Dedicated Freight Corridor Corporation of India Limited

(A Government of India Enterprise)

ADDENDUM NO. 04 Dated 24/07/2015

Addendum /Amendments to the Bidding Document for

"CONTRACT PACKAGE CP-204: DESIGN, SUPPLY, CONSTRUCTION, INSTALLATION, TESTING AND COMMISSIONING OF 2X25 KV ELECTRIFICATION, E&M AND ASSOCIATED WORKS OF DOUBLE TRACK RAILWAY LINES ON A DESIGN BUILD LUMP SUM BASIS FOR MUGHALSARAI – NEW BHAUPUR SECTION OF EASTERN DEDICATED FREIGHT CORRIDOR"

ICB No.: HQ/EL/EC/D-B/Mughalsarai-New Bhaupur

Following Amendments are hereby made to the Bidding Document, issued on 08.04.2015 for submission of Stage-1 (Technical Proposal) Bids for 2x25kV, AC traction Electrification, E&M and Associated Works (Contract Packages 204), in accordance with ITB 8 as follows:

S.N.	Bidding Document (Part/Section/ Vol. etc.)	Paragraph or Clause No.	Page No.	Amendments in the Bidding Document
1.	Cover Page of		1 of 887, 129	Replace the name of the project on all cover pages of the Bidding
	Bid Document		of 887 387 of	document with the following:
			887 and	
			840 of 887	"Design, Supply, Construction, Installation, Testing and Commissioning of 2x25kV, 50 Hz, AC Traction Electrification, E & M and Associated Works of Double Track Railway Lines on a Design Build Lump Sum Basis For Mughalsarai – New Bhaupur Section of Eastern Dedicated Freight Corridor"
2.	Part 1, Section II, Bid	ITB 1.1	38 of 887	Replace the first paragraph of 3 rd row of ITB 1.1 with the following:
	Data Sheet			"Name of the ICB is: Design, Supply, Construction, Installation,
				Testing and Commissioning of 2x25kV, 50 Hz, AC Traction

S.N.	Bidding Document (Part/Section/ Vol. etc.)	Paragraph or Clause No.	Page No.	Amendments in the Bidding Document
				Electrification, E & M and Associated Works of Double Track Railway Lines on a Design Build Lump Sum Basis For Mughalsarai – New Bhaupur Section of Eastern Dedicated Freight Corridor"
3.	Part 1, Section IV, Bidding Forms	Subject of Form	61 of 887, 63 of 887, 72 of 887, 75 of 887, 80 of 887, 82 of 887, 83 of 887, 84 of 887, 85 of 887, 86 of 887, 86 of 887, 92 of 887, 93 of 887, 96 of 887, and 107 of 887	Replace contents of "Subject:" on Forms at page numbers stated in the left hand column with the following : "Design, Supply, Construction, Installation, Testing and Commissioning of 2x25kV, 50 Hz, AC Traction Electrification, E & M and Associated Works of Double Track Railway Lines on a Design Build Lump Sum Basis For Mughalsarai – New Bhaupur Section of Eastern Dedicated Freight Corridor"
4.	Part-1 Section – IV Bidding Forms	Form LOP	72 of 887	Delete entire note "(For Bidders in India to be executed on in to account the Notes Shown below. (On each Firm's Letter Head)" below the heading of Form LOP and replace with the following note: "Firms from India shall execute Form LOP on non-judicial stamp paper of appropriate value. Firms from outside India shall execute Form LOP according to the applicable Law in the

S.N.	Bidding Document (Part/Section/ Vol. etc.)	Paragraph or Clause No.	Page No.		Amendments in the Bidding Do	cument
				Bidder's (F country"	ïrm's) country, as applicable ir	n Bidder's (Firm's)
5.	Part-1 Section –IV Bidding Forms	Form CCC	81 of 887	following: "For the pur currency in Reference F	a 1st sentence of Notes (i) of FORM rpose of conversion of Indian Rup to US\$, Bidders shall use the Rates published by Reserve Bank date of bid submission."	oees (INR) / foreign Foreign Currency
6.	Part 1, Section IV, Bidding Forms	Form CU	84 of 887	•	e word "Container" with the wor of second paragraph of the body of	
7.			109 of 887	modified tab	e contents of Table "Price Schedul ole for Price Schedule as under: ent of Contract Price for Payment	
				Price Schedul e No.	Cost Centre	Weightage (%)
				(1)	(2)	(3)

S.N.	Bidding Document (Part/Section/ Vol. etc.)	Paragraph or Clause No.	Page No.		Amendments in the Bidding Docume	ent
				2.1	Surveys, Investigations, Studies, Design & Documents, O & M Manuals and As Built Drawings, Training of Staff	5%
				2.2	OHE Works	37.5%
				2.3	Traction Sub Station (TSS) Works	29.5%
				2.4	Sectioning Post (SP) Works	8%
				2.5	Sub-Sectioning Post (SSP) Works	9.5%
				2.6	SCADA Works	1.5%
				2.7	E&M Works	2%
				2.8	Supply of Contract Spares and Special Tools & Instruments	3%
				2.9	Integrated Testing, Commissioning and Final Taking over of Works	4%
					Total	100%
				above shal Requireme	e Cost Centres and Details of the Scope I be read in conjunction with the Employ ent General Specifications (GS) and Part ons (PS) as applicable.	ver's

S.N.	Bidding Document (Part/Section/ Vol. etc.)	Paragraph or Clause No.	Page No.	Amendments in the Bidding Document
8.	Part 1, Section IV, Bidding Forms	Price Schedule 2.2	112 of 887	Replace the content of column 6 under heading "Cost" "For one TKM number of TKMs " with the following: "For one TKM the apportioned price is 37.5%/n. where n is number of TKMs" and insert the word "Erection" in column 2 under heading of Cost Centre for items 2.2.11 to 2.2.16.
9.	Part 1, Section IV, Bidding Forms	Price Schedule 2.8	126 of 887	Replace the content of column 6 under heading "Cost" "5% of the Contract Price " with the following: "3% of the Contract Price"
10.	Part-2, Vol.1	1.5.7 Proof Checking & Design Validation through an Independent agency as approved by the Engineer:	143 of 887	Add new sub clause 1.5.7(3) as under: "The Proof-checking & design Validation agency shall have a proven experience of carrying out design/ proof-checking work of at least two assignments related with 25kV or 2x25kV Railway Electrification system. The proposed agency shall be approved by the engineer."
11.	Part-2, Vol.1	3.17 Factory Acceptance Test Plan	176 of 887	Replace the contents of first sentence "Factory(OEM) Factory." of Sub Clause 3.17.4 With the following: "Factory acceptance Tests shall include Type/Routine/ acceptance/ special Tests at Original Equipment Manufacturer(OEM) factory or the Accredited Test lab / test house as approved by the Engineer"

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12.	Part-2, Vol.1	3.7	169 of 887	Replace the contents of sub clause 3.7.1(11) with the following:
		Simulation Study Plan.		"The Simulation Results shall conform and validated to Standards EN 50119, EN50317, EN50318, EN50388, EN50367, EN50163, EN50122-1, EN50124-1, EN50121 (all Parts), IEEE80:2013, IEC 60909 and other standards as specified in Part 2-Employer's requirement".
13.	Part-2, Vol.2	3.3	401 of 887	Replace the contents of sub clause 3.3.1(4){a}with the following:
		Scope		"25 kV AC cable/ overhead connections from TSSs/ SPs/ SSPs/ ATS (if any) as required to OHE."
14.	Part-2, Vol.2	3.3 Scope	401-402 of 887	Replace the contents of 3 rd sentence of Sub clause 3.3.1(7) with the following;
				"The BEC as required shall be capable to handle the Return current as may be witnessed during the broken rail or Rail Maintenance without raising the touch potential beyond acceptable limit and compromise the safety of General public or Rail personnel in proximity/ touch."
15.	Part-2, Vol.2	3.3.3 (3)(a)(iii)	406 of 887	Replace the contents of sub clause 3.3.3 (3)(a)(iii).i with the following:
		Preliminary Design		"Electrical Clearance study Report."
16.	Part-2, Vol.2	3.3.3(3),(c)	407 of 887	Replace the contents of Sub clause 3.3.3 (3)(c) (iii) with the following:
		Construction & Installation Stage		"Quality Assurance and Quality Hold Points;"
17.	Part-2, Vol.2	5.5.2	428 of 887	Replace the contents of sub clause 5.5.2(3) with the following:
		System Wide EMI Mitigation/ EMC, Earthing & Bonding		"The Contractor shall simulate the worst condition scenario including the failure of insulator, Rail fracture, earthing of broken conductors etc. as per EN50122-1."

S.N.	Bidding Document (Part/Section/ Vol. etc.)	Paragraph or Clause No.	Page No.	Amendments in the Bidding Document
		Strategy		
18.	Part-2, Vol.2	6.5	435 of 887	Replace the Table 6.5.1 with the following revised table 6.5.1 as under
		Short Circuit Capacity		SystemBreaking Capacity/Fault DurationVoltageApparent Power inin(kV)MVASeconds
				220 20000 1 132 10000 1
19.	Part-2, Vol.2	6.7.2 Voltage unbalance	436 of 887	 Replace the sentence "The limitgrid sub-station:" of Clause 6.7.2 with the following: "The limit of voltage unbalance permitted according to Central Electricity Authority (CEA) standards are as follows:"
20.	Part-2, Vol.2	6.9 Protection Scheme	437 of 887	Replace "± 200 m" in 2 nd sentence of sub clause 6.9.1 with "± 450 m".
21.	Part-2, Vol.2	6.9 Protection Scheme	438 of 887	Delete the following contents of sub clause 6.9.8 (a): "Line differential protection as required"
22.	Part-2, Vol.2	7.6 Batteries and chargers.	451 of 887	Replace the contents of the sub clause 7.6.3 with the following: "Each Set of Battery bank shall support 110V dc loads for a minimum of 10 hours."

S.N.	Bidding Document (Part/Section/ Vol. etc.)	Paragraph or Clause No.	Page No.	Amendments in the Bidding Document
23.	Part-2, Vol.2	8.3 Sectioning of Overhead Equipment	462 of 887	Replace "Drawing DFC/EC/MGS-NBP/TR-01" with "Drawing GC/DFCC/PS/GSD/401" in the Sub Clause 8.3.1.
24.	Part-2, Vol.2	9.2 SOURCE OF SUPPLY	477 of 887	 Replace the contents of the sub clause 9.2(1) and 9.2(2) with the following: (1) TSS (each) – One 100kVA Auxiliary Transformer connected to 25kV bus bar. (2) SP, SSP and Auto Transformers stations (if any) – One 10kVA Auxiliary Transformer at each switching station connected to 25kV bus bar. One Auxiliary Transformer of 10kVA connected to 25kV bus bar shall also be provided at TSS.
25.	Part-2, Vol.2	10.1 General Requirements	481 of 887	Replace "Drawing no DFC/EC/MGS-NBP/SCADA/1" with "Drawing no. GC/DFCC/TR/SCADA/701" in Sub Clause 10.1.3.
26.	Part-2, Vol.2	10.4 Traction Power supply Facilities to be controlled and Monitored	486 of 887	Replace "drawing no. DFC/EC/MGS-NBP/TR-01" with "Drawing no. GC/DFCC/TR/SCADA/701" in sub clause 10.4.2(9).
27.	Part-2, Vol.2	10.5 Indicative list of Equipment to be monitored and Controlled at remote locations	488 of 887	Replace "The videosurveillance:" in sub clause 10.5.6 with the following:"The video Surveillance system shall be provided for effective real-time video surveillance of the Traction Substation from OCC. The contractor shall provide the video Surveillance for the following:"

S.N.	Bidding Document (Part/Section/ Vol. etc.)	Paragraph or Clause No.	Page No.	Amendments in the Bidding Document
28.	Part-2, Vol.2	10.6 SCADA System Performance Requirements	489 of 887	Replace the contents of the sub clause 10.6.9 with the following: "The SCADA system shall be capable of time stamping with a resolution in conformance to IEC 60870-5-104 and IEC 61850 as required."
29.	Part-2, Vol.2	10.6. SCADA System Performance Requirements	489 of 887	Replace the contents of the sub clause 10.6.10(f) with the following: "Shall Support Application Layer – IEC 60870-5-104"
30.	Part-2, Vol.2	10.9 Design Criteria and Performance Specification	493 of 887	Delete sub clause 10.9.1 (7).
31.	Part-2, Vol.2	10.9.3 Supervision Architecture	494 of 887	Replace "Drawing no DFC/EC/MGS-NBP/SCADA/1" with "Drawing no. GC/DFCC/TR/SCADA/701" in sub clause 10.9.3(6).
32.	Part-2, Vol.2	10.9.3 (8)(2)(d)	496 of 887	Replace the contents of sub-clause-10.9.3 (8)(2)(d) with the following:- "Portable configuration and Fault Diagnostic devices-One number for each IMD and two numbers for OCC"
33.	Part-2, Vol.2	Table 13.2.1 Quantity of Contract Spares A. OHE	535 of 887	Replace the content of S.No:1 under heading "quantity" in table 13.2.1, sub-head "A.OHE Spares" with the following: "2% of each type used for the project subject to min of 20 nos. and Maximum of 40 nos."

S.N.	Bidding Document (Part/Section/ Vol. etc.)	Paragraph or Clause No.	Page No.	Amendments in the Bidding Document
		Spares 1-All types of structures including portal parts		
34.	Part-2, Vol.2	Table 13.2.1 Quantity of Contract Spares B. PSI (TSS,SP,SSP) spares	536 of 887	 Replace the content of S.No:18 under heading "Item Description" in table 13.2.1, sub-head "B: PSI (TSS, SP, SSP) - Spares" with the following: " Circuit Breakers, CTs, PTs and other Accessories as used for the project"
35.	Part-2, Vol.2	Table:18.4.4 Interfacing Requirements with Indian Railways	583 of 887	Replace the contents "The costby DFCCIL." of item 2, column 3 (Indian Railways) of Table 18.4.4 with the following: "Cost of Power & Traffic Block if any shall be borne by DFCC. However, if any penalty becomes liveable on account of late cancellation of Block or otherwise due to any other reasons, shall be payable by the contractor.
36.	Part-2, Vol.3	3.2 Scope of E&M and associated Work	701 of 887	Replace the contents of the sub clause 3.2.1(a) with the following "11 kV power supply arrangement with redundant HT switchgears, protection and metering arrangement including the provision of Cabling between Auxiliary Sub Station (ASS) and the Point of Supply (ASS end)."

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37.	Part-2, Vol.3	4.2.2 Project Data Parameters / Performance Requirement	710 of 887	 Replace the 1st sentence "The electricmay be" of sub clause 4.2.2(1)(c) with the following: "The electric substations shall be designed to feed the E & M power requirement of Stations, Depots, Staff Quarters, and associated buildings"
38.	Part-2, Vol.3	5.3 Performance	723 of 887	Add a sub-clause (4) in Clause 5.3 "The Auxiliary Transformer losses shall not exceed as per specified Criteria of BEE for 5 Star rating".
39.	Part-4			Replace the drawing "no. GC/DFCC/PS/TSS/SCH/TYP/101" with the revised drawing "no. GC/DFCC/PS/TSS/SCH/TYP/101, REV-01".
40.	Part-4			Replace the drawing "no. GC/DFCC/TR/ SCADA/701" with the revised drawing "no. GC/DFCC/TR/SCADA/701, REV-01".
41.	Part 2 , Section VI, Volume-2	Point 4	791 of 887	Delete the contents of Sub clause 17.5. at page 791 of 887 and replace with the following:-17.5.1 The Contractor shall make its own arrangements, subject to the consent of the Engineer, for access required to the Site. The Contractor will negotiate with the land owners or other appropriate government agencies to seek temporary occupation of land and seeking necessary permission for construction of temporary access roads. The existing access roads may be used by the Contractor for transport of his men, material and equipment. However, these shall be maintained by the Contractor to a satisfactory level to allow uninterrupted flow of traffic including the public traffic otherwise using

S.N.	Bidding Document (Part/Section/ Vol. etc.)	Paragraph or Clause No.	Page No.	Amendments in the Bidding Document
				 these roads. The preparation & strengthening including modification of existing roads to meet the site conditions for access to Power supply installation i.e. TSS, SSP, SSP and ATS if any are in the scope of the Contractor. 17.5.2 The Contractor will be required to provide suitable pathways/road to afford easy reach to equipment in the switchyard. A motorable road suitable for heavy equipment should be provided to permit vehicle movement from switchyard heavy equipment up to Control Room of TSSs/SSP/SP and from Control room to Entry/exit gate(s). 17.5.3 It may be noted that the roads within the TSS, SSP & SP (including that for ATS provided if any) as required shall be bitumen concrete (BC) and constructed by Contractor CP-204 to permit transportation of all heavy equipment. The roads shall have min. 5 meter wide RCC road. Road construction shall be as per IRC standards. For this purpose, the Contractor shall prepare the necessary design and calculations and submit them to the Engineer and shall construct the roads as per approved designs. 17.5.4 Adequate provision for road drainage including protection of embankment and slopes of roads shall be made. All the culverts and allied structures (required for road/rail, drain trench crossings etc.) shall be designed as per IRC standard / IS code and should be checked for loading.

S.N.	Bidding Document (Part/Section/ Vol. etc.)	Paragraph or Clause No.	Page No.	Amendments in the Bidding Document						
42.	Part 2, Section VI, Vol 2,	Table No. 7.1.1 Table No. 7.1.2 Table No. 7.1.3	446 of 887 & 447 of 887	Replace the contents of the Table No. 7.1.1, Table No. 7.1.2 & Table No. 7.1.3 with the revised contents. Table 7.1.1 List of Proposed Traction Substations (TSS)						
				S. No	Installation Name	Approx. IR Chainages / detour (KMs)	Approx. DFCC Chaina ge (in Km)	Plot Size (sqm)	Spare Transfo mer(s) require ment	r level at point of
				1	Deoria TSS	681	134.400	140x 85	yes	132 kV
				2	Chandaipur TSS	On detour	194.200	140x 85		132 kV
				3	Gadhion TSS	800.7	258.100	140x 85	yes	132 kV
				4	Bharwari TSS	861.5	317.051	140x 85		132 kV
				5	New Rasulabad TSS	920	379.363	140x 85	yes	132 kV
				6	Aung TSS	980.3	442.395	140x 85	no	132 kV
				7	Piturpur TSS	On detour	501.773	140x 85	yes	132 kV
				Table 7.1.2 List of Proposed Sectioning and paralleling Posts (SP)						
				S. No	Installation Name	С	pprox. IR hainages / etour (KMs		C F nage	vailable Plot Size (sqm)
				1	Newaria SP	7	12/17-19	164.9	91 55	5mx30m
				2	Kukhuri SP	7	67/21-23	225.5		5mx30m
				3	SubedarGanj SP		etour	288.2		5mx30m
					Athsarai SP	-	39/15-19	347.7		5mx30m
					Kurasatikalan SP		51/5-7	413.3		5mx30m
				6	Chakeri SP	d	etour	472.0	0/1 5	5mx30m
					Table 7.1	.3 List of Pro Post	oposed Su s (SSP) (N			parallelir

S.N.	Bidding Document (Part/Section/ Vol. etc.)	Paragraph or Clause No.	Page No.	Amendments in the Bidding Document						
				S. No	Installation Name	Approx. IR Chainages/ detour (KMs)	Approx. DFCC Chainage (in Km)	Available Plot Size (sqm)		
				1	Nakhra SSP	696/23-25	149.155	55mx25m		
				2	Adhwar SSP	Detour	179.555	55mX25m		
				3	Birohi SSP	751/25-27	209.867	55mX25m		
				4	Kotha SSP	783/25-27	241.817	55mX25m		
				5	Chheoki SSP	Detour	269.09	55mx25m		
				6	New Manauri, SSP	847	302.565	55mX25m		
				7	New Shujatpur SSP	877	332.483	55mX25m		
				8	Khaga SSP	905/1-3	363.202	55mx25m		
				9	Ramwa SSP	935	396.717	55mx25m		
				10	New Malwan SSP	966-67	428.604	55mx25m		
				11	New Kanpur SSP	997.76	459.714	55mX25m		
				12	Bhimsen SSP	Detour	488.424	55mX25m		
43.	Part-2, Vol.2	10.10.2(3)(b) Performance Specification for SCADA software	498 of 887	Replace the contents of the sub clause 10.10.2(3)(b) with the following: "The Tele-commands shall receive the highest priority in conformance to IEC 60870-5-104."						