

S.No.	Tender Page No.	Tender Clause No./Section No.	Content of tender requiring clarification	Points of clarification required	RailTel's Response
1.	53	1.3(5) of Chapter 4A	Bidder shall propose two type of WSS module for all the sites i.e. ROADM, OEQ & Regenerator site for operational spare simplicity & in future any OEQ & Regenerator site shall be easily converted into the ROADM site with incremental hardware only.	We understand that bidder needs to propose 2 type of WSS for entire network not for site. Please confirm.	It is proposed to amend of the tender condition and same is defined in Corrigendum-V.
2.	56	1.3-30 (o) of Chapter 4A	Each side of a ROADM is to be split logically and physically, ensuring that there are no single points of failure that would cause both east and west add/drop traffic to be lost.	We understand that for each ROADM degree, bidder needs to propose separate shelf housing ROADM and amplifier for the specific degree. For example, 4 Degree ROADM node would require 4 different optical shelves to be proposed. Kindly confirm	It shall be separate Mux/demux, amplifiers and WSS for each direction in Single/Multiple chassis and bidder is allowed to use a single transponder card and provide the East-West Separation with the help of an Optical Splitter.
3.	85	8.1 of Chapter 4B	All equipment should be provided with required Racks, Sub-racks, Power Supply (1+1 Hot standby). Attenuators, Optical Filters, Optical Multiplexer/Demultiplexer, Optical Add/Drop Cards, Supervision Channel module, Optical Performance Monitoring Capability Controller Card etc. are to be supplied.	Please confirm if Rack needs to be proposed for for only sites requiring more than 21RU space (for OADM sites) and 4RU space (for ILA Sites).	Please see corrigendum-V , For the ILA and OADM Locations RailTel will provide space in Rack up to 8 RU for ILA site and 21 RU for OADM sites on standard 19" Telecom Rack. In case the offered ILA and OADM require more space in that case bidder shall provide the Rack.
4.	85	9.4 of Chapter 4B	Equipment should be telecom grade and depth of equipment should be preferably 300mm to assure ample space for proper cable management at rear end.	We understand that 300mm depth is mandatory requirement. Kindly confirm.	Tender condition is very clear ,No change is proposed in tender condition

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5.	105	1.3.2.7 of Chapter 4G	System should support Optical channel/path protection at DWDM line side or client side.	We understand that Optical protection unit for path protection has to be an external unit and should be housed in any slot in a chassis. Kindly confirm.	Tender condition is very clear ,No change is proposed in tender condition
6.	41	1.2.1 of Chapter 4A	Delhi –Mughalsarai	Path1- New Delhi-Ghaziabad direct path details is missing. Path2- For Kanpur and Mugalsarai, same span between Kanpur-Lucknow needs to be considered. Please confirm. Please confirm if following figure 8 to be formed at Kanpur, Mugalsarai and Asansol.ie 4 rigns need to be there (mandatory).	Please see corrigendum-V. Kanpur to Lucknow will be common path for Kanpur to NDLS and Kanpur to Mughalsarai in protection path.
7.	41	1.2.1 of Chapter 4A	Mx to BSL	Path between Bhusaval-Jalgaon is common to both Main and Protection. Pls confirm if there are 2 diff paths from Bhusaval-Jalgaon	Bhusaval-Jalgaon is common to both Main and Protection
8.	41	1.2.1 of Chapter 4A	Pratap Nagar to Mx	Please confirm if Site in Mumbai (Mx) is refering to MahaLaxmi.	Yes , Mx means Mumbai (Mx)
9.	41	1.2.1 of Chapter 4A	BSL-SC	Path-2 - Please confirm if following understanding is correct for the path : Bhusaval-Manmad-Belapur-Daund-Pune-Daund-Sholapur-Wadi-Securndrabad	It is proposed to amend of the tender condition and same is defined in Corrigendum -V
10.	41	1.2.1 of Chapter 4A	MX-BSL	Manmad-Bhusaval is common for both the sections as per given topology. Please change the service end points or provide disjoint path details	It is proposed to amend of the tender condition and same is defined in Corrigendum -V
11.	41	1.2.1 of Chapter 4A	Pune-Mumbai	As per given topology, Bhusaval will be not be part of Manmad-Daund-Pune section. Please confirm if understanding is correct and also confirm the new services	It is proposed to amend of the tender condition and same is defined in Corrigendum -V
12.				Request Railtel provide the E2E Link distance for each service. This will ensure the correct path to be taken for Link Engg.	Span loss and Distance is already provided in Tender document .E2E link distance may be drive from span distances.

13.	86	1.1.1 of Chapter 4C	The envisaged network under present scope is to be managed from Secunderabad NOC as main site. The DR site will be decided by RailTel which will be either Chennai or Mumbai or Kolkata with clients at each of these NOCs and at CNOC. For this purpose:	DR site can be at any place including Delhi also. Clients can be placed according to the requirement of Railtel. Please amend the clause accordingly.	DR locations will be different from main location
14.	58	41.1.8 of Chapter 4A	Earthing will be made available on Earthing bus- bar on the wall in equipment room. Racks if applicable (for new DWDM layer), DCDB, MCBs, power cables (approx. 15 mtr per site) required for extending power from Power distribution point shall be provided by the bidder	Power cards will be redundant, Power cable also we have to consider total of 60 Mts(2x (R+B)=2x(15+15)=60 Metres)per site. Please clarify.	Tender condition is very clear .Both power supply should be connected with DC Charger.
15.	89	1.5.1 of Chapter 4D	The earthing arrangement shall be provided by RailTel for earthing of optical and digital equipment at the equipment room on a bus bar with value less than one ohm (approx.). The extension of the same to the equipment rack /equipment using earth cable 16 sq mm (min.) copper of ISI make, will be the responsibility of the Tenderer.	Please confirm the length of earthing cable to be considered per site.	Approx. 15 mtr per site may be considered
16.	7	Note XII of Chapter-1	Bidder/OEM can also leverage existing DWDM hardware/ Management system of 100G DWDM system deployed in RailTel in proposal. In case if the cards/modules /Licenses in the existing hardware is proposed, OEM shall provide Undertaking for long term support for 8 years for all existing components irrespective of End of Life of the existing hardware. Existing traffic shall not be impacted during the	We understand that Railtel will do the AMC for existing hardware. Upon compliance to the requirement in the clause & providing required quote in the bid, we request RailTel to sign the AMC contract with vendors for eight years support by fixed cost annually.	Tender condition is very clear.

			deployment of the new DWDM system. Hardware required for such up gradation shall be included in price bid.		
17.	53	1.3.5 New DWDM System of Chapter 4A	Bidder shall propose two type of WSS module for all the sites i.e. ROADM, OEQ & Regenerator site for operational spare simplicity & in future any OEQ & Regenerator site shall be easily converted into the ROADM site with incremental hardware only.	Meaning of "two type of WSS module for all the sites" is not clear, please explain elaborately.	Please see corrigendum-V
18.	54	1.3.17 of Chapter 4A	For the optical connectors used on the equipment side the 'Optical Return Loss' of these connectors shall better than 50 dB	'Optical Return Loss' of the equipment side connectors better than 40 dB should be accepted; kindly confirm.	Tender condition is very clear ,No change is proposed in tender condition
19.	55	26. (2) of Chapter 4A	Amplifiers (Inc. Booster, Pre-Amp and In-line Amplifier) Max. Two types	This clause is restrictive to offer efficient and optimized amplifier solution; there are 3 type of amplifiers mentioned in the clause as Booster, Pre-Amp and In-line Amplifier, whereas max 2 types are allowed. Further based on the link budget there could be more than one type of amplifier for each variation, particularly In-line Amplifier. We request this clause to be removed to offer more flexible, efficient and optimized solution and be in line with the clause 2.1.7 page-108 "A range of Pluggable EDFA amplifiers shall be available that allows the design of cost-effective solutions."; kindly confirm.	Please see corrigendum-V
20.	55	26. (4) of Chapter 4A	Mux/Demux (Ch. Add/drop) Only One type	Separate Mux and Demux one type each should be accepted; kindly confirm.	Tender condition is very clear ,No change is proposed in tender condition

21.	58	41. SITE PREPARATION: (41.1.5) of Chapter 4A	For the ILA and OADM Locations RailTel will provide space in Rack up to 4 RU for ILA site and 21 RU for OADM sites on standard 19" Telecom Rack. In case the offered ILA and OADM require more space in that case bidder shall provide the Rack.	Kindly confirm if the Telecom Rack provided by RailTel can also be used to fit 21" ETSI chassis.	Tender condition is very clear ,No change is proposed in tender condition
22.	109	3.4 Environmental Requirements of Chapter 4G	The product shall meet following standards and regulations: 3.4.1 Generic requirements defined in ETS 300 019 (environmental criteria) 3.4.2 NEBS level 3 3.4.3 Telcordia GR-3028-CORE: Thermal Management, Telecommunication Central Office 3.4.4 Operation: ETS300 019 Class 3.1 3.4.5 Transport: ETS300 019 Class 2.2 3.4.6 Storage: ETS300 019 Class 1.1 3.4.7 EN300386 Telecommunication centers	Equivalent Indian guidelines from TEC should be accepted; kindly confirm.	Equivalent Indian guidelines/ standards /regulations from TEC will be accepted
23.	110	3.8 Power Supply & Power Consumption (3.8.2) of Chapter 4G	The equipment shall operate with the input voltage in the range of -40,5VDC to -72VDC.	This clause is in conflict with Page-55 Clause "25. Power Supply: a. Nominal power supply is -48 V DC. The equipment shall work in the range -40 V Dc to -60 V DC."; kindly confirm that the range should be -40 V DC to -60 V DC.	Please see corrigendum-V
24.	112	4.4 of Chapter 4G	Management system shall support SNMPv3/TL-1 interface.	Any management protocol including SNMP v1/2/3, TL1, Netconf, REST, gRPC, etc. should also be allowed.	Tender condition is very clear ,No change is proposed in tender condition
25.	114	13 of Chapter 4H	Minimum 2 Nos. branded compact 90 CFM fan modules working on 48 V DC properly fitted at top of rack should be provided with each rack.	As the chassis inside the rack uses forced cooling and covered on top, a fan on the top of the rack will serve no purpose, request to remove this clause.	Tender condition is very clear ,No change is proposed in tender condition

26.	43	1.2.1 (23-28) of Chapter-4A	JP-MJ 10x10G MJ-PRTP 10x10G JP-KOTA 10x10G NDLS-NIC/SP 10x10G	Since Client Capacity requirement for these sectors is in multiple of 10G only i.e. 10x10G, So request RailTel to allow 100G Line Rate MuxPonder card also for these sectors to have cost effective BOQ offer.	Please see the corrigendum-V
27.	52	1.2 of Chapter-4A (Page-52)	Bidder is also required to submit full link budget calculation of required channels (40/80) along with input parameters Vs output of planning tool.	As RFP states about the requirement of DWDM Transponder/MuxPonder with 100G & 200G Line Rate support on same hardware (by mean of Software control) so Mux/Demux shall be of 100GHz spacing with min 40 Ch support so that higher Line rate DWDM cards (up to 100GHz spectral channel) can work on this DWDM / Photonics Layer meeting current RFP requirement & FUTURE compatible as well.Request RailTel to confirm if above understanding is correct.	Bidder is also required to submit full link budget calculation of 40 channels or 80 channels based on proposed DWDM system along with input parameters Vs output of planning tool.
28.	53	1.3.2 of Chapter-4A	Bidder shall propose minimum 4-degree Flex Grid C- band WSS at ROADM sites in Backbone segment depicted in 1.2.1.	We understand Bidder can quote max. TWO Types of WSS modules however minimum 4-degree Flex Grid support shall be there in both WSS incase Bidder is quoting two hardware for WSS.Request RailTel to confirm if above understanding is correct.	Bidder can quote max. TWO Types of WSS modules in Network e.g 4-degree and 9-degree. Minimum 4-degree Flex Grid support shall be there.
29.	53	1.3.5 of Chapter-4A	Bidder shall propose two type of WSS module for all the sites i.e. ROADM, OEQ & Regenerator site for operational spare simplicity & in future any OEQ & Regenerator site shall be easily converted into the ROADM site with incremental hardware only.	We understand Bidder can quote max. TWO Types of WSS modules however minimum 4-degree Flex Grid support shall be there in both WSS incase Bidder is quoting two hardware for WSS.Request RailTel to confirm if above understanding is correct.	Bidder can quote max. TWO Types of WSS modules in Network e.g 4-degree and 9-degree. Minimum 4-degree Flex Grid support shall be there.
30.	53	1.3.1 of Chapter-4A	The NG DWDM system shall support transmission of single carrier channel with Software Configurable 100G & 200G line rate as per link budget requirement. DWDM Line Port shall be tunable to 100G/200G through software only to run different line rates to cover	We understand OEM/Bidder needs to quote DWDM Transponder/MuxPonder with 100G & 200G Line Rate supported hardware with Software configurable 100G and 200G Line Rates As per traffic Matrix except 10x10G clients requirement. Request RailTel to confirm if above understanding is correct.	Please see the corrigendum-V

			different		
31.	55	26.2 of Chapter-4A	Max Two types of Amplifiers allowed including Booster, Pre-Amp and In-Line Amplifier	Booster and Pre-Amplifiers are generally available either in single card (both BA & PA) or individually in two cards (BA separate and PA separate) and by seeing huge variations in fiber loss values (~ 10 dB to 35 dB) in RFP, Optimum DWDM Link engineering requires combinations of these EDFA modules in order to achieve cost effective Solution, so we request RailTel to allow minimum 5 types of Amplifiers Request RailTel to allow above amplifiers in the RFP	Please see the corrigendum-V
32.	55	25.a of Chapter-4A	Nominal power supply is -48 V DC. The equipment shall work in the range -40 V Dc to -60 V DC.	-40,5VDC looks TYPO so request RailTel to rectify the same & allow to Quote the equipment with	Please see the corrigendum-V
33.	110	3.8.2 of Chapter-4G	The equipment shall operate with the input voltage in the range of -40,5VDC to -72VDC.	DC Power range -40 VDC to -60 VDC as per industry general standard for Telecom equipments.	Please see the corrigendum-V
34.		Chapter-4		100G Client Plug. 100G Plug details are missing. Request RailTel to confirm if following 100G plug (100GE and OTU4) can be quoted along with Transponders as per Traffic Matrix QSFP28 L4 Single Mode with 10KM (100GE and OTU4)	Please see the corrigendum-V
35.		Chapter-4		10 Client Plugs. 10G Plugs details are missing in RFP. Request RailTel to confirm if following 10G Plug can be quoted in BoQ as per Traffic Matrix.Multirate 10GE/OTU2/OC192/FC1200, 1310nm, 10km SFP+	Please see the corrigendum-V

36.	82	Annexure-1 of Chapter-4A	3(b) ILA and OADM locations	Erode, Trichy and Chennai are also ROADM Sites as per Fiber loss sheet Request RailTel to kindly confirm	Please see the corrigendum-V
37.	64	Annexure-1 of Chapter-4A	2.Delhi-Kolkata	Few Section have G.653 Fiber type so just reconfirming from RailTel if its correct or just TYPO.	Yes It is TYPO.
38.	63	Annexure-1 of Chapter-4A	2.Delhi-Kolkata	Delhi - Ghaziabad Fiber loss details (Kms and Loss in dB) are missing. Request RailTel to provide details	Please see the corrigendum-V
39.	61	Annexure-1 of Chapter 4A	Annexure-1 Fiber loss details	Many Spans fiber loss (after adding 6 dB EOL Margin) are very high & close to 35-40dB. As per TEC GR any span of 22 dB is classified as Long haul DWDM span and 33 dB span (30 dB + 3dB) is classified as Very Long Haul DWDM span where 3 dB is margin per span. So beyond 33dB loss spans are not suitable for 100G/200G DWDM systems. Becuase performance would be on threshold on day#1 itself or will need costly regen sites in solution. So request RailTel to provide ILA locations for section where EoL fiber loss is > 33 dB as per TEC GR.	Please see the corrigendum-V

40.	61	Annexure-1 of Chapter 4A	Link Losses	11 Fiber Spans have fiber loss variation is > 2dB between A-B vs B-A on same fiber span & Length. <table><tr><th>Sector Name</th><th>END A</th><th>Node Type</th><th>End B</th><th>Node Type</th><th>Fiber Length (in Km)</th><th>Fiber Type (GSD or not)</th><th>1st Fiber Loss (in dB)</th><th>2nd Fiber Loss (in dB)</th><th>Diff dB A-B vs B-A</th></tr><tr><td>BLR-MUM & BLR-CHN</td><td>Madison</td><td>ODDM</td><td>Case-rock</td><td>ILA</td><td>61.7</td><td>Yes</td><td>19</td><td>23.5</td><td>-4.5</td></tr><tr><td>BLR-MUM & BLR-CHN</td><td>Londa</td><td>ODDM</td><td>Alcarne</td><td>ILA</td><td>37.5</td><td>Yes</td><td>17.1</td><td>22.2</td><td>-5.1</td></tr><tr><td>BLR-MUM & BLR-CHN</td><td>Arwari</td><td>ILA</td><td>High</td><td>QDDM</td><td>65</td><td>Yes</td><td>29.7</td><td>31.8</td><td>-2.1</td></tr><tr><td>BLR-MUM & BLR-CHN</td><td>Arwari</td><td>ILA</td><td>Dongre</td><td>ILA</td><td>75.6</td><td>Yes</td><td>20.9</td><td>23.5</td><td>-2.6</td></tr><tr><td>BLR-MUM & BLR-CHN</td><td>Arwari</td><td>QDDM</td><td>Tenar</td><td>ILA</td><td>25</td><td>Yes</td><td>19.8</td><td>12.8</td><td>-7</td></tr><tr><td>BLR-MUM & BLR-CHN</td><td>Tygar</td><td>ILA</td><td>Tenar</td><td>ILA</td><td>78.6</td><td>Yes</td><td>30.6</td><td>27.5</td><td>-3.1</td></tr><tr><td>BLR-MUM & BLR-CHN</td><td>Coobate</td><td>ILA</td><td>Baggore</td><td>QDDM</td><td>43.4</td><td>Yes</td><td>31</td><td>28.9</td><td>-2.1</td></tr><tr><td>BLR-MUM & BLR-CHN</td><td>MAJ (Mangrove)</td><td>QDDM</td><td>Kohalpur</td><td>ILA</td><td>56.1</td><td>Yes</td><td>24.2</td><td>17.6</td><td>-6.5</td></tr><tr><td>BLR-MUM & BLR-CHN</td><td>Sub-30</td><td>ILA</td><td>Sub-30</td><td>ILA</td><td>65</td><td>Yes</td><td>20</td><td>16.2</td><td>-3.8</td></tr><tr><td>BLR-MUM & BLR-CHN</td><td>Tindhar</td><td>ILA</td><td>Chengalattu</td><td>ILA</td><td>78.5</td><td>Yes</td><td>23.2</td><td>28.4</td><td>-5.2</td></tr><tr><td>NDL VO</td><td>Mughalrai</td><td>QDDM</td><td>Basant Road</td><td>ILA</td><td>61.57</td><td>653D</td><td>26.2</td><td>28.2</td><td>-2</td></tr></table> In Few of sections the difference in fiber loss A-B vs B-A is close to 5 dB which is not good operationally for 100G/200G DWDM system. 100G/200G DWDM system require better fiber maintenance, For Long-haul DWDM network like RailTel in order to achieve Bi-directional optimum DWDM performance we suggest to keep both sides fiber loss same or variations shall not be more than 2 dB. Since its same fiber with exactly same distance and length so there are lots of scope for Fiber loss improvements which will provider better DWDM Performance & Margin.	Sector Name	END A	Node Type	End B	Node Type	Fiber Length (in Km)	Fiber Type (GSD or not)	1st Fiber Loss (in dB)	2nd Fiber Loss (in dB)	Diff dB A-B vs B-A	BLR-MUM & BLR-CHN	Madison	ODDM	Case-rock	ILA	61.7	Yes	19	23.5	-4.5	BLR-MUM & BLR-CHN	Londa	ODDM	Alcarne	ILA	37.5	Yes	17.1	22.2	-5.1	BLR-MUM & BLR-CHN	Arwari	ILA	High	QDDM	65	Yes	29.7	31.8	-2.1	BLR-MUM & BLR-CHN	Arwari	ILA	Dongre	ILA	75.6	Yes	20.9	23.5	-2.6	BLR-MUM & BLR-CHN	Arwari	QDDM	Tenar	ILA	25	Yes	19.8	12.8	-7	BLR-MUM & BLR-CHN	Tygar	ILA	Tenar	ILA	78.6	Yes	30.6	27.5	-3.1	BLR-MUM & BLR-CHN	Coobate	ILA	Baggore	QDDM	43.4	Yes	31	28.9	-2.1	BLR-MUM & BLR-CHN	MAJ (Mangrove)	QDDM	Kohalpur	ILA	56.1	Yes	24.2	17.6	-6.5	BLR-MUM & BLR-CHN	Sub-30	ILA	Sub-30	ILA	65	Yes	20	16.2	-3.8	BLR-MUM & BLR-CHN	Tindhar	ILA	Chengalattu	ILA	78.5	Yes	23.2	28.4	-5.2	NDL VO	Mughalrai	QDDM	Basant Road	ILA	61.57	653D	26.2	28.2	-2	In case of fiber loss variations is more than 2 dB in 1st Fiber Loss and 2nd Fiber Loss of same fiber. In that case Bidder is allowed to consider lower of both these fiber loss value for Link engineering.
Sector Name	END A	Node Type	End B	Node Type	Fiber Length (in Km)	Fiber Type (GSD or not)	1st Fiber Loss (in dB)	2nd Fiber Loss (in dB)	Diff dB A-B vs B-A																																																																																																																				
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				Request RailTel to allow us to consider lower of both these fiber loss value for Link engineering & ask Fiber team to rectify the fiber before deployment.	
41.	55	26.4 of Chapter-4A	Mux/Demux of one TYPE	Mux/Demux module generally comes either in single card (both Mux & Demux) or individually in two cards (Mux separate and Demux separate). So request RailTel to allow both integrated (Single) and separate module (Two) in this RFP however Bidder needs to Quote same type of Modules for all the required sites.	Mux/Demux should be in single card (both Mux & Demux) and Bidder needs to Quote same type of card in Network.
42.	61	Annexure-1 of Chapter 4A	Annexure-1 Fiber loss details	First Fiber loss means End A - End B (towards B) and Second Fiber means loss End B- End A (towards A).Request RailTel to confirm if this is correct understanding	Yes
43.	7	XIII of Note SOR Chapter-1	Bidder/OEM can also leverage existing DWDM hardware/ Management system of 100G. Bidder/OEM can also leverage existing L2 resource at Mumbai/ Delhi/ Secunderabad/Kolkata if applicable.	To have fair competition, we request RailTel to not allow leveraging the incumbent's managemnet system and existing L2 resources. We further request that all the bidders should quote the required HW/Management system and L2 service resources in the priced bids. This will help RailTel to have an apple to apple comparison of the bids.	Tender condition is very clear, No change is proposed.
44.	40	1.1 of Chapter 4A	RailTel desires to create 100G/200G network by using mix of Alien wavelength over ADVA's & Ciena make coherent DWDM segment & new DWDM system using new fiber pairs on remaining segment	Please clarify if the bidder is allowed to propose higher line rate than 100G/200G in some of the network sections if link engineering permits.	Bidder is allowed to propose higher line rate than 100G/200G in some of the network sections if link engineering permits

45.	41	1.2.1-1 of Chapter 4A	Delhi-Mughalsarai	Delhi –Mughalsarai : Protected with figure of 8 at Kanpur. We understand that GZB will be the common POP in this link in the first ring of figure of 8. At GZB, does the bidder need to provide two separate equipment for working path and protected path to have the node disjoint protection or a single node will be sufficient. Please confirm. Also, Delhi-Mughalsarai link will have two rings or 3 rings? Bidder need to protect the channel in 2 rings or 3 rings in this link? Please clarify.	Please see the corrigendum-V
46.	41	1.2.1-2 of Chapter 4A	Mughalsarai-Kolkata	Mughalsarai— Kolkata: Protected with figure of 8 at Asansol. We understand that "Figure of 8 protection" means that the channel has to be protected in each ring. If we take example of Mughalsarai-Kolkata link, then Channel should be protected in Mughalsarai- ASANSOL and ASANSOL-Kolkata separately by dropping the channel at ASANSOL. Please confirm.	Figure of 8 protection" means that the channel has to be protected in each ring.e.g. Mughalsarai-Kolkata link, then Channel should be protected in Mughalsarai- ASANSOL and ASANSOL-Kolkata separately by dropping the channel at ASANSOL.
47.	45/46	5.1 of Chapter 4A	Mumbai - Chennai Link	As stated in tender document, the ADVA deployed Mux-Demux are 80 channels with 50GHz spacing. This means that in the Mumbai link, the bidder can only propose 100G lambda because 200G and higher bit rates consume more than 50GHz spacing. Please confirm if our understanding is correct.	Tender condition is very clear, No change is proposed.
48.	53	1.3-3 of Chapter 4A	WSS shall support full C-band spectrum i.e. 4000/4800 GHz.	As per ITU-T G.694.1, we understand the DWDM C Band Spectrum ranges from 191000 GHz to 196000 GHz. Please clarify the significance of 4000/4800 GHz.	WSS shall support full C-band spectrum 40/48 channel of 100Ghz and 80/96 channel of 50GHz
49.	54	24.b of Chapter 4A	Amplifiers shall support full C- band spectrum 4000/4800 GHz.	As per ITU-T G.694.1, we understand the DWDM C Band Spectrum ranges from 191000 GHz to 196000 GHz. Please clarify the significance of 4000/4800 GHz.	Amplifier shall support full C-band spectrum 40/48 channel of 100Ghz and 80/96 channel of 50GHz

50.	54	24.d of Chapter 4A	The Optical Amplifiers shall be of 'Mid-Access' type with due implementation for gain-flatness, feedback gain-control & channel-power balancing etc.	The "Mid-Access" type of amplifiers were used for the networks having 10G wavelengths where there was an option to place a DCM between the first amplifier stage and second amplifier stage. These amplifiers are not suitable for Coherent networks. Therefore, we request RailTel to allow the bidder to use single stage EDFAs which can meet all the required functionalities of the coherent network as stated in this tender.	Please see the corrigendum-V
51.	54	24.d of Chapter 4A	The Optical Amplifiers shall be of 'Mid-Access' type with due implementation for gain-flatness, feedback gain-control & channel-power balancing etc.	Channel power balancing is the ROADM/WSS functionality not the Amplifier functionality. We request to remove this from the clause since Channel power balancing is already a requirement in the ROADM/WSS section.	Please see the corrigendum-V
52.	54	24.d of Chapter 4A	The Optical amplifiers have to work on 80 @ 50GHz or 40 @ 100GHz channels from day one.	As per the trend in last few tenders, we have observed that RailTel's network is evolving towards flexi grid environment with higher bit rates like 200G/300G being offered by various bidders. In this tender also, one of the alien section have 200G/300G bit rates. In this tender, RailTel has asked for flexi grid WSS. However, the amplifier being asked is Fixed Grid amplifier. Therefore, we request RailTel to amend the clause as per below: The optical amplifiers should support flexi grid network having higher bit rates of 200G/300G/400G from day-1.	Tender condition is very clear, No change is proposed.

53.	55	26.2 of Chapter 4A	Amplifiers (Inc. Booster, Pre-Amp and In-line Amplifier) : Max two Types	The fiber characteristics in the network are on the higher side. So, the bidder will need to provide higher power booster amplifiers in some of the sections in addition to usual preamps and booster amps. Some of the sections may need RAMAN amplifiers also. Therefore, we request RailTel to allow use of "Maximum 4 types" of Amplifiers.	Please see the corrigendum-V
54.	56	30(a) of Chapter 4A	To support "East-West separation(EWS) i.e. the add/drop channel traversing the east direction shall not share common cards with add/drop channels in west direction	We understand that "East-West separation (EWS)" means that, there shall be separate Mux/demux, WSS for each direction. However, the bidder is allowed to use a single transponder card and provide the East-West Separation with the help of an Optical Splitter. Please confirm.	It shall be separate Mux/demux, amplifiers and WSS for each direction in Single/Multiple chassis and bidder is allowed to use a single transponder card and provide the East-West Separation with the help of an Optical Splitter.
55.	56	30(o) of Chapter 4A	Each side of a ROADM is to be split logically and physically, ensuring that there are no single points of failure that would cause both east and west add/drop traffic to be lost.	By splitting each side of ROADM logically and physically, we understand that each direction should have it's own ROADM Module. For ex, a 3 degree node should have 3 ROADM cards, so even if the degree-1 ROADM card fails, other two degrees are not affected. Please confirm.	It shall be separate Mux/demux, amplifiers and WSS for each direction in Single/Multiple chassis and bidder is allowed to use a single transponder card and provide the East-West Separation with the help of an Optical Splitter.
56.	85	9.5 of Chapter 4B	100G client interface shall be LR4/SR4 type with dual rate	Please clarify if the required 100G interface is LR4 or SR4, because there is significant difference in cost.	Please see the corrigendum-V
57.	86	1.1.3 of Chapter 4C	The tenderer must provide North Bound CORBA or other ITU standard interface for integrating the NMS to an OSS platform.	We understand that RailTel requires just the support of NBI interfaces in the offered TMN to connect with an external OSS platform on Day-1. The bidder does not need to quote for the NBI licenses in the SOR. Please confirm.	Tender condition is very clear, No change is proposed.

58.	86	1.1.3 of Chapter 4C	For integrating the NMS to an OSS platform, tenderer will share necessary details related to the interface provided for this purpose viz. dual NBI/API/MIB etc. whenever required by RailTel, conforming to FCAPS requirement.	The OSS is generally used to monitor the multi-vendor network via a single window. Function of an OSS platform is limited to Fault/Alarm reporting, Inventory reporting and Performance reporting only. ITU-T has defined FCAPS functionality for the TMN architecture. It is not applicable to OSS platforms. Request you to amend the clause: "For integrating the NMS to an OSS platform, tenderer will share necessary details related to the interface provided for this purpose viz. dual NBI/API/MIB etc. whenever required by RailTel, conforming to Fault, Inventory and performance reporting."	Tender condition is very clear, No change is proposed.
59.	112	4.4.10 of Chapter 4G	Management system shall support Northbound Interface and shall report Alarm, Inventory, Provisioning data. Describe all the northbound interfaces supported.	The Northbound interfaces in the TMN system are used to report Alarm, Inventory and Performance data. We understand that "Provisioning" is the typing error. Please confirm.	Tender condition is very clear, No change is proposed.
60.	43	1.2.1 of Chapter 4A	Design Network: 27.NDLS - NIC 28.GZB - NIC	Both of these links are mentioned as protected, but protection path is not mentioned in the traffic matrix. Please provide the protection path for these services.	Please see the corrigendum-V
61.	76	Annexure-II (1-b) of Chapter 4A	Protection Path 2 : Lucknow-Varanasi-MughalSarai	This protection path should start from Kanpur and not Lucknow. How can we reach from Kanpur to Lucknow on the protection path. Is the Kanpur -Lucknow path common between "GZB-Kanpur" and "Kanpur-Mughalsarai" rings? Please clarify. Also, Lucknow is shown as 4 degree OADM node, but in the Delhi-Kolkata link distance sheet, lucknow only has 3 degrees. Please clarify.	Kanpur - Lucknow path common between "GZB-Kanpur" and "Kanpur-Mughalsarai" rings and also Please see in corrigendum-V

62.	41	1.2.1(a-1) of Chapter 4A	Delhi – Mughalsarai : Protected with figure of 8 at Kanpur	Delhi is mentioned as a 2 degree node, but according to the link distance sheet, Delhi is a spur site with 1 degree. We cannot provide protection path till Ghaziabad Ghaziabad is mentioned as a 4 degree node in node details and topology, but according to link distance sheet, it is a 3 degree node. Please clarify.	Please see the corrigendum-V
63.	65	Annexure- I (3) of Chapter 4A	Delhi to Mumbai	NDLS - OKHLA Path is missing in the link distance sheet. Please clarify.	NDLS - OKHLA Path is available in Page no 65.
64.	63	Annexure- I (2) of Chapter 4A	Delhi to Kolkata	The spur route from Allahabad to Katni does not have any traffic according to the traffic matrix. Does the Bidder need to include these sites in the SoR BoQ? Please clarify	Bidder should provide optical & photonic layer to meeting link budget requirement of 200G channel for Allahabad to Katni, Hubli to Guntakal, and Hassan to Arsikeri.
65.	67	Annexure- I (4) of Chapter 4A	Optional Additional ILA (If required).	The fiber characteristics in the network are on the higher side. Further in the new section, 6dB Margin is also there. Many of the links are going above 35dB when Margin is included. The additional ILA sites given on page-67 are not enough to meet the required link engineering to build a stable and future proof design. We request you to provide more number of additional ILA sites in the sections exceeding 35dB loss.	Please see the corrigendum-V

66.		Chapter 4A		New DWDM Sections having no traffic . Does the bidder need to provide optical layer including amplifiers, ROADM, Mux-Demux etc. in the SoR BoQ for the sections in New DWDM links which have no traffic passing through them? Please clarify.	Bidder should provide optical & photonic layer in New DWDM links which have no traffic passing through them. It should meet link budget requirement of 200G per channel.
67.		Chapter 4A		Interconnection of Delhi-Kolkata, Delhi-Mumbai, Bangalore-Chennai, Bangalore-Mumbai topologies. Does RailTel intend to interconnect the 3 new DWDM topologies or they will remain as shown in tender (isolated from each other). For Example: NDLS, Mumbai, Panvel, Bhusaval etc are some of the common nodes amongst these topologies. Does the bidder need to consider them as separate in every topology since no traffic is going from one topology to another? Please clarify.	Proposed New DWDM System should be interconnecting at Junction points like Delhi with other New DWDM topologies. System should be proposed accordingly.
68.	67	Annexure-I (5) of Chapter 4A	Existing Network : Mumbai - Secunderabad	The protection path from Mumbai to Bhusaval via Panvel is missing in the link distance sheet. Mumbai to Panvel is there, but Panvel to Bhusaval is not there. Please clarify	Please see the corrigendum-V
69.	67	Annexure-I (5) of Chapter 4A	Existing Network : Mumbai - Secunderabad	Bhusaval to Pune direct link is missing in the link distance sheet. Please Clarify	Please see in Tender Document at Page 69 (SN 81-94) and Page 68 (SN 31-40)
70.	41	1.2.1 (a-1) of Chapter 4A	Delhi –Mughalsarai	1. Capacity 2x100G means "two channels of 100G capacity each"? or "two 100G clients"? What's meant by 10x10G capacity?	2X 100G and 10x10G client capacity , Please see the corrigendum-V
71.	41	1.2.1 (a-1) of Chapter 4A	Delhi –Mughalsarai	2. Detailed information required on client traffic.	Please see corrigendum-V

72.	41	1.2.1 (a-1) of Chapter 4A	Delhi –Mughalsarai	3. Path 2 follows LKO->CNB->LKO. Is it a typographical error or a requirement?	Kanpur -Lucknow path common between "GZB-Kanpur" and "Kanpur-Mughalsarai" rings. Please see in corrigendum-V
73.	41	1.2.1 (a-1) of Chapter 4A	Delhi –Mughalsarai	4. Clarification needed on "figure of 8 protection type".	Figure of 8 protection" means that the channel has to be protected in each ring.e.g. Mughalsarai-Kolkata link, then Channel should be protected in Mughalsarai- ASANSOL and ASANSOL-Kolkata separately by dropping the channel at ASANSOL.
74.	43	Page 43, diagram of Chapter 4A	Delhi to Kolkata	Katni ALD link not mentioned in the table.	Bidder should provide optical & photonic layer in New DWDM links which have no traffic passing through them. It should meet link budget requirement of 200G per channel.
75.	46	1.2.1 (b-5.1-c) of Chapter 4A	ILA sites equipped with Mid Stage Amplifier with East Direction and West direction.	Why Mid stage amplifier is required for 100G coherent line systems?	Please see corrigendum-V
76.	51	5.3 of Chapter 4A	Alien wavelength solution must be designed without impacting existing channel however few tuning (Amplifier Gain, tilt.) allowed for optimization and shall not require truck roll	What is the typical power, OSNR, and wavelength values of alien wavelengths?	Please see corrigendum-V
77.	49	5.2 of Chapter 4A	Vijayawada –Kolkata & Nagpur--Kolkata (Existing 100/200G Coherent technology based	1x300G line means 3x100G or what?	1x300G line rate.
78.	53	1.3-1 of Chapter 4A	The NG DWDM system shall support transmission of single carrier channel with Software Configurable 100G & 200G line rate as per link budget requirement	SW configurable 100G/200G line rates are needed. What will be the client interfaces for those cards?	Client interfaces for those cards should be 2x100G

79.	53	1.3.2.of Chapter 4A	Bidder shall propose minimum 4-degree Flex Grid C- band WSS at ROADM sites in Backbone segment depicted in 1.2.1.	Why flex grid solution is required when the solution is based on fixed Mux/Demux?	Tender condition is very clear .Please go through tender document
80.	53	1.3.6.of Chapter 4A	Booster amplifier and pre amplifier shall be integral part of DWDM terminals, ILAs and OADMs/ ROADMs	Whether ILAs upgradable to ROADM are needed from day one?	Tender condition is very clear .Please go through tender document
81.	53	1.3.10.of Chapter 4A	The system shall support one Optical Supervisory Channel (OSC) as specified by ITU-T Rec.G.692 for the monitoring and configuration of OTM, ILA, OADM and ROADM on the route and shall be manageable from one location for the entire route via the EMS or LCT of the equipment. The OSC transmitter and receiver behavior at the Inline Amplifier/ Booster / Pre-Amp shall be monitored through EMS via suitable alarms	Whether CD or CDC ROADMs are needed? Which type of ROADM nodes are required?	Tender condition is very clear .Please go through tender document
82.	54	24.d. of Chapter 4A	The Optical Amplifiers shall be of 'Mid-Access' type with due implementation for gain-flatness, feed-back gain-control & channel-power balancing etc. The Optical amplifiers have to work on 80 @ 50GHz or 40 @ 100GHz channels from day one.	Mid-stage amplifier is only required for pre amplifiers and ILAs not in Booster amplifier	Tender condition is very clear .Please go through tender document
83.	55	point 26.3 of Chapter 4A	WSS	WSS of two types. one type is ROADM. What is the other one?	Please see the corrigendum-V

84.	56	30.h of Chapter 4A	ROADM shall provide add/drop of 100G, 200G channel as offered bidder (0 to 40 channels for 100G Channel based solution or 0 to 20 Channels for 200G rates-based solution)	Why the number 200G channels are less than 100G channels?	Tender condition is very clear .Please go through tender document
85.	57	34 of Chapter 4A	Protection switching shall be triggered based on Loss of Signal and Pre-FEC BER signal failure/Degrade signal failure	Protection is channel or 1+1 client?	Tender condition is very clear .Please go through tender document
86.	57	38.of Chapter 4A	100G Transponder shall provide following client protocol a. 100GE b. OTU4	What is required? 100G Transponder, 100G/200G line rate capable transponder or Muxponder?	Tender condition is very clear .Please go through tender document
87.	108	1.4.3.2 of Chapter 4G	OTU4 (100m, SR10, 10x10G Parallel)	10x10 parallel optics is obsolete these days.	Tender condition is very clear .Please go through tender document
88.	111	4.2.7 of Chapter 4G	System shall support manual reset of performance logs.	Reset of perf logs in EMS or System?	Tender condition is very clear .Please go through tender document
89.	112	4.4.5 of Chapter 4G	The system shall support redundant NMS access points and redundant NMS access per NE	What is meant by "redundant NMS access per NE"?	Tender condition is very clear .Please go through tender document
90.	113	4.6.1 of Chapter 4G	System shall support DCN demarcation from the carrier's DCN (Gateway functionality) that includes the use of individual TCP/IP port management and SFTP client on the NE.	Please the explain the meaning of DCN demarcation.	Tender condition is very clear .Please go through tender document
91.	57	33 of Chapter 4A	100/200G for protected circuits channel must be protected within ring against fiber cut. Traffic must survive against single fiber cut in each ring independently or simultaneously. The switching time must be less than 50 ms	100/200G for protected circuits channel must be protected within ring against fiber cut. Traffic must survive against single fiber cut in each ring independently or simultaneously. The switching time must be less than 50 ms. Is it for 2 fiber ring or 4 fiber ring? Can the single fiber cut in each ring be in same span or different spans?	Tender condition is very clear .Please go through tender document

92.	53	1.3-2 of Chapter 4A	Bidder shall propose minimum 4-degree Flex Grid C- band WSS at ROADM sites in Backbone segment depicted in 1.2.1.	Bidder shall propose minimum 4-degree. Is scalability required from 4 to 8 degree in future?	No
93.	105	1.3.1.1 of Chapter 4G	10G Muxponder shall support several ports with OC-3/STM-1, OC-12/STM-4, OC-48/STM-16, OUT1 client rates.	OUT1 client rates. Needs clarification on OUT1	Please see corrigendum-V
94.	41	1.2.1 of Chapter 4A	Design of network	Type Linear. Does it mean that there is no protection required between these nodes?	Linear means no protection
95.	104	1.2.5 of chapter 4G	Passive and active optical components in form of a pluggable module	Passive and active optical components in form of a pluggable module. Does this imply the units are pluggable as hot-swap modules/Card Cartridge/ and passive units?	Tender condition is very clear .Please go through tender document
96.	104	1.2.5.4 of Chapter 4G	Electronically Variable Optical Attenuator (EVOA)	Electronically Variable Optical Attenuator (EVOA). EVOA are integral part of WSS modules in ROADM. There may be no separate EVOA which is expected to be pluggable. The same may be confirmed?	Tender condition is very clear .Please go through tender document
97.	108	2.1.7 of Chapter 4G	A range of Pluggable EDFA amplifiers shall be available that allows the design of cost-effective solutions.	A range of Pluggable EDFA amplifiers shall be available that allows the design of cost-effective solutions.	Tender condition is very clear .Please go through tender document
98.	108	2.1.7 of Chapter 4G	A range of Pluggable EDFA amplifiers shall be available that allows the design of cost-effective solutions.	Does this imply, the amplifier units are pluggable as hot-swap modules/Card Cartridge?	
99.	104	1.1.2 of Chapter 4G	The proposed chassis at OADM sites shall support minimum 8x100G client-side capacity from day-one	The proposed chassis at OADM sites shall support minimum 8x100G client-side capacity from day-one. Can this be provided through 4 Lambdas of 200G Muxponder?	Tender condition is very clear .Please go through tender document
100	108	1.4.4 of Chapter 4G	System shall support 'Grey' interfaces at the line side.	System shall support 'Grey' interfaces at the line side. Is it a fixed or C-Band Tunable. What is implied by "Grey"?	Tender condition is very clear .Please go through tender document