or existence of a Force Majeure Event, such Dispute shall be finally settled in accordance with the Dispute Resolution Procedure; provided that the burden of proof as to the occurrence or existence of such Force Majeure Event shall be upon the Party claiming relief and/or excuse on account of such Force Majeure Event.

21.10 Excuse from performance of obligations

If the Affected Party is rendered wholly or partially unable to perform its obligations under this Agreement because of a Force Majeure Event, it shall be excused from performance of such of its obligations to the extent it is unable to perform on account of such Force Majeure Event; provided that:

- (a) the suspension of performance shall be of no greater scope and of no longer duration than is reasonably required by the Force Majeure Event;
- (b) the Affected Party shall make all reasonable efforts to mitigate or limit damage to the other Party arising out of or as a result of the existence or occurrence of such Force Majeure Event and to cure the same with due diligence; and
- (c) when the Affected Party is able to resume performance of its obligations under this Agreement, it shall give to the other Party notice to that effect and shall promptly resume performance of its obligations hereunder.

ARTICLE 22

SUSPENSION OF CONTRACTOR'S RIGHTS

22.1 Suspension upon Contractor Default

Upon occurrence of a Contractor Default, the Employer 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 Employer 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 Employer 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 Employer 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 Employer for all costs incurred during such period. The Contractor hereby licences and sub-licences respectively, the Employer or any other person authorised by it under Clause 22.1 to use during Suspension, all Intellectual Property belonging to or licenced to the Contractor with respect to the Project 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

22.3.1 In the event that the Employer 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 Employer may, in its discretion, revoke the Suspension at any time, whether or not the cause of Suspension has been rectified or removed hereunder.

22.3.2 Upon the Contractor having cured the Contractor Default within a period not exceeding 60 (sixty) days from the date of Suspension, the Employer shall revoke the Suspension forthwith and restore all rights of the Contractor under this Agreement.

22.4 Termination

22.4.1 At any time during the period of Suspension under this Article 22, the Contractor may by notice require the Employer to revoke the Suspension and issue a Termination Notice. The Employer shall, within 15 (fifteen) days of receipt of such notice, terminate this Agreement under and in accordance with Article 23.

- 22.4.2 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 Employer upon occurrence of a Contractor Default.

ARTICLE 23

TERMINATION

23.1 Termination for Contractor Default

23.1.1 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 Employer 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 and the Environmental, Social, Health and Safety (ESHS) Performance Security, in accordance with this Agreement;
- (b) subsequent to 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 without the prior written consent of the Employer;
- (e) the Contractor fails to proceed with the Works in accordance with the provisions of Clause 10.1 or fails to adhere to agreed ESHS-MSIP 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 Engineer-in-charge;
- (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) failure to complete the Punch List items within the periods stipulated therefor in Clause 12.2.1;
- (h) 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 Engineer-in-charge;
- (i) 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 Employer;
- (j) the Contractor creates any Encumbrance in breach of this Agreement;

- (k) an execution levied on any of the assets of the Contractor has caused a Material Adverse Effect;
- (l) 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;
- (m) 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 Employer, a Material Adverse Effect;
- (n) a resolution for winding up of the Contractor is passed, or any petition for winding up of the Contractor is admitted by a court of competent jurisdiction and a provisional liquidator or receiver 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;
- (o) any representation or warranty of the Contractor herein contained which is, as of the date hereof, found to be materially false or the Contractor is at any time hereafter found to be in breach thereof;
- (p) the Contractor submits to the Employer any statement, notice or other document, in written or electronic form, which has a material effect on the Employer's rights, obligations or interests and which is false in material particulars;
- (q) the Contractor has failed to fulfill any obligation, for which failure Termination has been specified in this Agreement; or
- (r) 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 Employer.
- (s) 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

23.1.2 Without prejudice to any other rights or remedies which the Employer may have under this Agreement, upon occurrence of a Contractor Default, the Employer shall be entitled to terminate this Agreement by issuing a Termination Notice to the Contractor; provided that before issuing the Termination Notice, the Employer shall by a notice informing 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.

23.1.3 After termination of this Agreement for Contractor Default, the Employer may complete the Works and/or arrange for any other entities to do so. The Employer 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 Employer Default

23.2.1 In the event that any of the defaults specified below shall have occurred, and the Employer 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 Employer shall be deemed to be in default of this Agreement (the "**Employer 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 Employer 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 Employer has failed to make payment of any amount due and payable to the Contractor within the period specified in this Agreement;
- (c) the Employer has failed to provide, within a period of 180 (one hundred eighty) days from the Appointed Date, the environmental clearances required for construction of the Project;
- (d) the Employer repudiates this Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by this Agreement; or
- (e) the Engineer-in-charge fails to issue the relevant Interim Payment Certificate within 60 (sixty) days after receiving a statement and supporting documents.

- 23.2.2. If the Employer determines, based on reasonable evidence, that the Contractor has engaged in corrupt, fraudulent, collusive or coercive practices, in competing for or in executing the Contract, then the Employer may, after giving 14 days' notice to the Contractor, terminate the Contract and expel him from the Site, and the provisions of Article 23 shall apply as if such termination had been made under Clause 23.1

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 work then that employee shall be removed from the site or works. If appropriate, the Contractor shall then appoint (or cause to be appointed) a suitable replacement person.

- 23.2.3 Without prejudice to any other right or remedy which the Contractor may have under this Agreement, upon occurrence of an Employer Default, the Contractor shall be entitled to terminate this Agreement by issuing a Termination Notice to the Employer; provided that before issuing the Termination Notice, the Contractor shall by a notice inform the Employer of its intention to issue the Termination Notice and grant 15 (fifteen) days to the Employer 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 Employer's representation or otherwise, the contractor does not issue the Termination Notice on such 15th 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. Hence he forfeits his right to any other remedy on that count.

23.3 Termination for Employer's convenience

Notwithstanding anything stated hereinabove, the Employer may terminate this Agreement for convenience. The termination shall take effect 30 (thirty) days from the date of notice hereunder.

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 to the Employer all Plant and Materials which shall have become the property of the Employer under this Article 23;
- (b) deliver all relevant records, reports, Intellectual Property and other licences pertaining to the Works, Maintenance, other design documents and in case of Termination occurring after the Provisional Certificate has been issued, the “as built’ Drawings for the Works;
- (c) transfer and/or deliver all Applicable Permits to the extent permissible under Applicable Laws; and
- (d) vacate the Site within 15 (fifteen) days.

23.5 Valuation of Unpaid Works

23.5.1 Within a period of 45 (forty) days after Termination under Clause 23.1, 23.2 or 23.3, as the case may be, has taken effect, the Engineer-in-charge 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.

23.5.2 The Valuation of Unpaid Works shall be communicated to the Employer, with a copy to the Contractor, within a period of 30 (thirty) days from the date of Termination.

23.6 Termination Payment

23.6.1 Upon Termination on account of Contractor’s Default under Clause 23.1, the Employer shall:

- (a) encash and appropriate the Performance Security and Retention Money, or in the event the Contractor has failed to replenish or extend the Performance Security, claim the amount stipulated in Clause 7.1.1, as agreed pre-determined compensation to the Employer 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
- (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.

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.

23.6.2 Upon Termination on account of an Employer Default under Clause 23.2 or for Employer's convenience under Clause 23.3, the Employer shall:

- (a) return the 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, as determined by the Engineer-in-charge, of the Plant and Materials procured by the Contractor and transferred to the Employer for its use, only if such Plant and Materials are in conformity with the Specifications and Standards;
 - (iii) the reasonable cost of temporary works, as determined by the Engineer-in-charge; and
 - (iv) 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.

23.6.3 Termination Payment shall become due and payable to the Contractor within 30 (thirty) days of a demand being made by the Contractor to the Employer with the necessary particulars, and in the event of any delay, the Employer shall pay interest at the State Bank of India Base Rate plus 2% (two percent), calculated at quarterly rests, 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 Employer of its payment obligations in respect thereof hereunder.

23.6.4 The Contractor expressly agrees that Termination Payment under this Article 23 shall constitute a full and final settlement of all claims of the Contractor on account of Termination of this Agreement and that it shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

23.7 Other rights and obligations of the Parties

Upon Termination for any reason whatsoever

- (a) property and ownership in all Materials, Plant and Works and the Project shall, as between the Contractor and the Employer, vest in the Employer in whole; provided that the foregoing shall be without prejudice to Clause 23.6
- (b) risk of loss or damage to any Materials, Plant or Works and the care and custody thereof shall pass from the Contractor to the Employer; and
- (c) the Employer 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 except for taking possession of materials, stores, implements, construction plants and equipment of the Contractor, which have not been vested in the Employer 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.

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 Employer, which consent the Employer 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 Employer, 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. For the avoidance of doubt, all Materials and Plants shall, upon their incorporation into Works, be free from any and all Encumbrances without the Employer being required to make any payment to any person on account of any costs, compensation, expenses and charges for such Materials, Plants and Works.

ARTICLE 25

LIABILITY AND INDEMNITY

25.1 General indemnity

25.1.1 The Contractor will indemnify, defend, save and hold harmless the Employer and its officers, servants, agents, Government Instrumentalities and Government owned and/or controlled entities/enterprises, (the “**Employer 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 Employer Indemnified Persons.

25.2 Indemnity by the Contractor

25.2.1 Without limiting the generality of Clause 25.1, the Contractor shall fully indemnify, hold harmless and defend the Employer and the Employer 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 as a result 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.

25.2.2 Without limiting the generality of the provisions of this Article 25, the Contractor shall fully indemnify, hold harmless and defend the Employer Indemnified Persons from and against any and all suits, proceedings, actions, claims, demands, liabilities and damages which the Employer 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, 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 Employer a licence, at no cost to the Employer, 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. In the event that 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

- 25.4.1 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.
- 25.4.2 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).
- 25.4.3 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 25.4.3 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 No consequential claims

Notwithstanding anything to the contrary contained in this Article 25, the indemnities herein provided shall not include any claim or recovery in respect of any cost, expense, loss or damage of an indirect, incidental or consequential nature, including loss of profit, except as expressly provided in this Agreement.

25.6 Survival on Termination

The provisions of this Article 25 shall survive Termination.

ARTICLE 26

DISPUTE RESOLUTION

26.1 Dispute Resolution

26.1.1 Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the “Dispute”) shall, in the first instance, be attempted to be resolved amicably in accordance with the conciliation procedure set forth in Clause 26.2.

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.

26.2 Conciliation

26.2.1 Contractor’s claims

If the Contractor considers himself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of this Agreement, the Contractor shall give notice to the Engineer-in-charge, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 28 days after the Contractor became aware, or should have become aware, of the event or circumstance. If the Contractor fails to give notice of a claim within such period of 28 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment, and the Employer shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Clause shall apply. The Contractor shall also submit any other notices which are required by the Contract, and supporting particulars for the claim, all as relevant to such event or circumstance. The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Engineer-in-charge. Without admitting the Employer’s liability, the Engineer-in-charge may, after receiving any notice under this Clause, monitor the record-keeping and/or Instruct the Contractor to keep further contemporary records. The Contractor shall permit the Engineer-in-charge to inspect all these records, and shall (if instructed) submit copies to the Engineer-in-charge.

Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Engineer-in-charge, the Contractor shall send to the Engineer-in-charge a fully detailed claim which includes full supporting particulars of the basis of the claim and of the extension of time and/or additional payment claimed. If the event or circumstance giving rise to the claim has a continuing effect:

- (a) this fully detailed claim shall be considered as interim;
- (b) the Contractor shall send further interim claims at monthly intervals, giving the accumulated delay and/or amount claimed, and such further particulars as the Engineer-in-charge may reasonably require; and

- (c) the Contractor shall send a final claim within 28 days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Engineer-in-charge. Within 42 days after receiving a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Engineer-in-charge and approved by the Contractor, the Engineer-in-charge shall respond with approval, or with disapproval and detailed comments. He may also request any necessary further particulars, but shall nevertheless give his response on the principles of the claim within the above defined time period.

Within the above defined period of 42 days, the Engineer-in-charge shall to agree or determine (i) the extension (if any) of the Time for Completion (before or after its expiry), and/or (ii) the additional payment (if any) to which the Contractor is entitled under the Contract. Each Payment Certificate shall include such additional payment for any claim as has been reasonably substantiated as due under the relevant provision of the Contract. Unless and until the particulars supplied are sufficient to substantiate the whole of the claim, the Contractor shall only be entitled to payment for such part of the claim as he has been able to substantiate. If the Engineer-in-charge does not respond within the timeframe defined in this Clause, either Party may consider that the claim is rejected by the Engineer-in-charge and any of the Parties may refer to the Adjudicator in accordance with Clause 26.2.2.

The requirements of this Clause are in addition to those of any other Clause which may apply to a claim. If the Contractor fails to comply with this or another Sub-Clause in relation to any claim, any extension of time and/or additional payment shall take account of the extent (if any) to which the failure has prevented or prejudiced proper investigation of the claim, unless the claim is excluded for reasons under this Clause.

26.2.2 Appointment of the Dispute Resolution Board (DRB)

Disputes shall be referred to a DRB for decision in accordance with this Clause. The Parties shall appoint a DRB within 3 months of signing of Agreement. The DRB shall comprise of three suitably qualified persons (the members), each of whom shall be a professional Ied in the type of construction involved in the Works and with the interpretation of contractual documents. The DRB is to comprise of three persons, each Party shall nominate one member for the approval of the 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, Iing the remuneration of any expert whom the DRB 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 DRB for it to give its opinion. Neither Party shall consult the DRB 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 Employer or the Contractor acting alone. Unless otherwise agreed by both Parties, the appointment of the DRB (Iing each member) shall expire when the Performance Certificate is issued by the Employer.

26.2.3 Obtaining Dispute Board's Decision

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 Employer's Engineer, either Party may refer the dispute in writing to the DB for its decision, with copies to the other Party and the Employer'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 additional information, further access to the Site, and appropriate facilities, as the DB may require for the purposes of making a decision on such dispute. The DB shall be deemed to be not acting as arbitrator(s). Within 84 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 until it shall be revised in an amicable settlement or an arbitral award as described below. Unless the Contract has already been abandoned, repudiated or terminated, the Contractor shall continue to proceed with the Works in accordance with the 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 given 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.

26.3 Arbitration

26.3.1 Any Dispute which is not resolved amicably, 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. Such arbitration shall be held in accordance with the Arbitration & Conciliation Act, 1996 of India.

26.3.2. Disputes shall be settled by arbitration in accordance with the following provisions:

1. Selection of Arbitrators. 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:
 - (a) the Employer 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 third arbitrator shall, at the request of either Party, be appointed by Secretary, the Indian Council of Arbitration²⁸, New Delhi

- (b) 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 named an arbitrator may apply to the Secretary, the Indian Council of Arbitration, New Delhi to appoint an arbitrator for the matter in dispute, and the arbitrator appointed pursuant to such application shall be the arbitrator of the other party for that dispute.

2. Rules of Procedure. Arbitration proceedings shall be conducted in accordance with procedure of the Arbitration & Conciliation Act 1996, of India.

3. Substitute Arbitrators. 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.

4. Nationality and Qualifications of Arbitrators. The arbitrators appointed pursuant to paragraphs 1(a) through 1(b) above shall be an expert with extensive experience in relation to the matter in dispute.

5. Miscellaneous. In any arbitration proceeding hereunder:

- (a) proceedings shall be held in New Delhi
- (b) the English language shall be the official language for all purposes; and
- (c) the decision of the majority of the arbitrators shall be final and binding and shall be enforceable in any court of competent jurisdiction, and the Parties hereby waive any objections to or claims of immunity in respect of such enforcement.
- (d) The expenses incurred by each party in connection with the dispute preparation, presentation etc. of its proceedings as also the fees and expenses paid to the Arbitrator appointed by such party or on its behalf shall be borne by each party itself. Fees and expenses for the Presiding Arbitrator including the cost of proceedings shall be shared equally by both the parties.
- (e) Court Jurisdiction: New Delhi

²⁸ If considered necessary replace 'Secretary, the Indian Council of Arbitration' with 'President of the Institution of Engineers (India)' or 'Chairman of the Executive Committee of the Indian Congress' or any other appropriate institution.

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 in the State 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 State Bank of India 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

27.4.1 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.

27.4.2 Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation thereunder nor time or other indulgence granted by a Party to the other Party shall be treated or deemed as waiver of such breach or acceptance of any variation or the relinquishment of any such right hereunder.

27.5 Liability for review of Documents and Drawings

Except to the extent expressly provided in this Agreement:

- (a) no review, comment or approval by the Employer or the Engineer-in-charge of any Document or Drawing submitted by the Contractor nor any observation or inspection of the construction, or maintenance of the Project nor the failure to review, approve, comment, observe or inspect hereunder shall relieve or absolve the Contractor from its obligations, duties and liabilities under this Agreement, the Applicable Laws and Applicable Permits; and
- (b) the Employer 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

27.7.1 Termination shall:

- (a) not relieve the Contractor or the Employer, 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.

27.7.2 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 RFB, 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

Any notice or other communication to be given by any Party to the other Party under or in connection with the matters contemplated by this Agreement shall be in writing and shall:

(a) in the case of the Contractor, be given by facsimile or e-mail and by letter delivered by hand to the address given and marked for attention of the person set out below or to such other person as the Contractor may from time to time designate by notice to the Employer; provided that notices or other communications to be given to an address outside Noida may, if they are subsequently confirmed by sending a copy thereof by registered acknowledgement due, air mail or by courier, be sent by facsimile or e-mail to the person as the Contractor may from time to time designate by notice to the Employer;

(b) in the case of the Employer, be given by facsimile or e-mail and by letter delivered by hand and be addressed to the Employer with a copy delivered to the Employer Representative or such other person as the Employer may from time to time designate by notice to the Contractor; provided that if the Contractor does not have an office in Noida it may send such notice by facsimile or e-mail and by registered acknowledgement due, air mail or by courier;

and

(c) any notice or communication by a Party to the other Party, given in accordance herewith, shall be deemed to have been delivered when in the normal course of post it ought to have been delivered and in all other cases, it shall be deemed to have been delivered on the actual date and time of delivery; provided that in the case of facsimile or e-mail, it shall be deemed to have been delivered on the working day following the date of its delivery.

27.14 Language

All notices required to be given by one Party to the other Party and all other communications, Documentation and proceedings which are in any way relevant to this Agreement shall be in writing and in English language.

27.15 Counterparts

This Agreement may be executed in two counterparts, each of which, when executed and delivered, shall constitute an original of this Agreement.

27.16 Confidentiality

The Parties shall treat the details of this Agreement as private and confidential, except to the extent necessary to carry out obligations under it or to comply with Applicable Laws. The Contractor shall not publish, permit to be published, or disclose any particulars of the Works in any trade or technical paper or elsewhere without the previous agreement of the Employer.

27.17 Copyright and Intellectual Property rights

27.17.1 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 Employer 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:

27.17.2 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 Employer for purposes other than those permitted under this Clause 27.17.

27.17.3 As between the Parties, the Employer shall retain the copyright and other intellectual property rights in this Agreement and other documents made by (or on behalf of) the Employer. 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 Employer'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

27.18.1 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.

27.18.2 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.

ARTICLE 28 DEFINITIONS

28.1 Definitions

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 made in accordance with the provisions contained in this Agreement;

“Applicable Laws” means all laws, brought into force and effect by 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 during the subsistence of this Agreement;

“Appointed Date” means that date which is later of the 15th day of the date of this Agreement, the date on which the Contractor has delivered the Performance Security and the Environmental, Social, Health and Safety (ESHS) Performance Security, in accordance with the provisions of Article 7 and the date on which the Employer has provided the Right of Way as per Schedule A;

“Arbitration Act” means the Arbitration and Conciliation Act, 1996 and shall include modifications to or any re-enactment thereof, as in force from time to time;

“Bank” means a bank incorporated in India and having a minimum net worth of Rs. 1,000 crore (Rupees one thousand crore) or any other bank acceptable to the Employer;

“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 that calendar month, which date 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 Bids in accordance with the provisions thereof;

“Bid Security” means the bid security provided by the Contractor to the Employer in accordance with the Request for Bids, and which is to remain in force until substituted by the Performance Security and the Environmental, Social, Health and Safety (ESHS) 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 entered into effect until the Base Date;
- (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 13.2.1;

“Change of Scope Order” shall have the meaning set forth in Clause 13.2.4;

“Completion Certificate” shall have the meaning set forth in Clause 12.4;

“Construction” shall have the meaning set forth in Clause 1.2.1 (f);

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

“Contract Price” means the amount specified in Clause 19.1.1;

“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 by the Contractor requires any reasonable action by the Contractor that must be approved by the Employer or the Engineer-in-charge hereunder, the applicable Cure Period shall be extended by the period taken by the Employer or the Engineer-in-charge to accord their approval;

“Damages” shall have the meaning set forth in paragraph (w) of Clause 1.2.1;

“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 26.1.1;

“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 as set forth in Schedule-I, and shall include ‘as built’ drawings of the Project;

“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, including Users thereof, or which poses an immediate threat of material damage to any of the Project Assets;

“Employer” shall have the meaning attributed thereto in the array of Parties hereinabove as set forth in the Recitals;

“Employer Default” shall have the meaning set forth in Clause 23.2;

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

“Encumbrances” means, in relation to the Project, 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 payees or beneficiaries or any similar arrangement under any insurance policy pertaining to the Project, where applicable herein but excluding utilities referred to in Clause 9.1;

“Engineer-in-charge” shall have the meaning set forth in Clause 18.1;

“EPC” means engineering, procurement and construction;

“ESHS” means environmental, social (including sexual exploitation and abuse (SEA) and gender-based violence (GBV), health and safety. **“ESHS Performance Security”** shall have the meaning set forth in Clause 7.1;

“Final Payment Certificate” shall have the meaning set forth in Clause 19.15.1;

“Final Payment Statement” shall have the meaning set forth in Clause 19.13.1;

“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 4.1.3 (b);

“GOI/GOWB” or “Government” means the Government of India / Government of West Bengal as the case may be;

“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 or the performance of all or any of the services or obligations of the Contractor under or pursuant to this Agreement;

“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 insurances 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, semiconductor, 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 Engineer-in-charge for payment to the Contractor in respect of Contractor’s claims for payment raised in accordance with the provisions of this Agreement;

“Lead Member” shall, in the case of a Joint Venture (JV), mean the member of such JV who shall have the authority to bind the contractor and each member of the JV; and shall be deemed to be the Contractor for the purposes of this Agreement;

“LOA” or “Letter of Acceptance” means the letter of acceptance referred to in Recital (E);

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

“Maintenance Inspection Report” shall have the meaning set forth in Clause 15.2.1;

“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 14.1.1;

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

“Manual” shall mean the Manual of Standards and Specifications;

“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” are all the supplies used by the Contractor for incorporation in the Works or for the maintenance of the Project;

“Monthly Maintenance Statement” shall have the meaning set forth in Clause 19.6.1;

“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” 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;

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

“Programme” shall have the meaning set forth in Clause 10.1.3;

“Project” means the construction and maintenance of the Project 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 internal and external physical and other assets such as civil works, plant and equipment including foundations, water supply, sanitary, lifts, sewerage, roads, drains, electrical lines, street lighting, pavements, rain-water harvesting, bore wells, tree plantation, fire-fighting system, Genset, waste management system, sign boards, communication systems, mechanical car parking etc.;

“Project Completion Date” means the date on which the Provisional Certificate is issued and in the event no Provisional Certificate is issued, 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 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 Milestone” means the project milestone set forth in Schedule-J;

“Proof Consultant” shall have the meaning set forth in Clause 10.2.2;

“Provisional Certificate” shall have the meaning set forth in Clause 12.2;

“Punch List” shall have the meaning set forth in Clause 12.2.1;

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

“Re.”, “Rs.” or “Rupees” or “Indian Rupees” means the lawful currency of the Republic of India;

“Request for Bids” or “RFB” shall have the meaning set forth in Recital ‘D’;

“Request for Qualification” or “RFQ” shall have the meaning set forth in Recital ‘C’;

“Retention Money” shall have the meaning set forth in Clause 7.5.1;

“Right of Way” means the constructive possession of the Site free from encroachments and encumbrances, together with all way leaves, easements, unrestricted access and other rights of way, howsoever described, necessary for construction and maintenance of the Project in accordance with this Agreement;

“Safety Consultant” shall have the meaning set forth in Clause 10.1.5;

“Scheduled Completion Date” shall be the date set forth in Clause 10.3.1;

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

“Section” means a part of the Project;

“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, as set forth in Schedule-D, and any modifications thereof, or additions thereto, as included in the design and engineering for the Project submitted by the Contractor to, and expressly approved by, the Employer;

“Stage Payment Statement” shall have the meaning set forth in Clause 19.4;

“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;

“Taxes” means any Indian taxes including 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 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 18.2.1;

“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 10.5.1;

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

“Valuation of Unpaid works” shall have the meaning set forth in Clause 23.5.1;

“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 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.

IN WITNESS WHEREOF THE PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DAY, MONTH AND YEAR FIRST ABOVE WRITTEN.

SIGNED, SEALED AND

SIGNED, SEALED AND

DELIVERED

DELIVERED

For and on behalf of Inland Waterways
Authority of India by:

For and on behalf of

THE CONTRACTOR by:

Project Director (JMVP)
Inland Waterways Authority of India
Ministry of Shipping, Government of India

(Signature)

(Signature)

(Name)

(Name)

(Designation)

(Designation)

In the presence of:

1.

2.

APPENDIX TO CONDITIONS OF CONTRACT

(text in this Appendix shall not be modified)

Fraud and Corruption

1. Purpose

1.1 The Bank's Anti-Corruption Guidelines and this annex apply with respect to procurement under Bank Investment Project Financing operations.

2. Requirements

2.1 The Bank requires that Borrowers (including beneficiaries of Bank financing); bidders (applicants/proposers), consultants, contractors and suppliers; any sub-contractors, sub-consultants, service providers or suppliers; any agents (whether declared or not); and any of their personnel, observe the highest standard of ethics during the procurement process, selection and contract execution of Bank-financed contracts, and refrain from Fraud and Corruption.

2.2 To this end, the Bank:

- a. Defines, for the purposes of this provision, the terms set forth below as follows:
 - i. "corrupt practice" is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
 - ii. "fraudulent practice" is any act or omission, including misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain financial or other benefit or to avoid an obligation;
 - iii. "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
 - iv. "coercive practice" is 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;
 - v. "obstructive practice" is:
 - (a) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive, or collusive practice; and/or threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

- (b) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 2.2 e. below.
- b. Rejects a proposal for award if the Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- c. In addition to the legal remedies set out in the relevant Legal Agreement, may take other appropriate actions, including declaring misprocurement, if the Bank determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement process, selection and/or execution of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- d. Pursuant to the Bank's Anti- Corruption Guidelines and in accordance with the Bank's prevailing sanctions policies and procedures, may sanction a firm or individual, either indefinitely or for a stated period of time, including by publicly declaring such firm or individual ineligible (i) to be awarded or otherwise benefit from a Bank-financed contract, financially or in any other manner; (ii) to be a nominated sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract; and (iii) to receive the proceeds of any loan made by the Bank or otherwise to participate further in the preparation or implementation of any Bank-financed project;
- e. Requires that a clause be included in bidding/request for proposals documents and in contracts financed by a Bank loan, requiring (i) bidders (applicants/proposers), consultants, contractors, and suppliers, and their sub-contractors, sub-consultants, service providers, suppliers, agents personnel, permit the Bank to inspect all accounts, records and other documents relating the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the Bank.

APPENDIX A

(to Conditions of Contract)

Appointment of Adjudicator

Suggested Draft of **Letter of Appointment of Adjudicators** in civil works contracts

Sub: _____ (Name of the Contract)

To

Name and address of the Adjudicator

We hereby confirm your appointment as Adjudicator for the above contract to carry out the assignment specified in this Letter of Appointment.

For administrative purpose _____ (*name of the officer representing the Employer*) has been assigned to administer the assignment and to provide the Adjudicator with all relevant information needed to carry out the assignment on behalf of both the Employer and the Contractor. The services will be required during the period of contract for the work of (Name of the Contract) _____.

The Adjudicator shall visit the worksite once in 3 (three) months till the completion of the work indicated above or as specifically requested by Employer/ Contractor for the period up to the end of defects liability period with prior intimation to the Employer and the contractor. The duration of each visit shall ordinarily be for one day only. These durations are approximate and (*Name of the Employer and Name of the Contractor*) may find it necessary to postpone or cancel the assignment and/or shorten or extend the duration.

The appointment will become effective upon confirmation of letter by you. The appointment of Adjudicator shall be liable for termination under a 30 (thirty) days written notice from the date of issue of the notice, if both Employer and the Contractor so desire. Also the appointment shall automatically stand terminated 14 days after the defect notice / correction period as stated in Article 17 is over.

The Adjudicator will be paid a fee of Rs. _____ (Rupees _____ only) per each day of visit at the worksite. The actual expenses for boarding and traveling in connection with the assignment will be reimbursed to the Adjudicator. The Adjudicator will submit a pre-receipted bill in triplicate to the Employer indicating the date of the visit, fees for the visit and a proof in support of the actual expenditure [only for items valued above Rs. 200 each] incurred by him against boarding, lodging and traveling expenses after performing the visit on each occasion. The Employer will make the admissible payment (both the Employer's and the Contractor's share) to the Adjudicator within 30 days of the receipt of the bill. The Contractor's share on this account (half the paid amount) will be recovered by the Employer from the Contractor's bills against the work.

In accepting this assignment, the Adjudicator should understand and agree that he is responsible for any liabilities and costs arising out of risks associated with travel to and

from the place of emergency repatriation, loss or damage to personal/professional effects and property. The Adjudicator is advised to effect personal insurance cover in respect of such risks if he does not already have such cover in place. In this regard, the Adjudicator shall maintain appropriate medical, travel, accident and third-party liability insurance. The obligation under this paragraph will survive till termination of this appointment.

Procedures for resolution of disputes by the Adjudicator is described in the contract of _____(name of the contract) between the Employer and the Contractor vide Article 26. Your recommendation should be given in the format attached, within 28 days of receipt of a notification of dispute.

The Adjudicator will carry out the assignment in accordance with the highest standard of professional and ethical competence and integrity, having due regard to the nature and purpose of the assignment, and will conduct himself in a manner consistent herewith. After visiting the worksite, the Adjudicator will discuss the matter with the Employer and if necessary with the Contractor before arriving at any decision.

The Adjudicator will agree that all knowledge and information not within the public domain, which may be acquired while carrying out this service shall be all time and for all purpose, regarded as strictly confidential and held in confidence, and shall not be directly or indirectly disclosed to any party whatsoever, except with the permission of the Employer and the Contractor. The Adjudicator's decision should be communicated in the form of a speaking order specifying the reasons.

The Adjudicator will agree that any manufacturing or construction firm with which he might be associated with, will not be eligible to participate in bidding for any goods or works resulting from or associated with the project of which this consulting assignment forms a part

Read and Agreed

Name of Adjudicator

Signature

Place:

Date:

Name of Employer

Signature of authorized representative of Employer

Name of the Contractor

Signature of authorized representative of Contractor

Attachment: Copy of contract document between the Employer and Contractor and format for recommendation.

SUMMARY OF ADJUDICATOR'S RESPONSIBILITIES

The Adjudicator has the following principal responsibilities:

1. Visit the site periodically.
2. Keep abreast of job activities and developments.
3. Encourage the resolution of disputes by the parties.
4. When a dispute is referred to it, conduct a hearing (no legal presentation), complete its deliberations, and prepare a recommendations in a professional and timely manner (as per sample format)

Sample Format of Adjudicator's Recommendation

[Project Name] Recommendation of Adjudicator

Dispute No. XX [NAME OF DISPUTE]

Hearing Date: _____

Dispute

Description of dispute. A one or two sentence summation of the dispute.

Contractor's Position

A short summation of the contractor's position as understood by the Adjudicator.

Employer's Position

A short summation of the Employer's position as understood by the Adjudicator.

Recommendation

The Adjudicator's specific recommendation for settlement of the dispute. (*The recommended course is consistent with the explanation*).

Explanation

(*This section could also be called Considerations, Rationale, Findings, Discussion, and so on.*)

The Adjudicator's description of how each recommendation was reached.

Respectfully submitted,

Date : _____

Date : _____

Date : _____

APPENDIX B

Environmental, Social, Health and Safety (ESHS)

Metrics for Progress Reports

Metrics for regular reporting:

- a. environmental incidents or non-compliances with contract requirements, including contamination, pollution or damage to ground or water supplies;*
- b. health and safety incidents, accidents, injuries and all fatalities that require treatment;*
- c. interactions with regulators: identify agency, dates, subjects, outcomes (report the negative if none);*
- d. status of all permits and agreements:*
 - i. work permits: number required, number received, actions taken for those not received;*
 - ii. status of permits and consents:*
 - list areas/facilities with permits required (, asphalt & batch plants), dates of application, dates issued (actions to follow up if not issued), dates submitted to resident engineer (or equivalent), status of area (waiting for permits, working, abandoned without reclamation, decommissioning plan being implemented, etc.);*
 - list areas with landowner agreements required (borrow and spoil areas, camp sites), dates of agreements, dates submitted to resident engineer (or equivalent);*
 - identify major activities undertaken in each area in the reporting period and highlights of environmental and social protection (land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation);*
 - for quarries: status of relocation and compensation (completed, or details of activities and current status in the reporting period).*
- e. health and safety supervision:*
 - i. safety officer: number days worked, number of full inspections & partial inspections, reports to construction/project management;*
 - ii. number of workers, work hours, metric of PPE use (percentage of workers with full personal protection equipment (PPE), partial, etc.), worker violations observed (by type of violation, PPE or otherwise), warnings given, repeat warnings given, follow-up actions taken (if any);*
- f. worker accommodations:*
 - i. number of expats housed in accommodations, number of locals;*

- ii. date of last inspection, and highlights of inspection including status of accommodations' compliance with national and local law and good practice, including sanitation, space, etc.;
- iii. actions taken to recommend/require improved conditions, or to improve conditions.
- g. *HIV/AIDS: provider of health services, information and/or training, location of clinic, number of non-safety disease or illness treatments and diagnoses (no names to be provided);*
- h. *gender (for expats and locals separately): number of female workers, percentage of workforce, gender issues raised and dealt with (cross-reference grievances or other sections as needed);*
- i. *training:*
 - i. number of new workers, number receiving induction training, dates of induction training;
 - ii. number and dates of toolbox talks, number of workers receiving Occupational Health and Safety (OHS), environmental and social training;
 - iii. number and dates of HIV/AIDS sensitization and/or training, no. workers receiving training (this reporting period and in the past); same questions for gender sensitization, flag person training.
 - iv. number and date of GBV /SEA sensitization and/or training, number of workers receiving training on code of conduct (in the reporting period and in the past), etc.
- j. *environmental and social supervision:*
 - i. environmentalist: days worked, areas inspected and numbers of inspections of each (road section, work camp, accommodations, quarries, borrow areas, spoil areas, swamps, forest crossings, etc.), highlights of activities/findings (including violations of environmental and/or social best practices, actions taken), reports to environmental and/or social specialist/construction/site management;
 - ii. sociologist: days worked, number of partial and full site inspections (by area: road section, work camp, accommodations, quarries, borrow areas, spoil areas, clinic, HIV/AIDS center, community centers, etc.), highlights of activities (including violations of environmental and/or social requirements observed, actions taken), reports to environmental and/or social specialist/construction/site management; and
 - iii. community liaison person(s): days worked (hours community center open), number of people met, highlights of activities (issues raised, etc.), reports to environmental and/or social specialist /construction/site management.
- k. *Grievances:* list new grievances (e.g. allegations of GBV / SEA) received in the reporting period and unresolved past grievances by date received, complainant, how received, to whom referred to for action, resolution and date (if completed),

data resolution reported to complainant, any required follow-up (Cross-reference other sections as needed):

- i. Worker grievances;
- ii. Community grievances

l. Traffic and vehicles/equipment:

- i. traffic accidents involving project vehicles & equipment: provide date, location, damage, cause, follow-up;
- ii. accidents involving non-project vehicles or property (also reported under immediate metrics): provide date, location, damage, cause, follow-up;
- iii. overall condition of vehicles/equipment (subjective judgment by environmentalist); non-routine repairs and maintenance needed to improve safety and/or environmental performance (to control smoke, etc.).

m. Environmental mitigations and issues (what has been done):

- i. dust: number of working bowzers, number of waterings/day, number of complaints, warnings given by environmentalist, actions taken to resolve; highlights of quarry dust control (covers, sprays, operational status); % of rock/spoil lorries with covers, actions taken for uncovered vehicles;
- ii. erosion control: controls implemented by location, status of water crossings, environmentalist inspections and results, actions taken to resolve issues, emergency repairs needed to control erosion/sedimentation;
- iii. quarries, borrow areas, spoil areas, asphalt plants, batch plants: identify major activities undertaken in the reporting period at each, and highlights of environmental and social protection: land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation;
- iv. blasting: number of blasts (and locations), status of implementation of blasting plan (including notices, evacuations, etc.), incidents of off-site damage or complaints (cross-reference other sections as needed);
- v. spill clean-ups, if any: material spilled, location, amount, actions taken, material disposal (report all spills that result in water or soil contamination);
- vi. waste management: types and quantities generated and managed, including amount taken offsite (and by whom) or reused/recycled/disposed on-site;
- vii. details of tree plantings and other mitigations required undertaken in the reporting period;
- viii. details of water and swamp protection mitigations required undertaken in the reporting period.

n. compliance:

- i. compliance status for conditions of all relevant consents/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 C-ESMP/ESIP requirements: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
- iii. compliance status of GBV/SEA prevention and response action plan: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
- iv. compliance status of Health and Safety Management Plan re: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
- v. 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.

Schedules

SCHEDULE - A

(See Clauses 2.1 and 8.1)

SITE OF THE PROJECT

1 Project Site Location

- 1.1 The Site is located at Farakka in Murshidabad district of West Bengal, on the Feeder Canal of Farakka Barrage. Google image of the new Navigational Lock and the existing lock is shown in Figure-1, 2 and 3.

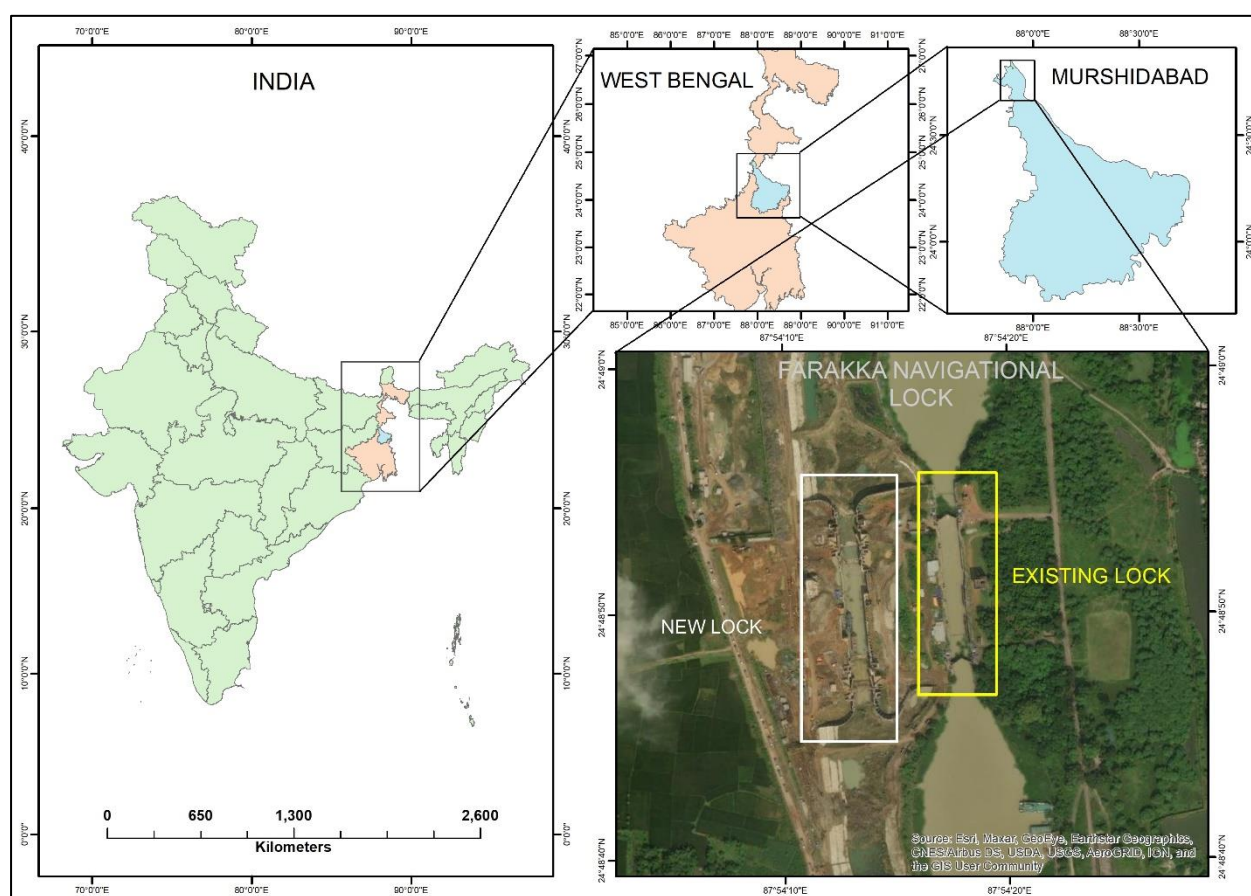


Figure 1 Index map of the project area with existing and new lock



Figure 2 Plan Map of Farakka Barrage and Navigational lock

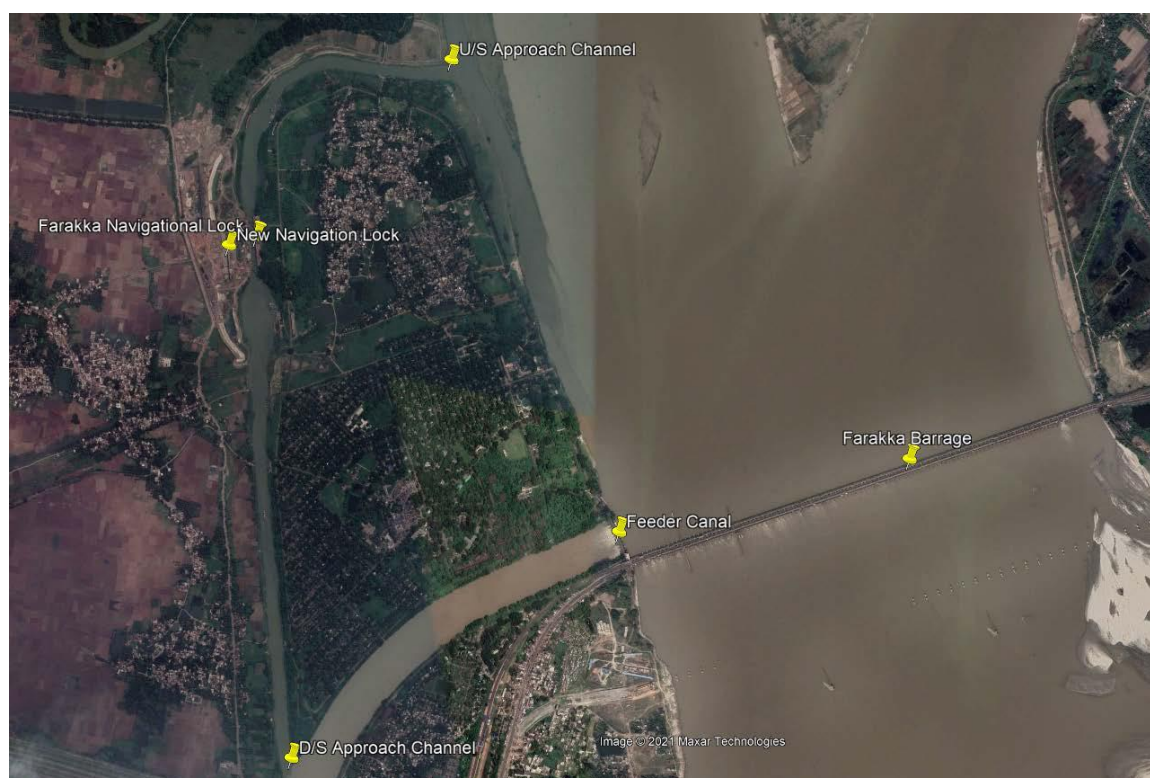


Figure 3 Close up view of Farakka Barrage, Feeder Canal and Locks

2 Access to Project Site

The site is well accessible from rail and road route:

- **Nearest Highway : NH-80 to Rajmahal**
- **Nearest Railway Station : Farakka Railway Station**

- **Nearest Railway Junction: Farakka Railway Station**
- **Nearest Airport : Bagdogra Airport, Darjeeling District, West Bengal**

3. Compilation of Site Data

3.1 Rainfall:

Gridded rainfall data has been collected from India Meteorological Department (IMD) for the project location between latitude and longitude of 24.75° N, 88° E and 24.75° N, 87.75° E. The data has been collected for a duration of 41 years from year 1980-2021. Average annual rainfall is around 1470 mm and the maximum rainfall occurs in the month of July which is of the order of 350 mm. The average monthly rainfall data from 1980-2021 is given in Table below.

Rainfall (mm) Data for the Project Site

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1980	6.9	2.8	11.6	8.3	185.6	299.3	506.4	703.8	346.0	90.7	0.0	0.0	2161.2
1981	33.4	11.4	6.1	130.4	193.5	123.1	488.5	262.3	286.3	0.0	2.8	35.2	1572.7
1982	1.0	4.7	40.1	11.9	52.9	216.7	200.5	316.0	117.3	55.4	37.9	0.5	1054.7
1983	11.9	0.9	23.9	33.1	88.5	134.4	331.8	180.3	367.2	126.3	0.0	29.0	1326.9
1984	45.9	25.4	4.3	8.1	128.2	375.0	388.5	234.6	227.0	114.7	0.0	1.4	1552.8
1985	4.2	1.9	3.4	11.9	174.3	170.2	406.7	209.5	281.7	162.1	0.0	3.7	1429.4
1986	0.6	7.8	0.1	58.2	90.8	152.9	284.8	109.2	261.8	227.4	3.3	6.2	1202.9
1987	0.2	3.8	25.7	61.3	94.1	174.4	581.0	751.3	357.4	50.3	6.4	3.9	2109.4
1988	0.3	15.2	29.1	29.1	99.6	260.8	287.7	399.9	171.6	69.6	33.0	2.7	1398.3
1989	0.7	16.0	0.4	0.0	189.4	155.4	341.2	193.3	433.6	60.9	0.0	12.1	1402.8
1990	0.0	28.4	20.2	20.0	196.1	162.1	514.9	251.6	257.3	145.0	0.9	0.0	1596.2
1991	6.2	5.7	9.1	13.1	116.2	327.4	391.8	204.6	472.4	60.7	0.0	68.6	1675.6
1992	0.0	14.3	1.5	4.7	84.1	161.9	458.5	237.2	200.2	75.1	9.0	0.6	1246.6
1993	21.0	1.8	21.7	67.7	71.1	340.6	236.2	385.2	396.9	67.0	37.4	0.0	1646.3
1994	21.9	20.6	0.0	13.2	27.4	240.6	171.9	200.3	150.3	131.9	0.0	0.0	977.9
1995	3.1	7.9	0.5	1.9	48.2	186.4	278.8	322.9	1020.3	9.1	58.8	8.1	1945.7
1996	10.3	10.4	0.4	15.1	29.6	248.0	303.0	513.7	277.9	70.0	0.0	0.0	1478.1
1997	23.3	9.4	8.3	77.9	109.5	242.3	387.5	510.3	270.1	29.8	14.2	32.8	1715.2
1998	7.6	11.1	61.9	45.7	141.5	143.7	568.1	359.1	324.4	226.2	20.5	0.0	1909.7
1999	0.0	0.0	0.4	5.7	108.3	308.1	489.5	566.6	541.6	172.9	0.6	0.0	2193.3
2000	4.1	36.2	26.6	111.4	181.5	327.5	264.9	176.1	635.2	25.9	0.0	0.0	1789.2
2001	0.3	0.0	1.5	16.9	185.7	272.8	221.8	230.6	259.7	209.9	0.0	0.0	1399.0
2002	10.9	0.6	2.9	88.1	104.1	195.5	259.3	358.2	329.9	54.8	9.3	0.0	1413.3
2003	1.0	52.7	30.8	14.5	136.8	309.7	194.3	176.1	210.7	258.5	0.0	2.0	1386.8
2004	19.0	0.0	2.0	44.7	62.7	346.7	332.7	215.2	130.7	485.9	0.0	0.0	1639.4
2005	15.6	3.8	52.1	17.2	96.6	87.1	571.4	329.9	163.3	154.8	0.0	0.0	1491.7
2006	0.0	0.0	4.3	67.6	99.1	204.3	239.8	247.3	488.2	67.8	11.3	0.5	1429.9
2007	0.0	42.7	44.2	0.4	85.8	275.2	549.3	235.7	272.2	51.5	0.9	0.0	1557.6
2008	43.3	1.9	5.0	21.0	40.1	392.8	416.3	292.5	216.9	34.6	0.0	0.0	1464.1
2009	0.8	5.3	0.9	0.2	227.4	73.4	298.9	463.4	157.5	276.7	2.4	0.0	1506.8

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2010	0.0	1.8	0.1	30.9	168.8	187.4	151.1	113.8	239.4	106.3	9.6	9.5	1018.5
2011	0.0	0.5	0.1	9.0	43.0	79.0	473.0	308.2	323.8	18.6	0.3	0.0	1255.2
2012	6.6	0.1	1.4	70.1	26.6	128.1	299.3	160.7	164.3	88.4	39.2	0.0	984.6
2013	0.1	14.3	1.0	32.6	134.2	320.9	118.1	381.8	169.3	309.5	2.9	0.0	1484.5
2014	0.3	55.0	1.4	11.5	168.3	236.5	382.0	251.2	217.0	29.6	0.0	0.0	1352.6
2015	18.9	2.9	35.7	97.5	137.2	269.9	452.5	322.6	221.6	32.0	3.0	0.0	1593.5
2016	14.9	0.0	4.0	16.6	78.2	130.8	358.4	163.9	338.9	46.7	0.0	0.0	1152.2
2017	2.1	0.0	7.6	69.5	101.2	87.9	311.4	413.4	165.6	111.8	0.2	8.9	1279.4
2018	0.0	13.2	24.6	143.2	142.5	91.3	199.6	157.4	115.3	69.0	0.0	13.5	969.4
2019	0.0	33.0	2.1	65.4	113.1	65.9	333.7	148.5	269.4	174.4	0.0	1.3	1206.6
2020	9.2	13.2	55.7	74.3	170.9	329.4	263.0	197.1	272.7	89.2	0.1	0.0	1474.5
2021	0.0	0.0	1.9	6.9	356.1	252.0	233.3	272.9	112.5	83.6	0.0	6.3	1325.2
Average	8.2	11.3	13.7	38.7	121.1	216.3	346.2	298.3	291.3	112.5	7.2	5.9	1470.7

3.2 Wind:

Wind speed data at 2m above ground has been collected from NASA POWER LARC for the project location. The data has been collected for a duration of 40 years from year 1981-2021. Average annual wind speed at the project location is around 2m/s. The maximum wind speed occurs in the month of June i.e., 2.60 m/s. The average wind speed varies from 1.38 m/s to 2.60 m/s throughout the year.

3.3 Temperature:

Temperature data has been collected from NASA POWER LARC for the project location. The data has been collected for a duration of 40 years from year 1981-2021. Average annual maximum and minimum temperature at the project location is around 44° C and 6° C respectively. The average maximum and minimum temperature vary from 27.8° C to 43.1° C and 6.6° C to 25.9° C respectively.

3.4 Water Level

The water levels U/S and D/S of the existing Navigational lock with reference to the Operation Maintenance Manual for the existing Lock are given in Table below **Error! Reference source not found.**

High Water Level U/S	RL +26.30 m
Low Water Level U/S	RL +18.288 m
High Water Level D/S	RL +24.38 m
Low Water Level D/S	RL +18.288 m

SCHEDULE - B

(See Clause 2.1)

DEVELOPMENT OF THE PROJECT

- 1 The renovation and modernization of existing Navigational lock shall include but not limited to the following items:

- Navigational Lock Structure along with inlet/outlet arrangement and approach structure gates including all associated facilities
- Gates (Caisson, Mitre, Radial and Bulkhead) along with operating system including all associated facilities
- Control Room building (including local control rooms) including all associated facilities
- Electrical works
- Bank protection works
- Site grading
- Residential Quarters
- Road
- Water supply
- Storm water drainage
- Sewerage system
- Fire-fighting system
- Monitoring stations along with equipment
- Access gates, boundary wall, security rooms and fencing
- Diversion of existing roads
- Model studies.
- Existing Navigational Lock traffic signal system.
- Synchronized Operation of Existing and New Navigational lock through integrated signal System
-

The detailed technical specifications for the abovementioned items are provided in Volume-II of Bidding Document.

SCHEDULE - C
(See Clause 2.1)

PROJECT FACILITIES

The Employer shall provide the following facilities to the Contractor:

- Subject to availability, space for site office shall be provided.

The other facilities such as like power supply, water supply and other requirements for “Renovation and Mordernization of Existing Navigational Lock at Farakka, Murshidabad District, West Bengal” in accordance with the terms and conditions of Bidding Document shall be arranged by Contractor.

SCHEDULE - D
(See Clause 2.1)
SPECIFICATIONS AND STANDARDS

Attached as Separate Volume – II

SCHEDULE - E
(See Clauses 2.1 and 14.2)
MAINTENANCE REQUIREMENTS

1 — Maintenance Requirements

- 1.1 — The Contractor shall, at all times maintain the Project in accordance with the provisions of this Agreement, Applicable Laws and Applicable Permits.
- 1.2 — 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 Employer 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 Employer under this Agreement, including Termination thereof.
- 1.3 — All Materials, works and construction operations shall conform to the relevant Specifications. Where the specifications for a work are not given, Good Industry Practice shall be adopted.

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 Engineer in charge 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 Engineer in charge.

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 Engineer in charge and conveyed to the Contractor and the Employer 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 poses a hazard to safety or risk of damage to property, the Contractor shall promptly take all reasonable measures for eliminating or minimizing such danger.

6. ~~Daily inspection by the Contractor~~

~~The Contractor shall, through its engineer, undertake a daily visual inspection of the Project and maintain a record thereof in a register to be kept in such form and manner as the Engineer in charge may specify. Such record shall be kept in safe custody of the Contractor and shall be open to inspection by the Employer and the Engineer in charge at any time during office hours.~~

7. ~~Pre-monsoon inspection / Post-monsoon inspection~~

~~The Contractor shall carry out a detailed pre-monsoon inspection and a Report of this inspection together with details of proposed maintenance works as required on the basis of this inspection shall be sent to the Engineer in charge before 25th May every year. The Contractor shall complete the required repairs before the onset of the monsoon and send to the Engineer in charge a compliance report. Post monsoon inspection shall be done by 30th October and the inspection report together with details of any damages observed and proposed action to remedy the same shall be sent to the Engineer in charge.~~

8. ~~Repairs on account of natural calamities~~

~~— All damages occurring to the Project on account of a Force Majeure Event or default or neglect of the Employer shall be undertaken by the Employer at its own cost. The Employer 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

DELETED

SCHEDULE - F
(See Clause 3.1.7(a))

APPLICABLE PERMITS

1 Applicable Permits

- 1.1 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 Panchayat/ Municipality and Pollution Control Board for installation of crushers, if any;
 - (c) Licence for use of explosives, if any;
 - (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) Permission of Panchayats/ Municipalities and State Government for borrow earth;
 - (h) Permission of State Electricity Board for installation of electric works; and
 - (i) Any other permits or clearances required under Applicable Laws.
- 1.2 Applicable Permits, as required, relating to environmental protection and conservation shall have been procured by the Employer in accordance with the provisions of this Agreement.

SCHEDULE -G
(See Clauses 7.1.1, 7.5.3 and 19.2)
FORM OF BANK GUARANTEE

Annex-I
(See Clause 7.1.1)
Performance Security
[Guarantor letterhead or SWIFT identifier code]

Performance Guarantee No.....*[insert guarantee reference number]*
Date.....*[insert date of issue of the guarantee]*

To:
Inland Waterways Authority of India
(Ministry of Shipping, Govt. of India)
A-13, Sector-1, Noida-201301 (U.P.)
Website: www.iwai.nic.in

WHEREAS _____ *[name and address of Contractor²⁹]*
(hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. _____
dated _____ to execute Renovation and Modernization of Existing
Navigational Lock at Farakka, West Bengal on Engineering, Procurement and Construction
(the EPC) basis (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the
Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum
specified therein as security for compliance with his obligations in accordance with the
Contract;

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

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible
to you, on behalf of the Contractor, up to a total of _____ *[amount of*
guarantee] _____ *[in words]*, such sum being payable in the
types and proportions of currencies in which the Contract Price is payable, and we
undertake to pay you, upon your first written demand and without cavil or argument, any
sum or sums within the limits of _____ *[amount of guarantee]* as
aforesaid without your needing to prove or to show grounds or reasons for your demand
for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor
before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of
the Contract or of the Works to be performed thereunder or of any of the Contract
documents which may be made between you and the Contractor shall in any way release

²⁹ In the case of a JV, insert the name of the Joint Venture

us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until³⁰, and any demand for payment under it must be received by us at this office on or before that date.

Signature and seal of the guarantor _____

Name of Bank _____

Address _____

Date _____

Notes:

- (i) All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.
- (ii) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.
- (iii) 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.

³⁰ Insert the date sixty days after the the expiry of Defects Liability Period. The Employer should note that in the event of an extension of this date for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Employer's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

SCHEDULE –G (Contd...)

FORM OF BANK GUARANTEE

Annex-I (contd...)

(See Clause 7.1.1)

Environmental, Social, Health and Safety (ESHS) Performance Security

[Guarantor letterhead or SWIFT identifier code]

ESHS Performance Guarantee No.....*[insert guarantee reference number]*

Date.....*[insert date of issue of the guarantee]*

To: _____ *[name of Employer]*
 _____ *[address of Employer]*

WHEREAS _____ *[name and address of Contractor³¹]*
 (hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. _____
 dated _____ to execute _____ *[name of Contract*
and brief description of Works] (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with Environmental, Social, Health and/or Safety (ESHS) obligations in accordance with the Contract;

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

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of _____ *[amount of guarantee]* _____ *[in words]*, such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ *[amount of guarantee]* as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

³¹ *In the case of a JV, insert the name of the Joint Venture*

This guarantee shall be valid until³², and any demand for payment under it must be received by us at this office on or before that date.

Signature and seal of the guarantor _____

Name of Bank _____

Address _____

Date _____

Notes:

- (i) All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.
- (ii) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.
- (iii) 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.

³² Insert the date sixty days after the the expiry of Defects Liability Period. The Employer should note that in the event of an extension of this date for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Employer's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

Annex –II
(Schedule-G)
(See Clause 7.5.3)

Form for Bank Guarantee for Withdrawal of Retention Money
[Guarantor letterhead or SWIFT identifier code]

_____ *[Bank's name and address of issuing branch or office]*

Beneficiary: _____ *[Name and Address of Employer]*

Date: _____

RETENTION MONEY GUARANTEE NO.: _____

We have been informed that _____ *[name of contractor³³]* (hereinafter called “the Contractor”) has entered into Contract No. _____ *[reference number of the contract]* dated _____ with you, for the execution of _____ *[name of contract and brief description of Works]* (hereinafter called “the Contract”).

Furthermore, we understand that, according to the conditions of the Contract, the Contractor may withdraw the retention money (hereinafter called the “**Retention Money**”) after furnishing to the Employer a bank guarantee for an amount equal to the proposed withdrawal.

At the request of the contractor, we _____ *[name of Bank]* hereby irrevocably undertake to pay you the sum or sums not exceeding in total an amount of _____ *[amount in Rupees]* (_____) *[amount in words]* upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract without cavil or argument.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall expire, at the latest, 90 days after the date of Completion Certificate. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

Signature and seal of the guarantor _____

³³ In the case of a JV, insert the name of the Joint Venture

Name of Bank _____

Address _____

Date _____

Notes:

- (i) All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.
- (ii) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.
- (iii) The address, telephone number and other details of the head office of the Bank as well as of issuing branch should be mentioned on the covering letter of issuing branch.

Annex – III
(Schedule-G)
(See Clause 19.2)

Form for Bank Guarantee for Advance Payment

[Guarantor letterhead or SWIFT identifier code]

Advance Payment Guarantee No.....*[insert guarantee reference number]*
Date.....*[insert date of issue of the guarantee]*

Inland Waterways Authority of India
(Ministry of Shipping, Govt. of India)
A-13, Sector-1, Noida-201301 (U.P.)
Website: www.iwai.nic.in

_____ *[name of Contract]*

Gentlemen:

In accordance with the provisions of the Conditions of Contract, Sub-clause 19.2 ("Advance Payment") of the above-mentioned Contract, _____ *[name and address of Contractor³⁴]* (hereinafter called "the Contractor") shall deposit with _____ *[name of Employer]* a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____ *[amount of guarantee³⁵]* _____ *[in words]*.

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

We further agree that no change or addition to or other modification of the terms of the Contract or of Works to be performed thereunder or of any of the Contract documents which may be made between _____ *[name of Employer]* and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

³⁴ In the case of a JV, insert the name of the Joint Venture

³⁵ An amount shall be inserted by the bank representing the amount of the Advance Payment installment, and denominated in Indian Rupees.

This guarantee shall be valid until³⁶, and any demand for payment under this guarantee must be received by us at this office on or before that date.

Yours truly,

Signature and seal of the guarantor: _____

Name of Bank: _____

Address: _____

Date: _____

Notes:

- (i) All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.
- (ii) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.
- (iii) 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.

³⁶ \$ Insert a date 90 (ninety) days after the end of one year from the date of payment of the Advance payment to the Contractor (in accordance with Clause 19.2 of the Agreement).

SCHEDULE - H
(See Clauses 10.1.4 and 19.3)
CONTRACT PRICE WEIGHTAGES
DELETED

SCHEDULE - I
(See Clause 10.2.4)
DRAWINGS

1 Drawings

In compliance of the obligations set forth in Clause 10.2 of this Agreement, the Contractor shall furnish to the Engineer-in-charge, free of cost, all Drawings listed in Annex-I of this Schedule-I.

2 Additional Drawings

If the Engineer-in-charge 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 Engineer-in-charge, as if such drawings formed part of Annex-I of this Schedule-I.

Annex - I
(Schedule - I)

List of Drawings

No.	Title of Drawing
ENL001	Index Plan of The Existing and New Navigational lock , Farakka
ENL002	Topography Survey of The Navigational lock Farakka
ENL003	General Arrangement Drawing of Existing Navigational lock
ENL004	General Arrangement Drawing of Parking Bay
ENL005	General Arrangement Drawing of Mooring Equipment
ENL006	General Arrangement Drawing of Bank Protection
ENL007-SH1	General Arrangement Drawing of Mitre Gate
ENL007-SH2	General Arrangement Drawing of Mitre Gate
ENL007-SH3	General Arrangement Drawing of Mitre Gate
ENL008-SH1	General Arrangement Drawing of Radial Gate
ENL008-SH2	General Arrangement Drawing of Radial Gate
ENL009-SH1	General Arrangement Drawing of Bulkhead Gate
ENL009-SH2	General Arrangement Drawing of Bulkhead Gate
ENL010-SH1	General Arrangement Drawing of Caisson Gate
ENL010-SH2	General Arrangement Drawing of Caisson Gate
ENL010-SH3	General Arrangement Drawing of Caisson Gate
ENL011	Power Single Line Diagram of Existing Navigational lock , Farakka
ENL012	Basic Control Architecture of Existing Navigational lock , Farakka
ENL013	General Arrangement Drawing of Bank Protection, Parking Bay, Storm Water Drainage and Road, Residential Area
ENL014	General Location Plan of Monitoring Instruments

SCHEDULE - J
(See Clause 10.3.2)
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 Employer of such compliance along with necessary particulars thereof.

Project Milestone-I

Project milestone –I of 25% financial progress shall occur before the 9th Month from the Appointed Date.

Project Milestone-II

Project milestone –II of 50% financial progress shall occur before the 12th Month from the Appointed Date.

Project Milestone-III

Project milestone –III of 75% financial progress shall occur before the 15th Month from the Appointed Date.

Project Milestone-IV

Project milestone –IV of 100% financial progress shall occur before the 20th Month from the Appointed Date.

All the milestones shown are mandatory. The contractor shall strictly follow all intermediate milestone utilising his resources to the optimum.

2 Scheduled Completion Period

- 2.1 The Scheduled Completion Period shall be 20 (Twenty) Months from the Appointed Date.
- 2.2 On or before the Scheduled Completion Date, the Contractor shall have completed construction in accordance with this Agreement.

An activity wise time schedule is given below. The contractor has to develop their work schedule:

ITEMS	Duration (Month)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Mobilization and Detailed design																					
Survey including field investigation and condition survey	3																				
Detailed Design and Vetting	4																				
Approval by IWAI	4																				
Renovation/Modernization of Civil work																					
Monitoring instruments	1																				
Site development	3																				
Dismantling work	4																				
Lock chamber	14																				
Control Room Building (including local control rooms)	13																				
Parking Bay for Caisson Gate	13																				
Bank Protection	6																				
Electrical Cable bridge	6																				
Renovation/Modernization of Hydromechanical Work																					
Mitre Gate including operating system	14																				
Radial Gate including operating system	14																				
Caisson Gate including operating system	14																				
Bulkhead Gate including operating system	14																				
Painting Schemes for Gate	5																				
Electrical and Control System																					
Electrical Power Supplies	6																				
Control System	4																				
Communication System	4																				
Signaling System	3																				
Other Infrastructural Works																					
Residential Quarters	6																				

SCHEDULE - K

(See Clause 12.1.2)

TESTS ON COMPLETION

1 Schedule for Tests

- 1.1 The Contractor shall, no later than 30 (thirty) days prior to the likely completion of construction, notify the Engineer-in-charge and the Employer of its intent to subject the existing Navigational lock to Tests, and no later than 10 (ten) days prior to the actual date of Tests, furnish to the Engineer-in-charge and the Employer detailed inventory and particulars of all works and equipment forming part of Works.
- 1.2 The Contractor shall notify the Engineer-in-charge of its readiness to subject the existing Navigational lock to Tests at any time after 10 (ten) days from the date of such notice, and upon receipt of such notice, the Engineer-in-charge shall, in consultation with the Contractor, determine the date and time for each Test and notify the same to the Employer who may designate its representative to witness the Tests. The Engineer-in-charge 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

- 2.1 Visual and physical test: The Employer's Engineer shall conduct a visual and physical check of construction to determine that all works and equipment forming part thereof conform to the provisions of this Agreement. The physical tests shall include measurement of crack, rutting area, area of potholes, depressions, shoving and settlement and upheaval, shoulder drop, erosion of soil from embankment.
- 2.2 Riding quality test for road: 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 2,000 (two thousand) mm for each kilometre.
- 2.3 Tests for gates: (i) Visual inspection of all the gates will be carried to check quality of fabrication. (ii) The non destructive testing of concrete in base slab, retaining wall, approach structure, filling emptying systems, embedded parts, etc. and non destructive testing of gates will be carried to check quality of construction/renovation/fabrication (iii) The time taken for opening and their operations in terms of time for operation and closing of the gates will be checked and should not be more than 5 minutes for Mitre gates and 2 minutes for radial gates. If the time taken is more than those prescribed above, the opening should be rectified to meet the criteria. (iv) Time taken for filling / emptying of the lock shall not exceed 8 minutes. If it does not meet the criteria, appropriate modification to the feeder channel shall be made. (v) The operation of gates will be tested with local control as well as main control room. Any snags in operation will be rectified.

Tests on Navigational lock , electromechanical and IT equipments: The Employer's Engineer shall require the Contractor to carry out test on Navigational lock works, electromechanical equipments and IT equipments etc. in accordance with good

industrial practice for determining the compliance of Navigational lock with specifications and standards.

- 2.4 Tests for Instruments.
- 2.5 Other tests: The Engineer-in-charge may require the Contractor to carry out or cause to be carried additional tests as may then seem to him possible, necessary or desirable, in accordance with Good Industry Practice, for determining the compliance of the Project with Specifications and Standards.
- 2.6 Environmental audit: The Engineer-in-charge shall carry out a check to determine conformity of the Project with the environmental requirements set forth in Applicable Laws and Applicable Permits.
- 2.7 Safety Audit: The Engineer-in-charge shall carry out, or cause to be carried out, a safety audit to determine conformity of the Project with the safety requirements and Good Industry Practice.
- 2.8 The contractor shall furnish free of cost any materials and labour which may be necessary for these Tests, and shall facilitate in every way all operations required by the Engineer-in-Charge, in making examination and tests.
- 2.9 The test results shall be recorded in the prescribed forms. Any default during the testing shall be immediately rectified and that section of the installation shall be re-tested. The completed test result forms shall be submitted to the Engineer-in-Charge for approval.

3 Agency for conducting Tests

All Tests set forth in this Schedule-K shall be conducted by the Engineer-in-charge or such other agency or person as it may specify in consultation with the Employer.

4 Completion Certificate

Upon successful completion of Tests, the Engineer-in-charge shall issue the Completion Certificate in accordance with the provisions of Article 12. Within seven (7) days of the issue of a Completion Certificate for a Section or for all the Works, the Contractor shall submit a Certificate of Compliance signed by the Project Manager and the Quality Assurance Manager indicating that all materials, goods and supplies incorporated in the Works conform to the requirements of the Contract.

SCHEDULE - L
(See Clause 12.2 and 12.4)
PROVISIONAL CERTIFICATE

1. I/We, (Name of the Engineer-in-charge), acting as the Engineer-in-charge, under and in accordance with the Agreement dated (the “**Agreement**”), for construction of the Renovation and Mordernization of Existing Navigational lock at Farakka, West Bengal (the “Project”) 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 undertaken to determine compliance of the Project with the provisions of the Agreement.

2. Works that are incomplete on account of Time Extension have been specified in the Punch List appended hereto, and the Contractor has agreed and accepted that it shall complete all such works in the time and manner set forth in the Agreement. In addition, certain minor works are incomplete and these are not likely to cause material inconvenience to the Users of the Project or affect their safety. The Contractor has agreed and accepted that as a condition of this Provisional Certificate, it shall complete such minor works within 30 (thirty) days hereof. These minor works have also been specified in the aforesaid Punch List.

3. In view of the foregoing, I/We am/are satisfied that the lock can be safely and reliably placed in service of the Users, and in terms of the Agreement, the Project is hereby provisionally declared fit use on this the day of 20.....

ACCEPTED, SIGNED, SEALED
AND DELIVERED
For and on behalf of
CONTRACTOR by:

SIGNED, SEALED AND
DELIVERED
For and on behalf of
ENGINEER-IN-CHARGE by:

(Signature)

(Signature)

COMPLETION CERTIFICATE

- 1 I/ We, (Name of the Engineer-in-charge), acting as the Engineer-in-charge, under and in accordance with the Agreement dated (the “Agreement”), for construction of the Works [****] (the “Project”) 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 with the provisions of the Agreement, and I am satisfied that the Project 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 have been completed, and the Project is hereby declared fit for use on this the day of 20.....

SIGNED, SEALED AND DELIVERED

For and on behalf of
the Engineer-in-charge by:

(Signature)

(Name)

(Designation)

(Address)

SCHEDULE - M
(See Clauses 14.6, 15.2 and 19.7)
PAYMENT REDUCTION FOR NON-COMPLIANCE

DELETED

SCHEDULE - N³⁷

(See Clause 18.1.1)

SELECTION OF ENGINEER-IN-CHARGE

1 Selection of Engineer-in-charge

- 1.1 The provisions of the World Bank “Procurement Regulations for IPF Borrowers, July 2016_Revised August 2018” shall apply for selection of an experienced firm to discharge the functions and duties of an Engineer-in-charge.
- 1.2 In the event of termination of the Technical Consultants appointed in accordance with the provisions of Paragraph 1.1, the Employer 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 Engineer-in-charge (the “**TOR**”) shall substantially conform with Annex 1 to this Schedule N.

3 Appointment of Government entity as Engineer-in-charge

Notwithstanding anything to the contrary contained in this Schedule, the Employer may in its discretion appoint a government-owned entity as the Engineer-in-charge; 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 Employer shall not be eligible for appointment as Engineer-in-charge.

³⁷ Mark this Schedule as not applicable, if a departmental engineer is to function as the Engineer-in-Charge

Annex – I
(Schedule - N)

TERMS OF REFERENCE FOR ENGINEER-IN-CHARGE

1 Scope

- 1.1 These Terms of Reference (the “TOR”) for the Engineer-in-charge are being specified pursuant to the EPC Agreement dated (the “Agreement”), which has been entered into between the [name and address of the Employer] (the “Employer”) and (the “Contractor”) for construction of the Works [****] 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.
- 1.2 The TOR shall apply to construction and maintenance of the Project.

2 Definitions and interpretation

- 2.1 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.
- 2.2 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.
- 2.3 The rules of interpretation stated in Clauses 1.2, 1.3 and 1.4 of the Agreement shall apply, mutatis mutandis, to this TOR.

3. General

- 3.1 The Engineer-in-charge shall discharge its duties in a fair, impartial and efficient manner, consistent with the highest standards of professional integrity and Good Industry Practice.
- 3.2 The Engineer-in-charge 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 Employer before determining:
- (a) any Time Extension;
 - (b) any additional cost to be paid by the Employer to the Contractor;
 - (c) the Termination Payment; or
 - (d) any other matter which is not specified in (a), (b) or (c) above and which creates an obligation or liability on either Party for a sum exceeding 0.2% of Contract price.
- 3.3 The Engineer-in-charge shall submit regular periodic reports, at least once every month, to the Employer in respect of its duties and functions under this Agreement. Such reports shall be submitted by the Engineer-in-charge within 10 (ten) days of the beginning of every month.
- 3.4 The Engineer-in-charge 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 Employer's prior approval in accordance with the provisions of Clause 18.2.

- 3.5 The Engineer-in-charge shall aid and advise the Employer on any proposal for Change of Scope under Article 13.
- 3.6 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 Engineer-in-charge shall specify such meaning, scope and nature by issuing a reasoned written statement relying on good industry practice and authentic literature.

4 Construction Period

- 4.1 During the Construction Period, the Engineer-in-charge shall review 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 10.1.6. The Engineer-in-charge shall complete such review and send its observations to the Employer and the Contractor within 15 (fifteen) days of receipt of such Drawings. In particular, such comments shall specify the conformity or otherwise of such Drawings with the Scope of the Project and Specifications and Standards.
- 4.2 The Engineer-in-charge shall review any revised Drawings sent to it by the Contractor and furnish its comments within 10 (ten) days of receiving such Drawings.
- 4.3 The Engineer-in-charge shall review 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.
- 4.4 The Engineer-in-charge shall complete the review 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.
- 4.5 The Engineer-in-charge shall grant written approval to the Contractor, where necessary, for interruption and diversion of the flow of traffic for purposes of maintenance during the Construction Period in accordance with the provisions of Clause 10.4.
- 4.6 The Engineer-in-charge shall review the monthly progress report furnished by the Contractor and send its comments thereon to the Employer and the Contractor within 7 (seven) days of receipt of such report.
- 4.7 The Engineer-in-charge shall inspect the Construction Works and the Project 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 Engineer-in-charge shall include in its Inspection Report, the compliance of the recommendations made by the Safety Consultant.

- 4.8 The Engineer-in-charge shall conduct the pre-construction review of manufacturer's test reports and standard samples of manufactured Materials, and such other Materials as the Engineer-in-charge may require.
- 4.9 For determining that the Works conform to Specifications and Standards, the Engineer-in-charge shall require the Contractor to carry out, or cause to be carried out, tests at such time and frequency and in such manner as specified in the Agreement and in accordance with Good Industry Practice for quality assurance.
- 4.10 The Engineer-in-charge shall test check all the quantity or number of tests prescribed for each category or type of test for quality control by the Contractor.
- 4.11 The timing of tests referred to in Paragraph 4.9, and the criteria for acceptance/rejection of their results shall be determined by the Engineer-in-charge in accordance with the specified quality standards. 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.
- 4.12 In the event that results of any tests conducted under Clause 11.10 establish any Defects or deficiencies in the Works, the Engineer-in-charge shall require the Contractor to carry out remedial measures.
- 4.13 The Engineer-in-charge may instruct the Contractor to execute any work which is urgently required for the safety of the Project, 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.
- 4.14 In the event that the Contractor fails to achieve any of the Project Milestones, the Engineer-in-charge shall undertake a review of the progress of construction and identify potential delays, if any. If the Engineer-in-charge shall determine that completion of the Project is not feasible within the time specified in the Agreement, it shall require the Contractor to indicate within 15 (fifteen) days the steps proposed to be taken to expedite progress, and the period within which the Project Completion Date shall be achieved. Upon receipt of a report from the Contractor, the Engineer-in-charge shall review the same and send its comments to the Employer and the Contractor forthwith.
- 4.15 The Engineer-in-charge 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 12.4.
- 4.16 Engineer-in-charge may recommend to the Employer suspension of the whole or part of the Works if the work threatens the safety of the Users. After the Contractor has carried out remedial measure, the Engineer-in-charge shall inspect such remedial measures forthwith and make a report to the Employer recommending whether or not the suspension hereunder may be revoked.
- 4.17 In the event that the Contractor carries out any remedial measures to secure the safety of suspended works and Users, and requires the Engineer-in-charge to inspect such works, the Engineer-in-charge shall inspect the suspended works within 3 (three) days of receiving such notice, and make a report to the Employer forthwith, recommending whether or not such suspension may be revoked by the Employer.
- 4.18 The Engineer-in-charge shall carry out, or cause to be carried out, all the Tests specified in Schedule-K and issue a Completion Certificate or Provisional

Certificate, as the case may be. For carrying out its functions under this Paragraph 4.18 and all matters incidental thereto, the Engineer-in-charge shall act under and in accordance with the provisions of Article 12 and Schedule-K.

~~5. Maintenance Period~~

- ~~5.1 The Engineer in charge 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.~~
- ~~5.2 The Engineer in charge shall undertake regular inspections, at least once every month, to evaluate compliance with the Maintenance Requirements and submit a Maintenance Inspection Report to the Employer and the Contractor.~~
- ~~5.3 The Engineer in charge 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 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.~~
- ~~5.4 In respect of any defect or deficiency referred to in Paragraph 3 of Schedule E, the Engineer in charge 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.~~

6 Determination of costs and time

- 6.1 The Engineer-in-charge shall determine the costs, and/or their reasonableness, that are required to be determined by it under the Agreement.
- 6.2 The Engineer-in-charge shall determine the period of Time Extension that is required to be determined by it under the Agreement.
- 6.3 The Engineer-in-charge shall consult each Party in every case of determination in accordance with the provisions of Clause 18.5.

7. Payments

- 7.1 The Engineer-in-charge shall withhold payments for the affected works for which the Contractor fails to revise and resubmit the Drawings to the Engineer-in-charge in accordance with the provisions of Clause 10.2.4 (d).
- 7.2 Engineer-in-charge shall -
 - (a) within 10 (ten) days of receipt of the Stage Payment Statement from the Contractor pursuant to Clause 19.4, determine the amount due to the Contractor and recommend the release of 90 (ninety) percent of the amount so determined as part payment, pending issue of the Interim Payment Certificate; and
 - (b) within 15 (fifteen) days of the receipt of the Stage Payment Statement referred to in Clause 19.4, deliver to the Employer 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.

7.3 The Engineer-in-charge shall, within 30 (thirty) 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.

7.4 The Engineer-in-charge 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 Engineer-in-charge shall perform all other duties and functions as specified in the Agreement.

9 Miscellaneous

9.1 A copy of all communications, comments, instructions, Drawings or Documents sent by the Engineer-in-charge to the Contractor pursuant to this TOR, and a copy of all the test results with comments of the Engineer-in-charge thereon, shall be furnished by the Engineer-in-charge to the Employer forthwith.

9.2 The Engineer-in-charge 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.

9.3 Within 90 (ninety) days of the Project Completion Date, the Engineer-in-charge 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 Employer, reflecting the Project as actually designed, engineered and constructed, including an as-built survey illustrating the layout of the Project.

9.4 The Engineer-in-charge, if called upon by the Employer or the Contractor or both, shall mediate and assist the Parties in arriving at an amicable settlement of any Dispute between the Parties.

9.5 The Engineer-in-charge shall inform the Employer and the Contractor of any event of Contractor's Default within one week of its occurrence.

SCHEDULE -O
(See Clauses 19.4.1, 19.6.1, and 19.8.1)
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 19.3.1 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 13.2.3 (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;
 - (iii) Any amount towards deduction of taxes at source under Applicable Laws; and
 - (iv) Total of (i) to (iii) above.
- (g) Net claim: (e) – (f) (iv);
- (h) The amounts received by the Contractor up to the last claim:
 - (i) For the Works executed (excluding Change of Scope orders);
 - (ii) For Change of Scope Orders, and
 - (iii) Taxes deducted

~~2. Monthly Maintenance Payment Statement~~

~~The monthly Statement for Maintenance Payment shall state:~~

- ~~(a) the monthly payment admissible in accordance with the provisions of the Agreement;~~
- ~~(b) the deductions for maintenance work not done;~~
- ~~(c) net payment for maintenance due, (a) minus (b);~~
- ~~(d) amounts reflecting adjustments in price under Clause 19.12; and~~
- ~~(e) amount towards deduction of taxes.~~

3. Contractor's claim for Damages

Note: The Contractor shall submit its claims in a form acceptable to the Employer.

SCHEDULE O-1 (Deleted)

~~Under Taking for INPUT TAX Credit in GST (See Clauses 19.22)~~

~~The contractor shall undertake to pass on the input tax credit in GST and shall compensate the employer for any loss suffered on this account by employee (if any).~~

~~We ,..... (Name of the Contractor) hereby certify that the for INPUT TAX Credit in GST in accordance with clause 19.22 of the Agreement shall pass on the input tax credit in GST and shall compensate the employer for any loss suffered on this account by employee (if any).~~

~~SIGNED, SEALED AND DELIVERED~~

~~(Signature)~~

~~(Name and designation of Contractors Representative)~~

~~(Address)~~

SCHEDULE -P

(See Clause 20.1)

INSURANCE

1. Insurance during Construction Period

- 1.1 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.
- 1.2 The insurance under paragraph 1.1 (a) and (b) above shall cover the Employer 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 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

- 3.1 The Contractor shall insure against its liability for any loss, damage, death or bodily injury, or damage to any property (except things insured under Paragraphs 1 and 2 of this Schedule or to any person (except persons insured under Clause 20.9), which may arise out of the Contractor's performance of this Agreement. This insurance shall be for a limit per occurrence of not less than the amount stated below with no limit on the number of occurrences.

The insurance cover shall be not less than: Rs. 2 lakhs

- 3.2 The insurance shall be extended to cover liability for all loss and damage to the Employer's property arising out of the Contractor's performance of this Agreement excluding:
- (a) the Employer'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 Employer.

SCHEDULE-Q
(See Clause 14.10)

Tests on Completion of Defect Liability Period

1. Visual and physical test:

1.1 Before any electrical system is put to use, the Contractor(s) shall carry out the following tests at site in presence of and to the satisfaction of the Engineer.

- Insulation resistance tests on cables, motors, switchgears and generators.
- Polarity tests wherever applicable.

2. Area Lighting Level Test

Contractor shall in the presence of client representative measure lux level through lux meters at various points in the lock areas and ensure lux levels as mentioned are achieved.

SCHEDULE-R
(See Clause 14.10)

Taking Over Certificate

I, (Name and designation of the Employer's Representative) under and in accordance with the Agreement dated (the "**Agreement**"), for construction of the Works [****] (the "**Project**") 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 with the provisions of the Agreement and I hereby certify that the Employer has taken over the Project from the Contractor on this day.....

SIGNED, SEALED AND DELIVERED

(Signature)

(Name and designation of Employer's Representative)

(Address)

SCHEDULE-S
(See Clause 17.7.2)

Performance Certificate

I, (Name and designation of the Employer's Representative) under and in accordance with the Agreement dated (the "**Agreement**"), for construction of the Works [****] (the "**Project**") on Engineering, Procurement and Construction (EPC) basis through (Name of Contractor), hereby certify that the Contractor has discharged all its obligations under the Agreement and in accordance with Article 17 of the Agreement I hereby issue Performance Certificate to the Contractor on this day.....

SIGNED, SEALED AND DELIVERED

(Signature)

(Name and designation of Employer's Representative)

(Address)

SCHEDULE-T
(See Clause 19.1.6)

All payments under the Contract shall be made in Indian Rupees only.

ANNEXURE 1

ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN

1. Introduction

The Environmental Management Plan (EMP) is the synthesis of all proposed mitigation and monitoring actions, set to a time frame with specific responsibility assigned and follow-up actions defined. EMP is a plan of action for avoidance, mitigation, and management of the negative impacts of the project. Environmental enhancement is also an important component of EMP.

2. The Environmental Management Plan

Effective measures are required to be proposed and implemented during the design, preconstruction and construction stage to eliminate or minimize the impact of the project development. Table 1 provides details of mitigation measures with implementation and supervision responsibility. Since the project is likely to have an impact on various components of the environment, the monitoring requirement covering soil erosion, tree plantation, air quality, water quality noise, and river sedimentation has been defined and included under the respective head at Table 2.

It will be essential for contractor to comply with applicable regulations and World Bank safeguard requirements. The Contractor will also have to comply with applicable standards with respect to Water, air, Noise, Dredge Material, soil and biodiversity as applicable to this project.

3. Environment health and safety cell

It is essential to establish environment health and safety cell for the project by contractor to ensure the health & safety of workers and environmental management of study area through effective implementation of EMP. Highly qualified and experienced persons in the field of Environmental Management of Similar projects shall be considered to man the cell who shall ensure the effective implementation of the environment management plan.

4. Reporting requirements:

It is required that the contractor will submit a quarterly compliance report to the PIU/PMU (IWAI). PMC/PMU will analyze the report and notify the corrective action if any is required to the contractor under intimation to IWAI.

Table 1. Environment Management Plan for Existing Lock gate at Farakka

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
RENOVATION PHASE							
1. Climate							
❖ Project is unlikely to cause negative effect on climate. However, project can contribute positively for climate	<ul style="list-style-type: none">• No tree cutting shall be carried out without obtaining permission from Forest department• Trees at the site shall be retained as green belt. Additionally, 100 trees should be planted within the projectsite.• Provision of alternative energy optionslike solar energy• Adoption of best practices to cut down resources and energy requirement	Kyoto Protocol, National WaterPolicy, 2012 & National ForestPolicy	Construction site	During Renovation stage	Green belt Plantation (@ Rs 500 per tree for 100 trees)- 50,000	Contractor,	IWAI/PMU/PMC
2. Natural & Man-made Hazard							
<div>❖ Earthquake-Seismic Zone –III damagerisk zone</div> <div>❖ Risk of flood</div>	<ul style="list-style-type: none">• Adoption of Relevant IS codes while designing the civil onshore & off- Shore structures to sustain the earthquake of moderate to high magnitude.• Designing of structures above theHFL• Preparation of emergency preparedness and response plan fornatural and man-made hazards like earthquake, floods, fires, shocks, explosion of hazardous materials etc.	NBC, 2005, local building bye laws, statefactory rules, Petroleum Rules and MSIHC Rules, 1989	Construction site & Navigation Channel	During Renovation stage.	Part ofProject Costs	Contractor	IWAI/PMU /PMC
3. Site Preparation: Levelling Lock Gate Site, Construction Camp, Construction Works							
❖ Leveling of lock gate site & Removal of vegetation	<ul style="list-style-type: none">• Tree cutting is very less however tree cutting if any required should be carried out only after obtaining NOC from forest department.	Municipal SolidWastes (Management and Handling) Rules, 2015	Construction site	During Renovation Stage	Part ofProject Costs	Contractor.	IWAI/PMU/PMC

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
	<ul style="list-style-type: none"> Excavation and filling operations should be carried out in parallel so as to minimize the soil erosion Water sprinkling to be carried out for dust suppression Top soil (15 cm) should be stripped and preserved under covered conditions for landscaping purpose in later stage. This should be stored in the form of the heap with the slide slopes covered with grass. Excavated soil should be used within the site for filling purpose and for realignment of the existing road. Any surplus soil should be disposed off to safe location/identified debris disposal site approved by IWAI within 5 kms of project site. Contractor should submit a plan prior excavation to the IWAI for management and disposal of the surplus earth. Green belt should be developed at the site and as per the Green Belt Management Plan (Annexure 3). Survival rate of tree should be regularly monitored. Work timings should be restricted from 6:00 AM to 10:00 PM. Adequate illumination should be provided at site during evening hours Rest area should be provided for workers at site and sleeping/lying down at site should be strictly 	Social Impact Assessment requirements					

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
	<ul style="list-style-type: none"> prohibited Safety guidelines as per operation, health & safety management plan (Attachment 2) should be followed Municipal Solid Waste Management: Excavated soil should be stored in covered conditions only Arrangement should be made for segregation of waste into recyclable and non-recyclable waste Non-recyclable waste generated should be disposed regularly through authorized agency. Recyclable waste should be sold to authorized vendors. Construction waste generated should be segregated at site into recyclable, reusable & rejected fraction. Recyclable should be sold to authorized vendor; reusable waste should be stored at site for usage and rejected fraction should be disposed at designated sites by the municipal authority If no debris or waste disposal site exists in the area then a site should be identified for debris disposal, should be approved by IWAI and should be used & manage for the same as per the Debris Management Plan (Attachment 3) 						
❖ Setting of Labor Camps: contamination of land and	Location of Camp: <ul style="list-style-type: none"> Construction camp siting, establishment, location and management should be as per 	The Building and Other Construction workers	Labour Camp Locations	During Renovation Stage	Approximate Rs 500,000/-per campfor sanitation and	Contractor.	IWAI/PMU /PMC

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
water resources from municipal waste from Camps, worker's health, Pressure on natural resources due to establishment of labour camps	<p>proposed Construction & Labour Camp Management Plan (Attachment 4)</p> <ul style="list-style-type: none"> Labour camps should be located close to the construction sites to the extent possible <p>Sanitation and Worker's Health:</p> <ul style="list-style-type: none"> Hygiene in the camps should be maintained by providing good sanitation and cleaning facilities. Soak Pits can be provided only if labour camp is located away from river. Camp should be well ventilated. It should have adequate provision for illumination, kitchen and safe drinking water facility. Proper drainage to be maintained around the sites to avoid water logging leading to disease Preventive medical care to be provided to workers Segregated, collection and disposal of solid waste on regular basis at identified municipal solid waste disposal location. If municipal solid waste site not available then waste should be land fill following the regulations. Provision should be made essential material supply like cooking fuel (gas) Provision should be made for day crèche for children 	(Regulation of Employment and Conditions of Service) Act 1996 and Cess Act of 1996 and The Water (Prevention & Control of Pollution) Act, 1974 and amendments thereof. Municipal Solid Wastes (Management and Handling) Rules, 2000			health facilities.		
❖ Setting up construction Camp:	<ul style="list-style-type: none"> All these facilities should be installed at existing lock gate site itself. In case 	Air (Prevention and Control	Site construction Camp	During Renovation Stage	approximate Rs 500,000/- per camp for	Contractor.	IWAI/PMU /PMC

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
Concert Mix Plant, Hot Mix Plant, Mechanical Workshop, Fuel storages, Lubricant storages	<p>these are to be set up away from site than these should be located at minimum distance of 500 m from habitation, water bodies.</p> <ul style="list-style-type: none"> • All maintenance facilities, hot mix plant and concrete mixing plant should be established with prior consent to establish to be obtained from SPCB. • All such equipment/plant should be fitted with air pollution control system and should comply with condition of consent to establish. • Periodic monitoring should be carried as per consent conditions. 	ofWater Pollution)Act, 1981 and Water (Prevention andControl of Water Pollution)Act, 1974			sanitation and healthfacilities.		
4. Site Preparation: Power supply, Water Supply, and Drainage, disposal of muck and debris							
❖ Power supply and Energy Conservation: Air Pollution, energy loss	<ul style="list-style-type: none"> • Power should be sourced from State electricity board in the area during construction stage as well operationphase. • DG sets should be used only in case of power failure • Back-up power should be set up with all provisions of containment for fuel leakages, air pollution control (stackheight as per regulation) and with acoustic enclosure. • Solar energy should be used in theproject. • Energy Conservation Building Code should be used as applicable to various office and other structures. 	Air (Prevention and Control of Water Pollution) Act, 1981 & ECBC Norms,2007	Construction Sites and Labour Camp Locations	During Renovation stage	Part ofProject Costs	Contractor.	IWAI/PMU /PMC
❖ Water Supply, Drainage and	<ul style="list-style-type: none"> • Supply water shall be used fordrinking water. 	Central GroundWater	Construction Sites and	During Renovation	Approx.Rs 300,000 for	Contractor.	IWAI/PMU /PMC

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
effluent discharge	<ul style="list-style-type: none"> Water required for construction should be sourced from river for which necessary permission should be obtained. Caution sign should be placed at site for optimal use of water Garland storm water temporary drains should be developed around the site to prevent any direct discharge of contaminated or soiled water to river. It should be passes through de-siltation chamber and water collection pit. Collected water should be used for construction purposes. All washing and maintenance effluent from the workshop area of vehicle maintenance area should Darin to separate collection areas fitted with oil and grease trap and de- siltation chamber. The treated water should be used for dust separation and green belt development. This water should not be discharged to river at all. 	Board, Water (Prevention and Control of Water Pollution) Act, 1974	Labour Camp Locations	stage	construction of grease traps and de-siltation chambers		
❖ Disposal of excavated earth, muck and debris: uncontrolled disposal may leads to increased sedimentation of the river.	<ul style="list-style-type: none"> Provision should be made for collection and draining of water from the excavated earth. It should be used for embankment protection or road construction depending on its suitability. Provision should be made for geo Synthetic Screen for arresting silt flowing down stream. 	Solid Waste (Management & Handling) Rules, 2015	River Bank along the lock gate site	Pre-Renovation and Renovation Stage	Part of Project Costs	Contractor.	IWAI/PMU /PMC

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
5. Embankment Design and Construction, Drainage Pattern							
❖ Navigational channel Bank Erosion ❖ Protection: Construction of Embankment and construction of inlet and out let structure: may lead to accumulation of sediments on the updrift side and erosion of the downdriftside Contamination of river water quality and land may happen due toriver bed material	<ul style="list-style-type: none">• Stone pitching should be provided on left bank of the river for protection• The river bank slope of U/S and D/S approach channel should be provided with two layers of pitching with PCC blocks of size of 1 m x 1m x 0.6 m. 6m wide.• Guide walls on U/S and D/S of the lock are tied to those of existing lock and cut offs to a depth of 5 m have been provided for protection againstscour• During block pitching, the block shouldbe placed at suitable distance and should not by dropping from height. Block should be placed by making gridin pitching area.• Erosion monitoring should be carried out periodically downstream as well.• River Bed material/dredged soil if any should be tested for contaminants before its use or disposal for land fill site. If any level of heavy metal contamination is found than it should be disposed off in a secure manner to TSDF.	Water (Prevention andControl of Water Pollution) Act, 1974	1500-meter stone pitching River Bank along the lock gate site & 40 m apron inside the river	During design, Pre-Renovation and Renovation Stage	Part ofProject Costs	Contractor.	IWAI/PMU /PMC
❖ Drainage Pattern	<ul style="list-style-type: none">• Natural Drainage pattern of area around should be maintained.• Storm water management drainsshould be provided at site for management of storm water management		Construction Sites, Access Road, and Labour Camp Locations	During Renovation stage	Part ofProject Costs	Contractor.	IWAI/PMU /PMC

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
6. Construction Material Sourcing							
❖ Borrow areas for sourcing earth for filling as required (erosion, loss of productive land, land degradation, air pollution)	<ul style="list-style-type: none">As surplus soil is available from excavation of the site, no borrow area may be required.	IRC Guidelines on borrowareas EIA Notification 2006(under Environmental Protection Act and Rules, 1986;)	-	During Renovation stage	Part ofProject Costs	Contractor	IWAI/PMU /PMC
❖ Quarries for sourcing stone and aggregates (loss of productive land, land degradation, air pollution. Any illegal quarrying may lead to land use change, unstable rock formation)	<ul style="list-style-type: none">Aggregates required for embankmentstone pitching and roads should be procured from licensed quarries.It should be ensuring that selected quarries are having requisite environment clearance, and comply with Air Pollution Control and Noise level requirements as per the law.Copy of Environmental Clearance letter and Consent to operate and should be obtained from the quarry owner and submitted to IWAI.Material should be transported under covered trucks only.No new quarry should be opened without due permissions. If new quarry is opened then it is require to obtain environment clearance from MoEFCC/SEIAAEach Quarry should be visited prior to its selection to ensure its compliance with lease conditions, EC and consent conditions.	EIA Notification 2006(under Environmental Protection Act and Rules, 1986)	Quarry Site	During Renovation stage	Part ofProject Costs	Contractor	IWAI/PMU /PMC

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
7. Protection of Flora and Fauna							
❖ Protection of impact on aquatic Fauna& Flora due to Increased sedimentation downstreamof construction site	<ul style="list-style-type: none">• To avoid the siltation in water 100m distance has been kept between existing lock gate.• No breeding ground is noticed around the project site. However, constructionactivity should be restricted during spawning & breeding period of fishes, i.e. June to August• To avoid the construction debris, wash or blown into the water the construction area shall be surrounded by silt screens.• The screens should also be placed around storage areas, to prevent waste from blowing away and to• prevent sediment run-off into the river.• All the material and debris shall be stored at least 20 meters away from the high water mark and construction equipment must not be cleaned or washed within 50 meters of the high water mark.• Run-off from site should pass through oil/grease traps and sedimentation tank before its reuse. All efforts shall be made for its reuse to avoid its discharge to river.• Construction activities shall be carried out rapidly. Culvert construction should not be carried out during breeding and spawning season means during rainy season.	<ul style="list-style-type: none">• Wild Life (Protection) Act,1972	Around Pilling Area	During Renovation stage	Part ofproject costs	PMU through DFO	IWAI/PMU /PMC

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
	<ul style="list-style-type: none"> • Maintaining equipment in good condition to prevent leaks or spills of potentially hazardous materials like hydraulic fluid, diesel, gasoline and other petroleum products • Positioning water borne equipment in a manner that will minimize damage to fish habitat. • Turbidity traps/curtains should be provided or Geo-Textile synthetic sheet curtain shall be placed around the construction area to prevent movement of sediments and construction waste. • Excavation activities onshore shall not be undertaken during monsoon season so as to minimize sedimentload of run-off. • All workers should be made aware of not throwing any waste in the river or any drain • No construction debris/ already accumulated solid waste at site or waste generated from labour camp should be thrown in river or any drain • Sewage generated from labour camp should not be directed into river but should be disposed off through septic tank/soak pit. • Engineering controls modify the equipment or the work area to make it quieter. Examples of engineering controls are: use of quieter equipment; 						

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
	<p>retro-fitting equipment with damping materials, mufflers, or enclosures; erecting barriers; and maintenance.</p> <ul style="list-style-type: none"> • Aquatic ecology monitoring shall be carried out prior start of construction and after completion of construction so as to assess the impact of construction activities on aquatic life. • Soil stabilization works in the bank must consider implications on changes in hydrological flow, current and behavior of the river. Such changes may create new problems such as change of river course, erosion of river embankment, change in erosion and inundation pattern of the bank etc. which will in turn impact the habitat of aquatic life • Sedimentation and siltation should be prevented to maintain productivity of aquatic ecosystem and availability of food such as aquatic fauna, vegetation to the avian fauna. • Green belt should be developed all around the project periphery. 1 ha of area is reserved as green area. App. 100 trees should be planted within the 1 ha of area to be provided at the site. 						
❖ Impact on avifauna including Migratory birds	<ul style="list-style-type: none"> • Hunting, poaching and harming any animal (especially avifauna) by any worker or project related person shall be strictly prohibited and monitored. • The designated important bird area is located more than 4 km from the 	Wild Life (Protection) Act	Around Project Site	During Renovation stage	Part of project costs	PMU	IWAI/PMU /PMC

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
	however it is recommended that, to conserve the local biodiversity (migratory birds of Farakka barrage area) the construction activities may stop for migratory periods of the birds if required.						
❖ Impact on Terrestrial Flora & Fauna	<ul style="list-style-type: none"> • There are very few trees and some agricultural land scattered around the location, besides the green meadows around. Development of a green belt has been proposed all along the lock gate boundary. This would help in settlement of dust and keep atmospheric humidity under check. • As far as possible the existing trees present at site shall be retained under greenbelt • Permission should be obtained from forest department prior tree cutting if any. • Thick green belt should be developed around the periphery of the lock site. App. 100 trees will be planted at the site. Green belt should include native tree species like Pepal, Bargad, Arjun, Sheesham, Kaner, Neem etc. Green belt should be developed as per the CPCB guidelines proposed above climate section • Maximum survival rate for plantation shall be ensured. • Hunting, poaching and harming any animal (especially avi -fauna) by any worker or project related person shall 	Wild Life Protection Act	In and Around Project Site	During Renovation stage	Part of project costs	Contractor	IWAI/PMU /PMC

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
	<p>be strictly prohibited and monitored.</p> <ul style="list-style-type: none"> • The designated imported bird area is located more than 4 km from the however it is recommended that, to conserve the local biodiversity (migratory birds of Farakka barrage area) the construction activities may stop for migratory periods of the birds if required. • Construction activities should be restricted to 6:00 Am-10:00 Pm especially noise generating activities • Illumination at the site shall be reduced during the night time (if no activity is going on) as it may disturb the nocturnal animals. • Noise generating activity shall not be undertaken during night time to minimize disturbance to animals. • Noise levels shall be maintained within the prescribed CPCBs limits to the extent possible during the day time. • No hazardous material or waste should be disposed off in the other land or nearby area as it may harm the animals, if consumed accidentally • Regular water sprinkling shall be done in dust prone areas and haul roads. • Construction site shall be barricaded to reduce the dust and noise generation. • Speed limit will be for construction vehicle shall regulate to control noise 						

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
	and dust emission. <ul style="list-style-type: none"> Regular maintenance of the dumper and construction machineries shall be done No timber usage should be allowed for cooking or any other purpose at site during design, construction phase of the project. Clean fuel like LPG should be used 						
8. Air Quality							
❖ Fugitive Dust Generation due to construction activities	<ul style="list-style-type: none"> Barricading the site to prevent dust dispersion to nearby areas Excavation and filling should be carried out in parallel. Excavation and filling should be carried out in phases Excavated soil should be stored under covered conditions Transport of loose and fine materials through covered vehicles. Loading and unloading of construction materials in covered area. Approach roads should be paved and widened. Water spraying on earthworks, unpaved haulage roads, other dust prone areas and construction yard. Make Provision of PPEs like face masks to workers. Raw materials like cement, sand and construction debris should be stored under covered conditions Wheel wash facility should be provided at exit points of the site 	Environmental Protection Act, 1986 and amendments thereof; The Air (Prevention and Control of Pollution) Act, 1981 and amendments thereof	Construction sites, Loading areas, storage areas,	During the Renovation phase	Part of project Costs	Contractor	IWAI/PMU /PMC

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
	<ul style="list-style-type: none"> Monitoring of air quality should be carried out on monthly basis to check the level of pollutants and effectiveness of proposed EMP. Development of green belt at the site efficient for arresting the particulate matter Mixing Plant, crushers and batching plant should be located on downwind direction of the site fitted with adequate stack height to ensure enough dispersion of exit gases. with appropriate pollution control measures Low sulphur diesel should be used for operating DG sets and construction equipment. 						
❖ Exhaust gas emissions from machinery and vehicular traffic.	<ul style="list-style-type: none"> Regular maintenance should be carried out of machinery and equipment. Diesel Generating (DG) sets should be fitted with stack of adequate height as per regulations (Height of stack = height of the building + 0.2 √KVA.) 	Environmental Protection Act, 1986 and amendments thereof; The Air (Prevention and Control of Pollution) Act, 1981 and amendments thereof	Construction camps and sites, batching plants, DG set's locations	During Renovation phase	Part of project Costs	Contractor	IWAI/PMU /PMC
❖ Emissions at access road: avoidance of traffic Jams	<ul style="list-style-type: none"> Efforts should be made to move construction material early morning and late evening period. Traffic regulators (Guard) should be posted in habitat area and at key junction areas to avoid congestion 	Environmental Protection Act, 1986 and amendments thereof; The Air	Existing roads	During Renovation phase	Part of project Costs	Contractor	IWAI/PMU /PMC

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
	<ul style="list-style-type: none"> No construction, material, equipment or vehicle should be stored or parked at any road or the non-project area Transportation vehicle should strictly adhere to the designated routes and timings and should avoid the peak traffic hours 	(Prevention andControl of Pollution) Act, 1981 and amendments thereof					
9. Noise and Vibration							
❖ Noise from construction vehicle, equipment and machinery.	<ul style="list-style-type: none"> All equipment to be timely serviced and properly maintained to minimize its operational noise. Construction equipment and machinery to be fitted with silencers and maintained properly. Barricading the construction site to minimize the noise level outside the site boundary Timely maintenance and servicing of construction equipment and vehicles to reduce the noise generation due to friction and abrasion Protection devices (ear plugs or ear muffs) will be provided to the workers operating in the vicinity of high noise generating machines. Honking should be prohibited at the project site All safety measures and Job rotations should be practiced for workers, working in high noise level areas. No noise generating activity should be carried out between 6:00 AM to 10:00 PM. 	Noise Pollution (Regulation andControl) Rules,2000 and amendments thereof	Lock gate site and accesses road.	During renovation stage	Part ofproject Costs	Contractor	IWAI/PMU /PMC

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
	<ul style="list-style-type: none"> Hearing test for the workers prior to deployment at site and high noise areas followed by periodic testing every six months. Monitoring of Noise levels should be carried out on monthly basis to check the level of pollutants and effectiveness of proposed EMP. 						
10. Land-use and Landscape							
❖ Land use Change and Loss of productive/top soil	<ul style="list-style-type: none"> Efforts should be made to improve the Aesthetic of the area. No construction waste or other wastes should be dumped at unidentified areas. Caution board in local language should be placed at different locations to prevent dumping of Municipal solid waste and other waste all around the project site areas which is happening substantially at present. About 15 cm of top soil layer should be stripped prior to excavation and stored separately in covered condition and should be used for landscaping of the lock gate site. The remaining excavated soil should be used for filling of site and road realignment. Excess earth, if any shall be disposed off at the locations designated by the authorities or to the debris disposal site identified for the project Land earmarked for dumping of construction waste, setting up of 	Design requirement	Around project site area and borrow area	During Renovation Stage	Approximately Rs25000 for five caution boards @Rs 5000 per board	Contractor	IWAI/PMU /PMC

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
	construction camps, plant sites etc should be free from any social and R&R issue and away from settlements.						
❖ Soil erosion due to construction activities, earthwork	<ul style="list-style-type: none"> Excavation and filling operations should be carried out in parallel so as to minimize the soil erosion. Unusable debris material should be suitably disposed off at pre designated safe disposal sites, but with prior approval of the concerned authority. Provision of cross drainage structure should be made in the access road if required to maintain the natural drainage pattern and prevent soil erosion Provision of side drain should be made in realigned road if required to prevent soil erosion Provision of geo-textiles matting, stone pitching, retaining wall, apron etc should be made to prevent the erosionof bank and scouring of bed duringrenovation phase Bio-turfing of embankments should be made enhance the slop stabilization. 		Access road and river bank	During Renovation Stage	Part ofproject costs	Contractor	IWAI/PMU /PMC
❖ Soil erosion at earth stockpiles	<ul style="list-style-type: none"> The earth stockpiles to be provided with gentle slopes to prevent soil erosion. Provision of geo-textiles matting, stone pitching, retaining wall, apron etc should be made to prevent the erosion 		At earth stockpiles	During Renovation Stage	Part ofproject costs	Contractor	IWAI/PMU /PMC

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
	of bank and scouring of bed during renovation phase <ul style="list-style-type: none"> • Soil compaction at the site should be undertaken by regulated water sprinkling to minimize any surface runoff or soil erosion 						
❖ Compaction and contamination of soil due to movement of vehicles and equipment	<ul style="list-style-type: none"> • Fuel and lubricants to be stored at the predefined storage location. • Storage area should be paved with gentle slope to a corner and connected with a chamber to collect any spills of the oils. • Provision of “oil interceptors” at wash-down and re-fueling areas. • Oil and grease spill and oil-soaked materials are to be collected and stored in labelled containers • (Labelled: WASTE OIL; and hazardous sign be displayed) and sold off to SPCB/ MoEF authorized vendors. • Movement of construction vehicles, machinery and equipment should be restricted to the designated haulage route. 		Lock gate site	During Renovation stage.	Part of project costs	Contractor	IWAI/PMU /PMC
11. Water Resources							
❖ Depletion of Groundwater resources due to unregulated abstraction for construction purpose	<ul style="list-style-type: none"> • Water required for construction should be sourced from rivers with due permission from authorities. • Water required for domestic use should be sourced from supply water. • Efforts to restrict water intensive activities during summer period (April, 			During Renovation stage	Part of project costs	Contractor,	IWAI/PMU /PMC

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
	May, June) <ul style="list-style-type: none"> No dumping of waste/wastewater in the ground. waste or wastewater should not be stored in unlined ponds 						
❖ Increase in water Siltation levels due to construction of lock due to disposal of domestic waste	<ul style="list-style-type: none"> Restoration of changes in the stream, if any, made during construction to its original level. Mobile toilets with anaerobic digestion facility should be fixed at construction site. No domestic waste should be discharged to river. Excavation activity should not be carried out during monsoon season Garland drains should be provided around excavated area so as to prevent entry of run-off to theexcavated pits Excavated areas should be covered to the extent possible to prevent entry of rainfall run-off in case of rains The storm water drain should beconnected to a collection cum sedimentation pond to collect the surface run of the construction area. The collected rain water should be used for dust suppression purposes at construction material handling area. Storm water drains should be provided for the parking areas also and these drains should be provided with oil &grease trap No waste should be disposed off in river and ground while filling and 		Lock gate site	During Renovation stage	Part ofproject costs	Contractor	IWAI/PMU /PMC

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
	<p>excavating.</p> <ul style="list-style-type: none"> • Washing of vehicle and equipment should not be carried out at river or any water body. Washing area should be provided with the storm water drains fitted with oil & grease trap. • Monitoring of surface water quality should be carried out on monthly basis to check the level of pollutants and effectiveness of proposed EMP • Storage of debris and raw material should be carried out in paved and covered areas. This will minimize interface of run-off with raw material and debris. • Water use should be minimized by using RMC, practicing curing by water sprinkling, maintaining flow of sprinklers, covering the water storage tanks to minimize water evaporation, creating awareness for water conservation and regular inspections at site to monitor the leakages in water storage area • In case RMC is not used then concrete transit mixer should be washed and cleaned daily. Wash from these mixers should be collected in block work tanks which will allow settling of concrete, removal of aggregates and allowing the waste to wastewater drain. This collected waste concrete can be dried and used for various purpose at site. 						

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
	<ul style="list-style-type: none"> Wastewater generated from the washing/cleaning area after passing through oil & grease trap & curing area should be re-used for water sprinkling and wheel washing Turbidity traps/curtains should be provide or Geo-Textile synthetic sheet curtain should be placed around pilling and construction area to prevent movement of sediments and construction waste. Septic tank/soak pit should be provided at site for disposal of sewagefrom the toilets at site and from the labour camps. Adequate toilets & bathrooms should be provided to prevent open defecation. Fuel should be stored in leak proof containers and containers should beplaced on paved surfaces. Proper collection, management and disposal of construction and municipal waste from site to prevent mixing of the waste in run-off and entering the water bodies Natural Drainage pattern of area around should be maintained. 						
12. Accident and Safety Risks							
❖ Accident risk from construction activities and health and safety of	<ul style="list-style-type: none"> Contractors to adopt and maintain safe working practices. Usage of fluorescent safety and cautionary signage, in local language at the construction sites 	Central Motor and Vehicle Act 1988 EP Act 1986 Noise Rules 2002	Construction sites	Renovation period	Part ofproject costs	Contractor	IWAI/PMU /PMC

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ Mitigation Cost	Institutional Responsibility	
						Implementation	Supervision
workers	<ul style="list-style-type: none"> • Training should be provided to workers, especially machinery operators, on safety procedures and precautions. • The Contractors to appoint a safety officer mandatory. • At every work place, a readily available first aid unit including an adequate supply of dressing materials, a mode of transport (ambulance), nursing staff, and doctor to be provided. • Required PPE should be provided to workers. • Periodic medical checkup should be carried out for the workers. • Training should be given to workers to handle the heavy equipment so as to prevent accidents • Training should be given to workers to handle emergency situation like fire, earthquake and flood • Rest area should be provided at the site where labour can rest after lunch and should not lie on site anywhere • Adequate illumination should be maintained in the working area, in labour camps and plant site. • Working hours of labour should not exceed than standard norms as per state factory law • Construction labour camps and site should be properly cleaned and 						

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
	<ul style="list-style-type: none"> • hygiene should be maintained • Proper sanitation facility like toilet and bathing facility should be provided at labour camps. Wastewater generated from these facilities should be disposed off through septic tanks and soak pit • Safety officers should be appointed at site so as to ensure all safety measures are taken at the site • Activity like smoking and consuming liquor should be prohibited at the site • Awareness on AIDS should be spread among the workers • Regular inspection for hygiene and safety in labour camps should be done • Speed limit of vehicles should be restricted at site to prevent any accidents. • Noise level in the work zone should be maintained and followed as per OSHAS norm • Employment should be provided preferable to local & affected people • Dustbins should be provided at labour camps for collection of waste and waste should be regularly disposed off through the concerned agency • Arrangement of fire-fighting should be made at site and workers should be trained to use the system in case of fire 	•	•	•	•	•	•
13. Shifting of Common Property Resources and Pressure on Existing Resources in Study Area							

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
❖ Shifting of community properties and utilities	<ul style="list-style-type: none"> Any CPR, if removed should be relocated at the earliest with consent of the villagers and the Gram Panchayat 		ProjectArea	Pre-Construction	Part ofProject Costs	Contractor	IWAI/PMU /PMC
❖ Pressure on Existing resources	<ul style="list-style-type: none"> Non-productive lands, barren lands, raised lands; wastelands should be used for setting up labour camps, plant sites and debris disposal site. The above sites will be located more than 500 m away from the settlement and other sensitive location. Land should be used for establishment of construction camps, debris disposal site and plant site only after obtaining consent from land owner. Necessary permits should be obtainedfrom concerned authorities in case any quarry site, batching plant, hot mix plant, WMM plant etc. is set up. Management, rehabilitation and closure of these sites should be as per the Management plans proposed for these sites. Records for starting, maintaining and closure should be maintained and should be approvedby site engineers Top soil should be stripped off from these sites prior to usage and should be sprayed back at the time closure. Top soil should be stored in covered condition Entrance to any road/structure should not be blocked for renovation of lock gate. 						

Environmental Issue/ Component	Remedial Measure	Reference to laws and Contract Documents	Approximate Location	Time Frame	Indicative/ MitigationCost	Institutional Responsibility	
						Implementation	Supervision
	<ul style="list-style-type: none"> • Site should be barricaded and should have entry guarded by security guard. Register should be maintained for entry of outsiders. No unauthorized person should be allowed to enter the site especially village children • A board should be displayed at entrance of site displaying name of project, area and hazards associated with the site on entrance and activities prohibited within and near site area in local language • All proposed environmental pollution measures should be taken during renovation phase of lock gate to minimize the harm to existing environmental quality of the area, which is being enjoyed by the residents of that area • Maintenance and repair of the road should be carried out both before and end of construction by contractor. • Sprinkling of water should be carried out in road also, so as to minimize • dust generation due to movement of construction vehicles 						

5. Environment Monitoring Plan

The objective of environmental monitoring during the renovation phase is to compare the monitored data against the baseline condition collected during the study period to assess the effectiveness of the mitigation measures and the protection of the ambient environment based on national standards. The following are the main objectives of the environmental monitoring program:

- Provides information for documentation of monitoring of mitigation measures and impacts
- Tool for the statutory authority of unanticipated adverse impacts or sudden changes in the environmental condition due to the proposed project
- Provides information that could be used for evaluating the effectiveness of implemented mitigation measures
- Provides information that could be used to verify predicted impacts and thus validate impact prediction techniques
- The effectiveness of the mitigation measures being followed during renovation phase can be assessed and the measures can be revised, made more stringent and reinforced based on the monitoring results
- Environmental Monitoring can also serve a basic component of a periodic environmental regulatory auditing program for the proposed project

A monitoring schedule has been sketched based on the environmental components that may be affected during the renovation phase of the project and is given in Table 2. Environment monitoring indicators identified are listed below

Monitoring Indicators

- Air quality- ambient air quality levels & stack emissions
- Surface Water quality
- Drinking water quality- for construction labours
- Noise levels- ambient noise level and work zone noise levels
- Soil quality- dredged sand quality and soil quality
- Solid & Hazardous Waste Management
- Wastewater disposal
- Re-plantation success / survival rate
- Soil Erosion
- Aquatic ecology– plankton and benthic communities
- Integrity of embankment

These indicators will be evaluated periodically based on the monitoring results, baseline conditions, predicted impacts and mitigation measures.

Table 2 Environment Monitoring Plan

S. No.	Aspect	Parameters to be monitored	No of sampling locations & frequency	Standard methods of sampling and analysis	Role & Responsibility	
					Implementation	Supervision
Renovation Period						
1.	Air Quality (Ambient & Stack)	PM10, PM2.5, SO2, NO2, HC and CO	Three Locations including project site, labor camp, and nearest habitation- once in two months	<ul style="list-style-type: none">• Fine Particulate Samplers for PM2.5• Respirable Dust Sampler fitted PM10• Respirable Dust Sampler fitted with Gaseous sampling arrangements for SO2 and NO2, CO analyzer /portable CO meter for CO portable HC meter ortubes for HC; TO-14A, TO- 15, USEPAMethod for sampling and analysis of VOCs in ambient air	Contractor	IWAI & PMC
2.	Surface Water Quality	Physical, chemical and biological	River Ganga- upstream & downstream- Once a month	Grab sampling and analysis by using standard methods	Contractor	IWAI & PMC
3.	Drinking water Quality	Physical, chemical and biological	Drinking water for labor camps Once a month	Grab sampling and analysis by using standard methods	Contractor	IWAI & PMC
4.	Noise Level	Daytime and night-time noise level (max, min & Leq levels)	Construction labor camp, construction site, and nearest village Once a month	Noise meter	Contractor	IWAI& PMC
5.	Soil Quality, Erosion &Siltation	Soil texture, type, Electrical conductivity, pH, infiltration, porosity, etc.,	Construction site, labor camps and debris disposal sites Once in 6 months	Collection and analysis of samples asper IS 2720	Contractor	IWAI & PMC
6.	Greenbelt development	Plantation survival rate	Lock gate premises	The survey, counting, recording & reporting	Contractor	IWAI & PMC
7.	Soil Erosion	---	Upstream & downstream of project site near river bank- -Once a month	Survey & observation; Extent and degree of erosion; Structures for controlling soil erosion	Contractor	IWAI & PMC
8.	Aquatic ecology	Phytoplankton, Zooplankton	River Ganga Six monthly	Species diversity index.	Contractor	IWAI & PMC
9.	Integrity of embankment	---	Upstream & downstream of lock gate site-Once a month	Survey & observation; Extent and degree of erosion; Structures for controlling soil erosion	Contractor	IWAI & PMC

Attachment

Attachment 1

Green Belt Development

1. Introduction

The Green belt acts as bio-filter for air pollutants and play a major role in safeguarding the environment and controlling the increasing level of air and noise pollution. It can serve as buffer and shock absorber against transient and accidental release of pollutants from industrial activity.

The green belt has been recommended as one of the major components of the EMP which will further enhance the environmental quality by:

1. Mitigation of air pollution
2. Attenuation of noise level
3. Maintaining the biodiversity of the area and improving aesthetics.

1.1 Size of Green belt

A dense greenbelt is already present at the boundary of the existing lock gate premises. Additional 100 trees along with herbs and shrubs will be planted. 3x3 m spacing will be kept between trees. A standard horticultural practice involves planting of saplings in pits of substantial dimensions i.e., 1m × 1m × 1m for big trees and along half of these dimensions for smaller trees and shrubs. The pits are then filled with earth, sand, silt and manure in pre- determined proportions. Saplings planted in such pits are watered liberally during dry months.

1.2 Selection of Tree Species

The Project renovation involve movement of vehicle for transportation of material. Thus emissions like particulate matter, SO₂, NO_x & CO shall be generated at site. Plants possess a large surface area and their leaves exhibit an efficient pollutant trapping mechanism. The effectiveness of plants to control pollution depends upon the physiological, morphological traits such as leaf epidermis, size, leaf orientation, internal enzyme system, etc. Systematic screening of plants for their ability to tolerate pollutant need be undertaken. For pollution abatement purposes tree species would be fast growing native species, wind firm, unpalatable to animals, hardy and dust and pollutants tolerant/resistant.

1.3 Time of Plantation

Plantation would be done two weeks after the rain starts. It is advised to avoid planting during the dry season, as this will require watering. It is advantageous to plant trees on cloudy days.

1.4 Recommended Plant species

Based on nature of pollutants following tree species are recommended to be planted:

Table: 1 List of Species for Plantation

S. No.	Plant Species	Common Name	Habit
1.	Anthocephalus cadamba	Kadam	Tree
2.	Ficus bengalensis	Badh	Tree
3.	Magnifera indica	Aam	Tree
4.	Tectona grandis	Teak	Tree
5.	Ficus religiosa	Peepal	Tree
6.	Hibiscus rosa sinensi	Hibiscus	Shrub
7.	Litchi chenensis	Litchi	Tree
8.	Delbergia sisoo	shisham	Tree
9.	Bougainvillea glavra	Bougainvillea	Shrub
10.	Narium indicum	Kaner	Shrub
11.	Azidirachta india	Neem	Tree
12.	Delonix regia	Gulmohar	Tree
13.	Albizia lebbeck	Siris	Tree
14.	Cassia fistula	Golden shower	Tree
15.	Pongamia pinnata	Indian beech	Tree
16.	Grasses and hages	--	Herbs

1.5 Protection of Tree saplings

Circular tree guard should be placed after the plantation of the saplings for the protection of these young plants from the ravages of cattle, sheep and goat and other animals. If tree saplings died or damage occur after placing the circular tree guard, timely replacements of damaged plant and thereafter care is important.

1.6 After Care & Monitoring

The growing plants are cared at least for the first two years under favorable conditions of climate and irrigation. Nutrients in pits are supplemented and the juveniles are provided protection.

Thinning shall start after the stand is 3-4 years old and repeated every 4 years until the stand is 15 years old. Between 15-25 years old, thinning should be conducted every 5 years and after 25 years old, thinning shall be done after every 10 years. When the canopy closes, at about 6 years, 30-40% of the stems shall be thinned to selectively remove suppressed, diseased and badly formed trees.

Periodic assessment shall be carried for survivability of the trees and maximum survival rate shall be achieved.

1.7 Records Keeping & Reporting

The following records shall be maintained:

- Record of Tree plantation
- Record of Survivability rate

Inspection shall be carried out at site to know the survival rate of the plantation. The tree plantation and survivability report shall be prepared every six monthly.

Attachment 2

Guidelines for On-Site and Off-Site Emergency Management

1. INTRODUCTION

Many emergencies can occur on any construction site and need to be effectively handled. The environmental and occupational health and safety aspects and related emergency can include incidence such as Collapse / subsidence of soil / Fire / Explosion / Gas Leak, Collapse of Building / Equipment and other Occupational Accidents. On site and off site emergency management plan shall be developed to effectively handle them.

Thus every contractor shall have an approved on-site emergency plan. The contractor should submit a copy of this plan to PIU and Supervision consultant before the start of the work. Contractor shall develop the onsite emergency plan considering the potential environmental, occupational health and safety emergency situation at site and activities involved. This plan shall include a list of these potential emergency situations in the onsite emergency preparedness & response plan. Contractor shall get the plan approved from IWAI/PMC

1.1 ANTICIPATED EMERGENCIES AT CONSTRUCTION SITE

The potential emergency situations have been defined below for guidance purposes. The contractors can follow these for developing site-specific on-site emergency preparedness plan.

Table 1: Site-specific emergency preparedness plan

Emergency Conditions/ Situations	Sources
Collapse/subsidence of soil	<ul style="list-style-type: none">• Civil structures
Bulk spillage	<ul style="list-style-type: none">• Hazardous substance / inflammable liquid storage• Vehicular movement on highway
Fire and explosion	<ul style="list-style-type: none">• Inflammable Storage Areas• Gas Cylinder Storage Areas• Electrical Circuits• Isolated Gas Cylinders (LPG / DA)• Welding / Gas Cutting Activity
Electrical Shock	<ul style="list-style-type: none">• HT line• LT distribution• Electrically Operated Machines / Equipment / Hand Tools / Electrical

	Cables
Gaseous Leakage	<ul style="list-style-type: none"> • Gas Cylinder Storage Areas • Gas Cylinder used in Gas Cutting / Welding Purposes
Accidents due to Vehicles	<ul style="list-style-type: none"> • Heavy Earth Moving Machinery • Cranes • Fork Lifts • Trucks • Workman Transport Vehicles (cars / scooters / motor cycles / cycles) • Collapse, toppling or collision of transport equipment
Slips & Falls (Man & Material)	<ul style="list-style-type: none"> • Work at Height (Roof Work, Steel Erection, Scaffold, Repair & Maintenance, Erection of equipment, Excavation etc.) • Slips (Watery surfaces due to rain) • Lifting tools & Tackles (Electric Hoist & Forklifts)
Collision with stationary/ moving objects	<ul style="list-style-type: none"> • Vehicular movement
Other Hazards	<ul style="list-style-type: none"> • Cuts & Wounds • Confined Space (under & inside machinery etc.) • Hot Burns • Pressure Impacts (Plant contains several Pressure Vessels & pipefitting containing CO₂, air, water, product & steam, which can cause accidents & injuries to persons around.)

1.2 DESIGN OF 'ON-SITE EMERGENCY PLAN'

The „On-site emergency plan" to be prepared by contractor and shall include minimum the following information:

- Name & Address of Contractor
- Updation sheet
- Project Location
- Name, Designation & Contact Numbers of the organization, nearby hospitals, fire agencies etc. and key personnel including their assigned responsibilities in case of an emergency.
- The roles and responsibilities of executing personnel
- Site Layout Diagram showing location of fire extinguishers, emergency collection area and fire alarm
- Identification of Potential Emergencies Situations/ preventive measures / control & response

measures.

- Location of Emergency Control Centre (or designated area for emergency control/coordination) with requisite facilities.
- Medical services / first aid
- List of emergency equipment including fire extinguishers, fire suits, etc.

1.3 EMERGENCY CONTROL CENTRE

The emergency control center shall be equipped with the following facilities

- Copy of current on-site emergency plan
- Display the name of the site emergency controller
- Two numbers of artificial respiratory sets
- Two numbers of Stretchers
- Vehicle for 24 hours (for large construction sites)
- Inter personnel/section telephone (2 numbers)
- Site layout diagram with entry and exit routes / Assembly points
- Directory of internal /external emergency phone Numbers
- A set of fire extinguishers (DCP type / Foam Type / CO2)
- List of fire extinguishers installed in the construction site including maintenance record
- A set of personal protective equipment (PPE)
- Two numbers of first-aid boxes with prescribed first-aid medicines
- List of competent first-aiders of fire trained personnel
- Two numbers of blankets
- Drinking water
- Two numbers of rescue ropes
- Two numbers of high beam torches
- Two numbers of gas leak detectors
- Life boat & jackets (if working in or near water course)

1.4 RECORDS

The following records shall be maintained:

- a. Record of emergency preparedness plan with emergency contact numbers
- b. Mock drill/emergency preparedness exercise records
- c. Corrective preventive action record after emergency is occurred

1.5 REPORTING

The accident and incident records and emergency preparedness drill reports shall form part of quarterly report to EA

1.6 RESPONSIBILITY

Contractor shall be responsible to handle emergency condition and shall be liable to compensate the damage against accident, if any occurs at site.

Attachment 3

Guidelines for Debris and Solid Waste Management

1. INTRODUCTION

Waste will be generated from the construction site and labor camps during the renovation phase. Type of the waste to be generated during the renovation phase is given below.

Excavated Soil

The Site is undulating and thus will require cut & fill for levelling. Finished level of the soil will be 37 m. Top excavated soil of 15 cm shall be stripped and shall be stored separately under covered sheds. This soil shall be used for green belt plantation.

Lower layers of excavated soil shall be re-used within the site for filling and levelling purpose, construction of approach & internal roads. If any extra soil is remained, then that should be disposed of to the approved debris disposal site.

Construction Waste

Construction waste will comprise of broken bricks, dry cement, discarded timber, metal piece, cement bag, dry asphalt/bitumen, glass, paint/varnishes box, etc. These wastes should be segregated into recyclable and non-recyclable waste. Recyclable waste shall be stored in the covered area and shall be sold to authorized vendors regularly. Non-recyclable waste shall be disposed of at the approved debris site in covered vehicles.

Municipal Waste

Municipal waste will be generated from the labor camp. Dustbins for recyclable and non-recyclable waste shall be provided in the labor camp area. Recyclable waste shall be sold to authorized vendors and non-recyclable shall be disposed of through authorized agency in area responsible for waste collection and management.

Waste generated requires proper management so as to minimize the negative impacts on environment. Concept of reduce, re-use and recycle shall be followed at site. The rejected waste should be disposed of in a secured manner. Thus, a site should be identified for disposal of the rejected waste.

1.1 SELECTION OF DISPOSAL SITES:

The locations of Disposal sites have to be selected such that:

- Disposal sites are located at least 1000 m away from sensitive locations like settlements, water body, notified forest areas, wildlife/bird/dolphin sanctuaries or any other sensitive locations.
- Disposal sites shall not contaminate any water sources, rivers etc so the site should be located away from the water body, and the disposal site should be lined properly to prevent infiltration of water.
- Public perception about the location of the debris disposal site has to be obtained before

finalizing the location.

- Permission from the village/local community is to be obtained for the Disposal site selected.
- Environment Engineer of PMC and the Executive Engineer of the Contract Management Unit must approve the Plan before the commencement of work.

1.2 PRECAUTIONS TO BE ADOPTED DURING DISPOSAL OF DEBRIS / WASTE MATERIAL

The Contractor shall take the following precautions while disposing of the waste material.

- During the site clearance and disposal of debris, the Contractor will take full care to ensure that public or private properties are not affected, there are no dwellings around the dump site, and that the traffic is not interrupted.
- The Contractor will dispose-off debris only to the identified places or at other places only with the prior permission of the Engineer-in-Charge of works.
- In the event of any spoil or debris from the sites being deposited on any adjacent land, the Contractor will immediately remove all such spoil debris and restore the affected area to its original state to the satisfaction of the Engineer-in-Charge of works.
- The Contractor will at all times ensure that the entire existing canal and drains within and adjacent to the site are kept safe and free from any debris.
- Contractor will utilize effective water sprays during the delivery and handling of materials when dust is likely to be created and to dampen stored materials during dry and windy weather.
- Materials having the potential to produce dust will not be loaded to a level higher than the side and tail boards and will be covered with a tarpaulin in good condition.
- Any diversion required for traffic during disposal of debris shall be provided with traffic control signals and barriers after the discussion with local people and with the permission of Engineer-in-Charge of works.
- During the debris disposal, the Contractor will take care of surrounding features and avoid any damage to them. The debris should not be disposed of along the bridges & culverts and near the water bodies.
- While disposing of debris /waste material, the Contractor will take into account the wind direction and location of settlements to ensure against any dust problems.
- Contractor should display the board at disposal site stating the name of project, usage of the site and type of debris being disposed.
- A guard shall be kept at disposal site to prevent any unauthorized disposal of waste at the debris disposal site
- Material should be disposed off through covered vehicles only
- No contaminated/hazardous/e-waste shall be disposed off at the debris disposal site.

1.3 RECORD KEEPING

Site approved by site engineer only can be used as disposal site. Record of all such site should be maintained along with the area of disposal site, type & quantity of material disposed off daily and capacity of disposal site.

1.4 GUIDELINES FOR REHABILITATION OF DISPOSAL SITES

The dumpsites filled only up to the ground level could be rehabilitated as per guidelines below and to be decided by the Engineer and the supervision consultant.

- The dumpsites have to be suitably rehabilitated by planting local species of shrubs and other plants. Local species of trees has also to be planted so that the landscape is coherent and is in harmony with its various components.
- In cases where a dumpsite is near to the local village community settlements, it could be converted into a play field by spreading the dump material evenly on the ground. Such playground could be made coherent with the landscape by planting trees all along the periphery of the playground.
- Closure of the disposal site should be upto the satisfactory level of site engineer

1.5 PENALTIES

Stringent action & penalties should be imposed off on contractor for dumping of materials in locations other than the pre-identified locations. Grievance Redressal mechanism should be in place for taking note and action on such complaints.

Attachment 4

Selection and Management of Construction/Labour Campsite

1. Selection and layout of construction camp

Labour camps, plant sites and debris disposal site shall not be located close to habitations, schools, hospitals, religious places and other community places. A minimum distance of 500 m shall be maintained for setting up such facilities.

2. Facilities at workers camps

During the renovation stage of the project, the contractor will construct and maintain necessary (temporary) living accommodation, rest area and ancillary facilities for labour. Facilities required are listed and elaborated below.

- Site barricading
- Clean Water Facility
- Clean kitchen area with provision of clean fuel like LPG
- Sanitation Facilities
- Waste Management Facilities
- Rest area for workers at construction site
- Adequate Illumination & ventilation
- Safe access road is required at camps
- Health Care Facilities
- Crèche Facility & Play School
- Fire-fighting Facility
- Emergency Response Area

2.1 Site Barricading

Site should be completely barricaded from all the sides to prevent entry of outsiders and animals into the site. Entry gate should be provided at the site and labour camp which should be guarded by security guard. All workers should be issued ID cards and entry of outsiders shall be maintained in the register at the gate. Board should be displayed at the site and the labour camp, the name of project, capacity of project, authority carrying out projects, restriction of entry without authorization, no smoking zone and associated risks. Plant operation shall be restricted to 6:00 Am to 10:00 PM

2.2 Clean Water Facility

Potable water shall be provided for construction labour for drinking & cooking purpose. Clean water shall be provided for bathing, cleaning and washing purpose. Water quality testing for water shall be carried out on monthly basis.

2.3 Clean Kitchen Area

Provision of clean kitchen area for cooking and storage of eatables shall be provided. Clean fuels like LPG shall be provided for cooking purpose. Burning of firewood, garbage, paper and any other material for cooking or any other purpose shall strictly be prohibited at the site.

2.4 Sanitation Facilities

Construction camps shall be provided with sanitary latrines and urinals. Toilets provided should have running water availability all the time. Bathing, washing & cleaning areas shall be provided at the site for construction labour. Washing and bathing places shall be kept in clean and drained condition. Workers shall be hired especially for cleaning of the toilets and bathing area. Septic tanks and soak pits shall be provided at site for disposal of the sewage generated.

2.5 Waste Management Facilities

Waste generated should be segregated at the site by providing the different color bins for recyclable and non-recyclable waste. Recyclable waste shall be sold to authorized vendors and non-recyclable shall be handed over to authority responsible in area for waste management. Waste management for construction site shall be as per waste management plan proposed in EMP.

2.6 Rest Area for Workers at Site

A rest area/shelter shall be provided at the site for construction workers where they can rest after lunch time and shall not lay down at site anywhere. The height of shelter shall not less than 3m from floor level to lowest part of the roof. Sheds shall be kept clean and the space provided shall be on the basis of at least 1.0 Sq.m per head.

2.7 Adequate Illumination & Ventilation

Construction worker camps shall be electrified and adequately illuminated. Illumination level shall be maintained after 5.30 Pm at the site to minimum 200 lux. Labour camps shall be adequately ventilated. Fans shall be provided for ventilation purpose.

2.8 Safe Access Road for Labour Camps

Temporary paved surface shall be constructed to approach the labour camp from the site. Movement shall not be hampered during monsoon season due to water logging and muddiness.

2.9 Health care Facilities:

First aid box, first aid room and personnel trained in first aid shall be available at labour camp and site all the time (24X7). Equipment in first-aid box shall be maintained as per State Factory's Law. Ambulance/ 4 wheeler motorized vehicle shall be available at the site for carrying injured to the nearby hospital. Tie-ups should be made with nearby hospital to handle emergency, if any. Nos. of ambulance, doctors and nearby hospital shall be displayed in first-aid room, site office & labour camps. Workers shall be made aware about the causes, symptoms and prevention from HIV/AIDS through posters and awareness programs

2.10 Crèche Facility & Play School

Crèche facility and play school should be constructed at the site temporarily so as children of construction labour can be kept there. Care takers should be hired for taking care of children. Attendance records of children shall be maintained. Children should not be allowed to enter active work areas.

2.11 Fire-Fighting facilities

Fire-fighting facility such as sand filled buckets and potable fire-extinguishers shall be provided at labour camps and at site. Fire-extinguishers shall be provided as per NBC norms.

2.12 Emergency Collection Area

Area shall be demarcated as emergency collection area near the gate where all the workers shall be guided to collect in case of any emergency like fire, flood and earthquake.

3. Activities prohibited at site

Activities which should be strictly prohibited at site shall include

- Open burning of wood, garbage and any other material at site for cooking or any other purpose
- Disturbance to the local community.
- Operation of the plant and machinery between 10 pm to 6 am unless approved by team leader
- No animal (wild or domestic or bird) shall be harmed by any construction worker in any condition at site and nearby areas
- Cutting of tree without permission of team leader/authorized person
- No indigenous population shall be hurt or teased

4. Guidelines for night time working at the site.

No activity generating noise shall be carried out at the site after 10:00 PM. Night working protocol should be followed (if required) as per guidelines prepared by IWAI. Site should be well illuminated to maintain minimum illumination level of 200 lux. Personnel working shall obtain permit to work from the team leader prior carrying out any work in night time and the record of such working shall be maintained in register. Any accidents, if occurs at site during night time working shall be immediately reported and recorded. Penalty shall be imposed on the contractor for the accident. Analysis shall be carried out to find the reason for such accidents for future learning.

5. Record keeping & Maintenance

Record of entry/exit of the people in the construction site and labour camp area shall be maintained in register at gate. Record of material coming in and going out from site also shall be maintained.

6. Auditing & Inspection

Conditions of labour camp and site shall be inspected and audit report shall be submitted to IWAI on monthly basis.

7. Closure of the Construction Site and Construction labour Camps

Construction site and labour camps shall be restored back to the original site conditions. Following measures are required to be taken during closure

- Septic tanks/soak pits should be dismantled
- Any temporary/permanent structure constructed shall be dismantled
- Construction/demolition waste, hazardous waste and municipal waste at site and labour camp site shall be disposed off as per waste management plan in EMP
- The site shall be cleaned properly
- Tree plantation to be carried out, if any required for stabilizing the area
- Any pit excavated shall be filled back
- Closure of the site and labour camp shall be approved by authorized person.