



## **PREQUALIFICATION DOCUMENT FOR**

**DESIGN, SUPPLY, CONSTRUCTION, INSTALLATION, OF 2X25 KV ELECTRIFICATION, SIGNALLING AND TELECOMMUNICATION AND ASSOCIATED WORKS INCLUDING TESTING AND COMMISSIONING FOR DOUBLE TRACK ELECTRIFIED RAILWAY LINE ON DESIGN BUILD LUMP SUM BASIS FROM MUGHALSARAI TO NEW SONNAGAR AND CHIRAILAPATHU STATION (EXCLUDING NEW KARWANDIYA – NEW DURGAUTI SECTION) OF EASTERN DEDICATED FREIGHT CORRIDOR.**

### **SYSTEM WORKS CONTRACT PACKAGE**

Issued on: 20.01.2016

Invitation for Prequalification (IFP)  
IFP No.: HQ/SYS/EC/D-B/MGS-DGO & KWDN-CPBH-SEBN

**Employer:**

**DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED**

**A GOVERNMENT OF INDIA ENTERPRISE**

**under**

**MINISTRY OF RAILWAYS**

**COUNTRY: INDIA**



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## Section - I. Instructions to Applicants (ITA)

### A. General

1. Scope of Application	1.1 In connection with the Invitation for Prequalification indicated in Section II, Prequalification Data Sheet (PDS), the Employer, as defined in the <b>PDS</b> , issues this Prequalification Document (PQD) to applicants interested in bidding for the works described in Section V, Project information and Scope of Works. Other details of the tender under National Competitive Bidding (NCB) are provided in the <b>PDS</b> .
2. Source of Funds	2.1 The required funds shall be arranged by the Employer.
3. Corrupt practices	<p>3.1 It is the Employer`s policy that Applicants, suppliers, and contractors and their subcontractors, observe the highest standard of ethics during the procurement and execution of such contracts.<sup>1</sup> In pursuance of this policy, the Employer</p> <p>(a) defines, for the purposes of this provision, the terms set forth below as follows:</p> <p>(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>2</sup> ;</p> <p>(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>3</sup>;</p> <p>(iii) “collusive practice” is an arrangement between two or more parties<sup>4</sup> designed to achieve an improper purpose, including to influence improperly the actions of another party.</p> <p>(iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party<sup>5</sup> or the property of</p>

<sup>1</sup> In this context, any action taken by a Applicant, supplier, contractor, or a sub-contractor to influence the procurement process or contract execution for undue advantage is improper.

<sup>2</sup> “another party” refers to a public official acting in relation to the procurement process or contract execution. In this context, “public official” includes employees of other organizations taking or reviewing procurement decisions.

<sup>3</sup> a “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>4</sup> “parties” refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non competitive levels.

<sup>5</sup> a “party” refers to a participant in the procurement process or contract execution.

	<p>the party to influence improperly the actions of a party;</p> <p>(v) "obstructive practice" is</p> <p>(aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede an 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;</p> <p style="text-align: center;"><b>or</b></p> <p>(bb) Acts intended to materially impede the exercise of the Employer's inspection and audit rights provided for under sub-clause 3.1 (d) below.</p> <p>(b) Will reject a proposal for award if it determines that the Applicant recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question;</p> <p>(c) Will sanction a firm or individual, at any time, including by publicly declaring such firm or individual ineligible, either indefinitely or for a stated period of time, Employer if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing.</p> <p>(d) Will have the right to get the accounts , records and other documents relating to the bid submission and contract performance of the Applicants, suppliers, contractors and their sub-contractors audited by auditors appointed by the Employer.</p>
<p>4. Eligible Applicants</p>	<p>4.1 An Applicant shall be a private, public or government owned legal entity, or any combination of them in the form of Joint Venture (JV) with the formal intent, as evidenced by a letter of intent, to enter into an agreement or under an existing agreement. In the case of a JV, unless otherwise specified in the <b>PDS</b>,</p> <p>(i) all parties shall be jointly and severally liable, and</p> <p>(ii) the number of partners shall be as per PDS.</p>



	<p>4.2 The eligibility criteria listed in this Clause 4 shall apply to the Applicant, including the parties constituting the Applicant, i.e. its proposed partners, subcontractors for any part of the Contract including related services.</p>
	<p>4.3 An Applicant may have the nationality of any country. An Applicant shall be deemed to have the nationality of a country if the Applicant is a citizen, or is constituted, incorporated or registered and operates in conformity with the provisions of the laws of that country, as evidenced by its Articles of Incorporation or Documents of Constitution, and its Registration Documents.</p>
	<p>4.4 An Applicant shall not have any conflict of interest with any other party involved with the project, either as an Applicant or in any other capacity during the project formulation and developmental stage. Any Applicant (s) including all members of the Joint Venture found to have a conflict of interest shall be disqualified. Applicant(s) shall be considered to have a conflict of interest,</p> <p>(i) if they participated as a consultant in the preparation of the design or technical specifications of the Works that are the subject of this prequalification.</p> <p>(ii) Where a firm, or a firm from the same economic or financial group, in addition to consulting, also has the capability to manufacture or supply goods or to construct works, that firm, or a firm from the same economic or financial group, cannot normally be a supplier of goods or works, if it provided consulting services for the contract corresponding to this prequalification, unless it can be demonstrated that there is not a significant degree of common ownership, influence or control.</p>
	<p>4.5 An Applicant shall submit only one application in the same Prequalification process, either individually as an Applicant or as a partner of a joint venture. No Applicant can be a subcontractor while submitting an application individually or as a partner of a joint venture in the same Prequalification process. A Sub-contractor in any application may participate in more than one application, but only in that capacity. An Applicant who submits, or participates in, more than one application will cause all the applications in which the Applicant has participated to be disqualified.</p>
	<p>4.6 An Applicant that is under a declaration of ineligibility by the Employer in accordance with ITA 3, on the date of submission of the application or thereafter, shall be disqualified.</p>

	<p>4.7 Applicants and all parties constituting the Applicant shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer shall reasonably request.</p>
	<p>4.8 The Applicant shall be considered disqualified / in-eligible if:</p> <p>(a) The Applicant or any of its partners and/or subcontractors included in the application for pre-qualification has been banned for business with Ministry of Railways along with <u>any of its attached and subordinate offices through an order issued by Ministry of Railways as per list available on Web site (<a href="http://www.indianrailways.gov.in/railwayboard">http://www.indianrailways.gov.in/railwayboard</a>)</u> of Railway Board pertaining to Banning of Business, with the Banning being valid as on the last date of submission of the PQ Application.</p> <p>(b) The Applicant or any of its partners included in the application for pre-qualification has suffered bankruptcy / insolvency or it is in the process of winding-up or there is a case of insolvency pending before any Court on the deadline of submission of Application.</p>
	<p>4.9 The Applicant / each partner of the joint venture, <b>shall submit an undertaking to this effect</b> duly signed by their authorized signatory along with the Application for prequalification stating that they are not liable to be disqualified as per sub clause 4, using the appropriate Performa mutatis-mutandis given in Section IV. <b>Non submission of such an affidavit by the Applicant shall result in summary rejection of his Application.</b></p>
5. Eligible Goods and Related Services	<p>5.1 All goods and related services to be supplied under the Contract can have their origin in any country as per extant rules of Government of India in vogue.</p>

## B. Contents of the Prequalification Document

6. Sections of Prequalification Document	<p>6.1 The document for the prequalification of Applicants (hereinafter - "prequalification document") consists of parts 1 and 2 which comprise all the sections indicated below, and should be read in conjunction with any Addendum issued in accordance with ITA 8.</p> <p><b>PART 1 : Prequalification Procedures</b></p> <p style="padding-left: 40px;">Section I. Instructions to Applicants (ITA)</p> <p style="padding-left: 40px;">Section II. Prequalification Data Sheet (PDS)</p> <p style="padding-left: 40px;">Section III Qualification Criteria and Requirements</p> <p style="padding-left: 40px;">Section IV. Application Forms</p>
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	<p><b>PART 2 : Works Requirements</b> Section V - Project Information and Scope of Works</p>
	6.2 The “Invitation for Prequalification Applications” issued by the Employer is not part of the prequalification document.
	6.3 The Employer accepts no responsibility for the completeness of the prequalification document and its addenda unless they were obtained directly from the Employer.
	6.4 The Applicant is expected to examine all instructions, forms, and terms in the Prequalification Document and to furnish all information or documentation required by the Prequalification Document.
7. Clarification of Prequalification Document	<p>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 <b>PDS</b>. The clarification/query should be received at least three (3) days prior to the Pre-submission conference. DFCC response to queries will be uploaded on the DFCCIL website <a href="http://www.dfccil.gov.in">www.dfccil.gov.in</a>. 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.</p> <p>7.2 Pre submission conference : Details in PDS.</p>
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 addenda.
	8.2 Any addendum issued shall be part of the Prequalification Document and shall be communicated in writing to all who have obtained the prequalification document from the Employer.
	<p>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 application.</p> <p>Necessary information in this regard will be uploaded on DFCCIL website <a href="http://www.dfccil.gov.in">www.dfccil.gov.in</a>.</p> <p>For further details refer PDS.</p>
<b>C. Preparation of Applications</b>	
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

	<p>conduct or outcome of the prequalification process.</p> <p>9.2 The <b>cost of PQ document is Rs. 10,000/-</b> (Rs. Ten Thousand Only). The details for obtaining PQ document will be as per PDS.</p>
10. Language of Application	10.1 The PQ application, as well as all correspondence and documents relating to Prequalification by the Applicant and the Employer, shall be written in <b>English</b> . 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 pages in English as certified by the Embassy/High Commission/Consulate of Indian origin of the bidder or the Embassy / High Commission / Consulate of the country of origin of the Applicant in India. For the purpose of interpretation and evaluation of the bid, translation certified by Embassy / High Commission / Consulate shall prevail.
11. Documents Comprising the Application	11.1 The application shall comprise the following: <ul style="list-style-type: none"> <li>(a) Application Submission Form, in accordance with ITA 12;</li> <li>(b) documentary evidence establishing the Applicant's eligibility to pre-qualify, in accordance with ITA 13; and</li> <li>(c) documentary evidence establishing the Applicant's qualifications, in accordance with ITA 14.</li> </ul>
12. Application Submission Form	12.1 The Applicant shall prepare an Application Submission Form using the form furnished 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 1.1 and 1.2, included in Section IV, Application Forms.
14. Documents Establishing the Qualifications of 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.
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.

	<p>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.</p>
<p><b>D. Submission of Applications</b></p>	
<p>16. Sealing and Identification of Applications</p>	<p>16.1 The Applicant shall enclose the original and the copies of the application in a sealed envelope that shall:</p> <ul style="list-style-type: none"> <li>(a) bear the name and address of the Applicant;</li> <li>(b) be addressed to the Employer, in accordance with ITA 17.1; and</li> <li>(c) bear the specific identification of this prequalification process (IFP No.) indicated in the PDS 1.1.</li> </ul>
	<p>16.2 The Employer will accept no responsibility for not processing any envelope that was not identified as required.</p>
<p>17. Deadline for Submission of Applications</p>	<p>17.1 Applicants may always submit their applications by mail (i.e. by Post) or by hand. When so specified in the PDS, applicants shall have the option of submitting their applications electronically, in accordance with electronic application submission procedures specified in the PDS. Applications shall be received by the Employer at the address and no later than the deadline indicated in the PDS. A receipt will be given for all applications submitted.</p> <p>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.</p>
<p>18. Late Applications</p>	<p>18.1 Any application received by the Employer after the deadline for submission of applications prescribed in accordance with ITA 17 will be treated as indicated in the PDS.</p>
<p>19. Opening of Applications</p>	<p>19.1 Any specific electronic application opening procedures required if electronic submission of applications is permitted pursuant to Sub Clause 17.1 shall be as specified in the PDS. Employer shall prepare a record of the opening of applications that shall include, as a minimum, the name of the Applicant. A copy of the record shall be distributed to all Applicants.</p>

<b>E. Procedures for Evaluation of Applications</b>	
20. Confidentiality	20.1 Information relating to the evaluation of applications, and recommendation for prequalification, shall not be disclosed to Applicants or any other persons not officially concerned with such process until the notification of prequalification is made to all Applicants.
	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, may do so but only in writing. It should be as per PDS.
21. Clarification of Applications	21.1 To assist in the evaluation of applications, the Employer may, at its discretion, ask any Applicant for a clarification of its application which shall be submitted within a stated reasonable period of time. Any request for clarification and all clarifications 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. Responsive-ness of Applications	22.1 The Employer may reject any application which is not responsive to the requirements of the prequalification document.
23. Domestic Bidder Price preference	23.1 Unless otherwise specified in the PDS, a margin of preference for domestic Applicants shall not apply in the bidding process resulting from this prequalification.
24. Subcontractors	24.1 Applicants can engage the subcontractor as indicated in PDS.
<b>F. Evaluation of Applications and Prequalification of Applicants</b>	
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. The use of other methods, criteria, or requirements shall not be permitted.
	25.2 Only the qualifications of sub-contractors that have been identified in the applications may be considered in the evaluation of an applicant. However the general experience and financial resources of sub-contractors would not be added to those of the applicant for purposes of pre-qualification of the applicant.

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 Applicants.
27. Prequalification of Applicants	27.1 All Applicants whose applications have met or exceeded ("passed") the specified threshold requirements will, to the exclusion of all others, be pre-qualified by the Employer.
28. Notification of pre - qualification	28.1 Once the Employer has completed the evaluation of the applications it shall notify all Applicants in writing of the names of those applicants who have been pre-qualified.
29. Invitation to Bid	29.1 After the notification of the results of the prequalification the Employer shall invite bids from all the Applicants that have been pre-qualified.
	29.2 Applicants may be required to provide a Bid Security acceptable to the Employer in the form and 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 pre-qualified in accordance with ITA 27 and invited to bid shall be subject to a written approval of the Employer prior to the deadline for submission of bids. Such approval shall be denied if 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 if in the opinion of the Employer, a substantial reduction in competition may result. Any such changes shall be submitted to the Employer not later than 14 days after the date of the Invitation for Bids.

## Section II. Prequalification Data Sheet (PDS)

<b>A. General</b>	
<b>ITA 1.1</b>	The Employer for the Project is: <b>Dedicated Freight Corridor Corporation of India Limited</b> <b>(A Government of India Enterprise)</b> Project Officer : <b>Group General Manager/Electrical-IV/EC</b>
<b>ITA 1.1</b>	Applications are invited from interested Applicants for Prequalification of Bidders to undertake work of :  Design, Supply, Construction, Installation, of 2x25 kV Electrification, Signaling and Telecommunication and associated works including Testing and commissioning for double track electrified Railway line on Design Build Lump sum basis from Mughalsarai to New Sonnagar and Chirailpathu stations (excluding New Karwandiya – New Durgauti section) of Eastern Dedicated Freight corridor.
<b>ITA 1.1</b>	Invitation For Pre-qualification (IFP) for :  Design, Supply, Construction, Installation, of 2x25 kV Electrification, Signaling and Telecommunication and associated works including Testing and commissioning for double track electrified Railway line on Design Build Lump sum basis from Mughalsarai to New Sonnagar and Chirailpathu stations (excluding New Karwandiya – New Durgauti section) of Eastern Dedicated Freight corridor.  IFP No: HQ/SYS/EC/D-B/ MGS-DGO & KWDN-CPBH-SEBN
<b>ITA 4.1</b>	In the case of applicant being joint venture following conditions will apply :  i) Separate identity/name shall be given to the Joint Venture Firm. ii) Maximum number of partners in the JV shall be limited to 4 (Four). iii) One of the members of the JV firms satisfying technical eligibility criteria for any of the component of the works and having majority share (51% or more) in the JV shall be nominated as the lead member of the JV. The other members shall have a share of not less than 20% each in case of JV having up to three members and not less than 10% each in case of JV having more than three members. iv) In case of JV firm with foreign member(s), the lead member has to be an Indian firm with a minimum share of 51%. v) Applicants from an eligible country may be excluded if as a matter of law or official regulations the Government of India (GOI) prohibits commercial relations with the country. vi) Only letter of intent to form JV, signed by all parties, is required at this stage.



	<p>vii) <u>Joint And Several Liability</u> - Members of the JV Firm to which the contract is awarded, shall be jointly and severally liable to the Employer (DFCCIL) for execution of the project in accordance with General and Special Conditions of Contract. The JV members shall also be liable jointly and severally for the loss, damages caused to the DFCCIL during the course of execution of the contract or due to non-execution of the contract or part thereof.</p> <p>viii) <u>Duration of the Joint Venture Agreement</u> - shall be valid during the entire currency of the contract including the period of extension, if any and the defect liability period after the work is completed.</p> <p>ix) <u>Governing Laws</u> - The Joint Venture Agreement shall in all respect be governed by and interpreted in accordance with Indian Laws.</p> <p>x) The JV shall nominate a representative (from lead partner only) who shall have the authority to conduct all business for and on behalf of JV during the pre-qualification process and subsequent stages.</p> <p>xi) Value/Length of a completed work done by a member in an earlier JV firm shall be reckoned only to the extent of the concerned member's share in that JV firm for the purpose of satisfying his/her compliance to the technical eligibility criteria in the tender under consideration.</p> <p>xii) Contractual payment received by a member in an earlier JV firm shall be reckoned only to the extent of the concerned member's share in that JV firm for the purpose of satisfying compliance of the financial eligibility criteria in tender under consideration.</p> <p>xiii) In addition to above the following will be conditions of JV which will be part of the Bid document. However, these conditions are given below for information and guidance.</p> <p>a) <b>Normally Earnest Money Deposit (EMD) shall be submitted only in the name of Employer "Dedicated Freight Corridor Corporation of India Limited" A/c JV Firm and not in the name of constituent member. However, in exceptional cases EMD in the name of Employer "Dedicated Freight Corridor Corporation of India Limited" A/c Lead Member can be accepted subject to giving written confirmation from JV members to the effect, that EMD submitted by the Lead Member may be deemed as EMD submitted by JV Firm.</b></p> <p>b) A copy of Memorandum of Understanding (MOU) executed by the JV members shall be submitted by the JV Firm alongwith the Tender. The complete details of the members of the JV firm, their share and responsibility in the JV firm etc. particularly with reference to financial, technical and other obligations shall be furnished in the MOU.</p> <p>c) Once the tender is submitted, the MOU shall not be modified / altered / terminated during the validity of the tender. In case the tenderer fails to observe/comply with this stipulation, the full</p>
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	<p>Earnest Money Deposit (EMD) shall be liable to be forfeited.</p> <p>d) Approval for change of constitution of JV Firm shall be at the sole discretion of the Employer (DFCCIL). The constitution of the JV Firm shall not be allowed to be modified after submission of the tender by the JV Firm, except when modification becomes inevitable due to succession laws etc. and in any case the minimum eligibility criteria should not get vitiated. However, the Lead Member shall continue to be the Lead Member of the JV Firm. Failure to observe this requirement would render the offer invalid.</p> <p>e) Similarly, after, the contract is awarded, the constitution of JV Firm shall not be allowed to be altered during the currency of contract except when modification become inevitable due to succession laws etc. and in any case the minimum eligibility criteria should not get vitiated. Failure to observe this stipulation shall be deemed to be breach of contract with all consequential penal action as per contract conditions.</p> <p>f) On award of contract to a JV Firm, a Performance Guarantee shall be submitted by the JV Firm as per tender conditions. <b>All the Guarantees like Performance Guarantee, Bank Guarantee for Mobilization Advance, etc. shall be accepted only in the name of Employer “Dedicated Freight Corridor Corporation of India Limited” A/c JV Firm and no splitting of guarantees amongst the members of the JV Firm shall be permitted.</b></p> <p>g) On issue of LOA (Letter Of Acceptance), an agreement among the members of the JV Firm (to whom the work has been awarded) shall be executed and got registered before the Registrar of the Companies under Companies Act or before the Registrar/Sub-Registrar under the Registration Act, 1908. This JV Agreement shall be submitted by the JV Firm to the DFCCIL before signing the contract agreement for the work. In case the tenderer fails to observe/comply with this stipulation, the full Earnest Money Deposit (EMD) shall be forfeited and other penal actions due shall be taken against partners of the JV and the JV.</p> <p>h) No member of the Joint Venture Firm shall have the right to assign or transfer the interest right or liability in the contract without the <i>written</i> consent of the other members and that of the employer (DFCCIL) in respect of the said tender/<i>contract</i>.</p> <p>i) <i>In case</i> one or more of the members of the JV Firm is/are partnership firm(s), following documents shall be submitted :</p> <p>(i) Notary certified copy of the Partnership Deed</p> <p>(ii) <i>Consent of</i> all the partners to enter into the Joint Venture /Agreement on a stamp paper of appropriate value (in original).</p> <p>(iii) Power of Attorney (duly registered as per prevailing law) in</p>
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	<p>favour of one of the partners of the partnership firm to sign the JV Agreement on behalf of the partnership firm and create liability against the firm.</p> <p>j) In case one or more members is/are Proprietary Firm or HUF, the following documents shall be <i>enclosed</i> :</p> <p>Affidavit on Stamp Paper of appropriate value declaring that his/her Concern is a Proprietary Concern and he/she is sole proprietor of the Concern OR he/she is in position of "KARTA" of Hindu Undivided Family (HUF) and he/she has the authority, power and consent given by other partners to act on behalf of HUF.</p> <p>k) In case one or more members is/are limited companies, the following documents shall be submitted :</p> <p>(i) Notary certified copy of resolutions of the Directors of the Company, permitting the company to enter into JV agreement, authorizing MD or one of the Directors or Managers of the Company to sign JV Agreement, such other documents required to be <i>signed</i> on behalf of the Company and enter into liability against the company and/or do any other act on behalf of the company.</p> <p>(ii) Copy of Memorandum and Articles of Association of the Company.</p> <p>(iii) Power of Attorney (duly registered as per prevailing law) by the Company authorizing the person to do/act mentioned in the sub-para (k)(i) above.</p>
ITA 4.3	<b>In case of single entity, the applicant should be Indian firm.</b> In case of JV, the conditions described in PDS at para-ITA 4.1 shall apply.
<b>B. Contents of the Prequalification Document</b>	
ITA 7.1	<p>All communication between the Employer and the Applicant shall be in writing. For the purposes of seeking clarification, the Employer's address is:</p> <p><b>Dedicated Freight Corridor Corporation of India Limited,</b>  Attention : Mr. Sanjay Kumar Gupta  Designation : Group General Manager/EL-IV/ EC  Address : Room # 436; 4<sup>th</sup> Floor Pragati Maidan Metro Station  Building Complex , New Delhi - 110001, India  Telephone : +91 - 11 - 23370526,  Facsimile number : +91 - 11 - 23454701  Electronic mail address : sanjaykgupta@dfcc.co.in</p>
ITA 7.2	<b>Pre-submission Conference:</b> A pre-submission conference will be held to clarify the issues related to this Pre-qualification document on the date, time and venue of the Pre-submission conference indicated

	<p>below. Applicants should give their quarries in writing well in advance before pre-submission Conference. All interested Applicants may attend the Pre-submission Conference. DFCC response to quarries will be posted on the DFCCIL's website. Non-attendance at the pre-submission conference will not be a cause for disqualification of the Applicant.</p> <p><b>Date : 16.02.2016 Time: 11:00 Hrs.</b></p> <p><b>Venue :</b> Conference Room, Dedicated Freight Corridor Corporation of India Limited, 4<sup>th</sup> Floor, Pragati Maidan Metro Station Building Complex, New Delhi-110001.</p> <p>Website of DFCC : <a href="http://www.dfccil.gov.in">www.dfccil.gov.in</a></p>
<b>ITA 8.3</b>	<p>DFCCIL may issue addendum(s)/corrigendum(s) to the PQ documents. In such case, the addendum(s)/corrigendum(s) shall be issued and placed on DFCCIL website at least seven days in advance of date fixed for submission of PQ applications. The Applicants must visit DFCCIL website and ensure that such addendum (s)/corrigendum (s) (if any) is also downloaded by them. Such addendum(s)/corrigendum(s) (if any) shall also be submitted, duly stamped and signed, along with the submission of the PQ application. Any Application submitted without addendum(s)/ corrigendum(s) (if any) shall be summarily rejected.</p>
<b>C. Preparation of Applications</b>	
<b>ITA 9.2</b>	<p>The interested applicant may purchase the PQ document from the address given in PDS Para 7.1 between 10:00 hrs to 17:00 hrs. on all working days from 21.01.2016 to <b>18.03.2016</b> on payment of <b>non-refundable cost of Rs.10,000/-</b> in the form of DD/Banker's Cheque issued by SBI or any other nationalized bank or schedule bank of India in favour of <b>“Dedicated Freight Corridor Corporation of India Limited”, payable at Delhi/New Delhi.</b> Prequalification document requested by Post will be dispatched by Registered/Speed post/Courier on payment of an extra amount of Rs. 500/- (Rs. Five Hundred only). DFCCIL will not be held responsible for postal delay if any, in the delivery of the PQ document or non-receipt of the same. Alternatively prospective applicant can download the PQ document from DFCCIL website (<a href="http://www.dfccil.gov.in">www.dfccil.gov.in</a>). <b>In case of downloaded application</b> an account payee DD/Banker's Cheque issued by SBI or any other nationalized bank or schedule bank of India amounting to Rs. 10,000/- in favour of Dedicated Freight Corridor Corporation of India Ltd., Payable at Delhi/New Delhi has to be attached with the PQ application.</p> <p>In case of JV the <i>PQ application</i> form can be purchased in the name of JV / any constituent member of JV but the application to be submitted only in the name of the JV Firm.</p>
<b>ITA 10.1</b>	<p>The language of the application as well as of all correspondence is <b>English.</b></p>

ITA 14.1	The applicant shall submit the certificates from the Clients/TDS certificate/Audited balance sheet duly attested by notary and/or Photostat of original certificates of client/ TDS certificate/Audited balance sheet duly attested by notary for each contract included in Section IV: Form FIN – 2.1, Form EXP 3.1 and 3.2.
ITA 15.1	Authorization is required to be submitted :- (1) By the partners of JV in favour of their authorized representatives. (2) By the above representatives of JV partners in favour of the representative of Applicant (Lead member of JV) submitting the application on their behalf.
ITA 15.2	In addition to the original (hard bound), the number of hard bound copies to be submitted with the application is : Two Each page of the application shall be Serially numbered and indexed.  One copy in digital - Read Only Diskette/CD/DVD shall also be submitted.
<b>D. Submission of Applications</b>	
ITA 17.1	<b>Applicants shall not have the option of submitting their applications electronically.</b> Applications submitted electronically will not be accepted and shall be rejected by the Employer. For application submission purposes only, the Employer's address is the same as that indicated as per ITA 7.1 above.  <b>Deadline of Submission of PQ Application : Upto 15:00 hrs. of 18.03.2016</b> <b>Date of Opening of PQ Application : 15:30 hrs. of 18.03.2016</b>
ITA 18.1	Applications received after deadline for submission of applications will be returned unopened to the Applicants.
<b>E. Procedures for Evaluation of Applications</b>	
ITA 20.2	After the deadline for submission of applications to the time of notification of the results of the pre-qualification in accordance with ITA 28, Applicant is not allowed to modify / supplement or change any information which has a material effect on his qualification status.
ITA 23.1	The margin of preference <b>shall not</b> apply for domestic Applicants
ITA 24.1	(1) Applicants planning to sub-contract any of the component of the work indicated in section III, Qualification Criteria, shall specify the activity(ies) or parts of the works to be sub-contracted in the Application submission Form. Applicants shall clearly identify the proposed specialist subcontractors in Forms ELI-1.2 and experience in EXP (Experience)-3.1 and EXP 3.2 in Section IV. Such proposed specialist sub-contractor(s) shall meet the corresponding qualification requirement specified in Section III, Qualification Criteria and Requirements.  (2) For all other components and activities not covered in Section III,

	<p>Qualification Criteria, the applicant may engage a sub-contractor for a part of the works under this Contract provided that –</p> <p>a) The names of all sub-contractors proposed to be employed for execution of work or any part thereof including manufacturing of components and fittings shall be submitted by the Contractor to the Employer/Engineer and got approved by him before the Contractor enters into an agreement with the Sub-Contractor for the purpose.</p> <p>b) The Contractor shall arrange the effective supervision of Sub-Contractor’s work and remain solely responsible for materials supplied and for works carried out on his behalf by the Sub Contractors”.</p>
<p><b>F. Evaluation of applications and prequalification of applicants</b></p>	
<p><b>ITA 25.1</b></p>	<p>The Financial Performance and Experience of Associates, Parent Companies or Sister Companies shall not be considered unless they are part of JV.</p>
<p><b>ITA 29.1</b></p>	<p>Applicants are advised that the following description of bidding process is only a summary of information. Prequalified bidders shall be guided by the detailed provisions of the bidding documents after they have been made available to them.</p> <p>Pre-qualified Bidders (Applicants) will be invited to submit their proposal i.e. Technical and Financial Bids in separate packets, marked so clearly. Technical bids shall be in response to the performance/ technical specifications for the project included in the bid document. 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. Financial bid shall contain only the information as described in the bidding documents.</p> <p>The scope of works mentioned in the works requirement section – V is indicative and full details shall be made available in the Employer’s requirement in the bidding documents.</p> <p>Prior to submission of bids the Employer may conduct clarification meetings with the Bidders to clarify any aspects of its Technical bid that require explanation and to review any queries/ suggestions of Bidder regarding commercial or contractual provisions of the bidding documents.</p> <p>The Employer will examine and carry out a detailed evaluation of the Technical bids to determine whether they are responsive or not. Responsive proposals are those proposals in which the technical documents are complete, properly signed by authorized representative, in order and in compliance to the performance/ technical specifications or other criteria specified in the bidding document.</p> <p>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.</p>

	<p>The Financial Bid packets of such bidders will be returned to them unopened.</p> <p>Financial bids of Technically responsive proposals will only be opened and evaluated.</p> <p>Evaluation of bid: All bids shall be received by the same deadline and opened and evaluated simultaneously so as to determine the lowest eligible financial offer.</p>
<p><b>ITA 30.1</b></p>	<p><b>Joint Venture:</b> After pre-qualification the Bidders are not allowed to form Joint Venture with other Bidders.</p>

## **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.

### **Contents**

- 1.0 General**
- 2.0 Qualification Criteria and Requirements**



## 1.0 General:-

- (1) For the purposes of conversion of foreign currency to Indian Rupees (INR) the Bank Currency (BC) selling exchange rate as published by State Bank of India on the date 28 days prior to last date of submission of application shall be used. For few of the currencies where BC selling rates are not published by SBI or Reserve Bank of India, the exchange rate may be obtained from the web site—<http://www.oanda.com/currency/historical-rates> or <http://www.xe.com/ict/>.
- (2) For the purpose of evaluation of proposals, all values given in INR in Eligibility and Qualification Criteria and the values provided by the applicants in their PQ proposals in the currency other than INR shall be converted into one currency i.e. INR as per exchange rate mentioned in note (1) above.
- (3) Completion certificate from Govt. Organization/PSUs/Public Limited Company(s) only will be accepted. The certificate from Private individual/Private Company for whom such works are executed shall not be accepted. In case, the work is executed for Public Limited Company, copy of work order, Bill of Quantity, TDS certificate for all payments received and copy of final/last bill paid by client shall be submitted.
- (4) Applicants while identifying the proposed specialist sub-contractors shall suggest name of only one sub-contractor instead of multiple sub-contractors for similar activity.
- (5) (i) Following components of the work shall be considered for determination of a Joint Venture (JV) firm:
  - a) 25 kV / 2x25 kV Over Head Equipment on Railway / Metro Rail/ Suburban rail transit system
  - b) Sub-station of 110 kV or above.
  - c) Signaling on Railway/Metro Rail /Suburban rail transit system.(ii) However, specialized sub-contractors are permitted in the following components / activities of work:
  - a) SCADA for traction application / power utilities with Design, supply, installation, testing & commissioning of system.
  - b) Designing of 25 kV / 2x25 KV Over Head Equipment on Railway/ Metro Rail/Suburban rail transit system.
  - c) Designing of a 2x25 kV traction sub-station (TSS), SP & SSP on Railway/Metro Rail/Suburban rail transit system.
  - d) Telecommunication works involving optic fiber network on Railway/Metro Rail/Suburban rail transit system.
  - e) Designing of signaling system involving electronic interlocking and automatic block signaling on Railway/Metro Rail/Suburban rail transit system.
  - f) Designing optic fiber based telecommunication network involving SDH Add-Drop nodes.
  - g) Train Management systems.

- (6) In support of Form FIN 2.1 (Section IV) against eligibility criteria 2.1 the applicants must submit
- Certificate from client showing the details of payment received in a particular financial year, duly attested by Notary.
- and/or**
- TDS certificate/the audited balance sheets and/or Photostat of TDS certificates/the audited balance sheets clearly indicating the contractual amount received.  
All documents, either original copy or Photostat should be duly attested by Notary.
- (7) For Forms Exp 3.1 and 3.2 (Section IV)
- Self declared quantities/values are not acceptable.
  - The applicant shall submit the completion certificates/ certified completion certificates from the client(s) and/or Photostat of original certificates of client (s). All documents, either original copy or photocopy should be duly attested by Notary.
  - Completion certificate from Govt. Organisation/PSUs/Public Limited Company(s) only will be accepted. **The certificate from Private individual/Private Company for whom such works are executed shall not be accepted.** In case, the work is executed for Public Limited Company, copy of work order, Bill of Quantity, TDS certificate for all payments received and copy of final/last bill paid by client shall be submitted.
  - Value/Length of a completed work done by a member in an earlier JV firm shall be reckoned only to the extent of the concerned member's share in that JV firm for the purpose of satisfying his/her compliance to the technical eligibility criteria in the tender under consideration.
- (8) Contractual payment received by a member in an earlier JV firm shall be reckoned only to the extent of the concerned member's share in that JV firm for the purpose of satisfying compliance of the financial eligibility criteria in tender under consideration.
- (9) In case the applicant is a partnership firm, the construction experience and contractual payments received shall be in the name of partnership firm only.

## 2.0 Qualification Criteria and Requirements

Sub- Clause No.	Subject	Eligibility and Qualification Criteria		Compliance Requirements		Documentation
		Requirement	Single Entity	Joint Venture		Submission Requirements
				All parties combined	Each Partner	
<b>1. Eligibility</b>						
1.1	<b>Nationality</b>	Nationality in accordance with ITA Sub-Clause 4.3 and as specified in PDS.	Must meet requirement	Must meet requirement for JV	Must meet requirement	Forms ELI – 1.1 & 1.2 , with attachments
1.2	<b>Conflict of Interest</b>	No conflicts of interest in ITA Sub-Clause 4.2 & 4.4	Must meet requirement	Must meet requirement	Must meet requirement	Form ELI -1.0 and 1.0 (a) Application Submission Form and affidavits
1.3	<b>Ineligibility</b>	Not having been declared ineligible by the Employer, as described in ITA Clause 4.6 and 4.8	Must meet requirement	Must meet requirement	Must meet requirement	Form ELI -1.0 and 1.0 (a) Application Submission Form and affidavits
<b>2. Financial Performance</b>						
2.1	<b>Financial Eligibility Criteria</b>	The contractual payments received by the applicant / JV firm or the arithmetic sum of contractual payments received by all the members of the JV firm in the <b>previous three financial year and the current financial year</b> up to the date of submission of application shall be at least <b>Rs. 527 Crores</b> (Rupees Five hundred Twenty Seven Crores).	Must meet requirement	Must meet requirement		Form FIN – 2.1 with attachments

Sub-Clause No.	Subject	Requirement	Single Entity	Joint Venture	Submission Requirements
<b>3. Technical Eligibility Criteria</b>					
3.1 (a)	Similar Construction Experience	<p>(i) The applicant/JV Firm or lead member of the JV firm must have satisfactorily completed in the last five previous financial years and the current financial year up to the date of submission of application at least one single work for a minimum value of Rs. 123 (One Hundred Twenty Three) Cr. and involving all components mentioned below:-</p> <p><b>a)</b> 25 kV/2x25 kV Over head Equipment on Railway/ Metro Rail/ Suburban Rail transit system.</p> <p><b>b)</b> Sub-station of 110 kV or above.</p> <p><b>c)</b> Signaling on Railway/Metro Rail/Suburban Rail transit system.</p> <p style="text-align: center;"><b>OR</b></p> <p>(ii) The applicant/JV firm or any member of the JV firm must have satisfactorily completed the following works in the last five previous financial years and the current financial year up to the date of submission of application:-</p> <p><b>a)</b> At least One contract having value of at least Rs. 25 (Twenty Five) Cr. of 25kV/2x25kV Over Head Equipment works of Railway/Metro Rail/Suburban Rail transit system.</p> <p style="text-align: center;"><b>And</b></p> <p><b>b)</b> At least one contract having value of at least Rs.25 (Twenty Five) Cr. of sub-station (of 110 kV or above works</p>	Must Meet requirement	Existing JV - Must Meet requirement  Or Lead Member of proposed JV - Must Meet Requirement	Form EXP – 3.1 with attachments
			Must Meet requirement	Existing JV - Must Meet requirement  Or One Member of proposed JV - Must Meet Requirement	
			Must Meet requirement	Existing JV - Must Meet requirement  Or	

Sub-Clause No.	Subject	Requirement	Single Entity	Joint Venture	Submission Requirements
		<p style="text-align: center;"><b>And</b></p> <p>c) At least one contract having value of at least Rs. 34 (Thirty Four) Cr. of signaling works on Railways/ Metro Rail/Suburban Rail transit systems.</p> <p style="text-align: center;"><b>And</b></p> <p>d) Aggregate value as a resultant of above (a), (b) and (c) must be at least Rs. 123 crore.</p>	<p>Must Meet requirement</p>             <p>Must Meet requirement</p>	<p>One Member of proposed JV - Must Meet Requirement</p>  <p>Existing JV - Must Meet requirement Or One Member of proposed JV - Must Meet Requirement</p>    <p>Existing JV - Must Meet requirement Or One Member of proposed JV - Must Meet Requirement</p>	
3.1 (b)	Similar construction Experience	(i) The applicant/JV firm or any member of the JV firm or Specialist Sub-contractor must have satisfactorily completed in the last five previous financial years and the current financial year up to the date of submission of application at least one contract having value of at least Rs. 79 (Seventy Nine) Lacs of SCADA including one Operational Control Center (OCC) or remote control centre (RCC) for traction application/Power utilities with design ,supply, installation, testing and commissioning of system.	<p>Must meet requirement</p> <p>or</p> <p>can be a Specialist sub-contractor</p>	<p>Must meet requirement</p> <p>or</p> <p>one member must meet requirement</p> <p>or</p> <p>can be a Specialist sub-contractor</p>	Form Exp 3.1

Sub- Clause No.	Subject	Requirement	Single Entity	Joint Venture	Submission Requirements
		<p>(ii) The applicant/JV Firm or any member of the JV firm or specialist sub-Contractor must have satisfactorily completed in the last five previous financial years and the current financial year up to the date of submission of application at least one single work having value of at least Rs. 16 (Sixteen) Cr. of Telecommunication works involving Train Management System (TMS)/Centralized Train Control system (CTCS)/Optic Fiber network on Railway/Metro Rail/Suburban Rail transit system.</p> <p><b>Note:-</b> Contracts where the JV members was an OEM and designed, Manufactured, tested and commissioned Train Management System (TMS)/Centralized Train Control system (CTCS) based system will also be considered.</p>	<p>Must meet requirement <b>or</b> can be a Specialist sub-contractor</p>	<p>Must meet requirement <b>or</b> one member must meet requirement <b>or</b> can be a Specialist sub-contractor</p>	
3.2	Design Experience	Successful completion of the following key design activities as a Design consultant or in-house Designer in the last five previous financial years and the current financial year up to the date of submission of application:			Form EXP 3.2
		(i) Detailed designing of 25kV/2x25kV over Head equipment for a minimum length of 20 TKM in at least one completed work on Railway/Metro Rail/Suburban Rail transit system.	<p>Must meet requirement <b>or</b> Can be a Specialist sub-contractor</p>	<p>Must meet requirement <b>or</b> one member must meet requirement <b>or</b> can be a Specialist sub-contractor</p>	

Sub- Clause No.	Subject	Requirement	Single Entity	Joint Venture	Submission Requirements
		(ii) Detailed designing of minimum 01 TSS in at least one completed work for 2x25 kV system on Railway/Metro Rail/Suburban Rail transit system.	Must meet requirement  or can be a Specialist sub-contractor.	Must meet requirement  or one member must meet requirement  or can be a Specialist sub-contractor	
		(iii) Detailed designing of signaling system involving Electronic interlocking, track vacancy detection, power supply arrangements, track side signal, point machines for Automatic Block Signaling for a minimum length of 20 TKM in at least one completed work on Railways/ Metro Rail/ Suburban Rail transit.  <b>Note:-</b> Contracts where the JV members was an OEM and designed, Manufactured, tested and commissioned the signaling processor based equipment will also be considered.	Must meet requirement  or can be a Specialist sub-contractor.	Must meet requirement  or one member must meet requirement  or can be a Specialist sub-contractor	
		(iv) Detailed designing of Optic Fiber based Telecommunication Network involving SDH Add-drop Nodes for a minimum length of 20 RKM in at least one completed work on Railways/ Metro Rail/ Suburban Rail transit.	Must meet requirement  or can be a Specialist sub-contractor.	Must meet requirement  or one member must meet requirement  or can be a Specialist sub-contractor	

Sub- Clause No.	Subject	Requirement	Single Entity	Joint Venture	Submission Requirements
		(v) Detailed Designing of Train management system (TMS)/Centralized traffic control system (CTCS) comprising of minimum of 4 stations on Railways/ Metro Rail/ Suburban Rail transit.	Must meet requirement  or can be a Specialist sub-contractor.	Must meet requirement  or one member must meet requirement  or can be a Specialist sub-contractor	

XXXXXX-XXXXXX



## **Section IV. Application Forms**

### **Table of Forms**

Application Submission Form

Applicant Information Form

Applicant's Party Information Form

Financial Eligibility Criteria details

Similar Construction Experience

Design Experience

## Form ELI -1.0

### Application Submission Form

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

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

To: *[insert full name of Employer]*

We, the undersigned, apply to be pre-qualified for the referenced IFP and declare that:

- (a) We have examined and have no reservations to the Prequalification Documents, including Addendum(s) No(s)., issued in accordance with Instructions to Applicants (ITA) Clause 8: *[insert the number and issuing date of each addendum]*.
- (b) We shall be jointly and severally liable to the Employer (DFCCIL) for execution of the project in accordance with General and Special Conditions of Contract. The JV members shall also be liable jointly and severally for the loss, damages caused to the DFCCIL during the course of execution of the contract or due to non-execution of the contract or part thereof in accordance with ITA 4.1.
- (c) We, including any sub-contractor for any part of the contractor resulting from this pre-qualification process, have eligible nationality of a country, in accordance with ITA Sub-Clause 4.3: *[insert the nationality of the Applicant, including that of all partners in case of a Joint Venture, and the nationality of each already identified subcontractor of related services, if applicable]*;
- (d) We, including any sub-contractor for any part of the contract resulting from this pre-qualification, do not have any conflict of interest, in accordance with ITA Sub-Clause 4.4;
- (e) We, including any sub-contractor for any part of the contract resulting from this pre-qualification have not been declared ineligible by the Employer in accordance with ITA Sub-Clauses 4.6.
- (f) We, including any sub-contractor have not been blacklisted / banned in accordance with ITA Sub Clause 4.8.
- (g) We, including any sub- contractor is neither Bankrupt/Insolvent nor is in the process of winding up nor there is a case pending before any court on the deadline of submission of the Application in Accordance with ITA Sub-Clause 4.8.
- (h) We, in accordance with ITA Sub clause 24.1, 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) which the Applicant intends to subcontract]*
- (i) 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 in local currency and equivalent INR]</i>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

*[If none has been paid or is to be paid, indicate "none".]*

- (j) 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 pre-qualified applicants to bid for the contract subject of this prequalification, without incurring any liability to the Applicants, in accordance with ITA Clause 26.

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

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

**Form ELI 1.0 (a)**  
[ refer: ITA sub clause 4.9 ]

**FORMAT FOR AFFIDAVIT TO BE SUBMITTED BY APPLICANT ALONGWITH THE APPLICATION**

*(To be executed in presence of Public Notary on non-judicial stamp paper of the appropriate value in accordance with relevant stamp Act. The stamp paper has to be in the name of the Applicant(s))*

I ..... (Name and designation)\*..... appointed as the attorney / authorized signatory of the Applicant (including its constituents), M/s. \_\_\_\_\_ (hereinafter called the Applicant ) for the purpose of the Application for the work of \_\_\_\_\_ as per the IFP No. \_\_\_\_\_ of DFCCIL, do hereby solemnly affirm and state on behalf of the Applicant including its constituents as under:

1. That the Applicant or any of its constituents including any sub-contractor have no reservations to the Prequalification Documents, including Addendum(s) No(s), issued in accordance with instructions to Applicant (ITA) clause 8: *(Insert the number and issuing date of each addendum)*.
2. That the applicant or any of its constituents shall be jointly and severely liable to the Employer (DFCCIL) for execution of the project in accordance with General and Special Conditions of Contract. The JV member shall also be liable jointly and severely for the loss, damages caused to the DFCCIL during the course of execution of the contract or due to non-execution of the contract or part thereof in accordance with ITA 4.1.
3. That the applicant or any of its constituents including any sub-contractor for any part of the contract resulting from this prequalification process, have eligible nationality of a country, in accordance with ITA Sub-clause 4.3: *(insert the nationality of the Applicant, including that of all partners in case of a Joint Venture, and the nationality of each already identified subcontractor of related services, if applicable)*;
4. That the applicant or any of its constituents including any sub-contractor for any part of the contract resulting from this prequalification process do not have any conflict of interest, in accordance with Sub-Clause 4.4;
5. That the applicant or any of its constituents including any sub-contractor for any part of the contract resulting from this prequalification process have not been declared ineligible by the Employer in accordance with ITA Sub-clause 4.6.
6. That the applicant or any of its constituents including any sub-contractor have not been banned in accordance with ITA Sub-Clause 4.8.

7. That Applicant or any of its constituents including any sub-contractor is neither Bankrupt/Insolvent nor is in the process of winding-up nor there is a case of pending before any Court on the deadline of submission of the Application in accordance with ITA Sub Clause 4.8.
8. That Applicant or any of its constituents including any sub-contractor declare and certify that they have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
9. That Applicant or any of its constituents including any sub-contractor declare that the information and documents submitted along with the application by us are correct and we are fully responsible for the correctness of the information and documents, submitted by us.
10. That Applicant or any of its constituents including any sub-contractor also understand that if the contents of the affidavit are found to be false at any time after the award of the contract it will lead to termination of the contract, forfeiture of Bid or Performance Security and blacklisted from any award of any future contract for a period of five years from the deadline for submission of the Application.

SEAL AND SIGNATURE OF THE APPLICANT

Verification:

Verified on \_\_\_\_\_ day of \_\_\_\_\_ at \_\_\_\_\_ that the contents of the above mentioned affidavit are true and correct and nothing material has been concealed there from.

SEAL AND SIGNATURE OF THE APPLICANT

\* *The contents in Italics are only for guidance purpose and details as appropriate, are to be filled in suitably by Applicant.*

*Attestation before Magistrate/Public Notary*

## Form ELI -1.1 Applicant Information Form

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

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

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

Applicant's legal name <i>[insert full legal name]</i>
In case of Joint Venture (JV), legal name of each partner: <i>[insert full legal name of each partner in JV]</i>
Applicant's Actual or Intended country of constitution: <i>[indicate country of Constitution]</i>
Applicant's actual or Intended year of constitution: <i>[indicate year of Constitution]</i>
Applicant's legal address in country of constitution: <i>[insert street/ number/ town or city/ country]</i>
Applicant's authorized representative information Name: <i>[insert full legal 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>
Attached are copies of original documents of <input type="checkbox"/> Articles of Incorporation or Documents of Constitution, and documents of registration of the legal entity named above, in accordance with ITA 4.3. <input type="checkbox"/> In case of JV, letter of intent to form JV.

Note: - This form is required to be filled by Applicant/JV firm giving details of Applicant/JV firm.

**Form ELI -1.2  
Applicant's Party Information Form**

*[The following form shall be filled in for the Applicant's parties including partner(s) of a joint venture, subcontractors]*

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

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

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

<p>JV applicant/specialist sub-contractor legal name: <i>[insert full legal name of Applicant's Party]</i></p>
<p>JV applicant/specialist sub-contractor country of registration: <i>[indicate country of registration]</i></p>
<p>JV applicant/specialist sub-contractor year of constitution: <i>[indicate year of constitution]</i></p>
<p>JV applicant/specialist sub-contractor legal address in country of constitution: <i>[insert street/ number/ town or city/ country]</i></p>
<p>JV applicant/specialist sub-contractor authorized representative information                  Name: <i>[insert full legal 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></p>
<p>Attached are copies of original documents of  <input type="checkbox"/> Articles of Incorporation or Documents of Constitution, and Registration                  Documents of the legal entity named above, in accordance with ITA 4.3.</p>

Note: - Separate ELI 1.2 form is required for all individual participants in the JV as well as sub-contractors.

**Form FIN - 2.1  
Financial Eligibility Criteria Details**

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

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

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

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

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

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

<b>Contractual Payments Received</b>		
<b>Year</b> ( Financial year to be indicated by Applicant )	<b>Amount and Currency</b>	<b>Equivalent INR</b>
Current Year (2015-16)	<i>[insert amount and indicate currency]</i>	<i>[insert amount in INR equiv.]</i>
Year 1 (2014-15)		
Year 2 (2013-14)		
Year 3 (2012-13)		
<b>Total Contractual Payment</b>		

**Note : In support of above please provide documents as detailed in Section-III 1.0 General Sub-para (5).**



### Form EXP - 3.1 Similar Construction Experience

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

The applicant or member of JV or specialized sub-contractor must complete the information in this form as per Section III, 2.0 Qualification Criteria and Requirements, Sub-clause 3.1.

Contract No. <i>[insert number] of [insert number of similar contracts required]</i>	Information	
Contract Identification	<i>[insert contract name and number, if applicable]</i>	
Award date	<i>[insert day, month, year, e.g., 3 June, 2012]</i>	
Completion date	<i>[insert day, month, year, e.g., 3 Oct, 2014]</i>	
Role in Contract	As Contractor/specialist sub-contractor	
Total Contract Amount	<i>[insert total contract amount in the currency as given in the contract]</i>	<i>[insert Total contract amount in equivalent INR]</i>
If member in a JV/Specialist sub contractor, specify participation in total contract amount as per section III	<i>Insert amount in the currency as given in the contract</i>	<i>[insert amount in INR equivalent]</i>
Employer's Name:	<i>[insert full name]</i>	
Address: Telephone/fax number E-mail:	<i>[indicate street / number / town or city / country] [insert telephone/fax numbers, including country and city area codes] [insert e-mail address, if available]</i>	

### Component No. One

Similar Contract No.	<i>[insert number] of [insert number of similar contracts required]</i>
Description of the similarity for Sub-Factor 3.1(a)(i) of Section III:	<i>[insert information]</i>
1. Amount	<i>[insert amount in the currency as given in the contract and equivalent INR in words and in Figures]</i>
2. Physical size	<i>[insert physical size of activities]</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. Other Characteristics	<i>[insert other characteristics as described in Section V, Scope of Works]</i>
<b><u>OR</u></b>	

Description of the similarity for Sub-Factor 3.1(a)(ii) of Section III:	<i>[insert information]</i>
<b>For OHE Work</b>	
1. Amount	<i>[insert amount in the currency as given in the contract and equivalent INR in words and in Figures]</i>
2. Physical size	<i>[insert physical size of activities]</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. Other Characteristics	<i>[insert other characteristics as described in Section V, Scope of Works]</i>
<b>For Sub-station Work</b>	
1. Amount	<i>[insert amount in the currency as given in the contract and equivalent INR in words and in Figures]</i>
2. Physical size	<i>[insert physical size of activities]</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. Other Characteristics	<i>[insert other characteristics as described in Section V, Scope of Works]</i>
<b>For Signalling Work</b>	
1. Amount	<i>[insert amount in the currency as given in the contract and equivalent INR in words and in Figures]</i>
2. Physical size	<i>[insert physical size of activities]</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. Other Characteristics	<i>[insert other characteristics as described in Section V, Scope of Works]</i>

**Component No. Two**

<b>Similar Contract No.</b>	<i>[insert number] of [insert number of similar contracts required]</i>
Description of the similarity for Sub-Factor 3.1(b) of Section III:	<i>[insert information]</i>
<b>For SCADA work</b>	
1. Amount	<i>[insert amount in the currency as given in the contract and equivalent INR in words and in Figures]</i>
2. Physical size	<i>[insert physical size of activities]</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. Other Characteristics	<i>[insert other characteristics as described in Section V, Scope of Works]</i>
<b>For Telecommunication work involving TMS/CTCS/Optic fibre network</b>	
1. Amount	<i>[insert amount in the currency as given in the contract and equivalent INR in words and in Figures]</i>
2. Physical size	<i>[insert physical size of activities]</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. Other Characteristics	<i>[insert other characteristics as described in Section V, Scope of Works]</i>

## Form EXP – 3.2 Design Experience

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

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

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

Nominated Subcontractor's Legal Name (if applicable): *[insert full name]*

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

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

Applicants or Specialist Subcontractor for key activities must complete the information in this form as per Section III, Qualification Criteria and Requirements, Sub-Factor 3.2.

1. Key Design Activity No. \_\_\_\_\_: *[insert brief description of the Activity, emphasizing its specificity]*  
[Separately for each activity listed in 3.2]

	Information	
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>	Design Consultant	In house Designer
Total Contract Amount	<i>[insert total contract amount in the currency as given in the contract]</i>	<i>[insert Total contract amount in equivalent INR]</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>	
Description of the key activities in accordance with Sub-Factor 3.2(i) to (v) of Section III:	<i>[insert response to inquiry indicated in left column]</i>	

## **PART 2 - Works Requirements**

# Section V. Project Information and Scope of Works

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## PROJECT INFORMATION AND SCOPE OF WORKS

### Information of DFC Project

#### 1.0 General

- 1.1** Dedicated Freight corridor Corporation of India Ltd. (DFCC), 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 DFCC.
- 1.2** Ministry of Railways (MOR), Government of India has planned to construct Dedicated Freight Corridor (DFC) covering about 3330 route kilometers on Eastern and Western Corridors. The coverage of Eastern Corridor is from Ludhiana to Dankuni and Western Corridor is planned from Jawaharlal Nehru Port, Mumbai to Rewari / Tughlakabad / Dadri near Delhi. There will be a linkage between two corridors at Khurja. The map showing the geographical extent of Freight Corridors is attached as Annexure-I.
- 1.3** The project entails construction of mostly double-track electrified railway lines. The bridges and other structures will be designed to allow movement of 32.5 ton axle load while the track structure will be designed for 25 ton axle load operating at train speed of up to 100 Km/h. The Eastern Corridor will handle single stack containers whereas Western Corridor is planned to cater to double stack containers. Up gradation of transportation technology, increase in productivity and reduction in unit transportation costs have been taken as guiding principles for formulating the project. Various operating systems, motive powers, signaling and work processes are required to conform to these broad perspectives.

#### 2.0 Eastern Dedicated Freight Corridor Alignment

- 2.1** Eastern DFC Route will be approximately 1799 Km long from Dankuni to Ludhiana via Mughalsarai-Allahabad-Kanpur-Tundla-Aligarh-Khurja. Proposed alignment of DFC has been generally kept parallel to existing Indian Railway line except provision of detours around certain cities.
- 2.2** The Eastern Dedicated Freight Corridor (EDFC) alignment passes through six states viz. West Bengal, Jharkhand, Bihar, Uttar Pradesh, Haryana and Punjab. It traverses Howrah, Hooghly, 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, Bulandsahar, Ghaziabad, Gautambudhnagar, Meerut, Muzaffarnagar, Saharanpur districts in Uttar Pradesh, Yamuna Nagar, Ambala districts in Haryana and Patiala, Fatehgarh Sahib, Ludhiana districts in Punjab.

#### 3.0 Funding for the Project

Out of 1799 km of Eastern Dedicated Freight Corridor (EDFC), Sonagar to Mughalsarai section is being financed by Government Funding. The route alignment of EDFC indicating the corridor length being funded by IR is attached as Annexure-II.

#### 4.0 Project Phasing

The implementation of EDFC portion funded by Government (Mughalsarai – Sonnagar) is planned in a phased manner. In the first phase 66 KM long stretch between New Karwandiya and New Durgauti Section is under construction and the balance stretch will be constructed in the present phase. The section Durgauti – Sasaram is going to be opened shortly and Sasaram – New Karwandiya section is under advance stage of completion.

#### 5.0 Project Information : Mughalsarai – New Sonnagar and Chirailapathu station (excluding New Karwandiya - New Durgauti section) of Eastern Dedicated Freight Corridor.

5.1 DFCCIL has awarded different civil and structure work contracts in Mughalsarai – Sonnagar section of Eastern Dedicated Freight corridor for which most of the stretches are in advance stage of completion including important bridge over Sone river.

5.2 The construction of EDFC section New Durgauti- New Karwandiya (Approx 66 kms.) between Mughalsarai to Sonnagar is in the advance stage and likely to be commissioned shortly. The Electrification work of the section Mughalsarai to New Durgauti and New Karwandiya to Sonnagar has been taken in hand in this work. The section is parallel to existing adjacent IR track. The north part of the section traverses through Chandauli district of Uttar Pradesh and Kaimur district of Bihar for approx. 40 km and balance part is in Rohtas district of Bihar.

5.3 **DFCCIL intends to commission the aforesaid section** between Mughalsarai to Chirailapathu and New Sonnagar (excluding New Durgauti – New Karwandiya section) of Eastern Dedicated Freight Corridor and accordingly intends to invite the Bid for Design, procurement, Construction of system works incorporating OHE, Traction Power Supply System, SCADA, E&M Signaling & Telecommunication works and its testing & commissioning for double track electrified railway line for Eastern Dedicated Freight Corridor.

5.4 **DFCCIL is also inviting separate bid on design build lump sum basis for Construction of Track for this section** and completion date for the track as well as system work has been planned in a manner so as to facilitate integrated testing and commissioning of the entire section.

5.5 The current prequalification exercise is to identify suitable Applicants for the system Contract for the subject section.

#### 6.0 Scope of Works : Mughalsarai – New Sonnagar Section (excluding New Karwandiya – New Durgauti section) approx. 69 kms.

##### 6.1 Abbreviations Used

- DFCC – Dedicated Freight Corridor Corporation
- EDFC – Eastern Dedicated Freight Corridor
- EI - Electronic Interlocking
- ER – Employer’s Requirement



- GSS – General Sub Station
- IR – Indian Railways
- LC – Level Crossing
- OCC – Operations Control Centre
- OHE –Over Head Electrical Equipment
- RDSO – Research Design and Standardization Organization
- RFO – Rail Flyover
- RKM – Route Kilometers
- RUB – Road Under Bridge
- SDH – Synchronous Digital Hierarchy
- TKM – Track Kilometers
- TSS – Traction Sub Station
- UPS - Un-interrupted Power Supply
- VHF – Very High Frequency
- TMS- Train Management System

## 6.2 General

- i This phase of the Eastern section of the Dedicated Freight Corridor, from Mughalsarai to New Sonnagar (excluding New Karwandiya – New Durgauti section) approx. 69 kms is to be constructed as double line electrified track with 2x25 kV AC, 50 Hz, over head catenary system capable of operating at a maximum train speed of 100 km/h with an initial axle load of 25.0 tonnes. Formation and bridge structure are to be provided for DFCC 32.5 tonnes loading and track structure for 25 tonnes axle load.
- ii System contractor shall undertake design, construction, manufacture, supply, installation, testing and commissioning of the Systems works including and without limitation, electrification of the line, new signaling and control systems, TMS, new telecommunication system, SCADA control system and E&M services for staff quarters, station buildings, rest houses, allied service buildings etc as indicated in the Employer`s Requirement.
- iii The design of all the work will be operationally compatible with the other Indian Railways (IR) sections connecting to DFC and adjacent sections of DFC.
- iv The Contractor shall be responsible for addressing design and construction interfaces with all other applicable railway systems of DFCC and Indian Railways (Civil, Structures and Track, Signaling, Telecommunications, SCADA, OHE, and Traction Rolling Stock) and systems of public services, utilities and third parties, etc. which are located adjacent or parallel to this phase of DFC system. The details shall be indicated in the Bid Document.
- v In addition, the Contractor shall undertake the rectification of defects and deficiencies appearing in the Permanent Works of this Contract during defect liability period which shall commence from commissioning for opening of the section and shall be upto 24 months from the date of final commissioning. In the manner and to the standards as stipulated by the Contract. However the details will be given in the Bid document.
- vi 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 program shall be compliant to ISO 9001:2008.
  - (c) The production of construction, maintenance and operation manuals, various documentation as indicated in ER.
  - (d) Supply of spares, maintenance tools and testing equipments etc. as indicated in ER.
  - (e) Training of DFCC personnel, to enable them to perform all necessary tasks, related to design, assembly, equipment erection, operation and maintenance.
- vii In full recognition of these objectives and with full acceptance of the obligations, the contractor shall execute the Works taking into account all liabilities and risks that may be involved.

### **6.3 Following falls within the Ambit of System Contractor**

#### **6.3.1 Electrification Works**

The Electrification Works shall comprise of design development from preliminary stage to detailed design including obtaining approvals from relevant authorities, construction, testing and commissioning, including provision of all associated and necessary training, documentation and spares, special tools, testing equipment, M&P for maintenance and support during the Defect Liability Period for the traction power supply systems, overhead equipment system, SCADA system, E&M works and all its constituent sub-systems, equipment and components for the DFCC Mughalsarai – New Sonnagar section (excluding New Karwandiya – New Durgauti section) of the project as per Employer's requirement.

#### **6.3.2 Traction Power Supply Systems – (TPSS)**

- (i) Specifically the TPSS shall comprise the following elements:
  - a) Construction of Traction power substation (TPS) including its building at which power is transformed from High Voltage 132/220kV to railway traction voltage level (2x25 kV nominal) and distributed via outgoing feeders to the Overhead Equipment (OHE) system, and at which switching facilities are present.
  - b) Construction of Traction sectioning and paralleling posts (SP) including its buildings and sub-sectioning and paralleling posts (SSP) including its buildings Outgoing feeders and traction return connections, between TPS and the OHE and between SP/SSP and the OHE;

- c) Power supply to signaling and communication gear.
- (ii) In respect of the design the Contractor shall be responsible for all phases and elements of design relating to the Traction Power Supply System. This shall include the 'System Design', the design of any 'Sub-Systems' (e.g. a traction power substation), 'Equipment and Component' design, and all other detailed design aspects.
- (iii) In respect of system design the Contractor is also 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 requirements for these systems.
- (iv) The Contractor shall also be responsible for the testing and commissioning of these installed systems and their interactions with other systems from an electrical (including electromagnetic) perspective.

### **6.3.3 Overhead Equipment system (OHE)**

This 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;
- b) The OHE shall be designed to be compatible with the existing electrified system of India Railways when merging/interfaces with the later.
- c) The contractor shall be responsible for the provision of all services and the supply, installation, testing and commissioning of all equipment necessary for the full implementation and operation of the OHE system.

### **6.3.4 SCADA Works**

These works shall comprise design, manufacture, supply, installation, testing and commissioning of the SCADA Systems and shall include, as detailed in ER.

### **6.3.5 E&M Works**

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

- a) Building services including the provision of non-traction power supplies;
- b) Non traction power supply and distribution including sub stations, internal and external electrifications of all the buildings (quarters/offices, platform, yards, sidings, depots at each stations areas, level crossings at stations and on open route etc. including surrounding compound and including arranging HT/LT supply from the power supply from the nearest sources. However the detailed requirement will be given in ER.
- d) DG sets for emergency supply at stations and locations as indicated in the bid 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 ( all the payments/deposits to

State Electricity Authorities shall be made by Employer.

### 6.3.6 Permanent works of Signaling and Telecommunication

The permanent Signaling and Telecommunication works shall comprise of but not limited to the design development from preliminary stage to detailed design, No Objection Certificates (NOC) and approval from relevant authorities, construction, supply, installation, testing and commissioning including provision of all associated and necessary training, documentation and spares, special tools, testing equipment, rectification and removal of defects during the Defect Liability Period and post commissioning maintenance for Signaling and Telecommunication systems and all its constituent sub-systems, equipment and components for the section Mughalsarai – New Durgauti and New Karwadiya to Sonnagar and Chirailpathu station on the Sonnagar – Mughalsarai of EDFC.

### 6.3.7 Signaling System - The Signaling System includes but not be limiting to the following components/subsystems:-

- a) Electronic interlocking comprising of Station Interlocking, LC Gate Interlocking and Automatic Signal Interlocking with a robust OFC telecom network for signaling requirements with full Network protection against Node failure, Fibre failure and Optical Cable failure. Electronic interlocking shall be equipped with interface for local operation and shall be upgradable to Centralized Traffic Control at a future date.
- b) Electronic interlocking with hot standby mode for all the signaling interlocking. Electronic interlocking shall have in built features of data logging of internal processes and external I/O.
- c) Digital Axle Counters for train detection at stations.
- d) Digital Axle Counters for train detection in the block sections.
- e) Power operated interlocked Level Crossing L.C. gates with approach warning and approach locking. Presently, unified LC gate working is envisaged for IR track and DFCC tracks.
- f) All track side signaling equipments including Multiple Aspect Colour Light Signals point machines, signaling & telecom cables etc.
- g) Points and crossings capable of 25 Ton axle load is envisaged. The design of interlocking arrangements on points and crossings shall be based on IRS/RDSO specification. In case of deviation from IRS/RDSO specification, if any, to suit to 25 Ton points and crossings, the acceptance shall be done by RDSO or any other agency deemed fit by DFCC.
- h) Integrated Power Supply (IPS) with battery backup.
- i) Remote diagnostics and condition monitoring system for predictive maintenance. Signaling systems/subsystems to be equipped with sensors/ interface arrangement for centralized remote condition monitoring & diagnostic through Ethernet.
- j) EMC/EMI studies to determine induced voltages from IR and DFC traction system. Lightning & Surge Protection, Earthing of Signaling system / equipments.

### 6.3.8 Communication System - The Telecom Systems shall comprise but not be limiting to the following components / subsystems:-

- a) Fibre optic ring Data Transmission Network (DTN) comprising of Add-drop Nodes of

SDH equipments to cater for Operational Telecommunication, SCADA and Telecom requirement for Signaling. All optical fibre nodes shall support Ethernet over SDH.

- b) Voice over Internet Protocol (VoIP) based Digital Telephone Exchanges.
- c) VHF sets for yard communication and driver, guard communication.
- d) Network Management System.
- e) EMC/EMI studies to determine induced voltages from IR and DFC traction systems. Lightning & Surge Protection, Earthing of Telecom system / equipments.
- f) One Operation Control Centre (OCC) is envisaged at suitable location in DFC route. All the control circuits will be extended to OCC on leased channels from M/s Railtel.
- g) Provision of GSM-R is not within the scope of work, however, Fibre Optic Data Transmission Network shall be capable to support GSM-R for future augmentation of Mobile Train Radio Communication.

### 6.3.9 Train Management system-

Train Management system (TMS) for monitoring and supervision of train traffic from centralized location termed as OCC, with capability of data logging. The TMS for Mughalsarai to New Sonnagar/Chirailapathu 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.

## 7.0 Salient Features (Indicative) :

The indicative features/performance specifications of the section are as given under:

SN	Description	Details
1.	Route length	69 RKM Approx ( Double Line working)
2.	Track length	144 TKM Approx
3.	Gauge	1676 mm
4.	Axle load	25 tonne with bridges of 32.5 tonne
5.	Ruling Gradient	1:200 (compensated)
6.	Steepest Gradient in yards	1:1200, (1:400 in exceptional cases with approval of DFCC)
7.	Junction stations	4 (Four)
8.	Crossing stations	1 (One)
9.	<b>Formation</b>	
10.	Bank width for Double line	13.5 m/14.5 m
11.	Slope embankment	2:1 (H:V) (minimum)
12.	Maximum degree of curvature	2.5 Degree (700 metres Radius)
13.	Rails	UIC 60 – 90 UTS – IRS T12-2009
14.	Sleepers	Mono-block Concrete, rail seat for 60 Kg/m rails
15.	Points & Crossings	60 kg. 1 in 12 thick web switches
16.	Rail Length	Rolled section as per IRST – 12 – 2009
17.	Yards	As per the approved plans of DFC.
18.	Other Components	SEJ – RDSO design for the same for 1676mm gauge will be detailed in Bid document.
19.	Maximum track super elevation	165 mm
20.	<b>Moving Dimensions-</b> Maximum Vertical Moving Dimension (MMD)	5.1 metres

SN	Description	Details
21.	<b>Track Centre</b>	
	Between two tracks of DFC	6 metres (minimum) / 6.25m bet. ML to LL in yards.
	Between existing track and DFC	As per indicative alignment plan as a part of Bid document. In general it will be 10 to 15 metres. Minimum 6m recommended 7.95m.
22.	<b>Bridges</b>	
	Minor bridges	121 no.
	Major bridges	18 no.
23	Viaduct	1 no. (Approx. 1.9 Km long)
24.	Maximum Operating Speed	100 kmph
25.	Trailing Load	6500 – 13000 tonnes
26.	Train Length	750/1500 m (Long haul operation)
	Nominal supply voltage	22.5 KV , 50 Hz, Single Phase, AC
27.	Minimum contact wire height	5.6 m from rail level at supports and 5.5 m at mid span
28.	Contract wire	150 Sq.mm grooved Hard drawn Copper
29.	Catenary wire	120 Sq.mm, cadmium copper
	No. of traction Power sub-stations (TPS)	One (Incoming supply 132/220 KV double circuit)
30.	No. of sectioning posts	One
31.	No. of sub- sectioning posts	3(Three)
32.	Power Density	1 MVA/Km
	EI at Junction Stations	4 stations
33.	EI at Wayside (Crossing) Stations	1 station
34.	Automatic Block Signaling	Block length 2 kms. (typical)
35.	Track vacancy Detection system at station	Digital Axle Counters
36.	Track vacancy Detection system in block section	Digital axle counters
37.	Interlocking of Level Crossing gates	23 LC gates.
38.	Networked Data Loggers, Remote Diagnostics and Condition Monitoring System	At Stations + OCC (Details will be indicated in ER)
39.	Dispatching Telephone System	At stations + OCC (Details will be indicated in ER)
40.	Emergency Communication System	Emergency sockets along the tracks (Details will be indicated in ER)
41.	IP based Digital Electronic Exchange System	At stations + OCC (Details will be indicated in ER)
42.	VHF Communication System	Lot (Details will be indicated in ER)
43.	Network Management System	1 System
44.	TMS (135 Km) approx	TMS system with OCC integration (Details will be indicated in ER)

## 8.0 Technical Specifications/design and approved vendors / suppliers

### Design criteria for SYSTEM works

8.1 Research Design and Standards Organization (RDSO), Lucknow, India, an organization of Ministry of Railways, government of India has standardized the technical specification 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 Specification issued by RDSO is available at the website of RDSO ([www.rdsso.gov.in](http://www.rdsso.gov.in)). The IRS Specifications can also be purchased from RDSO.

8.2 The Employer's requirements to be included as part of the bidding document for this work will generally conform to the IRS/RDSO specifications. Wherever, IRS/RDSO specification are not available the following standards in the order of precedence given below shall be followed

- International Standards
- European Norms
- National Standards

8.3 RDSO maintains approved list of suppliers / vendors for various Electrical equipments/items/components to be used on railway systems in India. Contractor is required to procure equipment/ items as per IRS/RDSO specification from the suppliers/vendors on approved list of RDSO or any other sources (for certain equipments), provided the equipment/item meets the technical requirements/acceptance criteria of RDSO which will be indicated in the Bidding document.

## 9.0 **Project Implementation**

9.1 The Project involves Design and construction of double line electrified track with 2X25kV AC, 50 Hz, overhead catenary system, capable of operating at a maximum train speed of 100km/h with an initial axle load of 25.0 tonnes including signaling and telecommunication, SCADA etc. and integration with existing IR system along with Integrated Testing and Commissioning.

9.2 The Construction Period for the complete system shall be approx. 24 months (including Design Period) from the date of award of the contract(s). The System Contractor shall be required to plan the various components of work in such a sequence that the complete work is commissioned in above period from the date of award of contract.  
The erection of masts and portal structure and stringing of conductor including cabling works shall be carried out through mechanized method.

9.3 'Project Management Consultants' 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.

9.4 As a part of the Bid Documents, the Pre-qualified applicants will be provided with Employers Requirements/ Performance Specifications, Reference Documents and other indicative field data available with DFCC and Civil & Track contractor.

The field data provided as a part of the Bid Documents by the Employer is based on the investigation carried out by the Employer and other agencies and is for reference purposes only. The Applicant will have to satisfy himself with the field data furnished and make his own investigations, if required, for submitting his offer. The applicant 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.

9.5 The Employer's Requirements/Performance Specifications provided as a part of the Bid

Documents, specify the procedural requirements for the preparation of the design, supply, installation, testing and commissioning of the Permanent and Temporary Works.

- 9.6 The Contractor's Designer 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.
- 9.7 The Preliminary Design shall incorporate the Contractor's tender design developed to sufficiently define the System components as detailed in the scope of works for Systems in para 6.0 above and other structures. After the consent of the Engineer, the System Contractor shall, proceed to prepare the definitive Designs.
- 9.8 The Definitive Design shall incorporate the Contractor's Technical Proposals and shall be the design developed to the stage at which all elements of 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 Permanent Works.
- 9.9 Upon issuance of the no objection, or a deficiencies list, by the Engineer in respect of the Definitive Design Submission, normally within thirty days (30 days), the Contractor shall complete the design in all respects and produce the Good for Construction Drawings, the purpose of which is to illustrate all the Permanent Works and to be the drawings governing construction.

## **10.0 Utilities**

- 10.1 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 civil contracts or other means. However, there is always a possibility of some of the unidentified utilities being detected by the System Contractor during the course of work. These utilities shall be relocated by the System Contractor and shall be paid for by the DFCC.

## **11.0 Interfacing with Civil Contractors**

- 11.1 New Mughalsarai – Sonnagar section (excluding New Karwandiya – New Durgauti section approx.) 69 kms. shall be electrified with 2x25 KV System and provided with Automatic Signaling. The System Contractor appointed through this PQ exercise shall be required to interface, coordinate and cooperate with the Civil, Structure and Track Contractors in such a way that complete project is commissioned successfully in a time bound manner. Detailed interfacing requirements shall be provided in the Bid Documents.

## **12.0 Site and Other Data**

- 12.1 **Project Area:** The Works will be carried out between Mughalsarai and New Sonnagar (excluding New Karwandiya – New Durgauti section) approx. 69 kms. in the state of Uttar Pradesh and Bihar. The proposed alignment will pass across the almost flat Indo Gangetic plain and will mostly be parallel to the Mughalsarai – Gaya double line section of Indian Railways. There will be some deviations from this route to avoid stations and some urban areas. A sketch showing the alignment is attached as Annexure II.
- 12.2 **Access to Site:**

Access to the Site areas is available through various roads as described below.

- Transportation by road is well developed in Eastern area of India.
- Railway transportation is also well developed in this area.



- Cargos can be transported from Mumbai or Kolkata seaport.
- Airports are located at Delhi, Lucknow, Varanasi, Patna.
- Public telephone facilities are well developed whole stretch of EDFC alignment.
- Mobile phones are also well developed whole stretch of EDFC alignment.
- Internet access is available in the whole country of India with wire or wireless. Connection speed is depending on service providers.

### 12.3 **Medical Facilities**

- General hospitals are available in major cities, such as Varanasi, Sasaram, Sonenagar
- Other hospitals are also available in every city area.
- Clinics are also available in villages along the EDFC alignment.
- Injections are all disposal type in order to prevent from transfer of any type of diseases.

12.4 **Hydrology:** The project area is generally flat and is prone to flooding 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.

### 12.5 **Environment Conditions:**

**Climate:** The climate of the project is a Tropical Monsoon Climate Marked by three distinct seasons:

**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.

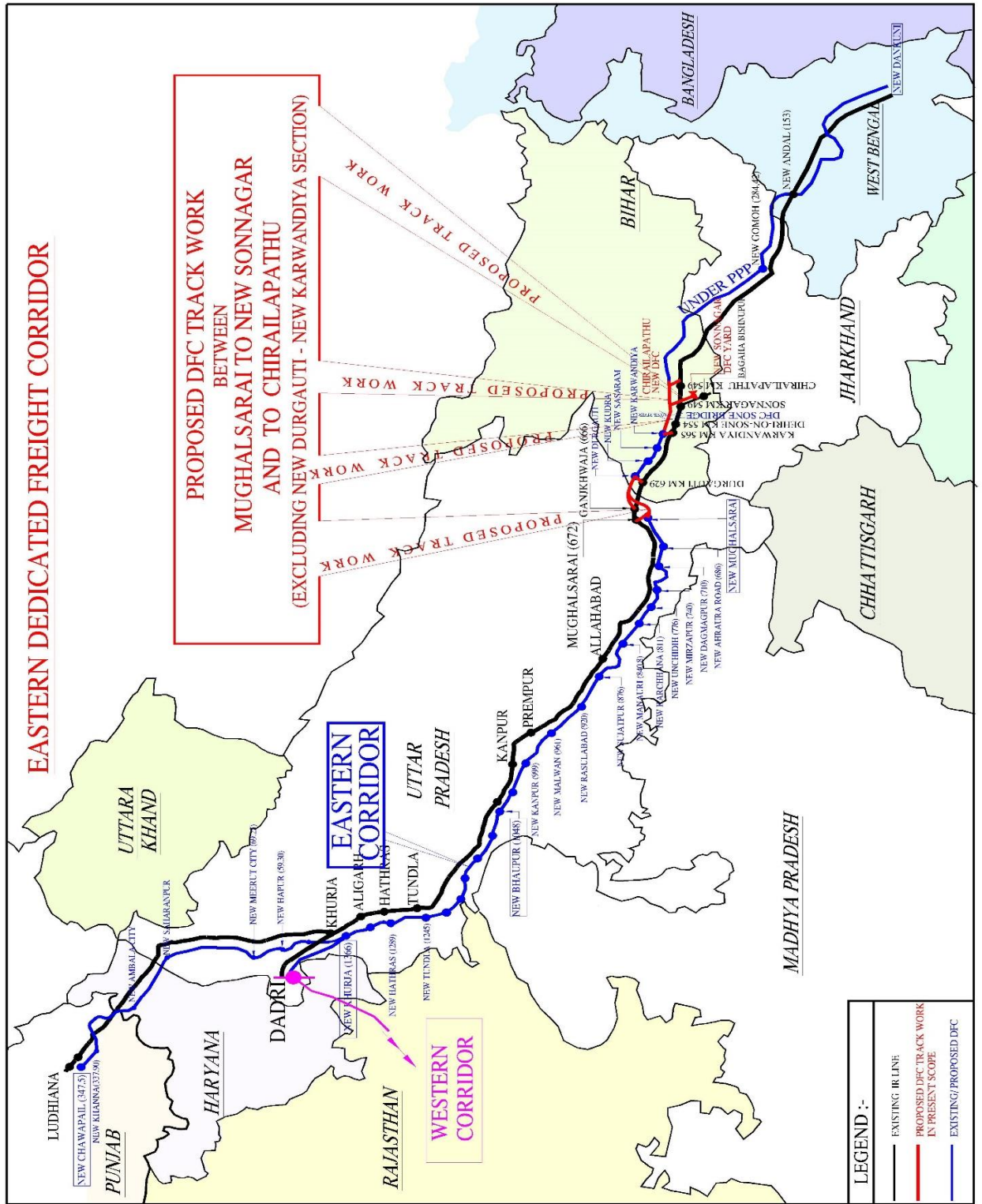
**Monsoon** (June-September): 85% of the average annual rainfall of 990 mm precipitates during this period and temperatures range from 40-45 °C on rainy days.

**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.

13. The details given in the scope of works are only indicative. The works shall be executed as per the Employers requirements to be specified in the Bid document.

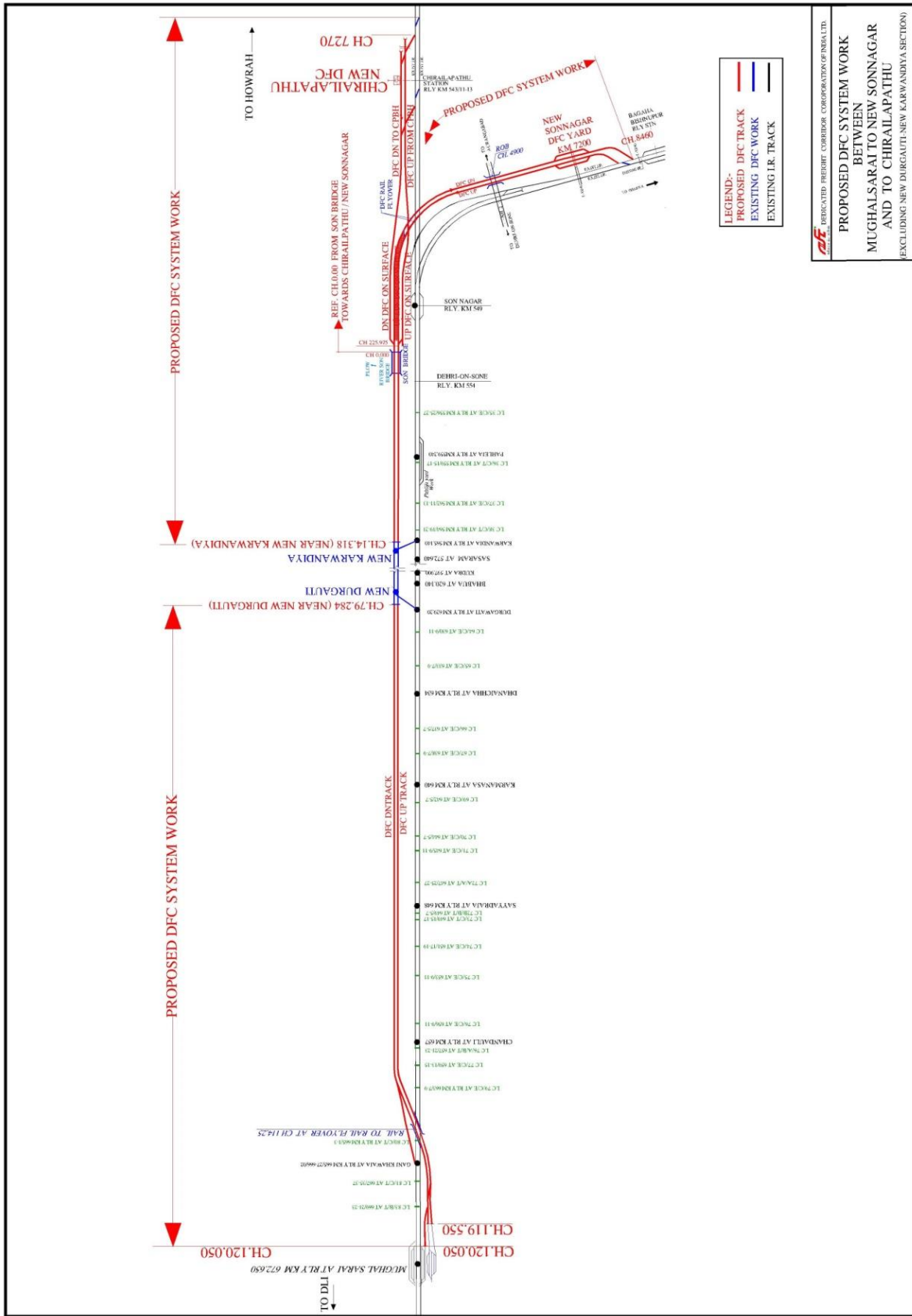
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ANNEXURE - I





ANNEXURE - II




**DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LTD.**  
**PROPOSED DFC SYSTEM WORK**  
**BETWEEN**  
**MUGHALSARAI TO NEW SONNAGAR**  
**AND TO CHIRAILAPATHU**  
**(EXCLUDING NEW DURGAPUR-NEW KARWANDIYA SECTION)**