

**Dedicated Freight Corridor Corporation of India Limited**

(A Government of India Enterprise)

**ADDENDUM No. 02 dated. 23.01.2018**

**Addendum/Amendments to the Bid Document**

**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.**

**Bid Document No.: HQ/SYS/EC/D-B/MGS-DGO & KWDN-CPBH-SEBN.**

**Date 29.12.2017**

SN	Part/Section/Volume	Page No.	Clause No.	Item	Addendum/Amendment to the Bid Document
1.	Part 2, Section V(B) Vol 8, PS Telecommunication	349 of 741	6.3.1	System Requirements of Data Networking System	<b>Replace existing Para with the following:</b> WAN shall connect OCC, DFC stations and IMD in Ring Topology using Optic Fibre Cable laid along Up and Down Track of DFCCIL. Further WAN shall connect TSS/RSS at New Durgauti with New Durgauti Station and TSS/RSS at New Karwandiya with New Karwandiya Station in Redundant Linear Topology using Optical Fibre Cable. WAN shall be created using Layer-3 Access Switch. As such Layer-3 Access Switch should be equipped with 4 Nos. 10GigE Fibre Ports for backbone interconnections.
2.	Part 2, Section V(B) Vol 8, PS Telecommunication	356 of 741	7.3.5.2	Administrative Telephone Network	<b>Replace existing Para with the following:</b> Administrative Telephones to be provided shall be Digital Telephones at OCC (16 Nos.) and at Stations (8 Nos. at each Station). All the remaining telephones shall be Analogue Telephones.
3.	Part 2, Section V(B) Vol 8, PS Telecommunication	359 of 741	7.3.8 (3)	Direct line Console	<b>Replace existing Para with the following:</b> Direct Line Consoles shall be provided for Station Controllers in SCR of each Station and shall have a minimum direct line capacity of 30 lines and shall be capable of interfacing with required direct line extensions.
4.	Part 2, Section V(B) Vol 8, PS Telecommunication	381 of 741	10.1	25 watt VHF Transceivers	The following three sub paras to be added in Clause 10.1 :- 10.1.5 Specifications given below shall be read in conjunction with RDSO

SN	Part/Section/Volume	Page No.	Clause No.	Item	Addendum/Amendment to the Bid Document
					<p>Specification No. RDSO/SPN/TC/73/2008.</p> <p>10.1.6 Provision of Voice Recording of conversation taking place on 25 Watt VHF Transceivers shall be provided through Voice Recording Equipment. This recording shall be Date and Time Stamped along with Stamping of Station Identity and VHF Channel Identity. Storage of Voice Communication shall follow FIFO (First-In-First-Out) methodology. Once voice communication is stored, it shall not get corrupted in any way. There shall not be any compression of the Voice Signals. The capacity of Voice Storage shall be at least 4 -weeks. There shall be an Ethernet Interface Port through which Recorded Voice can be transferred to Laptop for replay or taking backup on CD/DVD. It shall be able to replay the Voice Recordings by simple operation of some feature/function key.</p> <p>10.1.7 Device for protection of 25 watt VHF Transceivers base station shall be provided in accordance with RDSO Specification No. RDSO/SPN/TC/98/2011 for Surge Protective Devices for Telecommunication Equipment</p>
5.	Part 2, Section V(B) Vol 8, PS Telecommunication	386 of 741	11.3.13	Battery Backup System	<p><b>Replace the existing Para with the following:</b></p> <p>Alarms for the Battery Backup System shall be implemented through Network Management System (NMS) provided in EDFC Phase-1 in the TER at OCC. Contractor shall extend these alarms using appropriate interface such as RS-232, RS-485, TCP/IP etc. Following Alarms shall be provided on the NMS in the TER at OCC for each of the 48 V DC Battery Backup System at all locations.</p> <ol style="list-style-type: none"> <li>(1) Mains Available/Mains Not Available</li> <li>(2) Mains Out of Range</li> <li>(3) Float Mode</li> <li>(4) Charge Mode</li> <li>(5) System Overload</li> <li>(6) Rectifier Modules Fail (one or more than one)</li> <li>(7) Battery Cut-Off Pre-Alarm</li> <li>(8) Battery Fail/Isolated</li> </ol>
6.	Part 2, Section V(B) Vol 8, PS Telecommunication	422 of 741	Annexure 1	EPABX Switch & Telephone Set Locations and Quantity	Replace the table and note in Annexure-1 with the following table and note.

SN	Part/Section/Volume	Page No.	Clause No.	Item	Addendum/Amendment to the Bid Document																																																													
					<table border="1"> <thead> <tr> <th rowspan="2">SN</th> <th rowspan="2">EPABX Switch Location</th> <th colspan="5">Telephone Set</th> <th rowspan="2">Total EPABX Telephones</th> </tr> <tr> <th>Service Building</th> <th>Station Building</th> <th>Residential</th> <th>Nearby Auto Hut</th> <th>Nearby IR Stations</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>New Chirailpathu</td> <td>15</td> <td>15</td> <td>0</td> <td>0</td> <td>20</td> <td>50</td> </tr> <tr> <td>2</td> <td>New Sonnagar</td> <td>15</td> <td>15</td> <td>15</td> <td>10</td> <td>10</td> <td>65</td> </tr> <tr> <td>3</td> <td>New Sonnagar Link</td> <td>10</td> <td>10</td> <td>0</td> <td>15</td> <td>15</td> <td>50</td> </tr> <tr> <td>4</td> <td>New Ganjkhwaja</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> <td>50</td> </tr> <tr> <td>5</td> <td>New ERC Mughalsarai</td> <td>10</td> <td>10</td> <td>0</td> <td>15</td> <td>15</td> <td>50</td> </tr> <tr> <td>6</td> <td>OCC</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>30</td> </tr> </tbody> </table> <p>Note: The total number of telephones shall remain fixed. The requirement of Telephone Sets at individual location may vary. Exact requirement will be identified during Design Stage.</p>	SN	EPABX Switch Location	Telephone Set					Total EPABX Telephones	Service Building	Station Building	Residential	Nearby Auto Hut	Nearby IR Stations	1	New Chirailpathu	15	15	0	0	20	50	2	New Sonnagar	15	15	15	10	10	65	3	New Sonnagar Link	10	10	0	15	15	50	4	New Ganjkhwaja	10	10	10	10	10	50	5	New ERC Mughalsarai	10	10	0	15	15	50	6	OCC						30
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7	Part 2, Section V(B) Vol 9, PS Electrical	456 of 741	6.5.3	Short Circuit Capacity	<p><b>Para should be replaced as under:</b> Higher Fault levels can be expected for TSS locations very close to Generating station for which actual fault levels may be worked out in consultation with Power Utility/PGCIL and switchgear selected accordingly.</p>																																																													
8	Part 2, Section V(B) Vol 9, PS Electrical	459 of 741	6.10.7	Earthing and Bonding	<p><b>Add following after first sentence of sub clause 6.10.7.1:-</b> “Earthing and Bonding simulation shall be for faults level of table 6.5.2.1”.</p>																																																													
9	Part 2, Section V(B) Vol 9, PS Electrical	463 of 741	New Sub Clause 7.1.4	Scope of Works	<p><b><u>New clause 7.1.4 should be added as under:</u></b> 7.1.4 - Following information regarding adjoining sections is furnished as under: <b>Switching Stations details of New Karwandiya to Durgauti (EDFC) section:</b></p> <table border="1"> <thead> <tr> <th>SN</th> <th>Item</th> <th>Location name</th> <th>IR Chainage (Km)</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	SN	Item	Location name	IR Chainage (Km)																																																									
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10	Part 2, Section V(B) Vol 9, PS Electrical	464 of 741	Table 7.2.3	Salient features of 220/132 kV Power Transformers.	<p>Add one row at the last of table 7.2.3 as below:</p> <table border="1"> <thead> <tr> <th colspan="2">Maximum permissible Losses:</th> </tr> </thead> <tbody> <tr> <td>No Load losses</td> <td>40 KW</td> </tr> <tr> <td>Load Losses</td> <td>220 KW</td> </tr> </tbody> </table>	Maximum permissible Losses:		No Load losses	40 KW	Load Losses	220 KW																																										
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11	Part 2, Section V(B) Vol 9, PS Electrical	466 of 741	Table 7.2.4-1	Salient features of Auto Transformers.	<p>Add one row at the last of table 7.2.4-1 as below:</p> <table border="1"> <tr> <td><b>Maximum permissible losses</b></td> <td></td> </tr> <tr> <td>1. No load losses</td> <td>7.5 KW</td> </tr> <tr> <td>2. Load losses</td> <td>26.5 KW</td> </tr> <tr> <td>3. Total losses</td> <td>34 KW</td> </tr> </table>	<b>Maximum permissible losses</b>		1. No load losses	7.5 KW	2. Load losses	26.5 KW	3. Total losses	34 KW																				
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12	Part 2, Section V(B) Vol 9, PS Electrical	470 of 741	Clause 7.2.11	Design Criteria for SCADA.	<p><b>Following should be added as the last para of the sub clause 7.2.11. Switching Stations details of New Karwandiya to Durgauti (EDFC) section are as under:</b></p> <table border="1"> <thead> <tr> <th>SN</th> <th>Item</th> <th>Location name</th> <th>IR Chainage (Km)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>TSS</td> <td>New Karwandiya</td> <td>566</td> </tr> <tr> <td>2</td> <td>SSP</td> <td>Kumahu</td> <td>576</td> </tr> <tr> <td>3</td> <td>SSP</td> <td>Shivsagar</td> <td>586</td> </tr> <tr> <td>4</td> <td>SP</td> <td>Kudra</td> <td>597</td> </tr> <tr> <td>5</td> <td>SSP</td> <td>Pasuli</td> <td>606</td> </tr> <tr> <td>6</td> <td>SSP</td> <td>Muthani</td> <td>616</td> </tr> </tbody> </table> <p>No. of S&amp;T huts - 10  No. of LC gates – 17  No. of Crossing/Junction station – 03  No. of 11 kV substation – 04 (03 nos. at station; 1 no. at separate location).</p>	SN	Item	Location name	IR Chainage (Km)	1	TSS	New Karwandiya	566	2	SSP	Kumahu	576	3	SSP	Shivsagar	586	4	SP	Kudra	597	5	SSP	Pasuli	606	6	SSP	Muthani	616
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13	Part 2, Section V(B) Vol 9, PS Electrical	471 of 741	Table 7.2.14	Interface for Transmission Line and RSS:	<p>Table 7.2.14 should be replaced as under:</p> <p><b>Interface for Transmission line for RSS:</b></p> <table border="1"> <thead> <tr> <th>Item</th> <th>System Contractor</th> <th>PGCIL</th> <th>IR</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Item	System Contractor	PGCIL	IR																								
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					220 kV double circuit Transmission line Pusauli to New Durgauti	Shall co-ordinate with PGCIL	Shall carryout the work.	_____
					Gantry 220 kV	Shall install the Gantry in co-ordination	_____	_____
					Connection to transmission line at 220 kV	Shall co-ordinate and provide assistance to PGCIL	Shall carryout the work.	_____
					RSS 220/132 kV TSS 132 kV/55kV	Shall carryout the work	_____	_____
					Outgoing Feeder 132 kV	Shall carryout the work in co-ordination with IR.	_____	Shall co-ordinate with DFCCIL and DFCC's System contractor.
					Gantry 132 kV	Shall carryout the work in consultation with IR.	_____	Shall co-ordinate with DFCCIL and DFCC's System contractor.
					Connection to IR transmission line at 132 kV	Shall co-ordinate and provide assistance to IR.	_____	Shall carryout the work.

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14	Part 2, Section V(B) Vol 9, PS Electrical	478 of 741	Sub Clause 8.8 .1	OHE Conductors	<p><b>Replace clause 8.8.1 with the following:</b>  <b>8.8.1 Sizes of Conductors.</b>  The sizes of conductors are furnished in the table no. 8.8-1 below:</p> <p style="text-align: center;"><b>Table No. 8.8-1</b>  <b>OHE Conductor details</b></p> <table border="1"> <thead> <tr> <th>Conductor</th> <th>Size (mm<sup>2</sup>)</th> <th>Material</th> <th>Specification</th> </tr> </thead> <tbody> <tr> <td>Catenary</td> <td>125</td> <td>Cadmium Copper</td> <td>ETI/OHE/50</td> </tr> <tr> <td>Contact Wire</td> <td>150</td> <td>HDGC</td> <td>ETI/OHE/76</td> </tr> <tr> <td>Feeder Wire</td> <td>288</td> <td>AAAC</td> <td>IS 398</td> </tr> <tr> <td>Aerial Earth Wire</td> <td>Of adequate size</td> <td>ACSR</td> <td>Relevant Specification.</td> </tr> <tr> <td>Buried Earth Conductor</td> <td>Adequate size if required</td> <td>Hot dipped galvanized stranded steel wire.</td> <td>IS:2629:1985</td> </tr> </tbody> </table>	Conductor	Size (mm <sup>2</sup> )	Material	Specification	Catenary	125	Cadmium Copper	ETI/OHE/50	Contact Wire	150	HDGC	ETI/OHE/76	Feeder Wire	288	AAAC	IS 398	Aerial Earth Wire	Of adequate size	ACSR	Relevant Specification.	Buried Earth Conductor	Adequate size if required	Hot dipped galvanized stranded steel wire.	IS:2629:1985
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15	Part 2, Section V(B) Vol 9, PS Electrical	569 of 741	Table 19.2.1-1	Supply of OHE spares	In SN-2 of the table 19.2.1-1, the word “120 mm <sup>2</sup> ” should be replaced as “125 mm <sup>2</sup> ”.																								
16	Part 2, Section V(B) Vol 9, PS Electrical	612 of 741	Annexure-X	List of Governing Acts, Regulations and Specifications	<p><b>Replace the first row of the table with the following:-</b></p> <table border="1"> <tr> <td>CEA Safety Regulations ( Measures relating to Safety)</td> <td>2010</td> </tr> </table>	CEA Safety Regulations ( Measures relating to Safety)	2010																						
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