



**Prequalification Document for Procurement of Design, Supply, Construction, Installation, Testing and Commissioning of 2x25kV AC Electrification, Signalling & Telecommunication, E&M and Associated Works on Design-Build Lump Sum Basis for Dadri-Khurja Section (approximately 47 Route Km of Double Line) of Eastern Dedicated Freight Corridor**

**SYSTEMS WORKS CONTRACT**

**Invitation for Prequalification No.  
ICB No: HQ/SYS/EC/D-B/Dadri-Khurja  
Dated: 22-12-2015**

**CONTRACT PACKAGE No. - 105**

**EMPLOYER:**

**DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED  
(A GOVERNMENT OF INDIA ENTERPRISE)**

**MINISTRY OF RAILWAYS**

**COUNTRY: INDIA**

**Issued on: 22-12-2015**

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## **PART 1 – Prequalification Procedures**





## Section I. Instructions to Applicants

### A. General

- 1. Scope of Application**

1.1 In connection with the Invitation for Prequalification<sup>1</sup> indicated in Section II, Prequalification Data Sheet (PDS), the Employer, as defined in the **PDS**, issues this Prequalification Document (“Prequalification Document”) to prospective applicants (“Applicants”) interested in submitting applications (“Applications”) for prequalification to bid for the Works described in Section VII, Scope of Works. In case the Works are to be bid as individual contracts (i.e. the slice and package procedure), these are listed in the PDS. The International Competitive Bidding (“ICB”) number corresponding to this prequalification is also provided in the **PDS**.
- 2. Source of Funds**

2.1 The Borrower or Recipient (hereinafter called “Borrower”) indicated in the **PDS** has applied for or received financing (hereinafter called “funds”) from the International Bank for Reconstruction and Development or the International Development Association (hereinafter called “the Bank”) towards the cost of the project named in the **PDS**. The Borrower intends to apply a portion of the funds to eligible payments under the contract(s) resulting from the bidding for which this prequalification is conducted. 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 financing) agreement. The loan (or financing) agreement prohibits a withdrawal from the loan (or credit) account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Bank, 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 financing) agreement or have any claim to the proceeds of the loan (or credit).
- 3. Corrupt and Fraudulent Practices**

3.1 The Bank requires compliance with its policy in regard to corrupt and fraudulent practices as set forth in Section VI.

3.2 In further pursuance of this policy, Applicants shall permit and shall cause its agents to permit the Bank to inspect all accounts,

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<sup>1</sup> The Invitation for Prequalification (IFP) provided information for potential bidders to decide whether to participate, including the essential items listed in the Standard Prequalification Document and also any important or specialized prequalification requirements requested to qualify for the prequalification.

records and other documents relating to the submission of the Application, bid submission (in case prequalified), and contract performance (in the case of award), and to have them audited by auditors appointed by the Bank.

#### **4. Eligible Applicants**

- 4.1 Applicants shall meet the eligibility criteria as per clause 5.1. For the purpose of applying the eligibility criteria listed in this Clause 4 and 5, references to the “Applicant” include all entities involved or intended to be involved with the proposed Works (including all partners and any of their affiliates that directly or indirectly control, or are controlled by or are under common control with the firm), specialized sub-contractors, consultants, manufacturers or suppliers (as mentioned in Form ELI-1.2 Applicant’s Party Information Form), and the personnel of each, for any part of the contract including related services.
- 4.2 An Applicant may be a firm that is a private entity, a government-owned entity—subject to ITA 4.9 - or a combination of such entities 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. In the case of a JV, all members shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms. The JV shall nominate an authorized 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 prequalification process, bidding (in the event the JV submits a bid) and during contract execution (in the event the JV is awarded the Contract). Unless specified in the **PDS**, there is no limit on the number of members in a JV.
- 4.3 A firm may apply for prequalification both individually, and as part of a joint venture, or as a sub-contractor. If prequalified, it will not be permitted to bid for the same contract both as an individual firm and as a part of the joint venture or as a sub-contractor. However, a firm may participate as a sub-contractor in more than one bid, but only in that capacity. Bids submitted in violation of this procedure will be rejected.
- 4.4 A firm and any of its affiliates (that directly or indirectly control, are controlled by or are under common control with that firm) may submit its application for prequalification either individually, as joint venture or as a sub-contractor among them for the same contract. However, if prequalified only one prequalified applicant will be allowed to bid for the same contract. All bids submitted

in violation of this procedure will be rejected.

- 4.5 An Applicant may have the nationality of any country, subject to the restrictions pursuant to ITA 5.1. An Applicant shall be deemed to have the nationality of a country if the Applicant 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 specialized sub-contractors or suppliers for any part of the Contract including related Services.
- 4.6 Applicants shall not have a conflict of interest. Applicants shall be considered to have a conflict of interest, if they participated as a consultant in the preparation of the design or technical specifications or have been hired or proposed to be hired by the Employer or Borrower as Engineer for contract implementation of the works that are the subject of this prequalification.
- 4.7 An Applicant that has been sanctioned by the Bank in accordance with the above ITA 3.1, including in accordance with the Bank's Guidelines on Preventing and Combating Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants ("Anti-Corruption Guidelines"), shall be ineligible to be prequalified, to bid for, 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.
- 4.8 The list of debarred firms and individuals is available at the electronic address specified in the **PDS**.
- 4.9 Government-owned enterprises or institutions in the Employer's Country may participate only if they can establish that they (i) are legally and financially autonomous (ii) operate under commercial law, and (iii) are not dependent agencies of the Employer<sup>2</sup>. To be eligible, a government-owned enterprise or institution shall establish to the Bank's satisfaction, through all relevant documents, including its Charter and other information the Bank may request, that it: (i) is a legal entity separate from the

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<sup>2</sup> Other than Force Account units, as permitted under paragraph 3.9 of the Procurement Guidelines

government (ii) does not currently receive substantial subsidies or budget support; (iii) operates like any commercial enterprise, and, inter alia, is not obliged to pass on its surplus to the government, can acquire rights and liabilities, borrow funds and be liable for repayment of its debts, and can be declared bankrupt; and (iv) is not bidding for a contract to be awarded by the department or agency of the government which under their applicable laws or regulations is the reporting or supervisory authority of the enterprise or has the ability to exercise influence or control over the enterprise or institution.

4.10 An Applicant shall not be under suspension from bidding by the Employer as the result of the execution of a Bid–Securing Declaration.

4.11 An Applicant shall provide such evidence of eligibility satisfactory to the Employer, as the Employer shall reasonably request.

## **5. Eligibility**

5.1 Firms and individuals may be ineligible if they are nationals of ineligible countries as indicated in Section V. The countries, persons or entities are ineligible if (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.

## **B. Contents of the Prequalification Document**

## **6. Sections of Prequalification Document**

6.1 This Prequalification Document consists of parts 1 and 2 which comprise all the sections indicated below, and which should be read in conjunction with any Addendum issued in accordance with ITA 8.

### **PART 1 Prequalification Procedures**

- Section I. Instructions to Applicants (ITA)
- Section II. Prequalification Data Sheet (PDS)
- Section III Qualification Criteria and Requirements

- Section IV. Application Forms
- Section V. Eligible Countries
- Section VI. Bank Policy – Corrupt and Fraudulent practices

PART 2 Works Requirements

- Section VII. Scope of Works

6.2 Unless obtained directly from the Employer, the Employer accepts no responsibility for the completeness of the document, responses to requests for clarification, the minutes of the pre-Application meeting (if any), or Addenda to the Prequalification Document in accordance with ITA 8. In case of any discrepancies, documents issued directly by the Employer shall prevail.

6.3 The Applicant is expected to examine all instructions, forms, and terms in the Prequalification Document and to furnish with its Application all information or documentation as is required by the Prequalification Document.

**7. Clarification of Prequalification Document and Pre-Application Meeting**

7.1 A prospective Applicant requiring any clarification of the Prequalification Document shall contact the Employer in writing at the Employer's address indicated in the **PDS**. The Employer will respond in writing to any request for clarification provided that such request is received no later than fourteen (14) days prior to the deadline for submission of the applications. The Employer shall forward a copy of its response to all prospective Applicants who have obtained the Prequalification Document directly from the Employer, including a description of the inquiry but without identifying its source. If so indicated in the **PDS**, the Employer shall also promptly publish its response at the web page identified in the **PDS**. Should the Employer deem it necessary to amend the Prequalification Document as a result of a clarification, it shall do so following the procedure under ITA 8 and in accordance with the provisions of ITA 17.2.

7.2 If indicated in the **PDS**, the prospective Applicant's designated representative is invited at the Applicant's cost to attend a pre-Application meeting at the place, date and time mentioned in the **PDS**. During this pre-Application meeting, prospective Applicants may request clarification of the project requirement, the criteria for qualifications or any other aspects of the Prequalification Document.

7.3 Minutes of the pre-Application meeting, if applicable, including the text of the questions asked by Applicants, including those during the meeting (without identifying the source) and the responses given, together with any responses prepared after the meeting will be transmitted promptly to all prospective Applicants who have obtained the Prequalification Document. Any modification to the Prequalification Document that may become necessary as a result of the pre-Application meeting shall be made by the Employer exclusively through the use of an Addendum pursuant to ITA 8. Non-attendance at the pre-Application meeting will not be a cause for disqualification of an Applicant.

**8. Amendment of Prequalification Document**

8.1 At any time prior to the deadline for submission of Applications, the Employer may amend the Prequalification Document by issuing an Addendum.

8.2 Any Addendum issued shall be part of the Prequalification Document and shall be communicated in writing to all prospective Applicants who have obtained the Prequalification Document from the Employer. The Employer shall promptly publish the Addendum at the Employer's web page identified in the **PDS**.

8.3 To give prospective Applicants reasonable time to take an Addendum into account in preparing their Applications, the Employer may, at its discretion, extend the deadline for the submission of Applications in accordance with ITA 17.2.

**C. Preparation of Applications**

**9. Cost of Applications**

9.1 The Applicant shall bear all costs associated with the preparation and submission of its Application. The Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the prequalification process.

**10. Language of Application**

10.1 The Application as well as all correspondence and documents relating to the prequalification exchanged by the Applicant and the Employer, shall be written in the language specified in the **PDS**. Supporting documents and printed literature that are part of the Application may be in another language, provided they are accompanied by an accurate translation of the relevant passages in the language specified in the **PDS**, in which case, for purposes of interpretation of the Application, the translation

shall govern.

**11. Documents  
Comprising the  
Application**

11.1 The Application shall comprise the following:

- (a) Application Submission Form, in accordance with ITA 12.1;
- (b) documentary evidence establishing the Applicant's eligibility, in accordance with ITA 13.1;
- (c) documentary evidence establishing the Applicant's qualifications, in accordance with ITA 14; and
- (d) any other document required as specified in the **PDS**.

11.2 The Applicant shall furnish information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Application

**12. Application  
Submission  
Form**

12.1 The Applicant shall complete an Application Submission Form as provided in Section IV, Application Forms. This Form must be completed without any alteration to its format.

**13. Documents  
Establishing  
the Eligibility  
of the  
Applicant**

13.1 To establish its eligibility in accordance with ITA 4, the Applicant shall complete the eligibility declarations in the Application Submission Form and Forms ELI (eligibility) 1.1 and 1.2, included in Section IV (Application Forms).

**14. Documents  
Establishing  
the  
Qualifications  
of the  
Applicant**

14.1 To establish its qualifications to perform the contract(s) in accordance with Section III, Qualification Criteria and Requirements, the Applicant shall provide the information requested in the corresponding Information Sheets included in Section IV, Application Forms.

14.2 Wherever an Application Form requires an Applicant to state a monetary amount, Applicants should indicate the US\$ equivalent using the rate of exchange determined as follows:

For construction turnover or financial data required for each year - Exchange rate prevailing on the last day of the respective Calendar year (in which the amounts for that year is to be converted) was originally established.

Value of single contract - Exchange rate prevailing on the date of the contract.

Exchange rates shall be taken from the publicly available source identified in the **PDS**. Any error in determining the exchange rates in the Application may be corrected by the

Employer.

**15. Signing of the Application and Number of Copies**

- 15.1 The Applicant shall prepare one original of the documents comprising the Application as described in ITA 11 and clearly mark it "ORIGINAL". The original of the Application shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Applicant. In case the Applicant is a JV, the Application 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 signatories.
- 15.2 The Applicant shall submit copies of the signed original Application, in the number specified in the **PDS**, and clearly mark them "COPY". In the event of any discrepancy between the original and the copies, the original shall prevail.

**D. Submission of Applications**

**16. Sealing and Identification of Applications**

- 16.1 The Applicant shall enclose the original and the copies of the Application in a sealed envelope that shall:
- (a) bear the name and address of the Applicant;
  - (b) be addressed to the Employer, in accordance with ITA 17.1; and
  - (c) bear the specific identification of this prequalification process indicated in the PDS 1.1.
- 16.2 The Employer will accept no responsibility for not processing any envelope that was not identified as required in ITA 16.1 above.

**17. Deadline for Submission of Applications**

- 17.1 Applicants may either submit their Applications by mail or by hand. Applications shall be received by the Employer at the address and no later than the deadline indicated in the **PDS**. When so specified in the **PDS**, Applicants have the option of submitting their Applications electronically, in accordance with electronic application submission procedures specified in the **PDS**.
- 17.2 The Employer may, at its discretion, extend the deadline for the submission of Applications by amending the Prequalification Document in accordance with ITA 8, in which case all rights and obligations of the Employer and the Applicants subject to the



previous deadline shall thereafter be subject to the deadline as extended.

**18. Late Applications**

18.1 The Employer reserves the right to accept applications received after the deadline for submission of applications, unless otherwise specified in the **PDS**.

**19. Opening of Applications**

19.1 The Employer shall open all Applications at the date, time and place specified in the **PDS**. Late Applications shall be treated in accordance with ITA 18.1.

19.2 Applications submitted electronically (if permitted pursuant to ITA 17.1) shall be opened in accordance with the procedures specified in the **PDS**.

19.3 The Employer shall prepare a record of the opening of Applications to include, as a minimum, the name of the Applicants. A copy of the record shall be distributed to all Applicants.

**E. Procedures for Evaluation of Applications**

**20. Confidentiality**

20.1 Information relating to the Applications, their evaluation and result shall not be disclosed to Applicants or any other persons not officially concerned with the prequalification process until the notification of prequalification results is made to all Applicants in accordance with ITA 28.

20.2 From the deadline for submission of Applications to the time of notification of the results of the prequalification in accordance with ITA 28, any Applicant that wishes to contact the Employer on any matter related to the prequalification process (except as specified in 20.1 above), may do so only in writing.

**21. Clarification of Applications**

21.1 To assist in the evaluation of Applications, the Employer may, at its discretion, ask an Applicant for a clarification (including missing documents) of its Application, to be submitted within a stated reasonable period of time. Any request for clarification from the Employer and all clarifications from the Applicant shall be in writing.

21.2 If an Applicant does not provide clarifications and/or documents requested by the date and time set in the Employer's request for clarification, its Application shall be evaluated based on the information and documents available at the time of evaluation of

the Application.

**22. Responsiveness of Applications**

22.1 The Employer may reject any Application which is not responsive to the requirements of the Prequalification Document. In case the information furnished by the Applicant is incomplete or otherwise requires clarification as per ITA 21.1, and the Applicant fails to provide satisfactory clarification and/or missing information, it may result in disqualification of the Applicant.

**23. Domestic Bidder Price Preference**

23.1 Unless otherwise specified in the **PDS**, a margin of preference for domestic bidders<sup>3</sup> shall not apply in the bidding process resulting from this prequalification.

**24. Sub-contractors**

24.1 Unless otherwise stated in the **PDS**, the Employer does not intend to execute any specific elements of the Works by sub-contractors selected in advance by the Employer.

24.2 The Employer may decide to permit subcontracting for certain specialized works as indicated in Section III 4.2, Experience. The Employer may do so at its own initiative or at the request of the Applicants during the prequalification process (if justified). When subcontracting is permitted by the Employer, the specialized sub-contractors experience shall be considered for evaluation. Section III describes the qualification criteria for sub-contractors.

24.3 Applicants may propose subcontracting to the percentage of the total value of the contract or the volume of works mentioned in the **PDS** and as further described in ITA 25.2.

**F. Evaluation of Applications and Prequalification of Applicants**

**25. Evaluation of Applications**

25.1 The Employer shall use the factors, methods, criteria, and requirements defined in Section III, Qualification Criteria and Requirements, to evaluate the qualifications of the Applicants, and no other methods, criteria, or requirements shall be used. The Employer reserves the right to waive minor deviations from the qualification criteria if they do not materially affect the technical capability and financial resources of an Applicant to

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<sup>3</sup> An individual firm is considered a domestic bidder for purposes of the margin of preference if it is registered in the country of the Employer, has more than 50 percent ownership by nationals of the country of the Employer, and if it does not subcontract more than 10 percent of the contract price, excluding provisional sums, to foreign contractors. JVs are considered as domestic bidders and eligible for domestic preference only if the individual member firms are registered in the country of the Employer, have more than 50 percent ownership by nationals of the country of the Employer, and the JV shall be registered in the country of the Borrower. The JV shall not subcontract more than 10 percent of the contract price, excluding provisional sums, to foreign firms. JVs between foreign and national firms will not be eligible for domestic preference.

perform the contract.

25.2 Applicants planning to subcontract more than 10% of total volume of work shall specify, in the Application Submission Form, the activity (ies) or parts of the works to be subcontracted along with complete details of the sub-contractors and their qualification and experience. The sub-contractors proposed shall be fully qualified for their work proposed, and meet the specified criteria in Section III, failing which such sub-contractors will not be permitted to participate. The qualification and experience of sub-contractors proposed by the Applicant under ITA 24.3 will not be considered for evaluation of the Applicant. The Applicant on its own (without taking into account the qualification and experience of the sub-contractor) should meet the prequalification criteria.

25.3 In case of multiple contracts, Applicants should indicate in their Applications the individual contract or combination of contracts in which they are interested. The Employer shall prequalify each Applicant for the maximum combination of contracts for which the Applicant has thereby indicated its interest and for which the Applicant meets the appropriate aggregate requirements. The Qualification Criteria and Requirements are mentioned in Section III. However, with respect to the specific experience under item 4.2 (a) of Section III, the Employer will select any one or more of the options as identified below:

N is the minimum number of contracts

V is the minimum value of a single contract

**(a) Prequalification for one Contract:**

Option 1: (i) N contracts, each of minimum value V;

Or

Option 2: (i) N contracts, each of minimum value V, Or

(ii) Less than or equal to N contracts, each of minimum value V, but with total value of all contracts equal or more than  $N \times V$ ;

**(b) Prequalification for multiple Contracts**

Option 1: (i) Minimum requirements for combined contract(s) shall be the aggregate requirements for each contract for which the applicant has applied for as follows, and

N1,N2,N3, etc. shall be different contracts:

Lot 1: N1 contracts, each of minimum value V1;

Lot 2: N2 contracts, each of minimum value V2;

Lot 3: N3 contracts, each of minimum value V3;

----etc.

Or

Option 2: (i) Minimum requirements for combined contract(s) shall be the aggregate requirements for each contract for which the applicant has applied for as follows, and N1,N2,N3, etc. shall be different contracts:

Lot 1: N1 contracts, each of minimum value V1;

Lot 2: N2 contracts, each of minimum value V2;

Lot 3: N3 contracts, each of minimum value V3;

----etc, Or

(ii) Lot 1: N1 contracts, each of minimum value V1; or number of contracts less than or equal to N1, each of minimum value V1, but with total value of all contracts equal or more than  $N1 \times V1$

Lot 2: N2 contracts, each of minimum value V2; or number of contracts less than or equal to N2, each of minimum value V2, but with total value of all contracts equal or more than  $N2 \times V2$

Lot 3: N3 contracts, each of minimum value V3; or number of contracts less than or equal to N3, each of minimum value V3, but with total value of all contracts equal or more than  $N3 \times V3$

----etc.

Or

Option 3: (i) Minimum requirements for combined contract(s) shall be the aggregate requirements for each contract for which the applicant has applied for as follows, and N1,N2,N3, etc. shall be different contracts:

Lot 1: N1 contracts, each of minimum value V1;

Lot 2: N2 contracts, each of minimum value V2;

Lot 3: N3 contracts, each of minimum value V3;

----etc, Or

(ii) Lot 1: N1 contracts, each of minimum value V1; or number of contracts less than or equal to N1, each of minimum value V1, but with total value of all contracts equal or more than  $N1 \times V1$

Lot 2: N2 contracts, each of minimum value V2; or number of contracts less than or equal to N2, each of minimum value V2, but with total value of all contracts equal or more than  $N2 \times V2$

Lot 3: N3 contracts, each of minimum value V3; or number of contracts less than or equal to N3, each of minimum value V3, but with total value of all contracts equal or more than  $N3 \times V3$

----etc, Or

(iii) Subject to compliance as per (ii) above with respect to minimum value of single contract for each lot, total number of contracts is equal or less than  $N1 + N2 + N3$  ---but the total value of all such contracts is equal or more than  $N1 \times V1 + N2 \times V2 + N3 \times V3$  ----

25.4 Only the qualifications of the Applicant shall be considered. In particular, the qualifications of a parent or other affiliated company that is not party to the Applicant under a JV in

- accordance with ITA 4.2 (or participating as a sub-contractor as per ITA 25.2) shall not be considered.
- 26. Employer's Right to Accept or Reject Applications**
- 26.1 The Employer reserves the right to accept or reject any Application, and to annul the prequalification process and reject all Applications at any time, without thereby incurring any liability to the Applicants.
- 27. Prequalification of Applicants**
- 27.1 All Applicants whose Applications substantially meet or exceed the specified qualification requirements will be prequalified by the Employer.
- 27.2 An Applicant may be "conditionally prequalified," that is, qualified subject to the Applicant submitting or correcting certain specified nonmaterial documents or deficiencies to the satisfaction of the Employer.
- 27.3 Applicants that are conditionally prequalified will be so informed along with the statement of the condition(s) which must be met to the satisfaction of the Employer before or at the time of submitting their bids.
- 28. Notification of Prequalification**
- 28.1 The Employer shall notify all Applicants in writing of the names of those Applicants who have been prequalified or conditionally prequalified. In addition, those Applicants who have been disqualified will be informed separately.
- 28.2 Applicants that have not been prequalified may write to the Employer to request, in writing, the grounds on which they were disqualified.
- 29. Invitation for Bids**
- 29.1 Promptly after the notification of the results of the prequalification, the Employer shall invite bids from all the Applicants that have been prequalified or conditionally prequalified.
- 29.2 Bidders may be required to provide a Bid Security or a Bid-Securing Declaration acceptable to the Employer in the form and an amount to be specified in the Bidding Documents, and the successful Bidder shall be required to provide a Performance Security as specified in the Bidding Documents.
- 30. Changes in Qualifications of Applicants**
- 30.1 Any change in the structure or formation of an Applicant after being prequalified in accordance with ITA 27 and invited to bid (including, in the case of a JV, any change in the structure or

formation of any member thereto) shall be subject to the written approval of the Employer prior to the deadline for submission of bids. Such approval shall be denied if (i) a prequalified applicant proposes to associate with a disqualified applicant or in case of a disqualified joint venture, any of its members; (ii) as a consequence of the change, the Applicant no longer substantially meets the qualification criteria set forth in Section III, Qualification Criteria and Requirements; or (iii) in the opinion of the Employer, the change may result in a substantial reduction in competition. Any such change should be submitted to the Employer not later than fourteen (14) days after the date of the Invitation for Bids.

<b>Section II. Prequalification Data Sheet</b>	
<b>A. General</b>	
<b>ITA 1.1</b>	<p><b>The identification of the Invitation for Prequalification is:</b> ICB No.: HQ/SYS/EC/D- B/ Dadri-Khurja dated 22.12.2015</p> <p><b>The Employer for the Project is:</b>                      Dedicated Freight Corridor Corporation of India Limited                      (A Government of India Enterprise)</p> <p><b>Project Officer:</b> Mr. V.P. Singh                      Group General Manager / EL - I/EC</p> <p>Applications are invited from interested Applicants for Prequalification of Bidders for Systems Works Contract 105.</p> <p>ICB Name: <b>Design, Supply, Construction, Installation, Testing and Commissioning of 2x25kV AC Electrification, Signalling &amp; Telecommunication, E&amp;M and associated works on Design-Build Lump Sum Basis for Dadri-Khurja Section (Approximately 47 Route Km of Double Line) of Eastern Dedicated Freight Corridor</b></p>
<b>ITA 2.1</b>	<p>The name of the Borrower is: Dedicated Freight Corridor Corporation of India Ltd                      (A Government of India Enterprise)</p> <p>The name of the Project is : Eastern Dedicated Freight Corridor Project-1 (EDFC-1)</p>
<b>ITA 4.2</b>	<p>Maximum number of Partners in the JV shall be 4 (Four), (each member should have at least 15% of share with total for all members as 100%)</p> <p>The Letter of Intent to enter into a JV / Consortium agreement should contain at least the following:</p> <ul style="list-style-type: none"> <li>- Name of the Lead Partner</li> <li>- Percentage share of JV / Consortium members</li> <li>- All members to be Jointly and severally liable for the execution of the Contract in accordance with the Contract terms</li> </ul>
<b>ITA 4.8</b>	<p>The electronic address of firms and individuals debarred by the Bank is available at: <a href="http://www.worldbank.org/debarr">http://www.worldbank.org/debarr</a>.</p>
<b>B. Contents of the Prequalification Document</b>	
<b>ITA 7.1</b>	<p>All communication between the Employer and the Applicant shall be in writing.</p> <p><b>For the purposes of seeking clarification, the Employer's address is:</b></p>



	<p>Dedicated Freight Corridor Corporation of India Limited</p> <p><b>Attention: Mr. V.P. Singh</b></p> <p><b>Designation:</b> Group General Manager /EL-I/EC</p> <p>Address: Room No. 432, 4<sup>th</sup> Floor,                  Pragati Maidan Metro Station Building Complex,                  New Delhi, PIN Code: 110001, India</p> <p><b>Telephone:</b> +91-11-23454840, Facsimile number: +91-11- 23454842</p> <p><b>Electronic mail address:</b> <a href="mailto:vpsingh@dfcc.co.in">vpsingh@dfcc.co.in</a></p>
<b>ITA 7.1 &amp; 8.2</b>	<b>The official web site of the Employer is</b> <a href="http://www.dfccil.gov.in">www.dfccil.gov.in</a>
<b>ITA 7.2</b>	<p>Pre-application meeting: A Pre-application meeting will be held to clarify the issues related to this Pre-qualification document on the date, time and venue of the Pre-application meeting indicated below.</p> <p><b>Date:</b> 18.01.2016      <b>Time:</b> 15: 00 Hrs</p> <p><b>Venue:</b> Conference Room, Dedicated Freight Corridor Corporation of India Limited, 4th Floor, Pragati Maidan Metro Station Building Complex, New Delhi - 110001, India.</p> <p>All interested Applicants may attend the Pre-application meeting.</p> <p>Minutes of Pre-application meeting will be prepared by the Employer and circulated to all the Applicants through email only who have purchased the pre-qualification document and will also be posted on the Employer’s website.</p>
<b>C. Preparation of Applications</b>	
<b>ITA 10.1</b>	<p>This Prequalification document has been issued in the “English” language.</p> <p>All correspondence exchange shall be in English.</p> <p>The Application as well as all correspondence shall be submitted in English language.</p> <p>Language for translation of supporting documents and printed literature is English.</p>

<b>ITA 11.1 (d)</b>	<p>The Applicant shall submit a Power of Attorney in favour of the person who has been authorised, through an appropriate Company Board Resolution or equivalent document to sign on behalf of the Applicant. Copy of such relevant Company Board Resolution or equivalent document should also be attached.</p> <p>In case the Applicant is a JV / Consortium, the Applicant shall submit Power of Attorneys for each member of the JV / Consortium and proposed subcontractors along with relevant Board Resolutions or equivalent documents. Such Applicant shall also submit the Power of Attorney of the JV / Consortium in favour of the person who has been authorised to sign the Application on behalf of the JV/Consortium, duly signed by all JV / Consortium members.</p>
<b>ITA 14.1</b>	<p>The applicant shall submit certificates from the clients for each contract included in Section IV: Form EXP – 4.1, 4.2 (a), 4.2 (b) and 4.3. These certificates should be self-attested by the applicant.</p>
<b>ITA 14.2</b>	<p>(In the second para of ITA 14.2 Section I, "Calendar Year" is to be read as "Financial Year.")</p> <p>Third Para of ITA 14.2 is replaced as under: "Value of Single Contract – Exchange rate prevailing on the date of award of contract."</p> <p>For the purpose of conversion of foreign currency / Indian rupees (INR) to US\$, the Applicants shall use the Reference Rates of Foreign Currency published by Reserve Bank of India (<a href="http://www.rbi.org.in">www.rbi.org.in</a>)</p> <p>In case a particular currency rate is not published by Reserve Bank of India, then the selling rate of such currency shall be taken from the following internet web site:  <a href="http://www.oanda.com">http://www.oanda.com</a></p> <p>In case the exchange rates are not available on the above website also, then mid-market rate of such currency shall be taken from the alternate web site  <a href="http://www.xe.com">http://www.xe.com</a></p>
<b>ITA 15.2</b>	<p>In addition to the original, the number of copies to be submitted with the application is : Three (3)</p> <p>Two (2) copies in digital - Read Only Diskette/CD shall also be submitted.</p> <p>The document submission shall be in spiral or hard bound form only. The Applicants are advised not to submit loose sheets in plastic folders. The applicants are further advised to machine number all the pages and prepare a table of contents in the beginning of each volume of documents referring the page numbers of the indexed items.</p>
<b>D. Submission of Applications</b>	
<b>ITA 17.1</b>	<p>Applicants do not have the option of submitting their applications electronically.</p>

	<p>Applications submitted electronically shall not be accepted.</p> <p>For application submission purposes only, the Employer's address is the same as stated in ITA 7.1 above.</p> <p><b>The deadline for application submission is:</b></p> <p><b>Date:</b> 29.02.2016      <b>Time:</b> 15: 00 hrs</p>
<b>ITA 18.1</b>	Applications received late shall not be accepted and will be returned unopened to the Applicants.
<b>ITA 19.1</b>	<p><b>The applications shall be opened on date, time and venue stated below:</b></p> <p><b>Date:</b> 29.02.2016      <b>Time:</b> 15:30 hrs</p> <p><b>Venue:</b> Conference Room,                  Dedicated Freight Corridor Corporation of India Limited,                  4th Floor, Pragati Maidan Metro Station Building Complex,                  New Delhi -110001, India</p>
<b>E. Procedures for Evaluation of Applications</b>	
<b>ITA 24.1</b>	At this time the Employer does not intend to execute any part of the Works by sub-contractors selected in advance.
<b>ITA 24.2</b>	Consent letter from the participating sub-contractor will be required as per details in the form ELI 1.3.
<b>ITA 24.3</b>	The percentage of work permitted to be subcontracted in addition to the activities highlighted in paragraph 4.2 (b) and 4.3 of Section III Qualification Criteria and Requirements will be detailed in the Bid documents.
<b>ITA 29.1</b>	<p>Applicants are advised that the following description of the Two-Stage Bidding Process is only a summary for information. Prequalified bidders shall be guided by the detailed provisions of the bidding documents, after they have been made available to them.</p> <p><b>First Stage Bid:</b> The bid process will involve asking the Pre-qualified Applicants to submit their First Stage Technical proposals in response to the performance / technical specifications for the project included in the bid document. First Stage Technical proposals are un-priced proposals and shall contain no prices or price schedules or other reference to rates and prices for completing the works. The Employer may ask the Pre-qualified Bidders to update the data submitted at the time of pre-qualification to assess their meeting the pre-qualification criteria during the bidding stage.</p> <p><b>Evaluation of First Stage Bids:</b> The Employer will examine the first stage technical proposals to determine whether they are complete, whether the</p>

documents have been properly signed and whether the bids are generally in order and respond adequately to the performance / technical specifications. Any bids found to be non-responsive or not meeting the minimum levels of the performance or other criteria specified in the bidding document will be rejected by the Employer and not included for further consideration. The Employer will then carry out a detailed evaluation of the first stage technical proposals in order to determine whether the technical aspects are in compliance with the Bidding Document.

**Clarification Meetings:** The Employer may conduct clarification meetings with each or any Bidder to clarify any aspects of its First Stage technical proposal that require explanation and to review any reservations to the commercial or contractual provisions of the bidding documents. The Employer may bring to the attention of the Bidder any amendments or changes which the Employer may require to be made to the First Stage Technical Proposal; however the Employer may not require amendments or changes at variance from the Employers' requirements unless the Employer intends to amend the Bidding Document in accordance with the relevant provision of the Bid Documents.

The Employer will issue a Memorandum titled "Changes Required Pursuant to First Stage Evaluation," documenting the clarifications made in writing and/or in a meeting, if any, and including an Annex listing all decisions, and required amendments or changes resulting from the clarification of the First Stage technical proposal. The Memorandum will be communicated to the Bidder as part of the invitation to submit the Second Stage bid.

**Second Stage Bid:** The Employer will invite the Bidders to submit a final updated Technical and a Commercial Second Stage bid based on its First Stage Technical Proposal taking into account the Bidding Document, if and as amended, and any other modifications as recorded in the Annex to the Memorandum titled "Changes Required Pursuant to First Stage Evaluation". Bidders will be allowed to submit only one Second Stage Bid.

### **Section III. Qualification Criteria and Requirements**

This Section contains all the methods, criteria, and requirements that the Employer shall use to evaluate Applications. The information to be provided in relation to each requirement and the definitions of the corresponding terms are included in the respective Application Forms.

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
<b>1. Eligibility</b>							
1.1	<b>Nationality</b>	Nationality in accordance with ITA 4.5	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments
1.2	<b>Conflict of Interest</b>	No conflicts of interest in accordance with ITA 4.6	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Application Submission Form
1.3	<b>Bank Eligibility</b>	Not having been declared ineligible by the Bank, as described in ITA 4.7 and 5.1	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Application Submission Form
1.4	<b>Government Owned Entity of the Borrower country</b>	Meet conditions of ITA 4.9	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Application Submission Form, Forms ELI – 1.1 and 1.2, with attachments
1.5	<b>United Nations resolution or Borrower's country law</b>	Not having been excluded as a result of prohibition in the Borrower's country laws or official regulations against commercial relations with the Applicant's country, or	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Application Submission Form

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
		by an act of compliance with UN Security Council resolution, both in accordance with ITA 5.1 and Section V.					
<b>2. Historical Contract Non-Performance</b>							
2.1	<b>History of Non-Performing Contracts</b>	Non-performance of a contract <sup>4</sup> did not occur as a result of contractor's default since 1 <sup>st</sup> January 2012.	Must meet requirement <sup>5</sup>	Must meet requirement	Must meet requirement <sup>5</sup>	N/A	Form CON-2
2.2	<b>Suspension Based on Execution of Bid Securing Declaration by the Employer</b>	Not under suspension based on execution of a Bid Securing Declaration pursuant to ITA 4.10.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Application Submission Form

<sup>4</sup> Nonperformance, as decided by the Employer, shall include all contracts where (a) nonperformance 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. Nonperformance must be based on all information on fully settled disputes or litigation, i.e. dispute or litigation that has been resolved in accordance with the dispute resolution mechanism under the respective contract and where all appeal instances available to the applicant have been exhausted.

<sup>5</sup> This requirement also applies to contracts executed by the Applicant as JV member.

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
2.3	<b>Pending Litigation</b>	Applicant's financial position and prospective long term profitability still sound according to criteria established in 3.1 (iii) below and assuming that all pending arbitration and / or litigation will be resolved against the Applicant <sup>6</sup>	Must meet requirement	N/A	Must meet requirement	N/A	Form CON – 2
2.4	<b>Litigation History</b>	No consistent history of court/arbitral award decisions against the Applicant <sup>7</sup> since 1 <sup>st</sup> January 2010.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Form CON – 2
<b>3. Financial Situation and Performance</b>							
3.1	<b>Financial Capabilities</b>	(i) The Applicant shall demonstrate that it has	Must meet requirement	Must meet requirement	N/A	N/A	Form FIN – 3.1, & Form CCC

<sup>6</sup> The Applicant shall provide accurate information on the related Application Form CON-2 about all pending litigation and / or arbitration cases resulting from contracts completed or ongoing under its execution.

<sup>7</sup> The Applicant shall provide accurate information on the related Application Form CON-2 about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the last five years. Only cases of arbitration /litigation finally settled against the Applicant should be listed. If the case is pending at any level of arbitration or judiciary, the same should be listed in Pending Litigation and NOT under Litigation History. A consistent history of awards against the Applicant or any member of a joint venture may result in rejection of the application.



Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
		access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow requirements estimated below for the subject Contract. US\$ 7 million (US\$ Seven million)					along with necessary attachments
		(ii) The Applicant shall also demonstrate, to the satisfaction of the Employer, that it has adequate sources of finance to meet the cash flow requirements after meeting the working capital requirements on works currently in	Must meet requirement	Must meet requirement	N/A	N/A	

Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
		progress and for future contract commitments.** **Information provided by the Applicant in Form CCC and any other document presented by the Applicant to demonstrate the source of finance will be used to adjudge the adequacy of the sources of finance for meeting the requirements of cash flow for the Construction Contracts (i) awarded to the Applicant but not started up to 28 days before Application Submission Deadline and (ii) started after date of drawing of the latest balance sheet submitted by the Applicant.					

Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
		(iii) The audited balance sheets <sup>8</sup> , profit and loss account and cash flow statement or, if not required by the laws of the Applicant's country, other financial statements acceptable to the Employer, for the last 5 (five) financial years shall be submitted and must demonstrate the current soundness of the Applicant's financial position. As a minimum requirement, an applicant must have positive net worth as on the last day of latest financial year.	Must meet requirement	N/A	Must meet requirement	N/A	

<sup>8</sup> The audited balance sheets, profit and loss account and cash flow statement of Group Companies, Parent Companies or Sister Companies and its affiliates shall not be considered for evaluation unless they are part of JV. The Applicants are advised to strictly adhere to this requirement and submit the financial statements of the Applicant and / or its JV /consortium members only in accordance with the laws of the Applicant's Country.

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
3.2	<b>Average Annual<sup>9</sup> Construction Turnover</b>	Minimum average annual construction turnover calculated as total certified payments received for contracts in progress and/or completed within the last five (5) financial years, divided by five (5).  US \$ 40 million (US \$ Forty million)	Must meet requirement	Must meet requirement	Must meet 30% (Thirty Percent) of the requirement	Must meet 50 % (Fifty Percent) of the requirement	Form FIN – 3.2
<b>4. Experience</b>							
4.1	<b>General Construction Experience</b>	Experience under construction contracts in the role of prime contractor, JV member, sub-contractor, or management contractor for at least the last 5 (five) years, between 1st January 2010 and application submission deadline.	Must meet requirement	N/A	Must meet requirement	N/A	Form EXP – 4.1

<sup>9</sup> Annual Construction Turnover should be substantiated through (i) Balance Sheets of the relevant financial years, provided that the figures, specifically for the Construction Turn Over, are stated in the Balance Sheet(s) or (ii) Specific certificate(s) issued by the Statutory Auditors or (iii) Certificate(s) issued by the Client(s).

Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
		<b>Note:</b> Contracts where the JV member was an OEM and designed, manufactured, tested and commissioned the signalling processor based equipment will also be considered.					
4.2 (a)	<b>Specific Construction &amp; Contract Management Experience</b>	A minimum number of similar <sup>10</sup> contract(s) specified below that have been satisfactorily and substantially <sup>11</sup> completed as a prime contractor, joint venture member <sup>12</sup> , management contractor or sub-contractor <sup>12</sup> between	Must meet requirement	Must meet requirement <sup>13</sup>	N/A	N/A	Form EXP 4.2(a)

<sup>10</sup> The similarity shall be based on the physical size, complexity, methods/technology and/or other characteristics described in Section VII, Scope of Works. Summation of number of small value contracts (less than the value specified under requirement) to meet the overall requirement will not be accepted.

<sup>11</sup> Substantial completion shall be based on 80% or more works completed under the contract.

<sup>12</sup> For contracts under which the Applicant participated as a joint venture member or sub-contractor, only the Applicant's share, by value, shall be considered to meet this requirement

<sup>13</sup> In the 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 a 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 completed by all members each of value equal or more than the minimum value required shall be aggregated.

Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
		1st January 2008 and application submission deadline:  Less than or equal to 3 (three) contract(s) each having a minimum value of US \$ 10 million (US \$ Ten million) totalling to a value equal to or more than US\$ 33 million (US \$ Thirty Three million)  The aforesaid contract(s) should include at least one work from each of the following disciplines:  a) Signalling work on Railway/ Metro /Suburban rail Transit System involving Stations and Block Sections using Electronic Interlocking and Automatic Block Signalling for a minimum value of US \$ 10 million					

Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
		<p>(US \$ Ten million) in a single contract.</p> <p>b)Overhead equipment (25 kV / 2 x 25 kV) work on Railway / Metro Railway Suburban rail Transit System for a minimum value of US \$ 10 million (US \$ Ten million) in a single contract.</p> <p>c)Traction Substation / Grid Sub-stations (110 kV or above) work for a minimum value of US \$ 10 million (US \$ Ten million) in a single contract.</p> <p>Note: Contracts where the JV member was an OEM and designed, manufactured, tested and commissioned the signalling processor based equipment will also be considered in respect of a) above.</p>					

Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
4.2 (b)		For the above and any other contracts completed and under implementation as prime contractor, joint venture member, management contractor or sub-contractor <sup>12</sup> between 1st January 2008 and application submission deadline a minimum construction experience in any one year* (continuous period of 12 months) in the following key activities successfully completed <sup>14</sup>	Must meet requirement	Must meet requirement	N/A	Must meet the following requirements for the key activities listed below <sup>15</sup>	Form EXP – 4.2 (b)
		(i) Design and Construction of Telecom Works of Optical Fibre Communication System	Must meet requirement (Requirement can be	Must meet requirement (Requirement can be met	N/A	N/A	Form EXP – 4.2 (b)

<sup>14</sup> Volume, number or rate of production of any key activity can be demonstrated in one or more contracts combined if executed during same time period. The rate of production shall be the annual production rate for the key construction activity (or activities). For the rate of production, either the average during the entire period or in any one or more years during the period should be specified. All claims for the quantity executed should be accompanied with the Client certificate. Unless specifically stated in the Client certificate, the rate of production shall be deemed to be total quantity performed divided by total duration of the project.

<sup>15</sup> The minimum experience requirement for multiple contracts will be the sum of the minimum requirements for respective individual contracts.



Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
		consisting of a minimum of 10 (Ten) Nodes	met through a Specialised Sub-Contractor)	through a Specialised Sub-Contractor)			
		(ii) Construction, testing & commissioning of 25 kV or 2x25 kV AC OHE (Overhead Equipment), for a minimum of 100 (One hundred) TKM (Track Kilometres)	Must meet requirement	Must meet requirement	N/A	Must meet requirement	Form EXP – 4.2 (b)
* Note: Twelve month continuous period for the JV members need not necessarily be concurrent.							
4.3	<b>Design Experience</b>	Successful completion of at least one work as prime contractor, joint venture member <sup>12</sup> , management contractor or sub-contractor between 1st January 2008 and application submission deadline in the following key activities :					

Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
		(i) Design* of Signalling System involving at least 2 (two) stations and 2 (two) block sections with Automatic Block Signalling, using Electronic Interlocking in a single contract on any Main Line Railway/Metro Railway/Suburban Rail Transit System.  * Design includes System design and detailed design.	Must meet requirement (Requirement can be met through a Specialised Sub-contractor)	Must meet requirement (Requirement can be met through a Specialised Sub-contractor)	N/A	Must meet requirement (Requirement can be met through a Specialised Sub-contractor)	Form EXP – 4.3
		(ii) Designing* of 25 kV / 2x25 kV overhead equipment on Railways / Metro Railways/ Suburban Rail Transit System for a minimum length of 50 (fifty) TKM.  * Design includes System design and detailed design.	Must meet requirement (or can be a specialist Sub-contractor or specialized design consultant)	Must meet requirement (or can be a specialist Sub-contractor or specialized design consultant)	N/A	Must meet requirement (Requirement can be met through a Specialised Sub-contractor)	Form EXP-4.3

Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
		(iii) Designing* of at least one TSS of 2x25 kV for Railway / Metro Railway / Suburban rail transit system  * Design includes System design and detailed design.	Must meet requirement (or can be a specialist Sub-contractor or specialized design consultant)	Must meet requirement (or can be a specialist Sub-contractor or specialized design consultant)	N/A	Must meet requirement (Requirement can be met through a Specialised Sub-contractor)	Form EXP-4.3

## **Section IV. Application Forms**

**Application Submission Form**

Date: *[insert day, month, and year]*  
 ICB No. and title: *[insert ICB number and title]*

To: *[insert full name of Employer]*

We, the undersigned, apply to be prequalified for the referenced ICB and declare that:

- (a) We have examined and have no reservations to the Prequalification Document, including Addendum(s) No(s), issued in accordance with Instructions to Applicants (ITA) 8: *[insert the number and issuing date of each addendum]*.
- (b) We have no conflict of interest in accordance with ITA 4.6;
- (c) We meet the eligibility requirements as stated ITA 4.1; we have not been suspended by the Employer based on execution of a Bid Securing Declaration in accordance with ITA 4.10;
- (d) We have not been declared ineligible by the World Bank in terms of ITA 4.7
- (e) We have not been excluded as a result of prohibition in the Borrower’s country laws or official regulations against commercial relations with the Applicant’s country, or by an act of compliance with UN Security Council resolution, both in accordance with ITA 5.1 and Section V.
- (f) We are not a government owned entity/ We are a government owned entity but meet the requirements of ITA-4.9\*
- (g) We, in accordance with ITA 24.2, plan to subcontract the following key activities and/or parts of the works:  
  
*[Insert any of the key activities identified in Section III- 4.2 (b) or 4.3 as applicable which the Employer has permitted under the Prequalification document and which the Applicant intends to subcontract along with complete details of the sub-contractors, their qualification and experience]*
- (h) We declare that the following commissions, gratuities, or fees have been paid or are to be paid with respect to the prequalification process, the corresponding bidding process or execution of the Contract:

<u>Name of Recipient</u>	<u>Address</u>	<u>Reason</u>	<u>Amount</u>
<i>[insert full name for each occurrence]</i>	<i>[insert street/ number/city/country]</i>	<i>[indicate reason]</i>	<i>[specify amount currency, value, exchange rate and US\$ equivalent]</i>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

*[If no payments are made or promised, add the following statement: “No commissions or gratuities have been or are to be paid by us to agents or any third party relating to this*

*Application]*

- (i) We understand that you may cancel the prequalification process at any time and that you are neither bound to accept any Application that you may receive nor to invite the prequalified Applicants to bid for the contract subject of this prequalification process, without incurring any liability to the Applicants, in accordance with ITA 26.1.
- (j) All information, statements and description contained in the Application are in all respect true, correct and complete to the best of our knowledge and belief.

Signed *[insert signature(s) of an authorized representative(s) of the Applicant]*

Name *[insert full name of person signing the Application]*

In the capacity of *[insert capacity of person signing the Application]*

Duly authorized to sign the Application for and on behalf of: Applicant's Name *[insert full name of Applicant or the name of the JV]*

Address *[insert street number/town or city/country address]*

Dated on *[insert day number]* day of *[insert month]*, *[insert year]*

[For an a joint venture, either all members shall sign or only the authorized representative, in which case the power of attorney to sign on behalf of all members shall be attached]

\* Delete one of the two sentences as appropriate.

**Form ELI -1.1**

**Applicant Information Form**

Date: *[insert day, month, year]*

ICB No. and title: *[insert ICB number and title]*

Page *[insert page number]* of *[insert total number]* pages

Applicant's name <i>[insert full name]</i>
In case of Joint Venture (JV), name of each member: <i>[insert full name of each member in JV]</i>
Applicant's actual or intended country of registration: * <i>[indicate country of Constitution]</i>
Applicant's actual or intended year of incorporation: * <i>[indicate year of Constitution]</i>
Applicant's legal address [in country of registration]: * <i>[insert street/ number/ town or city/ country]</i>
Applicant's authorized representative information Name: <i>[insert full name]</i> Address: <i>[insert street/ number/ town or city/ country]</i> Telephone/Fax numbers: <i>[insert telephone/fax numbers, including country and city codes]</i> E-mail address: <i>[indicate e-mail address]</i>
1. Attached are copies of original documents of <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 ITA 4.5. <input type="checkbox"/> In case of JV, letter of intent to form JV or JV agreement, in accordance with ITA 4.2. <input type="checkbox"/> In case of Government-owned enterprise or institution, in accordance with ITA 4.9 documents establishing: <ul style="list-style-type: none"><li>• Legal and financial autonomy</li><li>• Operation under commercial law</li><li>• Establishing that the Applicant is not dependent agency of the Employer</li></ul>
2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

\* In case of Joint Venture / Consortium fill only details of JV / Consortium and not of individual JV / Consortium members. In case the JV is not formed at the time of PQ submission details of intended country of registration, intended date of incorporation and legal address in the intended country of registration of JV / Consortium may be provided in the appropriate row.

## Form ELI -1.2

### Applicant's Party Information Form

*[The following form is additional to Form ELI – 1.1., and shall be completed to provide information relating to each JV member (in case the Applicant is a JV) as well as any Specialized Sub-contractor proposed to be used by the Applicant for any part of the Contract resulting from this prequalification]*

Date: *[insert day, month, year]*

ICB No. and title: *[insert ICB number and title]*

Page *[insert page number]* of *[insert total number]* pages

Applicant name: <i>[insert full name]</i>
Applicant's Party name: <i>[insert full name of Applicant's Party]</i>
Applicant's Party country of registration: <i>[indicate country of registration]</i>
Applicant Party's year of constitution: <i>[indicate year of constitution]</i>
Applicant Party's legal address in country of constitution: <i>[insert street/ number/ town or city/ country]</i>
Applicant Party's authorized representative information Name: <i>[insert full name]</i> Address: <i>[insert street/ number/ town or city/ country]</i> Telephone/Fax numbers: <i>[insert telephone/fax numbers, including country and city codes]</i> E-mail address: <i>[indicate e-mail address]</i>
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 ITA 4.5. <input type="checkbox"/> In case of a Government-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and absence of dependent status, in accordance with ITA 4.9. 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.



**Form ELI -1.3**

**Letter of Consent**

*(To be filled up by each Sub-contractor)*

Sub-contractor's Name: [insert full name]  
Applicant's Name: [insert full name]  
Date: [insert day, month, year]  
ICB No. and title: [insert ICB number and title]

Dear Sir,

The invitation for pre-qualification for [insert name of work] has been called for by *[insert name of employer]*.

In this regard, this is an undertaking that [insert name of Sub-contracting firm] having its office at *[insert address of the Sub-contracting firm]* is willing to participate as sub-contractor for *[insert brief work details for which sub-contractor will provide services]* with [insert name of applicant] for this project.

*[Insert name, signature and seal of authorized representative of the Sub-contractor]*

**Form CON – 2**

**Historical Contract Non-Performance, Pending Litigation and Litigation History**

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

Applicant's Name: *[insert full name]*

Date: *[insert day, month, year]*

Joint Venture Party Name: *[insert full name]*

ICB No. and title: *[insert ICB number and title]*

Page *[insert page number]* of *[insert total number]* pages

<b>History of Non-Performing Contracts in accordance with sub clause 2.1 of Section III, Qualification Criteria and Requirements</b>			
<input type="checkbox"/> Contract non-performance did not occur since 1 <sup>st</sup> January 2012, specified in Section III, Qualification Criteria and Requirements, Sub-Factor 2.1.			
<input type="checkbox"/> Contract(s) not performed since 1 <sup>st</sup> January 2012, specified in Section III, Qualification Criteria and Requirements, requirement 2.1 is as follows:			
<b>Year</b>	<b>Non-performed portion of contract</b>	<b>Contract Identification</b>	<b>Total Contract Amount (current value, currency, exchange rate and US\$ equivalent)</b>
<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>
<b>Notes:</b>			
(i) Check the appropriate Box <input type="checkbox"/> above. In case the lower box is checked, please provide the details in the above table.			
(ii) 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. Non-performance 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.			
(iii) This requirement also applies to contracts executed by members of the JV and to contracts executed by the Applicant as JV member.			
(iv) Refer ITA 14 for date and source of exchange rate.			

**Pending Litigation, in accordance with sub clause 2.3 of Section III,  
 Qualification Criteria and Requirements**

- No pending litigation in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.3.
- Pending litigation in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.3 is as follows:

Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (currency), US\$ Equivalent (exchange rate)
<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>

Notes:

- (i) Check the appropriate Box  above. In case the lower box is checked, please provide the details in the above table.
- (ii) The Applicant shall provide accurate information about all pending litigation and / or arbitration cases resulting from contracts completed or ongoing under its execution.
- (iii) The Applicant shall also provide details of pending litigation referred in paragraph (ii) above, which has been accounted for in the submitted latest audited balance sheet as follows:
  - (a) The claims and suits lodged against the company for which the company has not accounted for the liability in its books as the matter is pending with arbitration/ courts and the same has not been finally settled up to the date of Balance Sheet and the company is sure that the decision will not go against the company. **(Please indicate the page no. of the audited balance sheet where these amounts have been reflected).**
  - (b) The claims and suits lodged by the company against customers/ supplies for recovery of dues and the matter is pending with arbitration/ courts and the company has accounted for the claims as receivable in its books of account considering the decision will be in favour of the company. **(Please indicate the page no. of the audited balance sheet where these amounts have been reflected).**
- (iv) Refer ITA 14 for date and source of exchange rate.

<b>Litigation History, in accordance with Sub-Clause 2.4 of Section III, Qualification Criteria and Requirements</b>			
<input type="checkbox"/> No Litigation History since 1 <sup>st</sup> January 2010, in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.4.			
<input type="checkbox"/> Litigation History since 1 <sup>st</sup> January 2010, in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.4 is as follows:			
Year of award	Outcome as percentage of Net Worth	Contract Identification	Total Contract Amount (currency), US\$ Equivalent (exchange rate)
<i>[insert year]</i>	<i>[insert 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>  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>
<b>Notes:</b> <ul style="list-style-type: none"> <li>(i) Check the appropriate Box <input type="checkbox"/> above. In case the lower box is checked, please provide the details in the above table.</li> <li>(ii) Refer ITA 14 for date and source of exchange rate.</li> <li>(iii) The Applicant shall provide accurate information about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the last five years.</li> <li>(iv) This may be noted that under this category only cases of arbitration /litigation <u>finally settled against the Applicant</u> should be listed. If the case is pending at any level of arbitration or judiciary, the same should be listed in Pending Litigation and NOT under Litigation History. A consistent history of awards against the Applicant or any member of a joint venture may result in failure of the application.</li> </ul>			

**FORM FIN – 3.1**

**Financial Situation and Performance**

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

Applicant's Name: [insert full name]  
 Date: [insert day, month, and year]  
 Applicant's Party Name: [insert full name]  
 ICB No. and title: [insert ICB number and title]  
 Page [insert page number] of [insert total number] pages

**1. Financial data**

Type of Financial information in (currency)	Historic information for previous _[insert number] years, [insert in words] (amount in currency, currency, exchange rate*, US\$ equivalent)				
	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Statement of Financial Position (Information from Balance Sheet)</b>					
<b>I. Available Working Capital</b>					
A. Total Assets (TA) (Excluding Deferred Expenditure and Losses)					
B. Total Outside Liabilities (TL) (Long Term Liabilities and Current Liabilities and Provisions)					
C. Revaluation Reserve					
<b>D. Net Worth (A-B-C)</b>					
E. Current Assets (CA)					
F. Current Liabilities and Provisions (CL)					
G. Working Capital (E-F)					
H. Proposed specific line of credit agreed by commercial Bank and/or any other source of finance for the subject contract(s)					
I. Total Available Working Capital (G+H) for the subject contract					
J. Working Capital requirements for future contract commitments [Total of col. 9 of Form: CCC]					
K. Sources of Finance for future contract commitments (Total of column 10 of Form CCC)					
L. Working Capital available after meeting the Working Capital requirements for future works contract commitments (I-J+K)					
<b>II. Financial Soundness</b>					

Type of Financial information in (currency)	Historic information for previous _[insert number] years, [insert in words] (amount in currency, currency, exchange rate*, US\$ equivalent)				
	Year 1	Year 2	Year 3	Year 4	Year 5
M. Net worth					
N. Profit before taxes					
O. Profit after taxes					

\* Refer ITA 14 for the exchange rate

## 2. Sources of Finance

*[The following table shall be filled in for the Applicant and all parties combined in case of a Joint Venture]*

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 (US\$ equivalent)
1		
2		
3		
4		

## 3. Financial documents

- (i) The audited balance sheets, profit and loss account and cash flow statement of Group Companies, Parent Companies or Sister Companies and its affiliates shall not be considered for evaluation unless they are part of JV. The Applicants are advised to strictly adhere to this requirement and submit the financial statements of the Applicant and / or its JV /consortium members only in accordance with the laws of the Applicant's country.
- (ii) The Applicant and its parties shall provide copies of financial statements for the last five financial years pursuant Section III, Qualifications Criteria and Requirements, Sub-factor 3.1. The financial statements shall:
  - a. reflect the financial situation of the Applicant 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.
  - c. be complete, including all notes to the financial statements.
  - d. correspond to accounting periods already completed and audited.
- Attached are copies of financial statements for the last 5 financial 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 application, justification should be provided for the same)

**Form FIN - 3.2**

**Average Annual Construction Turnover**

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

*Applicant's/Joint Venture Member's Name: [insert full name]*

*Date: [insert day, month, year]*

*Applicant's Party Name: [insert full name]*

*ICB No. and title: [insert ICB number and title]*

*Page [insert page number] of [insert total number] pages*

<b>Annual turnover data (construction only)*</b>			
<b>Year</b> (Financial year to be indicated by Applicant)	<b>Amount</b> <b>Currency</b>	<b>Exchange rate**</b>	<b>US\$ equivalent</b>
<i>[indicate financial year]</i>	<i>[insert amount and indicate currency]</i>		
		Average Annual Construction Turnover ***	

\* Annual Construction Turnover should be substantiated through (i) Balance Sheets of the relevant financial years, provided the figures, specifically for the Construction Turn Over, are stated in the Balance Sheet(s) or (ii) Specific certificate(s) issued by the Statutory Auditors or (iii) Certificate(s) issued by the Clients

\*\* Refer ITA 14 for date and source of exchange rate.

\*\*\* Total US\$ equivalent for all years divided by the total number of years. See Section III, Qualification Criteria and Requirements, Clause 3.2.



**CURRENT WORK CONTRACTS TO BE IMPLEMENTED AND / OR COMPLETED IN THE FUTURE\***

S. No.	Name of the Contract	JV Percentage Share (%)	Expected Date of Commencement	Total Contract Value	Currency Conversion Rate	Converted Contract Value (in US\$ Million)	Scheduled date of Completion	Estimated Average Billing for 4 months working capital requirements (in US\$ Million)	Fund based line of credit sanctioned for these contracts) (in US\$ Million)	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1										
2										
3										
4										
...										
Total										

\*The Applicant should provide information in respect of (i) Construction Contracts already awarded (i.e. contracts to be executed in future) to the Applicant but not started up to 28 days before Application Submission Deadline; and (ii) Construction Contracts started after date of drawing of latest balance sheet submitted by the Applicant.

**Notes:**

1. Copy of Joint Venture (JV) agreement for each contract should be submitted.
2. Copy of Letter of Award (LoA) for each contract should be submitted.
3. The figures in columns 5 should be for the share of JV partner.
4. The Documentary evidence of the amount and source of funds indicated in column 10 shall be submitted by the Applicant. In the absence of the supporting documentary evidence, the amount of funds indicated in Col 10 against respective works shall not be considered.
5. If in the Client's Certificate, the member's share in the JV, Contract Amount and Date of Award of Work are clearly stated, submission of copies of JV Agreement as well as copy of Letter of Award stated in Note 1 and 2 above is not required.

**Form EXP - 4.1**

**General Construction Experience**

*[The following table shall be filled in for the Applicant and in the case of a JV Applicant, each Member]*

Applicant's/Joint Venture Member's Name: *[insert full name]*

Date: *[insert day, month, year]*

Applicant JV Party Name: *[insert full name]*

ICB No. and title: *[insert ICB number]*

Page *[insert page number]* of *[insert total number]* pages

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

Starting Year	Ending Year	Contract Identification	Role of Applicant
<i>[indicate year]</i>	<i>[indicate year]</i>	Contract name: <i>[insert full name]</i> Brief Description of the Works performed by the Applicant: <i>[describe works performed briefly]</i> Amount of contract: <i>[insert amount in currency, mention currency used, exchange rate and US\$ equivalent*]</i> Name of Employer: <i>[indicate full name]</i> Address: <i>[indicate street/number/town or city/country]</i>	<i>[insert "Prime Contractor" or "JV Member" or "Sub-contractor" or "Management Contractor"]</i>
		Contract name: <i>[insert full name]</i> Brief Description of the Works performed by the Applicant: <i>[describe works performed briefly]</i> Amount of contract: <i>[insert amount in currency, mention currency used, exchange rate and US\$ equivalent*]</i> Name of Employer: <i>[indicate full name]</i> Address: <i>[indicate street/number/town or city/country]</i>	<i>[insert "Prime Contractor" or "JV Member" or "Sub-contractor" or "Management Contractor"]</i>
		Contract name: <i>[insert full name]</i> Brief Description of the Works performed by the Applicant: <i>[describe works performed briefly]</i> Amount of contract: <i>[insert amount in currency, mention currency used, exchange rate and US\$ equivalent*]</i> Name of Employer: <i>[indicate full name]</i> Address: <i>[indicate street/number/town or city/country]</i>	<i>[insert "Prime Contractor" or "JV Member" or "Sub-contractor" or "Management Contractor"]</i>

\* Refer ITA 14 for date and source of exchange rate.

Note: Give reference of the attached Employer's certificate (Page number of the PQ Bid) based on which the experience is being claimed.

**Form EXP - 4.2(a)**

**Specific Construction and Contract Management Experience**

*[The following table shall be filled in for contracts performed by the Applicant, each member of a Joint Venture, and Specialized Sub-contractors]*

Applicant's/Joint Venture Member's Name: *[insert full name]*

Date: *[insert day, month, year]*

JV Party Name: *[insert full name]*

ICB No. and title: *[insert ICB number and title]*

Page *[insert page number]* of *[insert total number]* pages

<b>Similar Contract No.</b> <i>[insert number] of [insert number of similar contracts required]</i>	<b>Information</b>			
Contract Identification	<i>[insert contract name and number, if applicable]</i>			
Award date	<i>[insert day, month, year]</i>			
Completion date	<i>[insert day, month, year]</i>			
Role in Contract <i>[check the appropriate box]</i>	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub-contractor <input type="checkbox"/>
Total Contract Amount	<i>[insert total contract amount in local currency]</i>		US\$ <i>[insert Exchange rate and total contract amount in US\$ equivalent]*</i>	
If member in a JV or sub-contractor, specify participation in total Contract amount	<i>[insert a percentage amount]</i>	<i>[insert total contract amount in local currency]</i>	<i>[insert exchange rate and total contract amount in US\$ equivalent]*</i>	
Employer's Name:	<i>[insert full name]</i>			
Address:	<i>[indicate street / number / town or city / country]</i>			
Telephone/fax number	<i>[insert telephone/fax numbers, including country and city area codes]</i>			
E-mail:	<i>[insert e-mail address, if available]</i>			

\* Refer ITA 14 for date and source of exchange rate.

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

<b>Similar Contract No.</b> <i>[insert number] of [insert number of similar contracts required]</i>	<b>Information</b>
Description of the similarity in accordance with Sub-Factor 4.2(a) of Section III:	
1. Amount	<i>[insert amount in local currency, exchange rate, US\$ in words and in Figures]</i>
2. Physical size of required works items	<i>[insert physical size of items]</i>
3. Complexity	<i>[insert description of complexity]</i>
4. Methods/Technology	<i>[insert specific aspects of the methods/technology involved in the contract]</i>
5. Construction rate for key activities	<i>[insert rates and items]</i>
6. Other Characteristics	<i>[insert other characteristics as described in Section VII, Scope of Works]</i>

Note: Give reference of the attached Client's certificate (Page number of the PQ Bid) based on which the experience is being claimed.

**Form EXP - 4.2(b)**

**Construction Experience in Key Activities**

Applicant's Name: *[insert full name]*

Date: *[insert day, month, year]*

Applicant's Party Name: *[insert full name]*

Sub-contractor's Name<sup>16</sup> (as per ITA 24.2 and 24.3): *[insert full name]*

ICB No. and title: *[insert ICB number and title]*

Page *[insert page number]* of *[insert total number]* pages

Applicant/JV member/All Sub-contractors for key activities must complete the information in this form as per ITA 24.2 and 24.3 and Section III, Qualification Criteria and Requirements, Clause 4.2.

1. Key Activity No. One (1): *[insert brief description of the Activity, emphasizing its specificity]*

Total Quantity of Activity under the contract:

<b>Information</b>				
Contract Identification	<i>[insert contract name and number, if applicable]</i>			
Award date	<i>[insert day, month, year]</i>			
Completion date	<i>[insert day, month, year]</i>			
Role in Contract <i>[check the appropriate box]</i>	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub-contractor or <input type="checkbox"/>
Total Contract Amount	<i>[insert total contract amount in contract currency(ies)]</i>		US\$ <i>[insert exchange rate and total contract amount in US\$ equivalent]</i>	
Quantity# (Volume, number or rate of production, as applicable) performed under the contract per year or part of the year  <i>[Insert extent of participation indicating actual quantity of key activity successfully completed in the role performed]</i>	Total quantity in the contract (i)	Percentage participation (ii)		Actual Quantity Performed (i) x (ii)
Year 1*				
Year 2*				
Year 3*				
Year 4*				

<sup>16</sup> If applicable

Year 5*			
* Insert any actual continuous period of 12 months.			
Employer's Name:	<i>[insert full name]</i>		
Address:	<i>[indicate street / number / town or city / country]</i>		
Telephone/fax number	<i>[insert telephone/fax numbers, including country and city area codes]</i>		
E-mail:	<i>[insert e-mail address, if available]</i>		

#Volume, number or rate of production of any key activity can be demonstrated in one or more contracts combined if executed during same time period. The rate of production shall be the annual production rate for the key construction activity (or activities). For the rate of production, either the average during the entire period or in any one or more years during the period should be specified. All claims for the quantity executed should be accompanied with the Client certificate. Unless specifically stated in the Client certificate, the rate of production shall be deemed to be total quantity performed divided by total duration of the project.

**Similarly Activity Number two (2) should be filled in Form 4.2 (b) after Activity Number 1**

**Summary of the above information derived from Forms submitted**

	Information	
Description of the key activities in accordance with Sub-Factor 4.2(b) of Section III:	<i>[insert response to inquiry indicated in left column]</i>	<i>[Start and End date of the considered continuous 12 months period]</i>
1. Number of Nodes for Telecom Works of Optical Fibre Communication System in a continuous period of 12 months from 1st Jan 2008 to application submission deadline.		
2. Number of TKM (Track Kilometres) for 25 kV or 2x25 kV AC OHE (Overhead Equipment) in a continuous period of 12 months from 1st Jan 2008 to application		

submission deadline.		
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Note: Give reference of the attached Client's certificate (Page number of the PQ Bid) based on which the experience is being claimed.

**Form EXP - 4.3**  
**Design Experience**

Applicant's Name: *[insert full name]*

Date: *[insert day, month, year]*

Applicant's Party Name: *[insert full name]*

Nominated Sub-contractor's Legal Name: *[insert full name]*

ICB No. and title: *[insert ICB number and title]*

Page *[insert page number]* of *[insert total number]*  
 pages

Applicants or specialized Sub-contractors for key activities must complete the information in this form as per Section III, Qualification Criteria and Requirements, Sub-Factor 4.3 (b).

1. Key Activity No. One (1): *[insert brief description of the Activity, emphasizing its specificity]*

[Separately for each activity listed in 4.3 Design Experience]:

<b>Information</b>				
Contract Identification	<i>[insert contract name and number, if applicable]</i>			
Award date	<i>[insert day, month, year]</i>			
Completion date	<i>[insert day, month, year]</i>			
Role in Contract <i>[check the appropriate box]</i>	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Sub-contractor <input type="checkbox"/>
Total Contract Amount	<i>[insert total contract amount in contract currency(ies)]</i>		US\$ <i>[insert exchange rate and total contract amount in US\$ equivalent]</i>	
If party in a JV, specify participation of total contract amount	<i>[insert a percentage amount]</i>	<i>[insert total contract amount in the currencies as given in the Contract]</i>	<i>[insert exchange rate and total contract amount in US\$ equivalent]*</i>	
Employer's Name:	<i>[insert full name]</i>			
Address:	<i>[indicate street / number / town or city / country]</i>			
Telephone/fax number	<i>[insert telephone/fax numbers, including country and city area codes]</i>			
E-mail:	<i>[insert e-mail address, if available]</i>			



**Similarly Activity No. Two (2) and Three (3) should be filled in Form 4.3 after Activity No. 1**

**Summary of the above information derived from Forms submitted**

	<b>Information</b>
Description of the Specific Design Experience in key Design Activities in accordance with Sub-Factor 4.3 of Section III:	<i>[insert response to inquiry indicated in left column]</i>
1. Number of Stations and Block Sections for Design* of Signalling System with Automatic Block Signalling, using Electronic Interlocking in a single contract on any Main Line Railway/Metro Railway/Suburban Rail Transit System. *Design includes System design and detailed design.	
2. Number of Track Kilometre for Designing* of 25 kV / 2x25 kV overhead equipment on Railways / Metro Railways/ Suburban Rail Transit System  * Design includes System design and detailed design.	
3. Number of TSS for Designing* of 2x25 kV TSS.  * Design includes System design and detailed design.	

Note: Give reference of the attached Client's certificate (Page number of the PQ Bid) based on which the experience is being claimed.

## **Section V. Eligible Countries**

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

In reference to ITA 5.1, for the information of the Applicants, at the present time firms and individuals, supply of goods, or contracting of works or services, from the following countries are excluded from this prequalification process:

Under ITA 5.1 (a)      *None*

Under ITA 5.1 (b)      *None*

## Section VI. Bank Policy - Corrupt and Fraudulent Practices

Guidelines for Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, dated January 2011

### “Fraud and Corruption

1.16 It is the Bank’s policy to require that Borrowers (including beneficiaries of Bank loans), bidders, suppliers, contractors and their agents (whether declared or not), sub-contractors, sub-consultants, service providers or suppliers, and any personnel thereof, observe the highest standard of ethics during the procurement and execution of Bank-financed contracts.<sup>17</sup> In pursuance of this policy, 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;<sup>18</sup>
  - (ii) “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;<sup>19</sup>
  - (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;<sup>20</sup>
  - (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;<sup>21</sup>
  - (v) “obstructive practice” is
    - (aa) 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
    - (bb) acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under paragraph 1.16(e) below.

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<sup>17</sup> In this context, any action to influence the procurement process or contract execution for undue advantage is improper.

<sup>18</sup> For the purpose of this sub-paragraph, “another party” refers to a public official acting in relation to the procurement process or contract execution. In this context, “public official” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

<sup>19</sup> For the purpose of this sub-paragraph, “party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution.

<sup>20</sup> For the purpose of this sub-paragraph, “parties” refers to participants in the procurement process (including public officials) attempting either themselves, or through another person or entity not participating in the procurement or selection process, to simulate competition or to establish bid prices at artificial, non-competitive levels, or are privy to each other’s bid prices or other conditions.

<sup>21</sup> For the purpose of this sub-paragraph, “party” refers to a participant in the procurement process or contract execution.

- (b) will reject a proposal for award if it determines that the bidder recommended for award, or 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) will declare mis-procurement and cancel the portion of the loan allocated to a contract if it 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 or the implementation 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) will sanction a firm or individual, at any time, in accordance with the prevailing Bank's sanctions procedures,<sup>22</sup> including by publicly declaring such firm or individual ineligible, either indefinitely or for a stated period of time: (i) to be awarded a Bank-financed contract; and (ii) to be a nominated<sup>23</sup>
- (e) will require that a clause be included in bidding documents and in contracts financed by a Bank loan, requiring bidders, suppliers and contractors, and their sub-contractors, agents, personnel, consultants, service providers, or suppliers, to permit the Bank to inspect all accounts, records, and other documents relating to the submission of bids and contract performance, and to have them audited by auditors appointed by the Bank;"

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<sup>22</sup> A firm or individual may be declared ineligible to be awarded a Bank financed contract upon: (i) completion of the Bank's sanctions proceedings as per its sanctions procedures, including, inter alia, cross-debarment as agreed with other International Financial Institutions, including Multilateral Development Banks, and through the application the World Bank Group corporate administrative procurement sanctions procedures for fraud and corruption; and (ii) as a result of temporary suspension or early temporary suspension in connection with an ongoing sanctions proceeding. See footnote 14 and paragraph 8 of Appendix 1 of these Guidelines.

<sup>23</sup> A nominated sub-contractor, consultant, manufacturer or supplier, or service provider (different names are used depending on the particular bidding document) is one which has either 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.

## **PART 2 – Works Requirements**

## **Section VII. Scope of Works**

### **1. General**

#### **1.1 Dedicated Freight Corridor Corporation of India Limited**

1.1.1 Dedicated Freight Corridor Corporation of India Ltd. (DFCCIL), a public sector company has been set up under the Indian Companies Act 1956 for implementation of Dedicated Freight Corridor Project. Government of India is the sole shareholder of the DFCCIL.

#### **1.2 The Dedicated Freight Corridor (DFC) Project**

1.2.1 Ministry of Railways (MOR), Government of India has planned to construct Dedicated High Axle Load Freight Corridor covering about 3363 kms on two corridors, Eastern Corridor from Ludhiana (Sahnewal) to Dankuni and Western Corridor from Jawaharlal Nehru Port, Mumbai to Dadri near Delhi along with inter-linking of the two corridors at Dadri.

1.2.2 The DFC Project entails construction of mostly double line railway tracks except single line between Khurja – Sahnewal (near Ludhiana). Up-gradation of transportation technology, increase in productivity and reduction in unit transportation costs have been taken as guiding principles for formulating the DFC project. Various operating systems, motive power, Electric Traction, Signalling and work processes are required to conform to this broad perspective.

#### **1.3 Eastern Dedicated Freight Corridor Alignment**

1.3.1 Eastern DFC Route will be approximately 1856 Km long from Dankuni to Ludhiana via Mughalsarai – Allahabad – Kanpur – Tundla – Aligarh and Khurja. Proposed alignment of DFC has been generally kept parallel to existing Indian Railway line except provision of detours at Mirzapur, Manda Road, Allahabad, Bharwari, Sirathu, Khaga, Fatehpur, Kanpur, Achalda, Bharthana, Etawah, Ferozabad, Tundla, Barhan, Hathras, Aligarh, Khurja, Wair, Hafizpur - Durala, Mansurpur to Talheri Buzurg, Ambala and Sirhind.

1.3.2 The Eastern Dedicated Freight Corridor (EDFC) alignment passes through six States viz. West Bengal, Jharkhand, Bihar, Uttar Pradesh, Haryana and Punjab. It traverses Howrah, Hoogly, Bardhaman districts in West Bengal and Gaya, Aurangabad, Rohtas (Sasaram) and Kaimur (Bhabua) districts in Bihar, Chandauli, Varanasi, Mirzapur, Allahabad, Kausambi, Fatehpur, Kanpur (Urban), Kanpur (Rural), Auraiya, Etawah, Ferozabad, Agra, Hathras, Aligarh, Bulandshahar, Ghaziabad, Gautambudhnagar, Meerut, Muzaffarnagar, Saharanpur districts in Uttar Pradesh, Yamuna Nagar, Ambala districts in Haryana and Patiala, Fatehgarh Sahib, Ludhiana districts in Punjab.

#### **1.4 Project Phasing**

1.4.1 The project is planned in a phased manner. The first phase (Phase - 1) of the

Project covers a length of 390 km, double line, from Bhaupur – Khurja- Dadri 2x25 KV AC Electrified section with Automatic Block Signalling. Dadri-Khurja link has a length of approximately 47 km and serves as a link between Eastern and Western Corridors of DFCC.

- 1.4.2 The second phase (Phase-2) covers a length of 402 route km between Mughalsarai – New Bhaupur section double-line, 2x25 KV AC Electrified section with Automatic Block Signalling.
- 1.4.3 Phase 3 consists of about 400 Km, single line, Khurja – Sahnewal (near Ludhiana), 2x25 KV AC Electrified, Signalling with Absolute block working.

## **1.5 Funding of the Project**

- 1.5.1 Eastern DFC Project for 1192 Km consisting of Phase 1, Phase 2 and Phase 3 is to be funded by World Bank. The Loan for Eastern DFC stretching between Bhaupur – Khurja – Dadri, Mughalsarai- Bhaupur and Khurja-Ludhiana has been sanctioned by World Bank vide loan No. 8066-IN, Loan No. 8318-IN and Loan No. 8513-IN respectively.

## **1.6 Contract Strategy for Dadri – Khurja section**

- 1.6.1 Civil, Structures and Track (CST) contract  
The CST works for Dadri-Khurja section will be done in one Contract Package CP-302.
- 1.6.2 Systems contract  
The Signalling, Telecommunication, OHE and other system works for Dadri-Khurja Section will also be done in one Contract Package CP-105.

## **1.7 Present Status of Dadri – Khurja section**

- 1.7.1 Presently, the process of land acquisition between Dadri – Khurja Section (47 kms of double line) is nearing completion. The Social Impact Assessment and Environment Impact Assessment studies for this section have also been completed.

## **1.8 Alignment of Dadri-Khurja Section**

- 1.8.1 The alignment of Dadri-Khurja section connecting the Eastern and Western Corridors is a double line section with an approximate length of 47 km and runs parallel to the existing IR track except for a detour at Wair with an approximate length of 5 km.
- 1.8.2 Sketch showing the alignment of Dadri - Khurja section is attached as Annexure I.

## **1.9 Scope of Works**

- 1.9.1 The current Prequalification exercise is to identify suitable and competent

- Bidders for System Works under Contract Package designated as 105 between Dadri – Khurja section (approximately 47 kms of Double Line) to be executed through a Design & Build Contract.
- 1.9.2 The Scope of Works mentioned in this PQ document is indicative. Full details regarding scope of works, will be provided in the Bidding Document.
- 1.9.3 The Contractor shall undertake:-
- a) Design, Manufacture, Supply, Construction, Installation, Testing and Commissioning of the Signalling & Telecommunication Works including Train Management System and Mobile Train-Radio Communication on EDFC route for Dadri – Khurja Section of Eastern Dedicated Freight Corridor.
  - b) Design, Construction, Supply, Installation, Testing and Commissioning for Electrification of Double Track Railways Lines (2x25 kV) along with E&M and associated works on a Design Build Lump Sum basis for Dadri – Khurja Section of the Eastern Dedicated Freight Corridor.
- 1.9.4 The Works shall comprise of Design Development from preliminary stage to detailed design, including obtaining No Objection Certificates (NOCs) and approvals from relevant authorities, construction, testing and commissioning, including documentation and spares, special tools, testing equipment and support during the Defect Notification Period for the Signalling, Telecommunications, Traction Power Supply systems, Overhead equipment system, E&M and Associated works and all their constituent sub-systems, equipment and components for the DFC from Dadri to Khurja. Construction would be done to suit train speed up to 100 kmph. The loops in general would be having a length of 750m/1500m.
- 1.9.5 Significant portion of the work would be required to be done for bulk of the length in the vicinity of Indian Railway Tracks carrying a very high density of freight and passenger carrying trains. As such the construction activities would be required to be carried out to cause least interference to the movement of Indian Railway Traffic. The proposed DFC lines would be required to be integrated with Indian Railway track at nominated junction stations. The Contractor shall also undertake interface co-ordination with the Civil & Track Works Contractor who shall be carrying out works forming part of this Project.
- 1.9.6 The design of all the work shall be operationally compatible with the Indian Railways (IR) sections connecting to DFC as per the operation plan of DFCC included as a part of bidding document.
- 1.9.7 The Contractor shall be responsible for addressing design and construction interfaces with all other Contractors and all other applicable railway systems of DFCC and Indian Railways, public services, utilities and third parties, etc. which are located adjacent or parallel to the other phases of EDFC in a manner so as to complete the works successfully within the prescribed time. The details shall be indicated in the Bidding Document.
- 1.9.8 In addition, the Contractor shall undertake the rectification of defects and



deficiencies for all Permanent Works falling under the preview of this Contract during the Defect Notification Period extending to a period of 24 months after the date of commissioning.

1.9.9 The Contractor shall also be responsible for:

- a) Safety relating to all items designed for the construction, construction process and the development of a system safety plan.
- b) Quality Management, Quality Assurance Accreditation, Quality Control methodology identified within a Quality Manual, which shall include methods of traceability, certification relating to testing and storage systems for retrieval and protection. The quality assurance programme shall be ISO 9001:2008 compliant.
- c) The production of Construction, Maintenance and Operation Manuals and other documentation as indicated in Employer's Requirement.
- d) Supply of spares, Machinery & Plants for mechanized maintenance, maintenance tools and test equipment as indicated in Employer's Requirement.
- e) Training of DFCC personnel, to enable them to perform all necessary tasks, related to design, assembly, equipment erection, operation and maintenance.
- f) The contractor shall be responsible for RAMS demonstration as detailed in the Bidding Document.

1.9.10 The scope of work includes mandatory clearances / approvals from the concerned authorities.

## **1.10 Permanent Works**

### **1.10.1 Signalling & Telecommunication System**

#### **I. Signalling System**

- (1) The entire stretch from Dadri to Khurja will be provided with Automatic Signalling System with 4 aspect Colour Light Line side Signals and Continuous track detection. Automatic signalling will be provided in the block section and main line of the stations.
- (2) The Signalling System shall include but not limited to the following components / sub-systems:
  - a) Electronic Interlocking for Stations and Automatic Block sections on Double Line section from Dadri to Khurja with Track Vacancy Detection Systems using Digital Axle Counters Systems, compatible Power Supply system. Electronic Interlocking shall have inbuilt-features of Data Logging of internal processes and external I/O.
  - b) Train Management System (TMS) for monitoring and supervision of train traffic from a centralised location termed as OCC, with capability of data logging. The TMS for Dadri-Khurja shall be provided, installed

and made operational in a manner so as to be compatible and integral to similar systems of other sections of the DFC by the Contractor.

- (3) The Signals, Points, Track Vacancy Detection systems and other signalling functions at the Stations and in the Block sections will be controlled /monitored by Electronic Interlocking (EI) located at station and along the route.

## **II. Telecommunication System**

- (1) The permanent works of Telecommunication systems shall comprise of but not be limited to the following:
  - a) Fibre Optic Transmission Network in ring formation comprising of Optical Fibre Cable, Add/Drop SDH Nodes & Primary Multiplexer to cater for telecom requirements of Train Operation / Management, Signalling System and, Traction & Power SCADA. All SDH Nodes shall support Ethernet over SDH.
  - b) Mobile Train Radio (MTR) system based on GSM (R) is being provided by Indian Railways along the existing alignment in the entire section. DFCC shall provide MTR on the sections where DFCC alignment takes a detour from the existing alignment of IR. Provision of MTR on detours and its integration with MTR of Indian Railway shall form part of the scope of work of this contract.
  - c) Other Telecom Systems such as Telephone Exchanges, WAN/LAN based IT Network, Universal Time Coordinated Master Clock System etc. at Stations & Depots.
  - d) Operational Control Centre (OCC) is being built at Allahabad under Contract Package 104. All the control circuits will be extended from Dadri Khurja Section to OCC at Allahabad through OFC media that will be made available by the Employer.

### **1.10.2 Electrical**

#### **I. Traction Power Supply Systems (TPSS)**

- (1) TPSS shall comprise of the following elements:
  - a) Design, Construction, Testing and Commissioning of 2x25 kV traction substation (TSS) including their switch yards, Power Supply, Control Buildings and other Associated E&M Works in connection with TPSS.
  - b) Design, Construction, testing and commissioning of Sectioning (and Paralleling) Posts (SP) and Sub-sectioning and Paralleling Posts (SSP) including their buildings, to segregate traction power supplies from adjacent traction substations and to enable sectioning and reconfiguration of the OHE.
  - c) Construction of Outgoing feeders and traction return connections, generally in the form of cables or bare conductors, between TPSS and the OHE and between SP/SSP and the OHE.

- d) Provision of Protection and control system including the power quality Control Equipment.

## **II. Overhead Equipment system (OHE)**

- (1) These works shall comprise design, construction, testing and commissioning of OHE system and shall include, but not be limited to, the following:
  - a) The design of OHE electrified at 2x25kV, AC, 50Hz including the traction return and Earthing system and 240 volts supply to S&T installations through Auxiliary Transformers;
  - b) The OHE shall be designed to be compatible with the existing electrified system of Indian Railways and adjoining phases of Eastern Dedicated Freight Corridor, when merging / interfacing with the latter.
  - c) The Contractor shall be responsible for the provision of all services and the supply, installation, testing & commissioning of all equipment necessary for the full implementation and operation of the OHE system.

## **III. SCADA Works**

- (1) These works shall comprise design, manufacture, supply, installation, testing and commissioning of the SCADA Systems and shall include, but not be limited to the following:
  - a) Monitor and control from the OCC in real-time, all operating conditions and events occurring at all points within the Traction Power Supply, Auxiliary and OHE system (2 x 25kV substations, basic sectioning points, station by-pass points and other strategic locations);
  - b) Alert operators immediately of hazardous or incorrect operating conditions at any point on the system that require warnings, changes of operations, or other measures and assist in decision making giving various options during normal and abnormal conditions;
  - c) Intervene and take any corrective actions needed to ensure safe and efficient operations;
  - d) Accurately measure, collect data, analyse and store permanently continuous records about system operating conditions at all times;
  - e) Provide redundancy features in the design, equipment and operations of the system to ensure uninterrupted operations and fail-safe devices and procedures.
  - f) Provide most efficient energy management.
  - g) Ergonomic design study and implementation for display and operation panel higher operator efficiency.
  - h) SCADA system shall be based on TCP/IP protocol and shall also be required to interface with SCADA system of adjacent sections.

#### **IV. Electrical & Mechanical Works**

(1) These works shall comprise design, construction, supply, installation, testing and commissioning of:

a) E&M works including Power Supply and Distribution, Electrification, Lighting, Ventilation, Air-conditioning, fire detection and suppression systems as specified in the Bidding Documents shall be executed for the following:

**1) Station Buildings, Staff Quarters and All Other Service Buildings**

The aforesaid E&M work for all these buildings which includes Station buildings at the Junction station, Signalling and Telecom Equipment rooms and Signalling and Telecom Power Supply Equipment rooms, Yards, IMSD and Residential Quarters will be executed by the Contractor. The scope of work excludes Conducting for these buildings which will be the responsibility of another contractor.

**2) Traction Sub Stations (TSS), Sectioning & Paralleling Post (SP), Sub Sectioning & Paralleling Post (SSP), Tower Wagon Sheds**

The aforesaid E&M works including Conducting will be the responsibility of the contractor.

- b) Provision of 11kV/0.433kV auxiliary substation and 400/230V Auxiliary Power Supply distribution for aforesaid and S&T installations.
- c) DG sets and UPS for essential and emergency supply at stations, depots and locations as indicated in the bidding document.
- d) Solar (SPV) power installations at stations and Depots as specified in the Bidding Document.
- e) All necessary Earthing (including lightning protection system) and stray current control provisions, coordination, liaising/pursuing with State Electricity Authorities for availing new Electric connections / augmentation of load, applying for load, collection of estimates for load, release of load and other related works.

#### **V. Simulation Studies**

The scope of work shall include, but is not limited to, conducting the following simulation studies as identified in the bidding document, as part of the Traction Power Supply System Design Report:

- a) Traction power load flow study, based on the use of a computer programme capable of simulating multi-train performance on a 2x25 kV ATF (autotransformer feed) system, while taking into consideration the electrical characteristics of the utility system and the effect of variations of OHE traction voltage on train performance.

- b) Utility system impact study to determine current and voltage imbalance, harmonic distortion, and power factor at the point of common coupling with the utility high voltage system.
- c) Short-circuit study.
- d) Protection and relay co-ordination study
- e) Insulation coordination study.
- f) EMI / EMC study of the railway environment.
- g) Induced voltage study
- h) Earthing and bonding safety study.
- i) Catenary –Pantograph dynamic interaction study
- j) Wind study
- k) Pollution mapping of the section
- l) Unified Power quality correction study including harmonics, Power Factor and Voltage Imbalance.

#### **VI. Others**

- a) In respect of Electrical design the Contractor will also be responsible for the electrical aspects of the OHE and the Traction Return and Earthing systems which form a part of the OHE. Specifically, this shall comprise the determination of the configuration, sizing and rating of these systems and their constituent components from an electrical (including electromagnetic) perspective in order to meet the specified and application duty requirements for these systems.
- b) The Contractor shall also be responsible for the Testing and Commissioning of the installed systems and their interactions with other systems from an electrical (including electromagnetic) perspective.

#### **VII. Housing and Structures for S&T and Electrical**

- a) Construction of buildings for Traction Sub Stations (TSS), Sectioning & Paralleling Post (SP), Sub Sectioning & Paralleling Post (SSP) and auxiliary sub stations.
- b) Construction of sheds and necessary pits for the tower wagons.
- c) Construction of Signalling & Telecommunication Equipment rooms and Power Supply Equipment Rooms.

### **2. Salient Features of the Project**

The indicative engineering features/performance specifications of the works are as given under:-

S. N.	Description	Details
1	<b>Gradient</b>	
	Ruling Gradient	1 : 200 (compensated)
	Desired Gradient in yards	1 :1200
2	<b>Formation width on straight tracks</b>	
	Bank width for Double line (embankment)	13.5 metres
	Bank width for Double line (Cutting excluding Side drains)	13.5 metres
	Bank width for Single line (embankment)	7.6 metres
	Bank width for Single line (Cutting excluding Side drains)	7.5 metres
	Formation	As per GE-14 report of RDSO
3	<b>Curves</b>	
	Recommended Radii and degree of Curves	700 metres (2.5 degree)
	Curve Compensation	@ 0.04% per degree of curvature
4	<b>Minimum Vertical Clearance above Rail level</b>	
	i. For Light Overhead Structure like FOBs	6.530 m
	ii. For Heavy Overhead Structure like ROBs	6.050 m
	iii. Heavy Overhead structures like ROBs over turnouts	6.530 m
5	<b>Track Centre</b>	
	Minimum distance between two tracks of DFC	6.0 metres
	Minimum distance between existing IR track and DFC	6.0 metres
6	<b>Bridges</b>	
	Standard of loading	DFC loading as per Indian Railway Bridge Rules for 32.5T axle load.
7	<b>Track Structures</b>	
	Gauge	1676 mm
	Rails	UIC 60 – IRS T12-2009
	Sleepers	Mono-block Concrete, rail seat for 60 Kg/m rails conforming to the overall dimensions and specifications of RDSO design.
	Rail Length	Rolled section as per IRS T – 12 – 2009
	Welding	Flash Butt Welded to 260 m or more. Further Welded to CWR in track using Mobile Flash Butt Welding Plant
	Turnouts	Turnouts with 60 Kg thick web curved switches with CMS crossings (1:12 for main line and loops; 1:8.5 is permissible only for

S. N.	Description	Details
		take offs for sidings)
	Yards	Running Lines, Hot Axle, Machine and ballast Sidings as per approved yard plans
	Other Components	SEJ – IRS/New Design Glued Insulating Joints- IRS/New Design
	Ballast	350 mm Cushion laid over a suitably designed embankment with a blanketing layer of designed thickness.
	Track Construction	Fully Mechanized with appropriate plant and machinery.
	Specifications	Design and Construction Conforming to Indian Railway Standards and DFCC Standards
8	<b>Junction Stations</b> (Where link lines connect the proposed DFCC Stations with the nearby IR station).	1 (One)
9	<b>Crossing Stations</b>	NIL
10	Nominal Supply Voltage	25 Kv, 50 Hz Single Phase AC
11	Traction Sub Station	One
12	Sub Sectioning and Paralleling Post (SSP)	Three

### 3. Technical Standards and Specifications

3.1 Research Design and Standards Organization (RDSO), Lucknow, India, an organization of Ministry of Railways, Government of India has standardized the technical specifications for various components of railway systems in India as Indian Railway Standard (IRS) Specifications, which are generally based on International Specifications and adopted to Indian conditions. The list of IRS/RDSO Specifications issued by RDSO is available at the website of RDSO ([www.rdsogov.in](http://www.rdsogov.in)). The IRS/RDSO Specifications can be purchased from RDSO. RDSO maintains approved list of suppliers/vendors for various equipment/ items/ components to be used on Railway systems in India. Procedures for registration of the new suppliers/vendors for railway equipment/items are also available at the website of RDSO. The bidders are advised to visit the website of RDSO for further information about the registration of new products.

Bidders shall be free to obtain equipment/items from the suppliers/vendors on approved list of RDSO or any other sources provided the equipment/item meets the technical requirements/acceptance criteria which will be indicated in the Bidding document.

#### **4. Project Implementation**

- 4.1 The Construction Period shall be **750 days** (including Design Period) from the date of award of the contract. The Contractor shall be required to plan the various components of work in such a sequence that the complete work is commissioned in 750 days from the date of commencement of contract. This will be followed by the Defect Notification Period, which may be up to twenty four months, after commissioning and operational acceptance of complete section.
- 4.2 The Project Management Consultant appointed by DFCCIL will be the Engineer for the Project and will perform the role as specified in Clause 3 Condition of Contract – Plant & Design Build FIDIC Yellow Book 1999 and as supplemented or amended through Particular Conditions of Contract.
- 4.3 As part of the Bid Document, the Pre-qualified applicants will be provided with Employers Requirement, Conditions of Contract, Reference Documents and other indicative field data available with DFCC and CST Contractor.
- 4.4 The field data provided as a part of the Bid Document by the Employer is based on the investigation carried out by the Employer and other agencies and is for reference purposes only. The Bidder will have to satisfy himself with the field data furnished and make his own investigations, if required, for submitting his offer. The Bidder shall be deemed to have obtained all necessary information as to risks, contingencies and all other circumstances which may influence or affect his Bid. Costs associated with any change in design or construction methodology later during execution on account of any change will be borne by the Contractor.
- 4.5 The Employer's Requirements/ Performance Specifications provided as part of the Bid Documents, specify the procedural requirements for the preparation of the design of the Permanent and Temporary Works.
- 4.6 The Contractor will undertake and prepare the Design of the Permanent and Temporary Works. The principal requirements of the Design Phase are the production of the Preliminary Design, the Definitive Design and Good for Construction Drawings.
- 4.7 The Preliminary Design shall incorporate the Contractor's tender design developed to sufficiently define the work components as detailed in the scope of the works. After the consent of the Engineer, the System Contractor shall, proceed to prepare the definitive Designs.
- 4.8 The Definitive Design shall incorporate the Contractor's Technical Proposals and shall be the design developed to the stage at which all elements of the System components are fully defined and specified. During the preparation of the definitive design, the Contractor shall complete all surveys, investigations and testing necessary to complete the design of the permanent works.
- 4.9 Upon issuance of the no objection, or a deficiencies list, by the Engineer in respect of the definitive design submission, normally within (30 days). The Contractor shall complete the design in all respects and produce "Good for



Construction” Drawings, the purpose of which is to illustrate all the Permanent Works and to be the drawings governing construction.

## **5. Utilities**

5.1 The utilities have generally been identified as part of the field data collection by the Employer and all these will be removed by DFCC either through the existing CST contract or other means. However, there is always a possibility of some of the unidentified utilities being detected by the Contractor during the course of work. These utilities shall be relocated by the Contractor as per the provisions of the bid document. Removal of uncharted utilities will be treated as a variation.

## **6. Hydrology**

6.1 The project area is generally flat and is prone to water stagnation during the monsoon. Flooding is generally attributed to the high ground water table and silting of water courses coupled with rainfall intensity and low hydraulic gradients.

## **7. Climate**

7.1 The climate of the project is a Tropical Monsoon Climate marked by three distinct seasons:

- a) Summer (March-June): Hot & dry with average temperatures of 45°C sometimes reaching 47-48°C with low relative humidity (20%) and dust laden winds.
- b) Monsoon (June-September): 85% of the average annual rainfall of 990 mm precipitates during this period and temperatures range from 40-45 °C on rainy days.
- c) Winter (October-February): Cold with temperatures in the range of 3-4°C sometimes dropping below freezing in elevated areas. Foggy conditions can occur in some tracts.

## 8. Abbreviations Used

ACTM	–	AC Traction Manual
CST	–	Civil, Structure and Track
DAC	–	Digital Axle Counters
DFCC	–	Dedicated Freight Corridor Corporation
EI	–	Electronic Interlocking
ER	–	Employer's Requirement
E&M	–	Electrical and Mechanical
EMC	–	Electro Magnetic Compatibility
EMI	–	Electro Magnetic Interference
FOB	–	Foot-Over Bridge
GSM-R	–	Global System for Mobile Communication for Railways
ICB	–	International Competitive Bidding
I/O	–	Input / Output
IR	–	Indian Railways
IRS	–	Indian Railways Specifications
ISO	–	International Organization for Standardization
IT	–	Information Technology
JV	–	Joint Venture
kV	–	Kilo Volt
LC	–	Level Crossing
MOU	–	Memorandum of Understanding
NOC	–	No Objection Certificate
OCC	–	Operations Control Centre
OFC	–	Optical Fibre Communication
OHE	–	Over Head Electrical Equipment
RAMS	–	Reliability, Availability, Maintainability & Safety
RDSO	–	Research Design and Standards Organization
RFO	–	Rail Flyover
RKM	–	Route kilometres
ROB	–	Road-Over Bridge
RTU	–	Remote Terminal Unit
RUB	–	Road Under Bridge
SCADA	–	Supervisory Control and Data Acquisition
SDH	–	Synchronous Digital Hierarchy
SEJ	–	Switch Expansion Joint
SP	–	Sectioning Post
SSP	–	Sub - Sectioning Post
T Km	–	Track kilometres
TMS	–	Train Management System
TPSS	–	Traction Power Supply System
TSS	–	Traction Sub Station
UIC	–	Union Internationale des Chemins de fer
UPS	–	Uninterrupted Power Supply