"DESIGN, SUPPLY, CONSTRUCTION, TESTING AND COMMISSIONING OF SIGNALLING, TELECOMMUNICATION AND ASSOCIATED WORKS OF DOUBLE TRACK RAILWAY LINES UNDER CONSTRUCTION ON A DESIGN BUILD LUMP SUM BASIS FOR MUGHALSARAI - NEW BHAUPUR SECTION OF EASTERN DEDICATED FREIGHT CORRIDOR"

CONTRACT PACKAGE CP-203

RESPONSE TO PRE-BID QUERIES

S.N.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
305	Clause 6.1.8 At Junction Station & Crossing Stations, Wi-Fi Facility, compliant with IEEE 802.11g Standards shall be provided for WAN Connectivity to users (which also include drivers of passing trains) via Wireless Enabled Devices and Equipment. A minimum of 10 simultaneous users may use the Wi-Fi Connectivity at Stations. This Wi-Fi Facility shall a minimum cover Station Buildings and EDFC Tracks upto 500 meters in both directions.	Is the Wi-Fi access requirement limited to stations only, or is it required for OCC complex as well? If yes, how many simultaneous users to be considered for OCC complex(10 users specified in the tender per station)	Provisions of Bidding Document are sufficiently clear. Also refer to reply at Sr. No. 159.
306	Clause 6.6.1 Access Control Mechanisms shall be employed via Authentication, Authorization and Cryptographic Key Validation, in accordance with IEEE 802.1X to restrict WAN Access to Authorized Users Only. Facilities shall be provided to ensure that the Confidentiality and Integrity of the Data Flows	Which authentication mechanism(s) is/are envisaged for WiFi users- will be EAP based authentication or Captive Portal based one or both?	The Access Control Mechanism, meeting Employer's Requirement, shall be proposed by Contractor and submitted to Engineer for review during Design Stage.

S.N.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
	for the WAN cannot be compromised by, for example, Eavesdropping, or Interception and Content Modification		
307	Clause 6.6.2 WAN shall be protected against Malicious Activities on the Networks, including Attacks from Viruses, Denial of Services (DoS), Hacking, Hijacking, Spoofing and other Malicious Events that may compromise the Integrity of the Networks. Such attacks shall include Sources within as well as outside the WAN.	While the document shares the intent, it doesn't clearly lay out the solution/components requirements. Kindly share details around what all security components are being asked for in the tender – is it limited to Firewalls? Broadly speaking, network based IDS/IPS could help prevent the external attacks to the network and HIPS could help prevent the internal attacks. Are there any such requirements?	The Contractor's proposal for protection of WAN against Malicious Activities on the Networks, meeting Employer's Requirement, shall be submitted to Engineer for review during Design Stage.
308	Clause 6.6.5 It shall be possible to set individual Levels of Access Rights & Permissions for each User in order to control the Integrity of the Network itself and any information contained in the Network	Since the configuration related activities are carried out by the respective EMS/NMS components, it is assumed that the desired functionality needs to support on EMS/NMS system itself. Kindly confirm the understanding.	The Contractor's proposal, meeting Employer's Requirement, shall be submitted to Engineer for review during Design Stage.
309	Clause 9.5.3 Display Clocks	It is assumed that this section defines the technical requirements for all the slave analog and digital clocks as per the volumetrics mentioned in clause 9.3.5. Kindly confirm.	Bidder's understanding is correct.
310	Clause 6.3.1	How the interconnection between L2 and L3 switch will happen as no. of ports required in L3	The requirement of minimum 4 Nos. 10GigE Fibre Ports in Layer-3 Switch are for backbone interconnections. For

S.N.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
		switch is only 4x10g.	interconnectivity of Layer-2 Switches with Layer-3 Switches, Contractor shall submit Network Topology and Connectivity Plan to the Engineer for approval in terms of Clause 6.3.4 of PS/ Telecommunication Works, Part 2, Section VI, Vol. 3.
311	Clause 6.7.1 Network Resilience and Protection	There is no mention of Layer-2 switch redundancy has been requested will it be 1+1 switch configuration per site.	Provisions of Bidding Document are sufficiently clear. The requirement of services availability are given in Clause 6.4.3 of PS/ Telecommunication Works, Part 2, Section VI, Vol. 3.
312	Clause 6.1.8	RFP mentions on 10 users per site/AP, how much is distribution between indoor and outdoor.	Bidding Document provides a minimum of 10 simultaneous users per Station which may be either indoor or outdoor or both.
313	Clause 6.5.3 Layer-2 Access Switches	There is no mention of Optical ports on L2 switches. How it will be connected to L3 switch.	For interconnectivity of Layer-2 Switches with Layer-3 Switches, Contractor shall submit Network Topology and Connectivity Plan to the Engineer for approval in terms of Clause 6.3.4 of PS/ Telecommunication Works, Part 2, Section VI, Vol. 3.
314	Clause 5.3.4.8 STM-16	Traffic of New Bhaupur-Khurja APL-1 required to Calculate overall Maximum Bandwidth allocation.	CP 104 is a Design-Build Contract where the Contractor has to propose his own design and equipment based on specifications provided for in the Bidding Document (The Bid Document of CP-104 along with amendments is available on

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(1)	(2)	(3)	(4)
			DFCCIL website). As per Para 10.6.7 of General Specifications, Part 2, Section VI, Vol. 1, the CP-203 Contractor will be required to interface with CP-104 Contractor for integration of Signalling & Telecommunication System as per requirements.
315	Clause 7.3.11 Telephone System Control Communication System	Location of Crew control room & other important location is not defined.	The Crew Control Rooms & other important location will be along the route and in the vicinity of the station premises details of which will be finalised during Design Stage.
316		Is it mandatory to provide Control Communication & emergency control communication system from RDSO vendor or Equipment which is complying all specs. as mentioned.	Please Refer to **Addendum No. 7, Sr. No. 4.**
317	Clause 7.3.8.9 Integration of Telephone network	Is it required a separate PBX at New Ekdil, New Tundla & New Khurja for providing PRI over E1 link and who will provide the media over all 3 location.	Provisions of Bidding Document are sufficiently clear.
318	Clause 12.11	If earthing is to be extended at OCC level, dimension of OCC building is required to design	The Contractor does not have to provide the OCC building earth but, only the Earthing for S&T equipment to be provided by the

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(1)	(2)	(3)	(4)
	Earthing Policy	Earthing & lightning protection scheme.	Contractor in the OCC. As such, the dimension of OCC building is not relevant.
319		How many TSS, SP, SSP, IMD, IMDS, nearby Service Buildings, Residential Quarters, Guest house & Club/Institute with each station & how many no. of Telephone sets at each locations? Location of Analog & Digital telephone with distance? Please give detail of media (Cu/OFC) for every telephone location? If OFC is there then only FXS gateway is possible. Because Digital Phone will work only upto 1 km on Cu.	The Bidding Document are sufficiently clear in various requirements. .
320	Clause 7.3.7.1	Please confirm the total no. of Direct line telephones (Location wise) as per Clause no. 7.3.7.1. Whether it is Digital or Analog? What will be the distance from PBX & what will be the connectivity?	The number of Direct Line Telephones shall be determined by Bidder/Contractor to meet Employer's requirement. For Functional/Technical Requirements of Direct Line Telephones, please refer to Clause 7.3.7.8 of PS/ Telecommunication Works, Part 2, Section VI, Vol. 3. The distance of Direct Line Telephones from PBX's and their connectivity shall be determined by the Bidder/ Contractor.
321	Clause 7.3.7.5	Please confirm the total no. of Direct Line Console (Location wise) as per clause no. 7.3.7.5)	Provisions of Bidding Document are sufficiently clear.

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(1)	(2)	(3)	(4)
322	Clause 7.3.7.6	Please clarify clause no. 7.3.7.6	Provisions of Bidding Document are sufficiently clear.
323	Clause 7.3.7.8	Please confirm the Quantity of telephone as per the clause no. 7.3.7.8 whether it is Analog or Digital?	The number of Direct Line Telephones shall be determined by Bidder/Contractor to meet Employer's requirement. For Functional/Technical Requirements of Direct Line Telephones, please refer to Clause 7.3.7.8 of PS/ Telecommunication Works, Part 2, Section VI, Vol. 3.
324	Clause 7.3.12	Please confirm the Qty. as per clause no 7.3.12	The quantity shall be determined by Bidder/Contractor.
325	Clause 5.2.2(3) The Signalling Equipment Rooms and Signalling Power supply equipment rooms for housing the Central Interlocking Unit at Stations are being built under CP 201 & 202 for construction of the same. The Station Building Plans are given in the Part 4-Reference documents. The air-conditioning of SER at Stations is being provided under CP 204 and for which too the contractor should do the required coordination. The additional building if any, required for housing object controller/EI of distributed interlocking at the Station shall be built by the Contractor.	As per scope of works, PS Building & Structure Works, Part 2, Section VI, Volume 4, clause 1.2 mentions that the CP-203 contractor have to build the SER Rooms, TER Rooms & UPS Rooms. However as per clause 5.2.2(3) the rooms will be built by CP-201 & CP-202 contractor and the scope of CP-203 contractor is only limited to interfacing. Kindly clarify what is the exact scope with regard to SER Rooms, TER Rooms & UPS Rooms, who will be responsible for building them and what exactly will be the scope of CP-203 contractor. Is it limited to PREFAB HUTS	The Contractor has to build all the S&T Service Buildings except the SER, TER and S&T Power Supply Equipment Rooms being built as part of Station building under CP-201 & CP-202. The E&M works in all these Service buildings will be done by other Contractor(s). Also refer **Addendum No. 7, Sr. No. 6 & 7.**

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(1)	(2)	(3)	(4)
		only?	
326	Section III, Evaluation and Qualification criteria, Clause 2.2 & Page 47 Financial Resources Using Form No FIN 3.3 in Section IV, Bidding Forms, the Bidder must demonstrate meeting the following cash-flow requirements: US $ 12 (Twelve) million for the subject contract Bidder should meet the above cash flow requirement as indicated in paragraph 3.1 (i) of Section (III) - Eligibility and Qualification criteria of Prequalification Document issued on 19.02.2014 for this bid and as modified, if any, through addendum. The Audited Financial Statements of the latest completed Financial Years (as required in paragraph 3.1 of Section III - Eligibility and Qualification criteria of Prequalification Document) are to be submitted.	1) Since we have already submitted the audited balance sheets for the last 5 years during PQ, we understand that we have to submit the Audited Balance Sheets of the Latest/Concluded Financial year only with respect to the criteria mentioned under this clause. "The Audited Financial Statements of the latest completed Financial Years (as required in paragraph 3.1 of Section III - Eligibility and Qualification criteria of Prequalification Document) are to be submitted" 2) We also understand that we need not require to re-submit the Form Fin-3.1 which was already submitted during PQ stage.	1) Bidder's understanding is correct. 2) Bidder's understanding is correct.

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327	Part 2, Section VI, Volume 2, PS Signalling, Chapter 1, 1.1.6 & Page No 313 1.1.6. The Civil Structures and Track works in Mughalsarai- New Bhaupur section are being/have started. The present work is for construction of Signalling and Telecommunication system on Mughalsarai-New Bhaupur section of EDFC. This specification details the technical requirements for the Signalling system to be implemented on this section.	We request you to Kindly inform the sizes of Signalling Equipment Room & Telecommunication equipment's room	The size of S&T Service buildings to be built by the Contractor will be determined by design prepared by the Contractor in accordance with provisions of the Bidding Document and reviewed/approved by the Engineer at design stage. In this regard, Bidder's attention is invited to Para 1.3.12, 5.2.1 & 5.2.2 of PS (Signalling works), Part 2, Section VI, Vol. 2, Para 12.3 of PS/Telecommunication Works, Part 2, Section VI, Vol. 3 and Para 1.4.5 (2) of PS Building & Structure Works, Part 2, Section VI, Vol. 4. It is further clarified that the size of SER, TER and S&T Power supply equipment rooms being built by CST contractor(s) of CP 201 & 202, as part of Station building will be as per Station Layout Plans given under 'Indicative Building Plans', Part 4 Reference Documents.
328	Part 2, Section VI, Volume 2, PS Signalling, Chapter 1, 1.2.6 & Page No 314 It is an objective to install all equipment in the minimum time available commensurate with the project aims. To achieve this, the Signalling system is to be designed on a modular basis such that a generic design	Does this mean that Partial commissioning / takeover will be done & Commercial operation can be started? Pl clarify whether part PAC will be issued?	Please refer to **Addendum No. 7, Sr. No.2.**

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(1)	(2)	(3)	(4)
	exists at all stations as far as possible, with variations to meet the local requirements. The contractor is encouraged to design the Signalling system in such a way that it can be pre-fabricated and tested at a central place away from the site and then delivered to site and installed. Commissioning and bringing into service of the Signalling will then be achieved on a station by station basis as defined in this document.		
329	Part 2, Section VI, Volume 2, PS Signalling, Chapter 1, 1.4.7 & Page No 315 (7) "Design and Implementation" means all activities associated with designing a Signalling system to meet the Employer's requirements, manufacture & supply, storage, Installation/Construction, testing and commissioning, training, supply of spares and documentation, removal of temporary works, handover of the system to the Employer and support during Defect Notification period and beyond as per provisions of Employers Requirements.	Pl clarify beyond DNP how many months?	Bidder's attention is invited to 'Service Life Support' to be provided by the Contractor as per Para 14.11 of GS, Part 2, Section VI, Vol. 1.
330	Part 2, Section VI, Volume 2, PS Signalling, Chapter 2, 2.1.4 & Page No 317	We request you to Kindly clarify what is meant by "future proofed"	'Future proofed' means the existing system shall be designed keeping future requirement in mind.

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	It is anticipated that Centralized Traffic Control (CTC) and Train Protection Warning System (TPWS) may be required in the future, therefore system provided under this contract shall be designed as demonstrable to be "future proofed" for the same.		
331	Part 2, Section VI, Volume 2, PS Signalling, Chapter 2, 2.2.1(4) & Page No 318 (4) Station area shall be designed for maximum flexibility and shall be fully signalled in accordance with current IR practices.	IRSEM is a base document and does not specify zonal/IR practices. Since this work is to be carried out in 2 different zonal railways section, please inform which Zonal Railway practice to be followed in addition to IRSEM.	The Contractor shall design the System as per provisions of the Bidding Document in consultation with the Engineer.
332	Part 2, Section VI, Volume 2, PS Signalling, Chapter 2, 2.2.3(4) & Page No 321 (b) Based on the approved Yard plans, the contractor shall prepare the Signal Interlocking plans (SIP) and the Control Tables for the Stations and Block sections. The SIP and Control Tables shall be prepared in accordance with interlocking principles provided for in the IRSEM.	IRSEM is a base document and does not specify zonal/IR practices. Since this work is to be carried out in 2 different zonal railways section, please inform which Zonal Railway practice to be followed in addition to IRSEM.	The Contractor shall design the System as per provisions of the Bidding Document in consultation with the Engineer.
333	Part 2, Section VI, Volume 2, PS Signalling, Chapter 2, 2.2.5(2j) & Page No 325 & 326 (j) Evaluators (i) Separate Evaluators shall be provided for	In auto section Supervisory track vacancy detection is already provided. All the UP and DN line DPs will be connected to the separate evaluators at the block sections, in	Please refer to **Addendum No.3, Sr. No.11.**

S.N.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
	UP and DOWN lines. (ii) The Supervisory system, where used, shall have a separate Evaluator from the Main system. (iii) However, if Evaluator of UP line Main system have spare capacity (keeping 20% of equipment used capacity reserved for further use), then it can be used for providing Supervisory system of DN line, and vice versa. (iv) A standby Evaluator with complete programming and configuration shall be provided for every Evaluator at Stations and Block Sections with arrangement for switch over using a single switch. After every change over, the track sections shall go in error state and shall have to be reset as per manual resetting procedure.	addition to this we will be providing a supervisory track detection system for every two DPs for which we will be proposing an additional evaluators for UP and DN line separately. If any failure on the main evaluator on the UP side with the supervisory system working fine then the main section can be reset by the supervisory TVD system. Since the standby system is available in the form of Supervisory system at the block section, we would like to suggest/request you that the standby of the evaluator at every location need not to be necessary. Pl clarify	
334	Part 2, Section VI, Volume 2, PS Signalling Works Chapter 2, 2.3.1(6) Page No 335 The system shall have all the capability built into it to be configured at a later stage for remote control of Signalling System for use as Centralized Traffic Control (CTC).System from OCC with minimum configuration	Kindly provide complete Signalling System architecture	The System Architecture for various Signalling sub systems based on the requirements specified in the Bidding Documents shall be developed by the Contractor and approved by the Engineer.

S.N.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
	changes and no hardware add-on. Alternatively it shall be possible to control the TMS provided in this contract from CTC in OCC provided by other contractor. The Contractor shall seek clarifications in this regard from the Engineer in the early stages of the project. The decision of the Engineer in this regard shall be final.		
335	Part 2, Section VI, Volume 2, PS Signalling Works Chapter 2, 2.3.6(2-f) Page No 356 Central server shall have following minimum hardware configuration: (i) Type: High end server. (ii) Processor – Minimum 64 Bit, Multi Core Multi processor. …. (xiv)	We assume that Multi Core Multi Processor means more than one core one Processor, that means 2 Core 2 Processor. Pl clarify.	Provisions of the Bidding Document are sufficiently clear.
336	Part 2, Section VI, Volume 3, PS Telecom Works Chapter 8, 8.2.2 Page No 532 MTRC System is being provided by Indian Railways in Mughalsarai-Ghaziabad section of	As per clause 8.2.2 GSMR coverage is to be designed for sections "where track alignment of Mughalsarai-New Bhaupur Section of EDFC is taking a detour and cannot be served by Base Station Sub-system (BSS) of IR", please confirm whether 'Link lines' are also required to	Please refer to **Addendum No. 4, Sr. No.6.**

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(1)	(2)	(3)	(4)
	Indian Railways (IR). As such in sections, where track alignment of Mughalsarai-New Bhaupur Section of EDFC is running parallel to the existing Mughalsarai-Ghaziabad Section of IRR, Base Station Sub-systems (BSSs) of IR will be shared by DFCCIL. However in sections, where track alignment of Mughalsarai-New Bhaupur Section of EDFC is taking a detour and cannot be served by Base Station Sub-system (BSS) of IR, new BSSs of DFCCIL shall be provided by the Contractor.	be considered for GSMR coverage	
337	Part 2, Section VI, Volume 3, PS Telecom Works Chapter 8, 8.5.1.1 Page No 544 (1) Base Station Sub-system (BSS) of Base Station Controller (BSC) controlling Base Transceivers Stations (BTSs) each containing a number of transceivers (TRXs). In sections, where track alignment of EDFC Phase-2 is running parallel to the existing Ghaziabad-Mughalsarai Section of Indian Railway, Base Transceivers Stations (BTSs) of Indian Railway will be shared by DFCCIL. Any up-gradation or strengthening required at BTSs of Indian Railway, for smooth handover between BSSs of Indian Railways and	Please confirm that interoperability certificate required for certifying interoperability with existing NSS of MTRC system of Indian Railway should be signed by both vendors i.e vendor of NSS of IR's MTRC and the proposed vendor.	Please refer to reply at Sr. No. 289.

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(1)	(2)	(3)	(4)
	DFCCIL, shall be done by the Contractor. However in sections, where track alignment of EDFC Phase-2 is taking a detour and cannot be served by Base Transceivers Stations (BTSs) of Indian Railway, new Base Transceivers Stations (BTSs) of DFCCIL shall be provided by the Contractor for adequate RF coverage. These BTSs shall be controlled by BSC at OCC. This new Base Station Sub-system (BSS) can be provided either by upgrading and using Base Station Controller (BSC) being provided under Contract Package CP-104 at OCC to meet the requirements of EDFC Phase-2 or by providing a new Base Station Controller (BSC) at OCC. This BSC shall be linked to the existing Network Sub-system (NSS) of MTRC System of Indian Railway used for Mughalsarai-Ghaziabad Section. Accordingly BSC and associated network elements constituting the Base Station Sub-system (BSS) shall be compatible with this Network Sub-system (NSS) of MTRC System of Indian Railway used for Mughalsarai-Ghaziabad Section. The Base Station Sub-system (BSS) should fulfil all interoperability criteria with existing Network Sub-system (NSS) of MTRC System of Indian Railway and should be supported with IOT		

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	documentation. Base Station Sub-system (BSS) to be provided under this Contract shall be capable of supporting data communications for Train Control System i.e. ETCS Level-2.		
338	FIDIC Yellow Book, clause 10.1 Taking Over of the works and sections "The Contractor may apply by notice to the Engineer for a Taking-Over Certificate not earlier than 14 days before the Works will, in the Contractor's opinion, be complete and ready for taking over. If the Works are divided into Sections, the Contractor may similarly apply for a Taking-Over Certificate for each Section."	Clarification requested on the term "Section".	The term "Section" is defined at Sub-Clause 1.1.5.6 of the FIDIC Yellow Book, General Conditions of Contract
339	Para-8.2.8/Scope of Services (Page No.-533) MTRC(GSM-R) – Telecom	Please confirm how the Contractor is entitled to obtain approval or to obtain new spectrum from WPC.	Provisions of Bidding Document are sufficiently clear and shall prevail.
340	Para-8.3.2/Coverage and performance (Page No-534) MTRC(GSM-R) – Telecom	Maximum tower height is not specified. Please confirm what is the maximum to be considered as requirement?	Please refer to **Addendum No. 7, Sr. No. 5**
341	Para-8.5.2/Frequency Planning/Page No.-	Future BTS upgrade may require replacement	Provisions of Bidding Document are

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(1)	(2)	(3)	(4)
	546/MTRC MTRC(GSM-R) – Telecom	of radio components?	sufficiently clear.
342	Para-8.3.18/radio NMS/ Page No.--540/MTRC MTRC(GSM-R) – Telecom	Please confirm the connections to GSM-is at Radio Server at OCC. Please clarify the type of interface.	The Query is not clear. The type of interface is a part of detailed design.
343	Para-8.5/Technical Requirements/Page no.-544/MTRC MTRC(GSM-R) – Telecom	Maximum power output of BTS is not specified. Please confirm the maximum power to be considered as requirement	Number of BTS & its power is a part of detailed design to meet the Employer's Requirements
344	Para-8.3.1(2)/System services/Page no.-433/MTRC MTRC(GSM-R) – Telecom	Does 'wireless data channel' imply 'packet switched (PS) data' or can it be construed as 'circuit switched (CS) data'? If it is PS, then network will need to be provided with GPRS.	Please refer to clause 8.1 of PS/ Telecommunication Works, Part 2, Section VI, Vol. 3 which clearly defines the Employer's Requirements.
345	Para-8.5.1.1(4)/Genaral/Page no.-545/MTRC MTRC(GSM-R) – Telecom	Recording facility for all GSM-R network calls centralized in a Voice Recording System (VRS). Would this be still required?	Provisions of Bidding Document are sufficiently clear.
346	Para-8.3.2/Coverage & performance/Page No.-534/MTRC MTRC(GSM-R) – Telecom	Requirement to provide coverage of IR stations connected to EDFC junctions may entail separate base station at IR station due to distance between IR and EDFC alignments. EDFC may agree that in such cases coverage will be conditional.	Please refer to Clause No. 8.2.2 of PS/ Telecommunication Works, Part 2, Section VI, Vol. 3 and **Addendum No.4, Sr. No 6.**

S.N.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
347	Para-1.2.7/Project Information of EDFC Phase-2/Pg No.-156/Introduction & Scope MTRC(GSM-R) – Telecom	Please identify DFC OCC location in Allahabad for the planning of OFC cabling and GSM-R BTS	Please refer to Clause 5.3.3.2 of PS/ Telecommunication Works, Part 2, Section VI, Vol. 3. Also refer to reply at Sr. No. 168.
348	Para-8.5.1.1(2) Genaral/Page no.- 545/MTRC MTRC(GSM-R) – Telecom	What will be location of MSC	Please refer to reply at query no. 10.
349	Para-8.5.1.1(1) Genaral/Page no.- 544/MTRC MTRC(GSM-R) – Telecom	How many BSC will be installed?	Please refer to reply at query no. 16.
350	Para-8.5.1.1(1) General/Page no.- 544/MTRC MTRC(GSM-R) – Telecom	Will EDFCC provide detail of IR BTS like available space for installation of antenna, If we will share same existing IR BTS for EDFCC GSM antenna or survey will be required?	The details of GSM-R of Indian Railways are given in Chapter-8 of PS / Telecommunication Works, Part-2, Section VI, Vol. 3. As per Para 10.6.9(2) of General Specifications, Part 2, Section VI, Vol. 1, the CP-203 Contractor will be required to interface with Indian Railways for integration of GSM-R System as per requirement.
351	Para-8.5.5/Communication between BTSs and BSC/Page no.-548/MTRC MTRC(GSM-R) – Telecom	How many BTS will be connected within one BSC?	Provisions of Bidding Document are sufficiently clear.
352	Para-5.3.3/Optical Fibre Cable Network/Page no.-498/OFC	Please clarify whether DFC network is integrated with IR existing network. If yes please defined the interface and its location.	The Contractor shall not be responsible for integration of DFC OFC network with existing OFC IR network at STM-1/STM-

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	SDH & OFC - Telecom		4/STM-16 Level. However the Contractor shall be responsible for providing the Second Network upto interfacing IR stations in terms of clause 5.3.4.3 of PS/ Telecommunication Works, Part 2, Section VI, Vol. 3.
353	Para-5.3.3.5/Optical Fibre Cable Network/Page no.-499/OFC SDH & OFC - Telecom	Please confirm the required spares are at least 50% of the used core.	Provisions of Bidding Document are sufficiently clear.
354	Para-5.3.4/SDH Network/Page no.-499/OFC SDH & OFC - Telecom	Please clarify the capacity of SDH matrix supporting STM-16/4/1.	Provisions of Bidding Document are sufficiently clear. Please refer to Clause 5.3.4.4 and 5.3.4.5 of PS/ Telecommunication Works, Part 2, Section VI, Vol. 3.
355	Para-5.3.3.3/Optical fibre cable network/Page no.-499/OFC SDH & OFC - Telecom	Please clarify the secondary network connection for Auto Location Hut. Is the connection is tapped and terminated at all locations or provision of spur link if the distance from BTS is less than 2km.	Provisions of Bidding Document are sufficiently clear.
356	Para-5.3.3/Optical fibre cable network/Page no.-498/OFC SDH & OFC - Telecom	In general, OFC cables which require redundant installation shall be laid down along up-track and down track separately. However, if there is no adequate space between IR track and DFC track, then both OFC cables shall be laid down in the same trench with brick separation. We are	Please refer to clause 12.7.5 of PS/ Telecommunication Works, Part 2, Section VI, Vol. 3.

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(1)	(2)	(3)	(4)
		afraid that DFC lines are mostly in parallel to the existing IR line, and that the available spacing between the centreline of IR track and DFC track is just 6m, In this case neither of digging by manual or horizontal drilling machine will be unrealistic beside the operating IR track. Furthermore, the digging will destroy the track formation overlapped by both line and against electrification pole foundations , which must be between IR and DFC Track	
357	Para-6.1.7/General/Page no.-510/Data Networking System WAN-Telecom	Please confirm WAN network between OCC, Stations is built upon the EoS interfaces of SDH communication system.	Please refer to clause 6.3.1 of PS/ Telecommunication Works, Part 2, Section VI, Vol. 3.
358	Para-6.3/System Requirements/Page no.-511/Data Networking System WAN-Telecom	We understand the Ethernet connection at Auto Section locations, LC gate, TSS,SPs, SSPs and ATSs can be provided with L2 switch which is connected from 10/100/1000 station (10G Ethernet).port of L3 switch in relevant Please confirm if our understanding is correct.	Please refer to clause 6.3.4 of PS/ Telecommunication Works, Part 2, Section VI, Vol. 3.
359	Para-7.3.5/Administrative Telephone Network/Pge no.-518/TELEPHONE SYSTEM EPABX-Telecom	Please clarify whether EDFC telephone network is connected to the existing IR network. If yes please define the interface and its location.	Connectivity with IR is well defined in Para 7.3.7.6 of PS/ Telecommunication Works, Part 2, Section VI, Vol. 3. Provisions of interface are a part of detailed design.
360	Para-7.3/System Requirements/Page no.-517/Page no.-517/TELEPHONE SYSTEM	Please clarify how to connect the subscriber through OFC to the exchanger	Query is not clear.

S.N.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
	EPABX-Telecom		
361	Para-9.1/General Requirements/Page no.-553/Master Clock system Master Clock- Telecom	Where Master clock will be installed	Please refer to clause 9.3.2 of PS/ Telecommunication Works, Part 2, Section VI, Vol. 3.
362	Para-12.1/General/ Page no.-565/Installation, earthing, Lighting and Surge protection Design – Telecom	Building sketch plan is required for designing.	The SER, TER and S&T Power supply equipment rooms at stations are being built by CST contractor(s) of CP 201 & 202, as part of Station building will be as per Station Layout Plans given under 'Indicative Building Plans', Part 4 Reference Documents. The SER, TER and S&T Power supply equipment rooms in block sections shall be constructed by Contractor as per PS/ Building and Structure Works, Part 2, Section VI, Vol. 4.
363	Para-10.1/25 Watt VHF Transceivers/Page no.-558/VHF Communication system 25 W VHF – Telecom	Where 25 VHF masts will be installed.	Please refer to clause 10.1.1.3 of PS/ Telecommunication Works, Part 2, Section VI, Vol. 3.
364	Part 2, Sec VI, Volume 1, GS: 4.5.1.3 (2), 4.5.2.2, 6.5.3. & volume 3: 4.1.8 Scope - General	What should be the content of design verification table? Are you looking as a System Engineering verification methodology or physical verification? However, we are under impression that it should be traceability of	These Paras define the Employers requirements. Further methodology for the design and design verification incorporating Production check, Independent check & Quality

S.N.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
		requirements for its apportionment, which will be captured in design specification. Design and drawing will comply to design specification which will be verified as per the signalling design methodology at three different levels: i.e. Production check, Independent check & Quality assured by Design Manager.	assurance shall be decided by the Engineer in consultation with the Contractor during the design stage.
365	ESPs Engineering Plan - Signalling	Detail Gradients required for finalisation of drawings.	Indicative Gradients already shown in 'Indicative Yard Plans' and 'Plans and Profiles (Project sheets) provided under Part 4 Reference Documents.
366	ESP of Mughal Sarai Mughalsarai - Signalling	1) Chainage not found of DE near point no. 63. 2) Chainage not found of DS near point no. 71 & 85. 3) Chainage not found of point no. 307	There are no Point numbers in 'Indicative Yard Plans' provided under Part 4 Reference Documents. Otherwise also, Information on Chainage is not materially relevant to Signalling at this stage.
367	ESP of New Ahraura Road New Ahraura Road - Signalling	1) PT. 55A chainage not found. 2) Uploop line buffer stop (Delhi End) chainage not found. 3) PT. 61A & 61B chainage not found.	There are no Point numbers in 'Indicative Yard Plans' provided under Part 4, Reference Documents. Otherwise also, Information on Chainage is not materially relevant to Signalling at this stage.
368	ESP of New Karchana New Karchana – Signalling	Chainage not found pt. no 63.	There are no Point numbers in 'Indicative Yard Plans' provided under Part 4 Reference Documents. Otherwise also, Information on Chainage is not materially

S.N.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
			relevant to Signalling at this stage.
369	ESP of New Kanpur New Kanpur – Signalling	Chainage of any signals function is not clear in ESP.	Please refer to higher resolution copy of New Kanpur Indicative Yard Plan provided as **Addendum No. 3, Sr. No. 31.**
370	ESP of New Mirzapur New Mirzapur – Signalling	IR line not found in ESP.	New Mirzapur is a Crossing station, then why IR line will be shown? Query not clear.
371	ESP of New Manauri New Manauri – Signalling	Chainage of 63A point is not found.	There are no Point numbers in 'Indicative Yard Plans' provided under Part 4 Reference Documents. Otherwise also, Information on Chainage is not materially relevant to Signalling at this stage.
372	ESP of New Malwan New Malwan – Signalling	1) CAL for Dn Main Line of first berthing tracks and Up Main Line of second berthing tracks is not mentioned in ESP. 2) Chainage of 51B point for the line going to tower wagon siding not mentioned In ESP.	Not relevant to Signalling design
373	ESP of Jeonathpur Jeonathpur - Signalling	1) Dependent shunt signal to be provided in existing up main line starter. 2) Dependent Shunt signal to be provided in existing down main line starter. 3) Exact location of up main line starter signal and down main line starter signal of IR line is not available from ESP. 4) Km/Chainage of the take-off end and landing	Query Not Clear.

S.N.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
		end are required to provide signals correctly.	
374	ESP of Chheoki Chheoki – Signalling	1) Where is the position of Station Building of Chheoki (DFCC) Station? 2) Existing SIP is required for preparation of Chheoki (DFCC) SIP.	Not relevant to Signalling design at this stage
375	ESP of Iradatganj Iradatganj – Signalling	1) Gate is not mention in the interlocked gates list. But gate is interlocked in this design and it is not mentioned in the ESP that whether it will be replaced by Rob/Rab or not	Which Gate? Query not clear. Please refer to Para 1.4.1 (4) of PS (Signalling Works), Part 2, Section VI, Vol. 2 for Contractor's scope of work on interlocking of LC gates.