

BHAUPUR – KHURJA SECTION OF EASTERN DEDICATED FREIGHT CORRIDOR SYSTEM WORKS: CONTRACT PACKAGE - CP 104 RESPONSES OF PRE-BID QUERIES OF THE BIDDERS

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
666	Part 2, Section VI, Vol. 2, Clause 10.1.2(9)(f), Page 83	Simulator with minimum 4 nos. Consoles at OCC for training of SCADA Operators and maintenance staff.	We understand that one no. of Simulator with 4 no. of consoles need to be supplied at OCC despite of the fact that the same has been not shown in SCADA system architecture provided. Request to confirm our understanding.	Please refer to amended Clause 10.1.2(9)(f) Addendum 3 (S.No. 46). Please refer Addendum 3 (S.No. 186) for modified Conceptual SCADA Network.
667	Part 2, Section VI, Vol. 1, Clause 15.1	AMC	What is period of AMC. Is there is any requirement of posting of engineer for AMC at OCC and RTU locations. If yes then how many engineers are required to be posted at OCC and RTU locations and for how many shifts?	AMC is not in the Scope of Permanent Works. However provisions of Clause 6.5(3)(c) and 6.5(5) shall prevail.
668	Part 2, Section VI, Vol. 1, Chapter 16	Training	<ol style="list-style-type: none"> 1. What will be the duration of training? 2. What will be number of training participants? 3. We understand that lodging, boarding, travel and local conveyance of training participants shall be borne by customer. 	Please refer Addendum 6 (S.No.197 & 198).

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			Request to confirm our understanding.	
669	Part 2, Section VI, Vol. 2, Clause 10.1.2(9)(d), Page 83	Provision of cable termination boxes at RTU locations and at OCC for OFC cables, where cables enter and leave equipment rooms.	<p>We understand that the same shall remain under OFC cable supplier / contractor. Request to confirm our understanding. However, in case if the same remains under RTU supplier then following shall remain under OFC supplier/contractor scope.</p> <ol style="list-style-type: none"> 1. OFC cable supplier will have to bring cable inside cable termination box (FODP) at the location finalized by customer. 2. Cable termination (IN/OUT) inside cable termination box shall remain the responsibility of OFC cable supplier/contractor. 3. OTDR and end to end fibre testing and communication establishment shall be the responsibility of OFC supplier/contractor. <p>Request to confirm our understanding on above.</p>	Provisions of Bidding document shall prevail.
670	Part 2, Section VI, Vol. 2, Clause 10.1.2(9)(j), Page 83	Provision of check metering at TSS	Request to elaborate the scope in detail.	Please refer Clause 3.3.1(l) Part 2, Section VI, Vol.2.

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671	Part 2, Section VI, Vol. 2, Clause 10.1.2(9)(k), Page 83	Protection from viruses and other security protection	We understand that firewall is required at OCC. Please confirm our understanding. In case if the same is required, we request you to clarify whether the same is required only for execution period or upto AMC period.	Please refer Clause 10.10.2(9). Please refer Addendum 6 (S.No. 212).
672	Part 2, Section VI, Vol. 2, Clause 10.1.2(9)(l), Page 83	Web server with android based client application	1. Although the same has been not shown in the SCADA system architecture but we understand that the same is required to be supplied. Please confirm our understanding. 2. We understand that no redundant Web server is required. Please confirm our understanding. 3. We understand that internet charges for Web Server connectivity shall be borne by DFCC upto AMC period. Request to confirm our understanding. 4. Internet connection shall be of 2 Mbps. Request to confirm our understanding.	1. Please refer Addendum 3 (S.No.186). 2. Please refer to Clause 10.7(1)(a). 3. & 4. Please refer Addendum 6 (S.No. 212).
673	Part 2, Section VI, Vol. 2, Clause 10.1.2(9)(m), Page 83	Provision of data server, application server with redundancy	Under the system architecture, two server in hot / standby mode and two servers for archive functions has been shown. We understand that DFCC requires two servers in hot/standby mode for running the	Please refer Addendum 3 (S.No. 186).

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			<p>application and two servers for archival function (Historical data storage). Request to confirm our understanding.</p> <p>2. We request you to clarify the storage requirements of Archive Servers (Historical servers) i.e. for how many months.</p> <p>3. We request you to provide the minimum configuration to be considered for each type of servers to meet the SCADA requirements.</p> <p>4. We request you to confirm, if any back up tape drive is also required for taking backup of data as and when required.</p> <p>5. We understand that for storage of data from Archive Server, we can provide a separate storage bay considering online data storage for two months backup.</p>	<p>2. Please refer Clause 10.10.2 (27)(e).</p> <p>3. Being a design and build contract, the contractor shall workout the required configuration to meet the functional requirements.</p> <p>4. Please refer Clause 10.10.2(27)(e).</p> <p>5. Provisions of Clause 10.10.2(27)(e) shall prevail</p>
674	Part 2, Section VI, Vol. 2, Clause 10.2.1.a, Page 84	<p>The design of the system, including all sub-systems and equipment shall be evolved based on principles as indicated in clause 4.4.3 along with the following additional principles:</p> <p>Adequate redundancy in system such that any single point failure shall not degrade the system</p>	<p>Please clarify following w.r.t. redundancy.</p> <p>1. Redundancy is required only at server levels.</p> <p>2. Redundancy is required at SCADA LAN.</p> <p>3. Redundancy is required at Printer level.</p> <p>4. No redundancy required at HMI/Workstation level but three nos. of HMI</p>	<p>Please refer Clause 10.7, Vol. 2, Part 2, Section VI.</p>

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	<p>Part 2, Section VI, Vol. 2, Clause 4.4.3, Page 24</p> <p>Part 2, Section VI, Vol. 2, Clause 10.7.1.a, Page 89</p>	<p>availability or performance in any way;</p> <p>(10) Adequate redundancy in system.</p> <p>(a) The SCADA system shall be of the highest reliability. The OCC equipment shall have 100% redundancy as a minimum.</p>	<p>needs to be supplies as per SCADA system architecture provided.</p> <p>5. Redundancy is not required at GPS receiver level.</p> <p>6. Redundancy in RTU is required at CPU and PCU card levels only.</p>	
675	Part 2, Section VI, Vol. 2, Clause 10.2.1.e, Page 84	SCADA system shall be self-monitoring i.e. failure of any piece of equipment down to the individual printed circuit boards shall cause an alarm locally and at the OCC.	Failure of any piece of equipment down to the individual printed circuit boards may create an alarm locally through hooters/lamp indication and may be seen using appropriate tool but it may not be possible to show these alarms at the OCC if potential free contacts are not provided by OEMs. Not all the OEMs provide this feature in their products. We understand that DFCC shall relax this clause if the same is not provided by OEMs.	Please refer Addendum 3 (S.No. 47).
676	Part 2, Section VI, Vol. 2, Clause 10.4.1, Page 86	The SCADA system shall have adequate number of workstations. This shall be proposed through the Contractor's work load assessment	From the SCADA system architecture provided, we understand that three no. of workstations are required to be supplied. We find three no. of work stations as adequate.	Provisions of Bidding document shall prevail.

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		report and shall be subject to approval by the Engineer	The assessment of workstations requirement is to be done by DFCC based on their operator deployment plan. We request you to confirm the quantity of workstations to be supplied.	
677	Part 2, Section VI, Vol. 2, Clause 10.4.4, Page 87	In addition to the requirements for provision of second transformer bay at substations with single transformer, the SCADA architecture shall permit up gradation of SCADA system upto 10% to include more controlled switching stations/ additional equipment.	We understand that RTU has to be designed for extra 10% IO slot for second transformer. Request to confirm our understanding and similarly SCADA system S/W sizing shall be designed for 10% extra points.	Provisions of Clause 10.4.4 shall prevail.
678	Part 2, Section VI, Vol. 2, Clause 10.5, Page 87	Table 10.1-1 provides an indicative overview of the typical items of equipment that will be required to be monitored and controlled in each Installation on Bhaupur – Khurja section of the Eastern Dedicated Freight Corridor.	We request you to provide the associated signals also (AI/DI/DO) to be monitored and controlled for designing IO list for each category.	Please refer Addendum 3 (S.No. 51).
679	Part 2, Section VI, Vol. 2, Clause 10.7.1(c), Page 89	(c) All OCC equipment shall be supplied power from two independent sources of supply.	We understand that all servers, workstation, printer, GPS, Storage shall have two power supply source and these power supply shall	Provisions of Clause 10.7.1(c) are self-explanatory.

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		Details are indicated in Vol. 5 of these documents.	be fed from two different UPS. Please confirm our understanding	
680	Part 2, Section VI, Vol. 2, Clause 10.7.1(d), Page 89	UPS equipment at the OCC for the SCADA system shall be online UPS. Details are indicated in Vol. 5 of these documents.	We request you to provide Volume 5 for UPS specifications. We understand that this UPS shall cater power supply requirements of SCADA as well as load requirements of other equipments located at OCC. For SCADA load, 20 KVA UPS shall be required We request you provide the load details of other equipment so that UPS can be designed based on total load requirement.	Volume 5 is part of Bidding document.
681	Part 2, Section VI, Vol. 2, Clause 10.7(1)(e), Page 89	The design shall consider security and backup storage of data in SCADA.	Please elaborate the meaning of backup storage. We understand that two archive servers has to be provided at OCC with common storage. In case of backup storage i.e. two storage is required, please provide the backup requirements in months required in storage	Provisions of Clause 10.7(1)(e) shall prevail. Also refer Addendum 3 (S.No. 186) for modified system architecture. Please also refer Clause 10.10.2(27)(e).
682	Part 2, Section VI, Vol. 2, Clause 10.7(2)(c), Page 90	The availability figures for other SCADA subsystems viz. Software Development and Training Simulator shall be 99.7%.	We understand that a training simulator is also required in redundant configuration. Request to confirm our understanding.	Provisions of Clause 10.7(2)(c) shall prevail.

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683	Part 2, Section VI, Vol. 2, Clause 10.8.1.10, Page 93	(10) Additionally, the SCADA system shall include a data link to a maintenance management system (MMS being developed by DFCCIL). This link shall enable the SCADA System to forward fault information to the MMS from all connected equipment to identify the location and nature of faults	We understand that the communication shall be through ICCP. Please confirm our understanding.	MMS of DFCCIL is presently using SNMP Protocol. However Contractor shall interface with DFCCIL during design stage.
684	Part 2, Section VI, Vol. 2, Clause 10.9.1(2), Page 93	(2) The SCADA system shall display information on the video wall to be provided as per Vol. 4 - PS – Telecommunication.	We understand that Video Wall (VPS) is not under the scope of SCADA vendor. Please confirm our understanding.	Provisions of Bidding document shall prevail.
685	Part 2, Section VI, Vol. 2, Clause 10.10.2(9)(c), Page 99	(c) There shall be no remote/email/internet access, user access codes/passwords in the master station software and hardware so that any possibility of a cyber-intrusion or attacks is eliminated. Reasonable precaution, by way of installing fire-wall, and blocking ports for connecting external devices like pen drives, CD drives etc shall be ensured.	We understand that no web server and connection to internet is required. Please confirm our understanding.	Please refer provisions of Clause 10.1.2(9)(l) and its Addendum 3 (S.No. 45).

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686	Part 2, Section VI, Vol. 2, Clause 10.10.2(23), Page 105	<p>(23) Printers</p> <p>(a) The SCADA software shall support a minimum of two data-logging laser printers connected on LAN. The data logging printers shall be in a secure room which the operators have no access to.</p> <p>(b) Each operator shall have one laser printer for the production of logs and reports.</p> <p>(c) An additional printer shall be provided for the general purpose computer connected to the office LAN.</p>	<p>We understand that following quantity of printers has to be supplied at OCC.</p> <ol style="list-style-type: none"> 1. 2 Black and White A4 size printer connected to dual SCADA LAN. 2. Three A4 size Black & White Laser printers connected to three workstations i.e. for each operator. 3. One A4 size Black & White Laser Printer connected to office LAN and not connected to SCADA LAN. 	Provisions of Clause 10.10.2(23) are self-explanatory.
687	Part 2, Section VI, Vol. 2, Clause 10.10.2.31, Page 108	<p>(31) Simulator:</p> <p>A Simulator workstation/server set up shall be provided at OCC location with identical replica/snapshots of the actual system available to SCADA Operators. It shall be possible for the trainer to:</p>	<ol style="list-style-type: none"> 1. Please clarify whether redundancy is required for Training Simulator Server or not. 2. Please provide the quantity of training simulator workstations to be supplied. 	<ol style="list-style-type: none"> 1. Please refer reply to Query no. 682. 2. Please refer Addendum 3 (S.No. 46).
688	Part 2, Section VI, Vol. 2, Clause	(viii) A general office PC shall be provided on each workstation for	1. Please clarify the quantity of general office PC to be provided.	1. Quantity of general office PC to be worked out by the bidders, being a

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	10.10.2.37, Page 110	word processing etc. This shall be connected to the office LAN and can have all of its USB ports and data drives unblocked.	2. Please confirm if MS Office, Antivirus is required to be provided for general office PC.	design and build contract. 2. The MS office, Antivirus is required for all general office PC.
689	Part 2, Section VI, Vol. 2, Clause 10.10.2.38, Page 111	Remote Terminal Unit	Please clarify at which locations RTUs are required to be installed	Being a design build contract detailed design is Contractor's responsibility.
690	Part 2, Section VI, Vol. 2, Clause 10.10.2.38.a.VII, Page 111	(vii) For each traction supply post, the RTU shall be equipped to handle all the I/O points which are required. The I/O points in Table 10.6-1 are indicative and not exhaustive. In addition, the RTU shall include fully configured spare I/O points available for the Employer's use; The RTU for a TSS without any standby transformer should allow addition of standby transformer and associated equipment.	Please clarify in terms of %age about spare IO requirements to be supplied.	Please refer Addendum 6 (S.No. 216).
691	Part 2, Section VI, Vol. 2, General	Relays integration	Please clarify if any numerical relay is also required to be integrated on IEC 61850 Protocol. If yes, please provide the qty.	Being a design build contract detailed design is Contractor's responsibility.

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			details for each location where RTU has to be installed.	
692	Part 2, Section VI, Vol. 2, Clause 10.11.2(1)(a)(v), Page 121	(v) The Master station simulator and protocol analyser tool shall also have following features:	Please confirm if any RTU simulator has to be provided.	Provisions of Bidding document shall prevail.
693	Part 2, Section VI, Vol. 2, General	Type test	Please confirm if fresh type test is required to be conducted for RTU or available type test report not older than three years is acceptable.	Provisions of Clause 4.4.2 and its Addendum 3 (S.No.25 & 26) shall prevail
694	Part 2, Section VI, Vol. 2, Clause 7.1.2 Page 52	Operations at the junctions and crossings stations. a. Both types are stopping stations with 5 minutes dwell time. b. Junctions stations are 1500m long and both 750m and 1500m will be stopping at these stations.	Confirm that single train of 750m only can stop in crossing station on Loops and Mains or Single train in Loops and Double trains in Main line of crossing station being the loop lengths 750m only now with 5minutes dwell time. Also confirm both single and double trains can stop in Junction yards, with 5 minutes dwell time.	Provisions of Bidding document shall prevail.
695	Part 2, Section VI, Vol. 2, Clause Conceptual SSP	The SSP are located in plain open line with out any cross over. This may not help in train operations in	With regards to SSP bypass track, we understand that the operation in Indian Railway is such that when there is a power	Provisions of Clause 8.3, Vol. 2, Part 2, Section VI shall prevail.

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	Drawing	case of fault in any of the line. Is there any review on insertion / shifting of cross overs for effective use of Power supply distribution	isolation at the SSP station, the stretch between the two crossovers adjacent to the failed SSP will be at single track operation. In the case of EDFC, this length is significant. This is different in other countries where there are crossovers built within the zone and vicinity of the SSP with control at SSP in order to minimize the single track operation in the event of power isolation in an SSP, even the SSP falls in open line (only two tracks). Please clarify.	
696	Part 2, Section VI, Vol. 2, Clause 5.5.1, Page 34		The fact that the requirement of 50% stoppages in every 30km would result in oversizing, will there be a review on the potential oversizing based on the operation plan stated in the contract and head way, in case the oversizing results in Simulation. What factors are flexible and what are rigid. EDFC to advice. Note this gets into tomouch energy consumption of various trains for starting and will impact on Transformer sizing. This requires further detailed clarification as a Time table of trains and type of trains and stoppages etc. Is it possible to communciate information on this by EDFC.	Please refer Clause 5.2, Part 2, Section VI, Vol. 2 and its Addendum 3 (S.No. 3). Please refer Addendum 6 (S.No. 205).

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697	Part 2, Section VI, Vol. 2, Clause 5.5.1, Page 34		Based on Contract conditions, bidders to simulate considering the regeneration as 0. Can it be left flexible, since considerable saving is possible with regeneration option.	Provisions of Bidding document shall prevail.
698	Part 2, Section VI, Vol. 2, Clause 5.5.1, Page 34	Some questions for urgent clarifications please	What is the electric traction effort and brake effort of the loco?	Please refer Table 5.2.1 and "Note" there of at Page 33 of 291.
699	Part 2, Section VI, Vol. 2, Clause 5.2.1, Page 32		What is the traction and brake effort consists of in kN?	Please refer Table 5.2.1 and "Note" there of at Page 33 of 291.
700	Part 2, Section VI, Vol. 2, Clause 5.2.1		What is the brake effort for a single wagon?	This is an interface item with IR. Typical value can also be obtained from speed certificate of Wagons available on RDSO website.
701	Part 2, Section VI, Vol. 2, Clause 5.2.1, Page 32		What is the auxiliary power for the loco? The RDSO standard stated that the spare provision per aux converter is 10kVA. This can be interpreted as a 10% spare capacity	Please refer Table 5.2.1 and "Ref." there of at Page 33 of 291. Provisions of Bidding document shall prevail.
702	Part 2, Section VI, Vol. 2, Clause		Power factor is to assumed as 0.85 as per the contract. We find this will improve with	Please refer Addendum 3 (S.No. 37).

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	5.2.1, Page 32		new rolling stock and other factors. Can we work for an actual conditions.	
703	Part 2, Section VI, Vol. 2, Clause 5.2.1, Page 32		Communicate what are the speed restriction area	Query is not clear as the Clause does not pertain to speed restrictions.
704	Part 2, Section VI, Vol. 2, Clause 5.2.1, Page 32		Please provide us the Gradient data From to Chainage; Curve with cant data..... From To chainage; in a table form which is very important for Simulation input. The alignment data are not so clear. This is very much required as input.	The required details can be derived from the data provided in Part 4 - Reference documents-1. Alignment plans, Yard plans and building plans.
705	Part 2, Section VI, Vol. 2, Clause 5.2.1, Page 32		Location of TSS, SP, SSP and IR connection in term of EDFC chainage.	Please refer Addendum 3 (S.No. 39 & 180 respectively).
706	Part 2, Section VI, Vol. 2, Clause 5.2.1, Page 32		Please provide the RS characteristics for present and future case with all the parameters as asked in SI.no. 5	Please refer Table 5.2.1 and "Note" thereof at Page 33 of 291.
707			EDFC may suggest the standard / Typical X/R of Transformer for simulation. Else typical values will be condiered by Bidder.	Provisions of Bidding document shall prevail.

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708	Part 2, Section VI, Vol. 2, Clause 5.1.5 & 5.1.6, Page 32		1st and 2nd stage scenario of Power supply failures shall be discribed very clearly.	Please refer Addendum 3 (S.No. 29). Also refer response to Query No. 267, 269 & 270.
709	Part 2, Section VI, Vol. 2, Clause 5.5.1, Page 34		Please explain what is bunched conditions of Trains.	Please refer Addendum 3 & 6 (S.No.31 & 205 respectively).
710	Part 2, Section VI, Vol. 2, Clause Table Clause 7.3.1, Page 55		All 8 nos. of 100MVA Transformers will be designed for ONAF & OFAF. However confirm on whether 1 Trfr will be supplied for ONAF & OFAF, remaining 7 only ONAN only will be supplied.	Provisions of Clause 7.3.2 (1) of the Bidding document shall prevail.
711	General		As discussed Filled Soil strata, Soil bearing capacity of CST may please be shared by EDFC.	The bore log data are being shared. Please refer to Addendum 3 (S.No.179). The bearing capacities may be worked out by the bidder from said data.
712	Part 2, Section VI, Vol. 2, General		For IR connection location joint survey required to be arranged. Also EDFC to provide EDFC chainage of IR track merging and also indicative distance from nearby IR Existing Mast.	The yard plans for junction station have already been provided in Part 4 - Reference documents. The required details may be worked out by bidder from said plans or through site inspection.

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713	Part 2, Section VI, Vol. 2, Clause 3.3.4, Page 18		<p>Confirm that Power block works are to be done by the Bidder on modifications.</p> <p>Also confirm that the IR Power blocks and IR Tower wagon checks after modification will be free of cost.</p>	<p>Please refer Clause 18.1.4(2).</p> <p>Please refer Addendum 6 (S.No.220).</p>
714	Part 2, Section VI, Vol. 2, General		<p>TSS, SSP, SP location plan to be given with EDFC chainage and nearby distance from IR Chainage and distance from IR existing Mast.</p>	<p>Please refer Addendum 3 (S.No.180).</p>
715	Part 2, Section VI, Vol. 2, Clause 11.4, Page 128		<p>Also Approach road from nearby National Highway to TSS/SSP/SP to be shown. Confirm that approach Road will be Constructed by EDFC, since ROW is involved and a permanent access will be a must for future Transformer and heavy equipment movement.</p>	<p>Please refer Part 2, Section VI, Volume 1, Appendix 19 - Requirements for Construction. Approach road plan for TSS, SP & SSP are attached.</p> <p>Please refer Addendum 3 (S.No.180).</p>
716	SIG-RS Appendix 2-1		<p>Provide the details of final requirement of Level xing and also the existing to be modified as RUB / ROB</p>	<p>There are 93 LCs in Bhaupur-Khurja section out of which ROBs will be constructed at 14 LCs. The details of balance 79 LCs are included in Appendix 1 of Part 2, Section VI, Volume 3 (Page 138-141).</p>

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717	Part 2, Section VI, Vol. 2, Clause 8.14.4, Page 73		Implantation for main line single mast is 3m. & anchor is 3.50m. However for Loop lines and other than main lines the Implantation can be reduced meeting the SOD. This will reduce the use of high sized portals.	Provisions of SOD for EDFC shall be complied with. Please also refer Addendum 3 (S.No. 183).
718	Part 2, Section VI, Vol. 2, LOP Drawing		Also confirm that the Layout Plan Structures are to be located considering the presently proposed tracks only in crossing and Junction stations.	Please refer Clause 8.22, Part 2, Section VI, Vol. 2.
719	Part 2, Section VI, Vol. 2, Clause 3.3.1, Page 12		The cost of soil filling in Station building, Staff quarters, IMD, IMSD, and also the remote TSS, SSP, SP will be more cheaper to CST contractor based on the volume of work they are already doing in the same area. So this shall be removed from this package. If still insisted the bidder will take up the same, but certainly this will cost 50times more, being a piece meal work, and separate resouces involvement. Can EDFC have a rethinking on this.	The provisions in the Bidding Document shall prevail.
720	Clause 3.3.1		Please confirm the Datum level to be followed very clearly at every location of soil filling as above, since HFL level cannot be determined at all. It may be better consider	The ground levels are indicated in the alignment plans provided in Part-4, Reference documents. HFL may be locally obtained through enquiry from village

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			that 1.50m above the existing ground level shall be the datum level. EDFC to confirm	heads or through meteorological department/ other relevant departments.
721	5.3.3(3) (GS)		Land for storage and operations 5000 sqm (Minimum) at 4 locations at standard intervals preferably near station is requested. EDFC is requested for all possible support.	In case spare land is available with the Employer the same can be handed over to the Contractor free of cost for the purpose of establishing temporary construction depot(s). However, whenever Employer requires this portion of land back, the same shall be handed over to the Employer with a month's notice at no extra cost/compensation to the Contractor.
722	Part 2, Section VI, Vol. 2, Clause 8.14.2, Page 73		Pre cast foundations for OCS will improve the quality and reduce the Time line also. EDFC is requested to consider this option	Provisions of relevant clauses of Bidding document shall prevail.
723	Part 2, Section VI, Vol. 2, Clause 8.14.2, Page 73		Base plated structures is the standard international practice. Please confirm its acceptance.	Provisions in the Clause 8.14, Part 2, Section VI, Volume 2 shall prevail. Please refer clause 8.2.8 (4) Part 2, Section VI, Volume 2 for OHE masts with base plate on bridges and viaducts.
724	Part 2, Section VI, Vol. 2, Clause 8.		Splices on OCS due to theft and damage by other agencies are exceptional cases, which is beyond the control of the Bidder. Please	Provisions of Clause 8.4 (2)(b) of Part 2, Section VI, Vol. 2 shall prevail.

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	4(2b)		confirm its acceptance	
725	Part 2, Section VI, Vol. 2, Clause 6.10(1), 8.16, 3.3.3.(1E)		Pollution mapping is not clear. It is international practice that Polluted zones are considered for City area, industrial area and near by Ocean coast due to salt breeze as an international practice also. There is no such situation envisaged in EDFC, since the yards are also away from IR stations and cities diverted as detour lines. Please confirm for any other specific condition to be considered under pollution area for Structural Zinc microns and insulators etc., This needs clarification from EDFC.	Please refer Clause 3.3.3(1)(e) and 6.10(1) for pollution mapping requirement.
726	Part 2, Section VI, Vol. 2, Clause 7.5.6.		25KV Breakers shall not be restricted to Vacuum, as Other insulation solutions are also there in international practice.	Provisions in Clause 7.5.6, Part 2, Section VI, Volume 2 shall prevail.
727	Part 2, Section VI, Vol. 2, Clause 13.2 (2)		Please clearly mention the items to be covered in OCS 10KM spares.	Please refer Addendum 3 (S.No 59).
728	Part 2, Section VI, Vol. 2, Clause 8.14.4.(6E)		We feel there is no need for Sigma Trip Location Board in this project. Please confirm the usage.	Provisions of Bidding documents shall prevail. Please refer Addendum 3 (S.No. 43).

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
729	Part 2, Section VI, Vol. 2, General		Understood that Umaria TSS land will be acquired only by March 2015. This may affect the project completion schedule. We prefer all access to works like building and also for TSS, SSP, SP shall be made available on NTP date.	This will be available by 05.03.2015.
730	Part 2, Section VI, Vol. 2, Clause 6.7.2		Lowest short circuit level of Grid Substation shall be communicated.	Please refer Addendum 3 (S.No. 36).
731	Part 2, Section VI, Vol. 2, Clause 16.3.2.(14 & (10)		Exclude Training requirement on Stray current Monitor & GIS Switchgear as they may not be related project items.	Please refer Addendum 3 (S.No. 61).
732	Part 2, Section VI, Vol. 2, SCADA GS		Confirm BCC is not in bidder scope.	Please refer to Clause 1.1.11, Page 11 of 95, Part 2, Section, VI, Volume 1.
733	Part 2, Section VI, Vol. 5, General		Provide break up for staff quarters stationwise.	Please refer Addendum 3 (S.No.154).
734	Part 2, Section VI, Vol. 5, General		PI indicate the filling required for Station building, IMD, IMSD, OCC as the locations are not identifiable very clearly for quantum of filling involved.	This shall be ascertained by the bidder through site data provided in the Part 4 - Reference Documents. Further details can be obtained through site survey.

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
735	Part 2, Section VI, Vol. 5, General		Confirm whether open yard lighting is included in the scope of work or not? If included, whether high mast lighting can be considered?	Please refer Chapter 9, Part 2, Vol. 5, Section VI.
736	Part 2, Section VI, Vol. 5, Clause 15.1		Though the Specification indicates 200 quarters (80 Type-1, 50 Type-2 and 70 Type-3), but their locations are not known. Same goes for IMD and IMSD. The SLD at attachment 15.1 of Building Specifications confirms that station substation will feed staff quarters as well as IMD/IMSD, therefore, their location relative to stations are of utmost importance. Please provide information of distribution and location these buildings (quarters).	80 Type-I, 40 Type-II and 40 Type-III quarters are to be constructed. The station wise details of Type-I, Type-II & Type-III quarters to be constructed is shared. Please refer Addendum 3 (S.No. 173).
737	Part 2, Section VI, Vol. 5, General		The attachment 15.1 (SLD) of Building Specifications indicates outgoing feeders for "Service Building". It is not clear which are these Service Buildings? Please clarify	Please refer Addendum 3 (S.No. 173)
738	Part 2, Section VI, Vol. 5, General		Please confirm the classification of various buildings as per NBC. This classification has a huge impact on provision of fire suppression facilities. More specifically please confirm whether fire hydrants are	Please refer Addendum 3 (S.No. 168)

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
			foreseen at station building, IMD, IMSD and staff quarters.	
739	Part 2, Section VI, Vol. 5, General		The Building Specification does not bring out whether wet fire hydrant system is applicable to OCC building or not. In our opinion, such system is required for OCC building. Kindly confirm.	Please refer Addendum 3 (S.No. 168).
740	Part 2, Section VI, Vol. 2, Clause 4.4.2 (6F), Page 22-23		Please confirm that 100% localization of imported material shall be acceptable instead of 50% restriction.	Provisions of Bidding document shall prevail.
741	Part 2, Section VI, Vol. 2, Clause 4.4.2 (6D) (i), Page 22-23		Prototype testing carried out in last 3 years up to supply date shall be considered (instead of up to first stage bid) shall be reviewed as in Clause 4.4.2(3) (i).	Please refer Addendum 3 (S.No. 25 & 26).
742	Part 3, Section VII, GS		Please confirm on procedures of compensation as per Yellow Fedic Book, if the time extension is warranted on no fault of the bidder.	Time extension, delay damages and price adjustment for delay beyond the control of the contractor will be dealt as per Part – 3 Conditions of Contract, Section VII and VIII.

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
743	General		Confirm on CD exemption on Raw materials to various equipments like metal import for Transformer, OCS conductors, structures etc., which normally applicable as international practice and Indian Metro Practices also.	Please refer Part 1 Bidding Procedure Section II Bid Data Sheet ITB 29.8 Page 44 & 45 of 134 and Part 3 Section VIII Particular Condition Sub Clause 4.11 Page 11 of 44.
744	Part 2, Section VI, Vol. 2, Clause 4.6.1 (1) (g)(iv), Page 25-26		Clear access dates are very much essential and shall be formally communicated.	Please refer reply to Query No. 14.
745	Part 3, Section-VIII, Clause 14.2, Page 28	<p>Mobilization Advance</p> <p>The Employer shall pay on written request by the Contractor an interest-free Mobilization Advance up to (Ten) 10 per cent of the Contract Price. The Mobilization Advance shall be released in two installments as under:</p> <p>(a) Upto (Five) 5 per cent: On Submission of Performance Security and commencement of mobilization process; and</p> <p>(b) Up to (Five) 5 per cent: On Submission of the Inception Report and details of utilization of initial</p>	<p>As the scale of this project is huge and is also a Capital Intensive project, neutral Cash Flow is of paramount importance, we would request you to change the Advance Payments terms as follows –</p> <p>(a) Upto (Five) 5 (Ten) 10 per cent: On Submission of Performance Security and commencement of mobilization process; and</p> <p>(b) Up to (Five) 5 per cent: On Submission of the Inception Report and details of utilization of initial Mobilization Advance of 5% to the satisfaction of Engineer.</p> <p>We would like to cite one such recent</p>	Not Agreed. Provisions in the Bidding Document shall prevail.

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
		Mobilization Advance of 5% to the satisfaction of Engineer.	example of a comparable huge Systems works on turnkey basis for Navi Mumbai Metro, where advance payment terms were 10+5%, copy of the relevant pages are enclosed as Annex A for your reference and consideration.	
746	Part 3, Section-VIII, Clause 2.1, Page 26	<p>The Employer / Engineer shall give Right to Access to site to the Contractor as per the following schedule subject to the Contractor providing Performance Security in terms of Sub-Clause 4.2 of General Conditions of Contract:</p> <p>Possession of Site for work will be handed-over to the Contractor as per the approved Work Plan taking into consideration the progress of the Civil Works Contract Packages [CP 101, CP 102 and CP 103] already under execution at the Site of Work.</p>	<p>We would like to emphasize here that for such Systems works on Design & Built basis, it is imperative to have the access dates with reference to the commencement date for better and efficient project execution on time.</p> <p>We would like to cite one such recent example of a comparable huge Signalling Systems works on Design & Built basis for Delhi Metro phase III Tender Package CS 03 & 04, enclosed please find from the Tender documents (APPENDIX V – KEY & ACCESS DATES), where very clear plan of access dates to be provided & followed up by key dates requirement for the Tender are given, copies of the relevant pages are enclosed as Annex C for your reference and consideration.</p>	Please refer to Query no. 14 & 17.

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response																		
747	Part 1, Section IV, Clause 2.0, Page 92	<table border="1"> <thead> <tr> <th data-bbox="537 528 607 715">S No (1)</th> <th data-bbox="611 528 826 715">Cost Centre (2)</th> <th data-bbox="831 528 958 715">Percent age of Contract Price (3)</th> </tr> </thead> <tbody> <tr> <td data-bbox="537 718 607 799">2.1</td> <td data-bbox="611 718 826 799">Electrical Works</td> <td data-bbox="831 718 958 799">58%</td> </tr> <tr> <td data-bbox="537 802 607 884">2.2</td> <td data-bbox="611 802 826 884">Signalling Works</td> <td data-bbox="831 802 958 884">30%</td> </tr> <tr> <td data-bbox="537 887 607 968">2.3</td> <td data-bbox="611 887 826 968">Telecommunication Works</td> <td data-bbox="831 887 958 968">8%</td> </tr> <tr> <td data-bbox="537 971 607 1053">2.4</td> <td data-bbox="611 971 826 1053">Building & Structures</td> <td data-bbox="831 971 958 1053">4%</td> </tr> <tr> <td data-bbox="537 1056 607 1102"></td> <td data-bbox="611 1056 826 1102">Total</td> <td data-bbox="831 1056 958 1102">100%</td> </tr> </tbody> </table>	S No (1)	Cost Centre (2)	Percent age of Contract Price (3)	2.1	Electrical Works	58%	2.2	Signalling Works	30%	2.3	Telecommunication Works	8%	2.4	Building & Structures	4%		Total	100%	<p>We would like to emphasize here that for such Systems works on Design & Built basis, it is not practical to follow the discipline for % allocations as in the Tender.</p> <p>We would suggest that these limits should be removed and if at all DFCCILS wants it to be there, this can be in the form of range or min/max limits for each works.</p>	Please refer Addendum 3 (S.No.8)
S No (1)	Cost Centre (2)	Percent age of Contract Price (3)																				
2.1	Electrical Works	58%																				
2.2	Signalling Works	30%																				
2.3	Telecommunication Works	8%																				
2.4	Building & Structures	4%																				
	Total	100%																				
748	Part 1, Section IV Bidding Forms, Price Schedule Electrical works 2.1.2, 2.1.3, 2.1.4, 2.1.5, 2.1.6	We have observed that the payment for supply portion within all these cost centres is coming around 60-65%, thus badly affecting the Cash Flow.	<p>We would request you to modify these Item of Work-</p> <p>1A. Supply of Materials –FAT/Dispatch - 40%</p> <p>1B. Supply of Materials - Receipt at Site - 40%</p>	Provisions of Bidding Document shall prevail.																		

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
	Price Schedule Signalling works 2.2.2, 2.2.3, 2.2.4, 2.2.5 Price Schedule Telecommunication works 2.3.2, 2.3.3, 2.3.4, 2.3.5		2. Erection - 15% 3. System Acceptance - 5% This will lead to an improvement in the negative aspect of the cash flow. This is also as per widely accepted Industry norms. We would like to cite one such recent example of a comparable huge Systems works on turnkey basis for Navi Mumbai Metro, where supply part is being paid on a reasonable part 80% or more, copy of the relevant pages are enclosed as Annex B for your reference and consideration.	
749	Part 2, Section VI, Volume 5, Clause 3.5 (1), Page 18	80 nos. type -1 staff quarters to be proposed to be constructed.	We understand that Railway Board's letter no. 2008/LMB/ 10/26 dated 20/04/2009 has stopped new construction of such quarter type. Kindly clarify	Provisions of Bidding document shall prevail.
750	Part 2, Section VI, Volume 5, Clause 15.1 (2) & (3), Page 99	The VRV type AC system is indicated. It is our suggestion to go for centralized water cooled type AC system in OCC building as that will be more economical and more compliant to green building concept.	Please confirm whether bidders can offer centralized AC system water cooled based. For your reference, please find an attached Annex describing merits and demerits of Water cooled centralized versus VRV system.	Provisions of Bidding document shall prevail.

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
751	Part 2, Section VI, Volume 5, Clause 15.1, Page 99	The PS does not mention AC redundancy concept for OCC building, though for stations "100% standby provision on a 24 hour basis" is mentioned (Clause 15.3.4 (1)).	Should DFCCIL insist for VRV system for OCC, we propose that Air Conditioning in the OCC (Half Circled Area) should be with N+1 outdoor unit and N+1 Indoor unit and rest of the building without standby units. PI confirms this arrangement is acceptable.	Please refer Addendum 3 (S.No. 169)
752	Part 2, Section VI, Volume 5, Clause 15.3.4 (1), Page 101	"ASM room, and Signalling and Telecommunication equipment rooms at stations shall have provision of air conditioning with 100% standby provision on a 24 hour basis."	We suggest that instead of 100% standby, it should be N+1 redundant system for 24 hours operation – please confirm	Please refer Addendum 3 (S.No. 169)
753	Part 2, Section VI, Volume 5, Clause 1.3 (20), Page 10	It requires: All public & service buildings including the Junction Stations / Crossing Station buildings, IMD/IMSD & OCC etc. shall have access for differently abled persons. All guidelines issued by ministry of urban development & Ministry of welfare & social justice issued from time to time shall be scrupulously followed in this regard.	Please clarify that all the toilets to be constructed for differently abled persons i.e. Male, Female and Disable means minimum three sets of WC, Washbasin, urinal pot etc. and lift for Upper Floor (including stations) where ever exists. Kindly clarify these issues otherwise these may lead to dispute at execution stage. In our view, no lifts are foreseen by at any building except OCC. Please confirm.	In each Public and Service building, all three types of toilets viz. Male, Female and Disabled are required as per National Building Code. The minimum number of each type of toilet will be decided by the Engineer depending upon the number of users. Regarding provision of lift please refer Chapter 17.

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
754	Part 2, Section VI, Volume 5, Clause 1.3 (2), (13), Page 9	Since all the locations of various buildings are remote and away from the city limits, the water supply may not be available from municipality, hence the bore wells are proposed to be considered.	Kindly confirm and also clarify whether standby bore wells to be considered or not. In our view, standby bore wells are not needed.	Provisions of Bidding Document shall prevail.
755	Part 2, Section VI, Volume 5, Clause 1.3, Page 8		Please clarify the provision of followings at the Gate Lodges :- The Bore well and The water Purifier (RO) The Rain Harvesting Pit The Air conditioner or Desert Cooler	Provisions of Bidding Document shall prevail.
756	Part 2, Section VI, Volume 5, General	It is understood that staff quarter, IMD, IMSD etc. shall be constructed within the 100m ROW acquired by DFCCIL. We propose that such structures shall be planned on one side of the station to economize the internal roads, boundary walls and other infrastructure.	Please confirm that contractor will be allowed flexibility in this regard and there will be no insistence on developing the 100m ROW stretch along the entire station / yard length of approx 1.5-2km.	Layout will be decided based on the functional requirement of each structure and the structures shall be constructed within the ROW. The development plan shall be approved by the Engineer considering user's requirement of the area.
757	Part 2, Section VI, Volume 5, Clause 1.4 (10), Page 11	The clause states: The scope of works also includes provision of bituminous road as per	Please clarify whether this 3 km road construction is envisaged for entire 350km project or it pertains to only one station. Further please confirm the road width	The approach roach shall be provided at each station wherever required. The total length of approach roach envisaged for

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
		Drg. No. DFCC/Approach roads, for a length of 3 Kms. The location and length of these roads shall be decided by Engineer. Requisite street lighting complying with the stipulations of lighting should also be provided.	<p>envisaged by DFCCIL.</p> <p>The Attachment 15.2 states lux level for "street lighting" as 150 lux and emergency lux level of 5-8. We feel 150 lux is bit too high to street lights. Please review and confirm.</p> <p>Clarity on these issues will result in optimal offer to DFCCIL.</p>	<p>entire Project length is 8 km.</p> <p>Please refer Addendum 6 (S.No. 238).</p>
758	Part 2, Section VI, Volume 5, Clause 2.7 (5), Page 15	The clause states: Boundary wall shall be provided around the buildings with controlled access viz. IMD, IMSDs, Residential quarters, Operation Control Centre, Station buildings for Junction and crossing stations as per Drg. No. DFCC/BOUNDARY WALL. Chain link fencing shall be provided as per Drg. No. DFCC/CHAIN LINK FENCING/TYP-001 around TSS, SSP, SP, Signalling Equipment and Signalling Power Supply rooms and Telecom Equipment & Telecom Power Supply rooms in the block section.	<p>We understand that the intent of DFCCIL is to build boundary wall for each of the buildings separately; e.g. for stations, IMD, OCC, IMSD, staff quarters etc. Please confirm whether boundary wall for entire campus (of ROW100m) of station (1.5-2km long) is foreseen and further confirm whether development of entire 100m ROW within station area (1.5-2.0km long) is included in the scope or not.</p> <p>Clarity on the above issues is very essential. It is suggested that DFCCIL develops an indicative development plan at anyone station, as that will provide clarify to bidders, will result in optimal bids and will help solve many problems at execution stage.</p>	Provisions of the Bidding Document shall prevail. The extent of Boundary Wall has been shown in the Reference Document Part-4.
759	Part 2, Section VI,	In case development of entire	Please elaborate the access control system,	Appropriate Access Control system by way

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
	Volume 5, General	campus containing the station building, IMD/ISMD, Tower Wagon Shed, 11 KV Substation, Pump Room, Residential Quarters etc. is foreseen.	CCTV System, Official Vehicles Garages, Boom Barriers, Guard Room, Entry Gate, RPF Check post, their barracks etc.	of providing entry gate shall be provided. CCTV shall be provided as per relevant provision of Bidding Document. Official Vehicles Garage is not required. However, parking space as per requirement shall be provided. Guard Room and Entry Gate shall be provided. RPF Check Post and Barracks are not covered in the present scope of work.
760	Part 2, Section VI, Volume 2, Clause 5.5.1 (last para), Page 35	“... For Traction Power Simulation consider 50% of the train run with a stoppage after every 30 kms and maximum dwell time of 5 minutes and wind speed of 0.5 m/second.”	Please confirm whether stoppage of 50% trains to be considered at 30km precisely or at stations (which are spaced 35-40km). In our view, it shall be considered at stations only as any mid-section stoppage will result in bunching in mid-section and line capacity would reduce. please clarify	Please refer Addendum 6 (S.No. 205).
761	Part 1: MOU - Para 2.1(7), Annexure 1, Section III, Clause 5	JOINT AND SEVERAL RESPONSIBILITY The Parties undertake that they shall be jointly and severally liable to the Client in the discharge of all the obligations and liabilities as per the contract with the Client and for	This concept will not be applicable in case of an SPV as there is no individual identity of the members and it would be the SPV as an entity which will be responsible /liable to the customer. In view of the above, please clarify and confirm that in order to make it suit to the	SPV has not been permitted as eligible entity for bidding as per Part 1 Section I Instruction to Bidders Clause 4 of bidding document.

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
		<p>the performance of contract awarded to their JV.</p> <p>In case one party fails or delays to perform its obligations either partially or totally, it shall be responsible for all the out comings concerned, and upon such conditions the other parties shall be obliged to take measures to perform well all the obligations under the contract with the Employer</p>	<p>SPV structure, these clauses can be removed and other such related revisions can be made in the form of MOU.</p>	
762	Part 1: MOU - Para 2.1(7), Annexure 1, Section III, Clause 7	<p>EXECUTIVE AUTHORITY</p> <p>The said Joint Venture through its authorized representative shall receive instructions, payments from the Client. The management structure for the project shall be prepared by mutual consultations to enable completion of project to quality requirements within permitted cost and time.</p>	<p>This Clause provides for authorized member to deal and accept payment from the client – in case of an SPV, it would be the SPV which will deal with the clients or receive payments and not any individual members;</p> <p>Please clarify and confirm that in order to make it suit to the SPV structure, these clauses can be removed and other such related revisions can be made in the form of MOU.</p>	Please refer reply to query no. 761.
763	Part 1: MOU - Para 2.1(7), Annexure 1, Section III, Clause 10	<p>INDEMNITY</p> <p>Each party hereto agrees to indemnify the other party against its respective parts in case of</p>	<p>In case of an SPV being incorporated, this clause does not have much relevance.</p> <p>Please clarify and confirm that in order to make it suit to the SPV structure, these</p>	Please refer reply to query no. 761.

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
		breach/default of the respective party of the contract works of any liabilities sustained by the Joint Venture.	clauses can be removed and other such related revisions can be made in the form of MOU.	
764	Part 2, Section VI, Vol.5, Clause 9.11.3(e), Page 80	The power socket outlets for maintenance purpose shall be supplied at 32A, 400 volt, 3-phase, 50 Hz.	Please clarify, whether it is necessary to install a 25kV/400V transformer to feed the 400 volt maintenance sockets in TSS, SP and SSP or whether these sockets for maintenance could be 240 volt.	Provisions of Part 2, Section VI, Volume 5, Clause 9.11.3(e) (Page 80) & Part 2, Section VI, Volume 2, Appendix 8, Clause 4.7.1 (Page 191) in the Bidding document shall prevail.
765	Part 2, Section VI, Vol. 2, Clause 4.7.1, Page 191	The following auxiliary power supplies are available: 110V dc from a battery 240 V ac, 50 Hz, single-phase from a 25/0.24 kV auxiliary transformer feed from Traction supply.		
766	Part 2, Section VI, Vol. 2, Clause 6.12, Page 45	Outdoor switchyard for TSS. The layout shall be designed and constructed based on manual for outdoor grid sub-station publication 299 of 2006 by Central Board of Irrigation and Power (CBIP), Delhi	It is requested to confirm whether all the TSS equipment should be out door or a mix TSS with the HV equipment outdoor and MV and LV equipment indoor.	Provisions of Bidding document shall prevail.
767	Part 2, Section VI, Vol. 2, Clause	The scope shall include any/ all necessary additional equipment,	Please clarify that in case the proposed power supply system needs to be reinforced	Provisions of Clause 3.2.3 and Clause

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
	3.2.3, Page 11	equipment of higher capacities and higher ratings for the systems and sub-systems necessary for the complete, safe, reliable, operable and maintainable traction power supply system	to satisfy requirements, whether there is a preference between higher capacity of equipments or additional equipments or midsection auto-transformer.	3.3.1 (d) shall prevail.
768	Part 2, Section VI, Vol. 2, Clause 3.3.1, Page 12	However the number and location of midsection Auto-Transformer station, required if any, shall be finalised by Simulation Study.		
769	Part 2, Section VI, Vol. 2, Clause 3.3.1, Page 13	(n) This shall include but not limited to preparation and leveling of ground.	Please clarify, whether the ramp of 3-4 m between TSS and track is consider from the ground level of the TSS to the ground level of the platform or from the ground level of the TSS to the rail level.	Provisions of Clause 3.3.1(n) in the Bidding document shall prevail.
770	Part 2, Section VI, Vol. 2, Clause 6.3, Page 40	(5) The maximum earth resistance of entire System shall meet the following requirements	It is requested to provide the value of the soil resistivity, in order to check these requirements and design the earth system?	Please refer Clause 3.3.3(3)(b)(vii) Part 2, Vol. 2, Section VI.
771	Part 2, Section VI, Vol. 2, Clause 10.5, Page 88	At indicative list of equipment to be monitored and controlled Fire alarm system for TSS, SP and SSP are mentioned	Please clarify, whether fire system and air conditioning at TSS, SP and SSP control rooms need to be included at design stage. They would be necessary in order to	Provisions of Bidding document shall prevail. Please refer Attachment 15.4 and its Addendum 3 (S.No. 175), Part 2, Section VI, Volume 5.

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
772	Part 2, Section VI, Vol. 5, Clause Attachment 15.4, Page 125	Matrix of required facilities at Ancillary Buildings: Fire alarm and control panel: NA	maintain equipment in good conditions.	
773	Part 4	Schematic Diagram of TSS, SP and SSP	Please clarify, whether these diagrams can be modified, for example, adding lighting arrester to protect the OHE, changing of technology in return circuit.	The Schematic diagrams included in Part 4 - Reference Documents are indicative only.
774	Part 1, Section IV, Clause 2.1.7, Page 102	E&M Works. Supply and Installation of balance E&M works at Stations, Depots and other Service Buildings	Works in depots are only mentioned at this point, and not in any other Price Scheduled, nor in Part 2. It is requested to clarify the scope of works regarding depots, whether OHE works energy supply are part of this contract. In that case, it is requested to provide plans of depots in order to quantify works.	Please refer Vol. 5, Part 2, Section VI.
775	Part 4		It is requested to provide a plan of the whole track trace.	Please refer Part 4 – Reference Document.
776	Part 1, Section III, Clause 2.1, Page 48	The Bidder and any subcontractors shall continue to meet the criteria used at the time of prequalification and shall give an undertaking to this	It is requested to clarify whether experience certificates need to be submitted by contractor in first stage bid in order to prove that it continues to meet prequalification	Provisions in Clause 2.1, Part 1, Section III shall prevail.

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
		effect. The Bidder shall fill up Form number ELI 1.1 and ELI 1.2 included in Section IV, Bidding Forms, Part 1 of Bidding Documents.	criteria.	
777	Part 3 / Section VIII / Appendix to Tender Currencies of Payment Clause 14.15, Page 29	b) The rates of exchange on Base Date in arriving at the local currency equivalent and the percentage (s) mentioned in (a) above shall apply for all payments under the Contract so that no exchange risk will be borne by the successful bidder.	It is hereby requested to confirm, whether the payments to the successful bidder shall be made in INR or as per the quoted currency(s).	Please refer to Clause 14.15 (Currency of Payment) in Conditions of Contract. The payment shall be made in Indian Rupees or currency named in Appendix to Tender. Bidder shall provide required details in Part 1 section IV Bidding Forms Form-LOB-SS (Appendix to Bid).
778	Part 1, Section-III, Clause 2.1(15), Page 52	The First Stage Technical Proposal will comprise of the following documents in addition to the documents required as per Clause ITB 11: - 15) Guaranteed Maximum Losses for Traction Transformers and Auto Transformers (Form GLT, Bidding Forms Section IV)	These inputs / data's gets converted into financial values based on formulae specified in PS Vol-2 Clause 6.23, Capitalization of Transformer losses. The exact value of losses can be ascertained only after completing the detailed design of the transformer. We therefore propose that the capitalization of losses for evaluation of bid form may be deleted. Bidders may be asked to only confirm that losses would be within the defined maximum limits.	Provisions in the Bidding Document shall prevail. Please refer Addendum 6 (S.No. 189 & 190).

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783	Part 1, Section IV, Form GLT, Page 90	Furnish the guaranteed maximum losses i.e. Maximum No-Load Loss in watt [I] and Maximum Load-Loss in watt [C] for Traction Transformers and Auto Transformers as per the requirement specified in Clause no. 6.23 of Part 2, Section VI, Volume 2 (Particular Specifications – Electrification Works).	This is design built contract. Detailed design will be done after award of contract only. So transformer losses can be calculated at that time. This being a very lengthy process loss cannot be calculated during technical stage submission .So request you include this transformer losses during second stage submission only.	Please refer Addendum 6 (189 & 190).
784	Part 3, Section VIII, Sub-Clause 10.2, Page 16	Deleted	<p>As taking over in parts is not allowed as per RFP. As very large section is covered under this project following issues will be involved :</p> <p>(i) If we take 2 year warranty for 1st year work, there will be total 5 year warranty which will be very cost expensive.</p> <p>(ii) For the section of 343 Km length security and caretaking will be very expensive. Dedicated security setup will be required on deputation along complete length of project.</p> <p>(iii) There will always danger of vandalism & theft of equipment. As splicing of OHE being not allowed, theft will pose a serious risk on this project if taking over in parts is not allowed.</p> <p>So We request you to allow for taking over in</p>	Provisions of Bidding document shall prevail.

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			parts as soon as it is commissioned.	
785	Part 3, Section VIII, Sub-Clause 1.7, Page 6	Delete Sub-graph (a)	As this tender being a Global competitive Bidding various MNC are involved in the bidding process. These MNCs work around the globe in various countries & projects. For the better positioning of organization restructuring also takes place time to time. So we request you to restate the assignment clause which in any case will be based on mutual consent.	Provisions of Bidding document shall prevail.
786	Part 2, Section VI, Volume 4, Clause 5.3.4.2, Page 29	First Network shall carry all Voice & Data Communication between OCC and Stations. First Network shall also carry all Train Management System Information and other Vital & Safety Related Information between OCC and Stations. All Vital & Safety Related System using OFC System shall be implemented as per EN-50159.	Is the bidder allowed to split the First Network into 2 independent Networks? (a) Network 1a carries all Voice & Data Communication between OCC and Stations and implementation as per EN-50159 for this network is not required. (b) Network 1b for TMS information and other Vital & safety related between OCC and Stations.	(a) & (b) Provisions in the Bidding Document are sufficiently clear. The design of first network as submitted by Contractor as part of Contractor Document, satisfying Employer's Requirement, shall be reviewed and/or approved by the Engineer during Design Stage.
787	Part 2, Section VI, Volume 4, Clause 5.3.4.3, Page 29	Second Network shall carry all Voice (including Emergency Communication) and Data (including Traction Power SCADA)	Is the bidder allowed to split the Second Network into 2 independent Networks?	

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		<p>Communication between Stations and Auto Section Locations, LC Gates, Interfacing IR Stations, GSM-R Locations, TSSs, SPs, SSPs, IMDs, IMSDs, Staff Residential Colonies, Rest Houses etc. Second Network shall also carry all Signal Control Information, Track Vacancy Detection Information and other Vital & Safety Related Information between Stations, Auto Section Locations, LC Gates and Interfacing IR Stations,. All Vital & Safety Related System using OFC System shall be implemented as per EN-50159.</p>	<p>(a) Network 2a carries all Voice (including Emergency Communication) and Data (including Traction Power SCADA) Communication between Stations and Auto Section Locations, LC Gates, Interfacing IR Stations, GSM-R Locations, TSSs, SPs, SSPs, IMDs, IMSDs, Staff Residential Colonies, Rest Houses etc. and implementation as per EN-50159 for this network is not required.</p> <p>(b) Network 2b for carry all Signal Control Information, Track Vacancy Detection Information and other Vital & Safety Related Information between Stations, Auto Section Locations, LC Gates and Interfacing IR Stations.</p> <p>(c) SDH/STM-4 provision are to be clearly specified with the requirements for Auto Section Locations, LC Gates, Interfacing IR Stations, GSM-R Locations, TSSs, SPs, SSPs, IMDs, IMSDs, Staff Residential Colonies, Rest Houses etc. The requirement is not clear that either we have to provide the STM-4 or lower to STM-4 equipment at these locations and locations are to be specified to estimate the other infrastructure requirement like power system, equipment room, cables and air-conditioning etc.</p>	<p>(a) & (b) Provisions in the Bidding Document are sufficiently clear. The design of second network as submitted by Contractor as part of Contractor Document, satisfying Employer's Requirement, shall be reviewed and/or approved by the Engineer during Design Stage.</p> <p>(c) Please refer Clause 5.3.4.5 for the level of SDH Nodes of the second network. Please refer Clause 5.3.3.3 for Location of SDH Nodes of the second network.</p>

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788	Part 2, Section VI, Volume 4, Clause 5.3.3.9, 6.1.4, Page 42	Wide Area Network (WAN) shall provide a high degree of availability by operating on an independent optical fibre rings using Optic Fibre Cables laid along Up and Down Track of EDFC. Employer shall hire from M/s RCIL required Optical Fibres from RCIL POP at Bhaupur (IR) to RCIL POP at Allahabad (IR). All works from/up to RCIL POPs at Bhaupur and Allahabad shall be carried out by Contractor. The Design of Wide Area Network (WAN) shall provide a highly Secure System, which shall prevent unauthorised Access and/or Hostile Intrusion.	We assume that EDFC will arrange (from RCIL) 10 Gigabit data link from Bhaupur to Allahabad. We understand that infrastructure like Equipment room, Power system etc at several locations to be arranged by EDFC between Bhaupur to Allahabad along with dark optic fibres if bidder to design solution based dark optic fibres between Bhaupur to Allahabad. Please clarify above.	Please refer Addendum 3 (S.No. 109 & 110).
789	Part 2, Section VI, Volume 3, Clause 3.6.3, Page 77	If any Signalling Equipment in Signalling Equipment Room in Block Sections does not withstand temperatures in the range of (-10 C) to (+70 C), it shall be provided with Panel air conditioning with 1+1 standby	Ansaldo Microlok equipment or object controller are designed for temperatures from -40deg cent to +70 deg cent. Please confirm if we can use single Microlock equipment /object controller in block sections.	It is not understood how the query is related to the referred clause which is pertaining to the environment setting for the equipment. It is also not understood what the single microlok equipment means. However, it is clarified that the architecture of the CIU and the Object controller will have to be as per applicable RDSO specification for the EI. Please also refer to amended Clause 3.6.3

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				(Addendum 3 (S.No. 83)).
790	Part 2, Section VI, Volume 3, Clause 1.4.7, Page 9	A centralized Operational Control Centre (OCC) for entire Eastern Dedicated Freight Corridor (Ludhiana-Khurja-Dadri-Bhaupur-Mughalsarai) sections shall be located at Allahabad along with the Regional Office of Eastern Dedicated Freight Corridor. The OCC building is being under PS (Buildings & Structures including E&M) Vol. 5 Part 2.	Please confirm our understanding that the contractual scope of this package is limited to Bhaupur-Khurja section and does not have any contractual linkage with completion of OCC for the entire eastern DFCC	The scope of work includes construction of OCC building for the entire EDFC (Ludhiana to Mughalsarai) under PS (Buildings & Structures including E&M) Vol. 5 and 'Train Management system' and 'SCADA system' for only Bhaupur - Khurja section under PS (Signalling works) Vol. 3 and PS (Electrification works) Vol. 4 respectively.
791	Part 2, Section VI, Volume 3, Clause 2.2.3 (2) (b), Page 17	It shall be capable of interfacing with TMS & TPWS systems using serial/ Ethernet/OFC ports.	Request you to amend the clause as follows: It shall be capable of interfacing with TPWS systems using serial/ Ethernet/OFC ports if required/ (or in locations where necessary).	The requirement is as per RDSO specification. Existing provision to prevail.
792	Part 2, Section VI, Volume 2, Clause 4.2, Page 20	The indicated requirement in spec is "Basic wind pressure*: 120 – 200 kgf/m2, as per wind map based on IS – 875. For long bridges (more	We wish to indicate that RDSO existing specifications require the wind pressure for OCS design purpose as 75 kgf/m2 for Green Zone (the Bhaupur Khurja section entirely	Provisions of Bidding document shall prevail.

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		<p>than 150m) and within 100m from their abutments on either side and on banks, where the height of the catenary above surrounding mean retarding surface is more than 30 meters, the specified 25% reduction in wind pressure shall not be reckoned for purposes of design.</p> <p>*The wind pressure for the specified work area shall be obtained from the wind map as per IS 875 and maximum wind pressure used for the designs with the approval of the Engineer.”</p>	<p>falls in green zone as per IS 875-3). The green zone velocity as per IS 875-3 is 47m/sec and with consideration of k1, k2 and k3 factors being 1, the wind pressure is determined ($= k1*k2*k3*Vb^2$) as 135 kgf/m². It is quite diverging from RDSO's specification of 75 kgf/m².</p> <p>DFCCIL is requested to please clarify the matter.</p>	
793	Part 2, Section VI, Volume 5, Clause 1.4 (10), Page 10	This clause indicates drawing no. DFCC/Approach Roads – but the same is not available in the RFP.	Please provide the drawing	Please refer Addendum 3 (S.No. 180).
794	Part 2, Section VI, Volume 5, Clause 3.10 (5), Page, Page 24	This clause indicates drawing no. GC/DFCC/GC/506 (Electrical Panel rooms ...) – but the same is not available in the RFP.	Please provide the drawing	Please refer Addendum 3 (S.No. 157).
795	Part 2, Section VI,	The clause states “The Contractor’s	Since the initial loading of the system is not	Provisions of the Clause in the Bidding

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	Volume 5, Clause 4.9.1 (1) (i), Page, 37	design of the system shall ensure that the main components e.g. HT/LT cables, main distribution panel, transformer, etc. are initially loaded to 50% of the designed capacity”	under the control of Contractor, it is therefore, requested that this clause is deleted. This will lead to confusion and vagueness.	document is clear and shall prevail.
796	Part 2, Section VI, Volume 5, Clause 4.9.7, Page 40	The noise criteria of 55dB (for static machine) and 65dB (for rotating machine) at 1m cannot be complied.	It is requested you to review the same.	Please refer Addendum 6 (S.No. 239).
797	Part 2, Section VI, Volume 2, Clause 6.2.7, Page 39	The clause mentions “... with the bus coupler closed”	It is our understanding that requirement of bus coupler is dependent on the solution offered by the bidder and as such necessity of bus coupler is not mandatory. please confirm	Please refer Addendum 6 (S.No. 206).
798	Part 2, Section VI, Volume 2, Clause 8.4 (4), Page 69		It is our understanding that requirement of AEC (Aerial Earth Conductor) is dependent on the solution offered by the Bidder and is not mandatory. Please confirm.	Provisions of Bidding document shall prevail.
799	Part 1, Section III, Annexure-I, Clause 2.1 (3), Page 52	Current Contract Commitments / Works in Progress (Form CCC, Bidding Forms-Section IV)	We have signed confidential Non- Disclosure agreements with the customers, providing the details of current contract commitments will be a direct violation to the Non	Provision in the Bidding Document shall prevail.

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
			<p>Disclosure Agreements.</p> <p>In view of the above it is requested to delete form CCC from the list of submittals.</p>	<p>Also, please refer Addendum 3 (S.No. 6).</p>
800	Part-1, Section IV, Price Schedule 2.0. Page 92		<p>The apportionment of contract prices, are not as per standard practices and payments are loaded heavily towards installation, Testing and commissioning and inadequately upon supply.</p> <p>An average of</p> <p>22% of Contract price are payable only after erection &</p> <p>15% of Contract prices are payable only at TOC.</p> <p>In a Contract of this complexity and nature Expenditures incurred towards Supply are close to 85% to 90%.</p> <p>All the above facts results into serious negative cash flow during the project execution.</p> <p>In view of the above it is requested to change the apportionment suitably, so that contractor gets adequate payment against each milestone towards the following:</p> <p>1) Supply</p>	<p>Provisions in the Bidding Document shall prevail.</p>

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
			2) Installation 3) TOC / Retention	
801	Part 2, Section VI : Volume 4, Clause 8.1.3.3, Page 64	<p>MTRC System is being provided by Indian Railways in Ghaziabad-Kanpur section of Indian Railway. As such in sections, where track alignment of Bhaupur-Khurja Section of EDFC is running parallel to the existing Ghaziabad-Kanpur Section of Indian Railway, Base Station Sub-systems(BSSs) of Indian Railway will be shared by DFCCIL. However in sections, where track alignment of Bhaupur-Khurja Section is taking a detour and cannot be served by Base Station Sub-systems(BSSs) of Indian Railway, new Base Station Sub-systems(BSSs) of DFCCIL shall be provided by Contractor with Base Station Controllers(BSCs) at OCC.</p>	<p>Please provide us with the design, technical and implementation details of the Incumbent Network of Indian Railways so that the scope of work for</p> <p>a) Upgradation of the Indian Railways network & b) Optimisation of the Indian Railways network and DFCC(E) network</p> <p>can be quoted accordingly in response to our bid.</p>	<p>Please refer Addendum 3 (S. No. 122) and Addendum 6 (S.No. 234)</p>
802	Part 2, Section VI : Volume 4, Clause 8.1.3.4, Page 64	<p>It is envisaged that Network Sub-systems(NSSs) of MTRC System of Indian Railway used for Ghaziabad-</p>		

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
		<p>Kanpur Section shall also be used for MTRC System of Bhaupur-Khurja Section of EDFC. As such Network Sub-systems(NSSs) of MTRC System of Indian Railway shall be suitably upgraded, if required, by the Contractor to meets the requirements of Bhaupur-Khurja Section of EDFC</p>		
803	<p>Part 2, Section VI : Volume 4, Clause 8.2.4.1, Page 67</p>	<p>As Network Sub-systems(NSSs) of MTRC System of Indian Railway used for Ghaziabad-Kanpur Section shall also be used for MTRC System of Bhaupur-Khurja Section of EDFC, Telephone Interface Equipments provided alongwith this NSSs shall be suitably augmented/upgraded by the Contractor to meets the requirements of Bhaupur-Khurja Section of EDFC.</p>		
804	<p>Part 2, Section VI : Volume 4, Clause 8.2.4.2, Page 67</p>	<p>The call hand-over between the RF coverage zones of different base stations shall be, flawless and guaranteed at speeds of 0 to 120 kmph, transparent to the radio users</p>		

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
		and shall not drop/interrupt on-going calls regardless of their type and mode.		
805	Part 2, Section VI : Volume 4, Clause 8.2.4.3, Page 67	The call hand-over execution time shall not exceed 300 milliseconds, which is measured as the time taken when the radio detects a signal strength below a pre-defined level to establishing communication using an adjacent base station site providing the new channel.		
806	Part 2, Section VI : Volume 4, Clause 8.2.4.4, Page 67	The handover success rate shall be at least 99.5% over train routes under design load conditions.		
807	Part 2, Section VI : Volume 4, Clause 8.2.4.4, Page 67	The above requirements shall also be applicable when call hand-over is between adjacent RF coverage zones of IR and DFCCIL.		
808	Part 2, Section VI : Volume 2, Clause 6.7.3(1), Page 43	Assuming power factor of 0.85 for the train journey, power factor correction shall be improved to 0.95 using 50 % static and 50 % variable	Using of Variable capacitors where response time is too fast and it is in continuous operation for this system, it can always maintained power factor of 0.95. In this	Yes. Also please refer Addendum 6 (S.No. 205).

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
		capacitors or 100 % variable capacitors.	scenario, simulation shall be conducted assuming power factor of 0.95. Please let us know whether our understanding is correct?	
809	Part 2, Section VI : Volume 2, Clause 6.2.7, Page 39	Every alternate TSS shall be provided with two transformers, one being standby. Rest of the TSSs shall have single traction transformer. The TSS shall be so configured such that two traction transformers at the TSS shall be capable of being operated in parallel simultaneously with the bus couplers closed. In the latter TSSs, the bus-bar shall be configured such that in future when the (second) stand by transformer is installed, along with the ancillary equipment, same can be installed with no modification to the TSS layout.	<p>If both the transformer should run in parallel operation, fault MVA in 54kV / 25kV Bus shall be much higher than 12kA (12kA fault level at 25kV mentioned at Table 6.5.1 Design Short Circuit Level) considering future requirement. In addition, Off-circuit tap changer proposed for Transformers. With this condition, parallel operation of transformers may not be technically good solution.</p> <p>We are considering in case of failure of one TSS transformer, adjacent TSS Transformer can feed the healthy as well as faulty section without affecting any loss of performance. Please let us know whether our understanding is correct?</p>	<p>Please refer Addendum 6 (S.No. 206).</p> <p>Please also refer Clause 5.5.1 of Part 2, Section VI, Volume 2.</p>
810	Part 2, Section VI : Volume 2, Clause 5.5.1, Page 34	For failure of one TSS, the system shall be able to support 100% Train service under normal and bunched condition. For failure of consecutive TSS reduction of train service shall be acceptable. The regeneration	During preparation of Time Table for Simulation study, considering 3 minutes dwell time with 50% stoppage, headway reduces lesser than 13 minutes at some sections. Please convey your acceptance.	Provisions of Clause 5.2, Table 5.2.2 and its Addendum (Addendum 3 S.No.30), and Clause 5.5.1 along with Addendum (Addendum 6 S.No. 205) shall prevail.

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
		figure shall be considered zero for simulation purpose. For Traction Power Simulation consider 50% of the train run with a stoppage after every 40 kms and maximum dwell time of 3 minutes and wind speed of 0.5 m/second.		
811	Part 2, Section VI, Volume 3, Clause 2.2.1 (4), Page 14	Absolute block working on single line connections between DFCCIL and IR stations shall be provided using Solid State Block proving by Axle Counter as per RDSO spec RDSO/SPN/175/2005"	For absolute block working on single lines between DFCCIL and IR Stations, vendor may be allowed to use MSDAC or SSDAC as per the design of the vendor. The system should be used in order to keep uniformity in the total DAC system. It would also help to monitor the entire system from a central location.	The requirement to use SSDAC is part of applicable RDSO specifications for Absolute Block working. There is no such requirement where the single line sections connecting DFCCIL and IR stations are provided with Slot working. Also, please refer to Addendum 3 (S.No 66).
812	Part 2, Section VI, Volume 3, Clause 3.3.4, Page 72	"The Reliability requirements shall be subsidiary to the Availability requirements of this specification. If higher figures are required to achieve the Availability requirements then these higher figures shall become the Reliability requirements for the Signalling / Train Control System."	The requirement of high availability DAC system can be achieved in many ways. Kindly clarify whether Dual Detection can be proposed by the vendors in order to achieve the same so that all the vendors are in same platform.	The provisions of the Bidding document are sufficiently clear. Existing provisions shall prevail.

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
813	Part 2, Section VI, Volume 2, Clause 8.4 (i), Page 68		<p>"1. Size - The catenary wire is available in the following standard nominal section sizes of 70, 95, 120 & 150 sq mm as per EN and DIN standards. With 125 mm, defined as the minimum size, the next alternate option available is 150 sq mm, which has a direct bearing on the system design.</p> <p>It is hereby requested to permit the standard size catenary cables as per the design of the bidder.</p> <p>2. Material - Only Copper Alloys are permitted as per tender document. We hereby request to permit Copper Electrolytic as per the design of the bidder.</p> <p>This is for your information that Systems with Copper Electrolytic are in operation in parts of the Europe and Installations are going in Gulf area, wherein the environment conditions are similar to that of India."</p>	<p>Provisions of Part 2, Section VI, Volume 2, Clause 8.4 shall prevail.</p> <p>Also please refer Addendum 6 (S.No. 208).</p>
814	Part 2, Section VI, Volume 2, Clause 4.4.2 (6) (a), Page 23	Three years satisfactory performance on AC Traction System from one month prior to date of second stage bid opening (As per Addendum 3, point 23)	<p>"It is hereby requested to clarify the following points:</p> <p>1. Is three years satisfactory performance on AC Traction System is envisaged for the</p>	

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
			<p>individual subsystems on one Proven Traction System? OR</p> <p>2. Is three years satisfactory performance on AC Traction System is envisaged for the individual subsystems on multiple Proven Traction Systems?"</p>	<p>Provisions of the Part 2, Section VI, Volume 2, Clause 4.4.2 are self-explanatory.</p>
815	Part 2, Section VI, Volume 2, Clause 10.6.2, Page 89	"Complete SCADA system with servers Complete SCADA system with servers, workstations, and full communication with all RTU's shall be ready within 3 minutes of a cold restart of complete system..."	The cold restart of Server grade machine involves powering up of hardware, hardware check & temperature control, loading of OS, and start of SCADA applications followed by user login. We request to change the mentioned time period to at least 10 minutes.	Please refer Addendum 6 (S.No. 209).
816	Part 2, Section VI, Volume 2, Clause 10.7, Page 89	RAMS Requirements - IEC 61508	IEC 61508 text says "If the required safety integrity is less than that specified for SIL1, then IEC 61508 does not apply". As SCADA system would pertain to safety integrity level less than SIL 1, IEC 61508 does not apply.	Please refer Addendum 6 (S No 210).
817	Part 2, Section VI, Volume 2, Clause 10.10.2 (4) (iii), Page 98	(iii) Used point of each type in an RTU. (Number of point used of a particular type of point)	Please clarify the requirement	Being a design and build contract, the number of points used for a particular type of point is to be worked out by the contractor based on the system design.

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
818	Part 2, Section VI, Volume 2, Clause 10.10.2 (16), Page 101	"Alarm acknowledgement d) ""There shall be a facility to label a post under maintenance & to disable the audio alarm for particular post/ RTU equipment by the operator""	Should all Alarms be disabled for such an RTU under maintenance or only Audible alarms should be disabled? Alarms are not relevant when a post is under maintenance	Part 2, Section VI, Clause 10.10.2 (16) is self-explanatory.
819	Part 2, Section VI, Volume 2, Clause 10.10.2 (16), Page 102	"Alarm Acknowledgement ""For scenarios such as contact chattering, it shall be alarmed as a failure and; visual indication of the discrepancy shall however remain active till its resolution." "	Please clarify the requirement. Contact chattering settings are done at RTUs. When contact status changes are received at a frequency greater than a set value, the status change is not reported by the RTU.	The requirements of indicating contact chattering failure given in the clause is self-explanatory. Being design and build contract only functional/performance requirement has been specified. Detailed design is in the scope of System Contractor.
820	Part 2, Section VI, Volume 2, Clause 10.10.2 (30), Page 107	"Overall screen design & real time display It shall be possible to play at least 20 different pre-recorded alarms based on criticality of alarm or any other alarm classification"	Request clarification on why 20 nos. of audible alarms are required? Usually audible alarms are used for critical alarms. Several audible alarms may confuse the operators. We recommend this usage of maximum 8 audible alarms.	Please refer Addendum 6 (S.No 214)
821	Part 2, Section VI, Volume 2, Clause 10.10.2 (15) (b) (ii), Page 101	"Historical Alarm List ii) Historical alarms list shall consist of all alarms for the last one month."	"Please clarify the need for historical alarms? The events which are associated with the Alarms are stored in the history. Alarms are generated for assisting the Traction operator	Provisions of clause 10.10.2(15)(b)(ii) is self-explanatory and shall prevail.

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
			for real-time operations. Please clarify why the alarms need to be stored in the SCADA historian? "	
822	Part 2, Section VI, Volume 2, Clause 10.10.2 (20), Page 103	"Power Block “(a) ... in pursuance of an approved written down procedure that enables identification of all the authorized and trained personnel granting the block i.e. (the controller of the authorized person requesting the block through a system of passwords & interlocks) and the recipients of the permit to work and precautions to be observed."	The written procedure shall be outside the scope of SCADA system. In SCADA system it will be possible to define which operators have view only or control access for particular zones/ sections.	Provisions of Clause 10.10.2 (20) is self-explanatory. Also, please refer Addendum 6 (S. No 213).
823	Part 2, Section VI, Volume 2, Clause 10.10.2 (20), Page 103	"Power Block The block shall not be able to be cancelled & section energized unless the permit has been returned by the recipients and the the block is cancelled by the person who was granted the block. "	Please clarify how Power block is received by Recipient and how is it cancelled? Is it using Local/ Remote switch at RTUs?	Please refer Clause no. 10.10.2(20)(b) and Clause no. 10.10.2(21) respectively regarding procedure for granting/ cancelling the power block.
824	Part 2, Section VI,	In case a tele-command is	When a command is aborted at the control	Please refer Addendum 6 (S.No. 213).

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
	Volume 2, Clause 10.10.2 (20), Page 103	attempted for energizing the device/ section under block, the command shall be aborted and a hazard message at the OCC and the RTU shall get generated”	center, how will event be generated at the RTU and for what purpose? Hazard message will not be generated at the RTU when the command is aborted.	
825	Part 2, Section VI, Volume 2, Clause 10.10.2 (21), Page 104	"Cancelling the Power block “(a) Only on authorization of the field supervisor having been granted power block, the operator shall be able to select the device or the section on which the block has to be cancelled and give power block cancellation command.””	Please clarify how will the field supervisor authorize the OCC operator for cancellation of power block?	Being a design build contract the procedure is to be laid down by system Contractor.
826	Part 2, Section VI, Volume 2, Clause 10.10.2 (32) (a), Page 108	"Safety Tagging “(a) ...issuing of command shall not be possible from any operator or other control room until this tag has been, over-ridden by the chief SCADA operator...”	"Will the user who has added the Safety tag not be authorized to remove it? Or another with similar or higher authorities? Eg. During a shift change. Chief SCADA operator logs into the system using username and password. Does the Chief SCADA Operator have to enter the credentials again to remove the safety tag? We recommend it should be possible for the tag to be over-ridden by the operator with same or higher authority as of the operator who placed the tag”.	Please refer Addendum 6 (S.No. 215).

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
827	Part 2, Section VI, Volume 2, Clause 10.10.2 (39), Page 113	(a) The RTU installations shall be dust, rodent and vermin proof with doors. The doors shall have proper rubber gaskets & locking arrangement. The cabinets shall have facility for bottom entry of incoming/outgoing cables for operation of the equipment. The stainless steel sheets of thickness not less than 1.6 mm as per IS: 6911- 1992 with mill finish of number 1 shall be used for making the cabinets. Suitable reinforcements shall be provided wherever necessary.	"The sheets shall be manufactured from CRCA sheet of minimum thickness of 1.6 mm, cured with acceptable quality treatment powder coating and painted so as to make the surfaces rust and scratch proof quality"	Please refer Addendum 6 (S. No. 217).
828	Part 2, Section VI, Volume 2, Clause 10.10.2 (51) (c), Page 117	The Central RTU shall include minimum of 4 serial ports using RS232/ RS485 interface and 2 Ethernet ports to communicate with IEDs by using the IEC61850/IEC60870-5-103/DNP 3.0 protocol. The Ethernet ports in the communication modules shall be of 100 Mbps.	"1) Kindly confirm Protocol of IED as IEC 61850 or IEC 103. 2) Kindly provide quantity of Relays & List of relay data to be taken into RTU. 3) Networking of IEDs to be in IED Vendor scope. Kindly confirm."	Being design and build contract only functional/performance requirement has been specified. Detailed design is in the scope of System Contractor.

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
829	Part 2, Section VI, Volume 2, Clause 10.10.2 (51) (b), Page 117	RTU shall support data acquisition from energy meters.	<p>"1) Supply of Energy meters shall be in IED Vendor Scope. Kindly confirm.</p> <p>2) Protocol & Quantity of Energy meters to be provided.</p> <p>3) List of Energy meter parameters to be taken into RTU to be provided."</p>	<p>Being design and build contract only functional/performance requirement has been specified. Detailed design is in the scope of System Contractor.</p>
830	Part 2, Section VI, Volume 2, Clause 4.2.1 & 4.2.2, Page 190 & 246	Protection for Traction /Auto Transformer & OHE System	Kindly confirm Relay Protocol for the protection relays to be provided.	Being design and build contract only functional/performance requirement has been specified. Detailed design is in the scope of System Contractor.
831	Part 3, Clause 14.9, Page 29	A retention amounting to 10 (ten) per cent of the value of the work done shall be deducted by the Engineer in the first and following Interim Payment Certificates, until the amount so retained reaches a limit of retention money of 5 (five) percent of the Contract Price. The Contractor may, after Taking-Over Certificate is issued at his option, replace the Retention Money with	It is kindly requested to take into account the option of replacing retention of 10% of amount of interim paymentse by an unconditional bank guarantee amounting 5% of Contract Price. This bank guarantee shall be issued at the beginning of the project within a validity up to the end of Defect Notification Period.	Provisions in the Bidding document shall prevail.

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
		an unconditional bank guarantee from the Bank, and valid for the period up to the end of the Defect Notification Period.		
832	Part 1, Section II, Clause ITB 30.1, Page 45	Please refer Part – 1 Bidding Procedures Section II Bid Data Sheet. ITB 30.1 Page 45 and 46 of 134. According to this Bid Price is to be quoted in Indian Rupees only. A Bidder expecting to incur expenditures in other currencies for input to the Works supplied from outside the Employer's country (referred to as "the foreign currency requirements") shall indicate in the Appendix to Bid of Letter of Bid – Two Stage Bidding, Second Stage Bidding, Second Stage Bid, (Form – LOB – SS) the percentage (s) of the Bid Price, needed by him for the payment of such foreign currency requirements, limited to no more than three foreign currencies.	We understand that every payment will be issued in INR plus foreign currencies (up to three) corresponding to respective percentages indicated in Appendix to Bid of Letter of Bid -Two Stage Bidding, Second Stage Bid (Form LOB-SS) . Please confirm.	Yes, Percentage break up of lump sum bid price as indicated in Appendix to Bid shall be applicable for release of payment.
833	Part 1, Section II,	2. Part of the replies is covered under item no. 1. DFCCIL will make payment in the name of JVA in the	Please clarify whether it is possible to invoice currency payments in an overseas account.	Yes it is possible to release payment in an overseas account provided it is in the

S. No.	Reference to Bidding Document (Consisting of Part, Section, Volume, Reference Clause, Page no. etc.)	As Per Tender	Clarification sought by the Bidders	DFCC's Response
		respective currency account no. as given by JVA and included in the contract agreement.		name of JV/JVA.
834	Part 1	Work is to be executed in the field. Project site falls in the jurisdiction of Uttar Pradesh under DFCCIL Project Unit CPM/Tundla. Billing for the project will be submitted to Project unit.	As DFCC is a new born company, would it be possible to obtain any guarantee or Commitment Letter from the funding parties (WB and Ministry of Railways). In case it is not possible, could the JV issue invoice to DFCC but receive payments from ADB or MoR?	It would not be possible to provide any guarantee or commitment letter from the funding parties (World Bank and Ministry of Railways). As per present arrangement incorporated in the bid document payment shall be made by DFCCIL.
835	Part 2, Section VI, Volume 4, Chapter -8, Clause 8.4.1.3, Page 80 and reply to queries sr no. 332, 452, 531		The existing MTRC system is non redundant system. Providing redundancy, upgradation, additional HW for Existing "major equipments" -NSS/BSS/OMC and new BTS/BSC shall mean to interlink the contracts with Indian Railways. Also who will order, implement and execute such upgradation/additional HW to existing network? DFCC may delink this requirement from this contract and from contractor responsibility.	As already clarified, the System Contractor shall be responsible for providing redundant engineering only for the equipment(s)/component(s) provided under the present contract.