



RAILTEL CORPORATION OF INDIA LIMITED
(A Govt. of India Undertaking)
(CIN: U64202DL2000GOI107905)

ELECTRONIC TENDER DOCUMENT

FOR WORK OF

**“Design, Supply, Installation, Testing & Commissioning of MDWDM system including
Integration with the existing network of RailTel”**

OPEN TENDER (Two Packet System)

खुली ई-निविदा न. RailTel/Tender/OT/CO/Project/2024-25/MDWDM/013
Dated:19.08.2024

OPEN E-TENDER NO. RailTel/Tender/OT/CO/Project/2024-25/ MDWDM/013
Dated:19.08.2024

निविदा दस्तावेज की कीमत: रु.5,900/- (टैक्स सहित)
Cost of Tender Document – Rs 5,900/- (Including Taxes)

रेलटेल
RAILTEL

खुली निविदा सूचना

E-Tender Notice No. RailTel/Tender/OT/CO/Project/2024-25/MDWDM/013

Dated: 19.08.2024

रेलटेल कॉर्पोरेशन ऑफ इंडिया लि. (रेलटेल) "एमडीडब्ल्यूडीएम उपकरणों की डिजाइन, आपूर्ति, स्थापना, परीक्षण तथा कमीशन, रेलटेल के मौजूदा नेटवर्क के साथ एकीकरण सहित" के लिये भारतीय पंजीकृत फर्मों से दो पैकेट के माध्यम से ई-टेंडर आमंत्रित करता है।

क)	निविदा का डाउनलोडिंग के खुलने की तिथि	19.08.2024
ख)	बोली प्रस्तुत करने की अंतिम तिथि और समय	09.09.2024 को 15.00 बजे तक
ग)	बोली-पूर्व प्रश्न जमा करने की अंतिम तिथि	28.08.2024
घ)	ई-बिड खुलने की तिथि और समय	09.09.2024 को 15.30 बजे
ङ)	निविदा की लागत(ए एम सी को छोड़कर)	लगभग रु. 31.44 Cr (टैक्स सहित)
च)	बयाना राशि (ईएमडी)	रु. 31.44 Lakhs
छ)	निविदा दस्तावेज की फीस	रु. 5,900/- (सभी समावेशी)
ज)	TReDS सुविधा उपलब्ध है	हाँ, m1xchange पोर्टल पर (url: https://www.m1xchange.com)

नोट: निविदा सूचना और निविदा प्रलेख रेलटेल की वेबसाइट पर उपलब्ध हैं और www.railtelindia.com या ई-टेंडरिंग पोर्टल <https://www.railtel.enivida.com> से डाउनलोड किए जा सकते हैं। ऑनलाइन बोली जमा करने के लिए निविदाकर्ता को पोर्टल <https://www.railtel.enivida.com> से निविदा प्रलेख की आधिकारिक ऑनलाइन प्रति डाउनलोड करनी होगी। सभी भविष्य की जानकारी अर्थात् इस निविदा के लिए शुद्धिपत्र / परिशिष्ट / संशोधन आदि ई-निविदा पोर्टल, रेलटेल वेबसाइट और सीपीपी पर पोस्ट की जाएगी। रेलटेल कार्यालय से निविदा प्रलेख की मुद्रित प्रति नहीं बेची जाएगी।

यह निविदा रेलटेल के इंटीग्रिटी पैकेट प्रोग्राम के तहत कवर की गई है और बोलीदाताओं को इंटीग्रिटी पैकेट पर हस्ताक्षर करने और बोली के साथ ही रेलटेल को जमा करने की आवश्यकता है।

बोली दाता तैयारी, बोली की तैयारी/प्रस्तुति /भागीदारी से संबंधित सभी लागतों को वहन करेगा। रेलटेल किसी भी तरह से आचरण या परिणाम की उदासीनता से इन लागतों के लिए जिम्मेदार या उत्तरदायी नहीं होगा।

जीएम/ टीपी के लिए

OPEN TENDER NOTICE

E-Tender Notice No. RailTel/Tender/OT/CO/Project/2024-25/MDWDM/013

Dated: 19.08.2024

RailTel Corporation of India Ltd. (RailTel) invites E-Tender in Two Packet System for “**Design, Supply, Installation, Testing & Commissioning of MDWDM system including Integration with the existing network of RailTel**” from Indian registered firms.

a)	Opening date of Tender downloading	19.08.2024
b)	Last date & time of submission of bid	09.09.2024 upto 15:00 hrs.
c)	Last date of submission of pre-bid queries	28.08.2024
d)	Opening of e-bid	09.09.2024 at 15:30 hrs.
e)	Estimated cost of work (excluding AMC)	Approx. Rs. 31.44 Cr (including taxes).
f)	Earnest Money (EMD)	Rs. 31.44 Lakhs
g)	Cost of Tender Document	Rs. 5,900/- (Including Tax)
h)	TReDS feature available	Yes, on m1xchange portal (url: https://www.m1xchange.com)

Note: Tender Notice and Tender Document are available on RailTel’s website and can be downloaded from www.railtelindia.com or from the e-Tendering portal <https://railtel.enivida.com>. For online bid submission the tenderer will have to necessarily download an official online copy of the tender document from portal <https://railtel.enivida.com>. All future information viz. corrigendum /addendum/ amendments etc. for this Tender shall be posted on e-Nivida Portal, RailTel’s Website and CPP. Printed copy of Tender document will not be sold from RailTel office.

This tender is covered under Integrity Pact Programme of RailTel and the bidders are required to sign the Integrity Pact and submit the same to RailTel along with the bid.

The bidder shall bear all costs associated with the preparation, submission/participation in the bid. RailTel in no way will be responsible or liable for these costs regardless of the conduct or outcome

For GM/TP

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CHAPTER-1

OFFER LETTER

RailTel Corporation of India Ltd.
Plate-A, 6th Floor,
Office Block Tower-2,
East Kidwai Nagar,
New Delhi-110023

Ref: RailTel/Tender/OT/CO/_____date:_____

1. I/We _____ have read the various conditions detailed in tender documents attached here to and hereby agree to ABIDE BY THE SAID CONDITIONS. I/We also agree to keep this offer open for acceptance for a period of **120 days** from the date of submission and in default thereof. I/We will be liable for forfeiture of my/our Earnest Money. I/We offer to supply various equipment at the rates quoted in the attached schedules and hereby bind myself/ourselves to complete the work within **180 days** from the date of issue of Purchase Order/LOA. I/We also hereby agree to abide by the Various Conditions of Contract and to carry out the supplies according to the Specifications for materials and works laid down by the RailTel.
2. A sum of Rs. _____ (____amount in words____) through eNivida Portal herewith submitted as “**EMD**”. The full value of Earnest Money shall stand forfeited without prejudice to any other rights or remedies if,

I/We withdraw or modify the offer within validity period or do not deposit the security deposit (Performance Bank Guarantee) within **specified days as per tender** after issue of Purchase Order/LOA.

or

I/We do not execute the contract agreement within 15 days after receipt of notice issued by the RailTel that such documents are ready,

or

I/We do not commence the work within 15 days after receipt of orders to that effect.

Until a formal agreement is prepared and executed the acceptance of this tender document shall constitute a binding contract between us subject to modifications, as may be mutually agreed to between us and indicated in the “Letter of Acceptance” of my/our offer for this work.

SIGNATURE OF CONTRACTOR(S)

Date

CONTRACTOR (S) ADDRESS

SIGNATURE OF WITNESS

1.

2

CHAPTER-2

SCHEDULE OF REQUIREMENT

Schedule of Supply (A)

SN	Description of Item	Unit	Qty.	Unit Rate in Fig (in Rs.)	Total Cost in Fig. (in Rs.)	Unit Rate in words (in Rs.)	Total Cost in words (in Rs.)
1	2	3	4	5	6	7	8
A	SCHEDULE OF SUPPLIES						
A1	Supply of MDWDM system as per technical requirements & specifications as defined in chapter- 3A of tender.	Lot	1				
A2	Spares @ 8% of supply against item A1 above.	Lot.	1				
A3	NMS						
(a)	Supply of NMS to support the specified numbers of NEs as per specifications in Chapter- 3A of tender (Software)	Lot	1				
(b)	Supply of NMS to support the specified numbers of NEs as per specifications in Chapter- 3A of tender (Hardware)	Lot	1				
A4	Supply of Local/Craft Service Terminal Hardware and Software as per technical specifications of tender document complete with all accessories compatible with NMS as per specifications in Chapter- 3A of tender	Nos.	8				
	Total Cost of Schedule of Supplies (A)						

Schedule of Services (B)

SN	Description of Item	Unit	Qty.	Unit Rate in Fig. (in Rs.)	Total Cost in Fig. (in Rs.)	Unit Rate in words (in Rs.)	Total Cost in words (in Rs.)
1	2	3	4	5	6	7	8
B	SECHEDULE OF SERVICES						
B1	Design, Installation, Testing, Commissioning and Integration of MDWDM system as supplied against Item No. A1 of Schedule of Supplies.	Lot	1				
B2	Design, Installation, Testing, Commissioning and Integration of NMS as supplied against items A3 of Schedule of Supplies.	Lot	1				

B3	Annual Maintenance Charges (AMC) after warranty period of overall cost (excluding Taxes & Duties) of supply portion of Schedule 'A' as detailed in Clause 4.A.3 of Chapter- 4A of Tender Document	years	5				
	Total Cost of Schedule of Services (B)						
	Total Value of Schedule of Supplies (A) & Schedule of Services (B)						



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Note																																																											
I	Unit rate quoted against SOR above should be CIP destination inclusive of all duties, taxes, insurance and freight etc. (with break-up as per Performa attached as Annexure-A and B of this Chapter). The materials as per SOR are required to be delivered at site as indicated in clause 4.A.4 of Chapter-4A. It shall be the responsibility of Tenderer to transport the equipment to site.																																																										
II	Bidder to give the detailed Bill of Material including break up of cost of common units/cards/module/chassis/License/Patch Cords, in the price bid for Schedule-A.																																																										
III	Tenderer shall attach Unit Rate Analysis of the item of the Schedule-A i.e. cost of each sub-assembly, card, module, License, Patch Cords etc. in their Price Bid . The quoted Unit Rate should correspond to the referred Rate Analysis.																																																										
IV	Tenderers should submit the configuration/technical details of offered equipment indicating quantities of various modules/ sub modules/ cards/ sub racks including the vacant slots in the sub racks/ chassis for expansion in Technical bid.																																																										
V	Cost of any license fee required to be paid for hardware & software shall be included in the rate quoted by the tenderer. All software supplied by the bidder should have perpetual license. There shall be no post contractual liability of license fee on RailTel for hardware & software supplied by tenderer.																																																										
VI	<p>The Bill of Material will be prepared for Schedule of Requirement against each item of SOR. This Bill of Material will be called “Bill of Material for Schedule of Requirement” and will be comprised of duly filled rates of each item and will be prepared according to Note (I) to (V) above. The Un-priced copy of the SOR along with the Breakup of individual itemized BOM (as per Format given below) and site wise distribution as per BOM should be submitted with the Technical Bid for evaluation. The above document submitted along with technical bid should not include any prices, if found so, the bid shall be summarily rejected.</p> <p>BOM shall be duly vetted by the OEM.</p> <p>Bidder(s) shall upload the complete SOR along with the price Breakup of individual itemized BOM for EACH ITEM (as per Format given below) along with the Financial bid. The Financial Bid submitted without itemized priced BOM may liable to be rejected</p> <p>The Format of “Bill of Material for Schedule of Requirement” is as below:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">SN</th> <th style="width: 20%;">Item</th> <th style="width: 5%;">Make & Model</th> <th style="width: 5%;">Unit</th> <th style="width: 5%;">Qty</th> <th style="width: 5%;">Sch- A1</th> <th style="width: 5%;">Sch- A2</th> <th style="width: 5%;">-</th> <th style="width: 5%;">Sch- B1</th> <th style="width: 5%;">Sch- B2</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>(to be provided by bidder)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">2</td> <td>(to be provided by bidder)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>									SN	Item	Make & Model	Unit	Qty	Sch- A1	Sch- A2	-	Sch- B1	Sch- B2	1	(to be provided by bidder)									2	(to be provided by bidder)									-	-																		
SN	Item	Make & Model	Unit	Qty	Sch- A1	Sch- A2	-	Sch- B1	Sch- B2																																																		
1	(to be provided by bidder)																																																										
2	(to be provided by bidder)																																																										
-	-																																																										
VII	<p>Non compliance of following will lead to summarily rejection of Bidder’s bid:-</p> <p>i. Tender Cost and EMD as per clause 4.A.22 of Chapter-4A.</p> <p>ii. If any Price Bid/Priced BOM submitted along with Technical Bid.</p>																																																										
VIII	Evaluation of bids will be done based on Total cost of Schedule-A & Schedule-B including taxes. After completion of evaluation process, LOA/Purchase Orders will be issued in favour of the selected bidder.																																																										

IX	The Bidder(s)/OEM(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
X	The tenderer shall make available the offered products during technical evaluation of offered equipment for testing and benchmarking to RailTel in New Delhi-Ghaziabad Section or any other section as decided by RailTel. Testing shall be completed by bidder within 30 days from the date of intimation to bidder. Testing shall be conducted by RNOC/CNOC as defined in clause 4.A.47, Chapter-4A. Testing and benchmarking may be exempted in case equipment offered by any bidder is already working in RailTel's network successfully, however decision of RailTel in this regard will be final and binding on bidder. Please refer clause 4.A.16.3 of Chapter-4A for detailed guidelines.
XI	<p>Only Class-I & Class-II local suppliers are eligible to participate in this tender. Work is not divisible. Purchase preference will be given to Class-I local supplier meeting the criteria of minimum 50% Local Content (LC) or as notified in the Notification no. 18-10/2017-IP dated 29.08.2018 issued by Department of Telecommunication (DOT) and Notification No. 33(1)/2017-IPHW dated 14.09.2017 issued by MeitY or latest notification issued till opening of tender.</p> <p>Among all qualified bids, the lowest bid will be termed as L1. If L1 is Class-I local supplier, the contract will be awarded to L1. If L1 is not Class-I local supplier, the lowest bidder among the Class-I local supplier, will be invited to match the L1 price subject to local supplier's quote price falling within the margin of purchase preference of 20%, and the contract shall be awarded to such Class-I local supplier subject to matching the L1 price. In case such lowest eligible Class-I local supplier fails to match the L1 price, the Class-I local supplier with the next higher bid within the margin of purchase preference of 20%, shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the Class-I local supplier within the margin of purchase preference of 20%, matches the L1 price, the contract may be awarded to the L1 bidder. Please refer clause-4.A.41.1 of Chapter-4A of this tender.</p>



Annexure-A

Price Schedule for Supply Items (Schedule-A)

SN	HSN Code	Description	Total Qty	EX-Factory Price (Basic Unit Price exclusive of all levies and charges) (in Rs.)	Pkg & Forwarding Charges		Freight & Insurance Charges		Other Charges and Levies (to be specified by bidder)	CGST, IGST, SGST & GST		Price Per Unit (all inclusive) for delivery at destination (4+6+8+9+11)
					%	Amt (in Rs.)	%	Amt (in Rs.)		%	Amt (in Rs.)	
1		2	3	4	5	6	7	8	9	10	11	12

Annexure-B

Price Schedule for Services (Schedule-B)

SN	Description	Total Qty	Basic Unit Price exclusive of all levies and charges (in Rs.)	Other Charges and Levies, if any (to be specified by bidder)		CGST, IGST, SGST & GST		Unit price (all inclusive) (4+5+7)
				Amt (in Rs.)	%	Amt (in Rs.)	Amt (in Rs.)	
1	2	3	4	5	6	7	8	

(End of Chapter- 2)

RAILTEL

CHAPTER-3A

TECHNICAL REQUIREMENTS AND SPECIFICATIONS

3.A.1 INTRODUCTION

RailTel is implementing an optical fiber-based Metro-DWDM System with new generation optical networking systems (SDN Based). The desired network should accommodate the growing demand for bandwidth, while maintaining compatibility and enhanced flexibility to transport and route all traffic types using Dense Wave Division Multiplexer (DWDM). RailTel desires to create 100G Channel DWDM (mix of 10G wavelength and 100G coherent wavelength) network.

The Proposed Traffic Cards solution shall also be supported over the existing DWDM System by using Alien wavelength. The system must be programmable and highly intelligent, robust and based on open architecture.

The OEM shall propose DWDM System to support alien wavelengths on photonic layer for third party transponders.

The technical specification given in this part describes functional as well as performance requirements of the proposed telecom network.

The DWDM system shall meet the requirements of both metro and long-haul networks.

3.A.2 OVERVIEW OF THE SCOPE OF WORK

The scope of work would be System Design, Supply of Equipment at various sites/locations of RailTel. The scope includes installation, testing, commissioning & acceptance of the Muxponder System Network including integration with the existing NOC/OSS system by providing standard northbound API's from supplied controller for management of devices. The scope of work shall include, but not be limited to the following:

Project Management, Supply of all related goods and providing all related services including custom clearance if required, transportation, installation, testing, commissioning & AT of the telecom system and training of RailTel personnel.

3.A.3 DESIGN OF NETWORK

3.A.3.1 Traffic Card:

1X100/200G Traffic Line System: Bidder/OEM shall propose Alien wavelength supported standard Traffic System. Standard Line side Coherent port should support the following optical parameters.

SN	Parameters	Values
1	Reach (Km) with 100G over DWDM Network (with DCM)	120* Km with following parameters 1. Fiber loss per section: 24dB 2. Total connector Loss: 1dB. 3. Fiber Repair Margin: 2dB. 4. Fiber Type: Single mode G652D 5. No of ILA in between: 1 Nos

2	Reach (Km) with 100G DWDM Network (without DCM)	250* Km with following parameters <ol style="list-style-type: none"> 1. Fiber loss per section: 24dB 2. Total connector Loss: 1dB. 3. Fiber Repair Margin: 2dB. 4. Fiber Type: Single mode G652D 5. No of ILA in between: 2 Nos
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*For Reach Link Calculation purpose, Bidder/OEM shall take optical parameters (like insertion loss, OSNR penalty) for reference of existing equipment components as given below:-

1. Mux/Demux
 - i. 100GHz 40 Channel module
 - ii. C-band 19590-19200
 - iii. Add Insert loss (max): 6.0 dB
 - iv. Drop Insert loss (max): 6.6 dB
2. OSNR of existing TXPs: Not Applicable for design validation
3. DGE sites: Not specifically used.
4. Amplifier Noise Figure
 - i. Line A: 5.5dB
 - ii. Line B: ~ 5-10 dB

3.A.3.2 Following photonic shall support

1. OADM sites are equipped with 8 Channel Mux/De-mux (minimum) with 100 GHz channel spacing at each direction.
2. ILA sites Should be equipped with Mid Stage/single Stage Amplifier for East Direction and West direction.
3. The proposed 100/200G Line ports shall be coherent technology based & link performance shall meet BER at 1E-15.
4. RailTel will provide Rack Space (Maximum 4 RU) per location per direction for OADM & ILA-OADM and Rack Space (Maximum 4 RU) for ILA & FOADM Locations and power (DC) for equipment Installation & Commissioning. In case the offered equipment requires more Rack Space, in that case bidder shall provide & install Smart Telecom Rack (42 RU) with inner air conditioning (Min 1 KW & external outdoor unit and SNMP monitoring of Temperature). In this case DCDB, MCBs, power cables (approx. 15 meters per site) required for extending power from Power distribution point shall be provided by the bidder.
5. -48 Volt DC Power Supply will be made available by RailTel (For the OADM System 300W per direction and 250W per ILA/ILA-OADM) in the existing rack. Bidder shall provide MCB of required capacity as per their equipment. In case the offered equipment requires more power supply, in that case bidder shall provide DC Charger (N+1 SMR redundancy) and battery bank of the required capacity and same should be from approved make/model from RDSO/TEC. Two sets of 48 Volt DC Charger (Minimum 75 A with N+1 SMR redundancy) & Battery bank (Minimum 300AH, Li-ION) at locations should be provided & installed by bidder with no additional cost to RailTel.

6. Vendor must ensure that proposed system must have co-exist with channels in existing Network without any extra Hardware. The system should be designed as per traffic requirements proposed by RailTel at the time of commissioning of equipment. However, any extra traffic card repeater required as per design for traffic requirement (proposed by RailTel), same will be arrange by RailTel with variation in contract.
7. Bidder is also required to submit full link budget calculation along with input parameters Vs output of planning tool at time of commissioning of equipment (clause 3.B.7 of Chapter 3B).
8. The bidder shall consider fiber losses 3 dB fiber repair margin.
9. The locations can be used as ILA, ILA-OADM & OADM locations. List of location and Segments for New DWDM is placed at **Annexure-I**.

3.A.3.3-a DWDM Network (photonics) & 10G/STM-16/STM-4/100G Traffic matrix shall be designed and provisioned as per **Annexure-II (Network topology)** and **Annexure-III (Link details)** of tender. The Roha to Madgaon (Goa) section in Pavel to Madgaon Route shall be designed with a 0.6 db/km + 3db repair margin and CSTM Section route shall be designed with a 1db/km + 3db repair margin. Other sections shall be designed with 0.45db/km + 3db repair margin. In case actual losses in the section is more than 28db at the time of commissioning of Network, RailTel will either improve the section losses or New ILAs, Amplifiers shall be arranged by RailTel through variation in existing contract. DWDM system should comply with technical specifications defined in Tender.

3.A.3.3-b For Alien wavelength, 10/100G Traffic matrix shall be designed and provisioned as per **Annexure-II (Network topology)** and **Annexure-III (Link details)** of tender. For 100G over Alien wavelength, bidder to considered (for designed purpose) minimum back-to-back OSNR sensitivity of -17 db or better at 100G line rate on 40 Channel system in between two locations of traffic matrix. For 10G over alien wavelength, shall be designed with a 0.5 db/km section loss + 3db repair margin (in case of km mentioned) otherwise OEM should consider repeater (OEO) at each OADM locations as per **Annexure-II (Network topology)**. In case of actual losses/OSNR are more at that time of commissioning of Network, RailTel will either improve the section losses or New ILAs, Amplifiers & Transponder (If required) shall be arranged by RailTel through variation in existing contracts.

3.A.3.4 RailTel will provide required photonics details including fiber losses for designing of Network to OEM/Bidder at time of Installation of Network.

3.A.3.5 DWDM System

Next Generation (NG) DWDM System (SDN Enable) shall be based on state-of-the-art Modern technology which drives high-capacity cost effectively and lowers operational cost. NG Muxponder system shall operate at discrete wavelengths in the C-band centered around 193.1 THz frequency as per ITU-T Rec.G.694.1 grid. The NG DWDM system shall support transmission of single or dual carrier channel 100 & 200G Coherent line rate. Line Ports shall support line rate as per requirement to cover different application on the same chassis with no changes to any of the common equipment at the optical or photonic layer provided meeting link budget.

1. The DWDM system shall be designed for use in transport networks as a protocol transparent solution for a variety of clients/services.

- i.** The DWDM OADM and ILA-OADM system at each location shall have the capability to support additional 400G (2x100G/200G) line traffic capacity after equipped with photonic layer and traffic card as per traffic matrix requirement. The system shall provide flexibility to map ODU2/ ODU2e/ ODU3/ ODU4/ ODU flex to 100/200G line ports. The system shall support client and line side protection (50 ms) on proposed 100/200G Traffic Line system (in case required in future).
- ii.** The 100/200G traffic Line system shall support out of band FEC as per ITU-T Rec. G.709.
- iii.** Optical monitoring as per ITU-T Rec.G.697 should be supported at all nodes through EMS or Controller.
- iv.** The equipment shall have provision for monitoring the performance of individual channels through the overhead byte of OTUCn. Also, in the case of Ethernet support, there shall be the provision of analysis of Ethernet frames.
- v.** Solution must support higher channel rate from 100G to 400G using single carrier on same proposed System if required in future by upgradation/replacing License/Module/Card.
- vi.** For the optical connectors used on the equipment side the ‘Optical Return Loss’ of these connectors shall be better than 50 dB.
- vii.** Line port shall be provided with tunable laser covering the complete C-band for 100 GHz spacing for fast provisioning of transparent end-to- end services and spare part reduction.
- viii.** The equipment shall be housed in standard 19" width sub-racks.
- ix.** The system shall comply to laser hazard class 1M or better.
- x.** The network based on the System should easily evolve from a point-to-point unprotected system to a ring or mesh network. Migration and expansion shall not cause any interruption or change of service, nor modify the operational concept or network management.
- xi.** The system should have automatically switched equipment protection for Power Supply protection and there shall be no interruption absolutely to traffic.
- xii.** System shall be built in such a manner that it should work with existing DWDM network based on above parameters and supplied SDN Controller should provide latest APIs, which shall further facilitate multivendor interoperability. System shall support configuration management, open APIs, and standards-based SNMP/YANG models. These management features should be available at no cost to RailTel.
- xiii.** All the Line ports of 100/200G Traffic Line System shall support minimum back-to-back OSNR sensitivity of -16 db or better at 100G line rate on 40 Channel system.
- xiv.** DWDM Network should be designed without Dispersion Compensation Module (DCM).
- xv.** All DWDM System (OADM, ILA-OADM & ILA) should have facilities to support

external alarm (potential free contact events) through inbuilt system.

or

Bidder/OEM should provide external system (-48V DC power supply operated) for monitoring of Power supply (Main supply failure and Battery voltage) through ethernet port and option for Mobile SIM. RailTel will provide ethernet ports or Mobile SIM at each site for the same.

2. Power Supply

- a. Nominal power supply is -48 V DC. The equipment shall work in the range -42 V DC to -60 V DC.
- b. The equipment shall be protected in case of voltage variation beyond the range specified in sub clause (a) above and also against reverse input polarity.
- c. The derived DC voltages in the equipment shall have protection against over- voltage, short circuit and overload.
- d. The equipment shall have the option of operating from two independent sources of input power supply.

3. Alarms:

The following System related alarm conditions shall be reported by the EMS/Controller

- a. Input power failure of the Line interface (including Ethernet interfaces).
- b. Fan/s failure.
- c. Hardware failure alarm
- d. Low input power at Line Port
- e. Low input OSNR.
- f. High Bit Error
- g. ODU-k related alarms

4. Line port shall support Post FEC BER 10-15 for all 100G rates.
5. Protection switching shall on Line port of 100/200G be triggered (50 ms) based on Loss of Signal, signal degrade, Pre-FEC BER Signal Failure and OSNR/Q factor signal degrade (if required).
6. The proposed system shall be managed by a single unified system/Controller with DC & DR (active location at Secunderabad and standby location at New Delhi) for all the active components. Bidder shall also propose Controller based Management System for managing system with DC & DR (active and standby). All licenses required for Northbound and Southbound interface (API) should be equipped with offered solution at no additional cost to RailTel. Bidder/OEM can also leverage existing Management system deployed in RailTel, if the OEM shall provide undertaking for long term support for 8 years for all existing components irrespective of End of Life of the existing hardware/License/Software. Hardware/License/Software required for such up gradation shall be included in the price bid.
7. Proposed system shall have management through remote CLI/Telnet/http/https and for alarm management, system support SNMP trap, syslog and SNMP polling.
8. The proposed system shall support third-party optics (MSA Complaints) at the client side with no cost to RailTel. Bidder can propose fully compatible third party optics.

9. Line ports shall provide following performance monitoring to health of circuit.
- a. Transmit Power
 - b. Receive Power
 - c. Wavelength (nm) or Frequency (THz)
 - d. Error Second
 - e. Severe Error Second
 - f. Code Violation or Background Block Error
 - g. Unavailable Second
 - h. Pre-FEC BER
 - i. OSNR/ESNR

10. Traffic requirements

A. 100/200G Traffic Line system (100/200G Transponder/Muxponder OR IP-MPLS over DWDM or OTN Switch with DWDM line ports-based solution).

- i. The Bidder/OEM shall propose a system that supports physical Line interfaces for 1x100/200G or 2x100G applications.
- ii. It should provide Physical client ports for QSFP28 pluggable modules to transport 100GbE client signals.
- iii. Traffic Line system should support fixed optics full C-band tunability (DWDM flex grid frequencies).
- iv. Traffic Line system should support SDFEC or equivalent. Traffic card should support Client and Line facility and terminal loop back.
- v. The proposed system shall be coherent technology based & link performance shall meet BER at 1E-15.
- vi. 100/200G Line ports system must support 100G to 200G using single or dual carrier on same proposed card/port if required in future by upgradation License/additional optic module.
- vii. 100/200G Line must support tx power 0 dB at 100G line rate.

B. 10G Transponder/Muxponder (Optional and as per proposed Solution).

- i. This network shall provide 10G bandwidth in point-to-point configuration in between P2P OADM network configuration.
- ii. The network should be capable of running 80 KM. in between OADM-to-OADM locations.
- iii. Bidder/OEM shall propose MUXPONDER that should support minimum 4 channel of 10GbE and 4 x 10GBE client.
- iv. System should support tunable DWDM SFP+ interface for 10GbE Services.
- v. It should support bi-directional ODUk cross-connection.
- vi. It should support the E-SNCP for 10GbE service.
- vii. It should support the ODU2e SNCP for 10GbE service.
- viii. It should support B/W and CWDM 10GbE SFP+ optical modules at the client.
- ix. Card should support the OTN alarm, facility management and performance monitoring at OTU and ODU layers.
- x. Proposed MUXPONDER card should support 10GbE/ODU2e client add/drop configurations with transparent constant bit rate (CBR) mapping.
- xi. The bidder needs to provide a minimum of 2x10G DWDM line SFP+ (OTU2/OTU2e) with full C-band tunability (DWDM flex grid frequencies) and 4 x10G client SFP+ (LR).

C. All the services of 100/200G shall be provision as per the requirement of traffic matrix

placed at **Annexure-IV**. The Bidder/OEM should propose either 100/200G Transponder/Muxponder OR IP-MPLS over DWDM or OTN Switch with DWDM line ports based solution at OADM and ILA-OADM locations as per the requirement of traffic matrix placed at **Annexure-IV**.

- D.** All Protected services of STM-4/STM-16/10G shall be provision as per the requirement of traffic matrix placed at **Annexure-V**. and same should be protected from all possible paths (single, dual, inter ring and intra ring fiber cuts) available (including alien paths) in Network as per topology defined in **Annexure II**. Proposed solution for protection should have support from minimum three different paths (In case of available of paths in topology) from day-1 for services of STM-4/STM-16/10G. Protection switching shall be triggered within 50 ms.
- E.** The Bidder/OEM can also propose DWDM with Optical ASON or IP-MPLS Router or Transponder/Muxponder or OTN Switch or optical protection module-based equipment/Card/Module or combinations for protection/Linear services of STM-4/STM-16/10G. Bidder/OEM can use proposed point to point 100/200G Links (against the requirement of traffic matrix as per **annexure-IV**) to provision services of STM-4/STM-16/10G.
- F.** In the case of IP-MPLS Router or OTN Switch. Following are minimum configuration should support on proposed device.

S. N	Features	IP-MPLS Router	OTN Switch
1	Power Supply	Redundant DC Power Supply (with the operating range of -42 to -60 V DC)	Redundant DC Power Supply with the operating range of -42 to -60 V DC)
2	Minimum Interface of Line Side & Client Side	<p>i. For 1 or 2 Direction Sites (New DWDM) :2x100G (Including 2x100G QSFP28 LR4 optic module) & 10x10G SFP+ (Including 8x10G SFP+ optic module)</p> <p>ii. For 3 or more Direction Sites (New DWDM) :8x100G (Including 2x100G QSFP28 LR4 optic module) & 20x10G SFP+ (Including 16x10G SFP+ optic module)</p> <p>iii. All 10G and 100G interfaces should support LR & ER in case required.</p> <p>iv Digital Optical Monitoring (DOM) should be supported, optics information retrievable including RX/TX-power, threshold-monitoring/alarms, inventory.</p>	<p>i. For 1 or 2 Direction Sites (New DWDM) :2x100G (Including 2x100G QSFP28 LR4 optic module) & 10x10G SFP+ (Including 8x10G SFP+ optic module)</p> <p>ii. For 3 or more Direction Sites (New DWDM) :8x100G (Including 2x100G QSFP28 LR4 optic module) & 20x10G SFP+ (Including 16x10G SFP+ optic module)</p> <p>iii. All 10G and 100G interfaces should support LR & ER in case required.</p> <p>iv Digital Optical Monitoring (DOM) should be supported, optics information retrievable including RX/TX-power, threshold-monitoring/alarms, inventory.</p>

		v. 10/100G Interface through breakout cable is acceptable and the device should be equipped with required optics & cable (3M).	v. 10/100G Interfaces through breakout cable is acceptable and the device should be equipped with required optics & cable (3M).
3	Software Feature	<p>1. MPLS: LDP, RSVP, LDP over RSVP & BGP-LU.</p> <p>2. FRR, LFA, RLFA & TI-LFA with 50ms switching.</p> <p>3. Segment Routing.</p> <p>4. Routing Protocol: BGP, ISIS & OSPF</p> <p>5. Label Stack: 5</p> <p>6. Segment Routing & LDP interworking with SR.</p> <p>7. Hardware Support for SRv6.</p> <p>8. MPLS VPN: 128 Nos of L2VPN & VPLS.</p> <p>9. MAC Table: 16K.</p> <p>10. Qos.</p> <p>11. Management: SSH, SNMP (V2 & V3), Netconf, OpenConfig, Telemetry & Console or Out-of-band Management.</p> <p>12. Interoperability with Juniper, Cisco and Nokia devices on the above features.</p>	<p>1. Management: CLI & Console or Out-of-band Management.</p> <p>2 shall support the state-of-the-art technologies such as ASON/G.8080 and GMPLS.</p> <p>3 Shall support multi-layer protection mechanism. It shall support SNCP protection at ODUk layers.</p> <p>4. ASON/GMPLS control plane shall support automatic creation, discovery and recovery of the ODUk channels.</p> <p>5. shall support 4/16/64, OTU1/2/2e/flex/3/3e/4, GE/10GE/40GE/100GE Ethernet services.</p> <p>6. The OTN based equipment shall support all the traditional protection schemes such as SNCP and MSP protection. Additionally, the equipment shall support ASON/ GMPLS based restoration.</p> <p>7. OTN ASON switching should be within 50 msec. and restoration within 10 sec.</p> <p>8. The ODUk cross-connect system shall be able to perform x-connections at ODUk (k = 0, 1, 2, 2e, 3, 4 and flex).</p> <p>9. System shall support flexible client to line connections, client to client connections (hair-pinning), Line to Line connections.</p>

			Any client port can connect to any client port or line port.
4	Certification	Offer product should have MTCTE at time of delivery of product.	Offer product should have MTCTE at time of delivery of product.
5	Operating Temperature & Space	0 to 40 degree C or better & and space occupied by the chassis must not exceed 800 mm deep cabinet & should be rack mountable to fit into a standard 19-inch rack.	0 to 40 degree C or better and space occupied by the chassis must not exceed 800 mm deep cabinet & should be rack mountable to fit into a standard 19-inch rack.
6	Trusted Telecom Portal (TTP)	OEM Should be listed in Trusted Telecom Portal and offered product should be <i>Trusted</i> Products on TTP at the time of delivery of product.	OEM Should be listed in Trusted Telecom Portal and offered product should be <i>Trusted</i> Products on TTP at the time of delivery of product.
7.	MEF-9/14 /CE (Carrier Ethernet) or LAB Certified.	The operating system of the IP-MPLS Routers of same category/series/family should be MEF-9/14 /CE (Carrier Ethernet) Certified OR TSEC approved.	Approved by any LAB/ TSEC /Government agency OR Product of same category/series/family should be proven in at least two telecom service providers.
8	Modular Operating system	Device can be of either modular/fixed type and shall have modular Operating system where it shall support individual restart of critical processes without affecting other processes or rebooting the entire operating system.	Device can be of either modular/fixed type and shall have modular Operating system where it shall support individual restart of critical processes without affecting other processes or rebooting the entire operating system.
9	Management	The proposed device should be managed from a single system along with DWDM equipment's.	The proposed device should be managed from single system along with DWDM equipment's.
10	Network Topology Support	Mesh, Ring and Linear	Mesh, Ring and Linear

- G.** For Panvel to Madgaon (Goa) section, Bidder can propose SFPs based solution on existing switches/Routers of RailTel for 2x10G traffic (dropping at each station) in place of Transponder based solution as per the requirement of traffic matrix placed at **Annexure-V**. SFPs should be supported on D-Links, Edgecore, Watchdog, Cisco, Juniper and Techroute Switches/Routers.
- H.** For the Panvel to Madgaon (Goa) section, Bidder can also propose SFPs based solution on existing SDH Equipment of RailTel for 1xSTM-16 traffic (dropping at each station) in place of Transponder based solution as per the requirement of traffic matrix placed at **Annexure-V**. SFPs should be supported on Tejas Equipment's of TJ1270, TJ 1400 & TJ 1600.
- I.** Bidder can also propose third party open SFP (MSA compliant) for client and line.

11. Optical Amplifier/ILA characteristic

- i. Amplifiers shall support full C- band spectrum 4000GHz from day 1.
- ii. The technical requirements of parametric values shall be as per ITU-T.692, G.957
- iii. Amplifiers should be EDFAs' type.
- iv. Proposed Amplifiers (A to B Locations) at both sides for sections (0 to 50 Km distance) should be capable to cater 28 db fiber section loss for 8 Channel system design and for sections (50 to 80 Km distance) should be capable to cater 32 db fiber section loss for 8 Channel system design. Proposed Amplifiers for ILA should also be supported as Pre-amplifiers in case required at ILA-OADM & OADM Locations.
- v. At OADM, Bidder should propose both Booster & Pre-Amp at each direction.
- vi. Bidder/OEM can propose with or without amplifiers based on span loss requirement at FOADM Sites.
- vii. Pre-amplifier, ILA, ILA-OADM & FOADM (if applicable) site amplifiers should have VOA (Variable optical attenuator)/VGA (Variable Gain adjustment) and monitor port for per channel power monitoring.
- viii. The Optical Amplifiers shall be of 'Mid-Access/Single stage EDFAs/Dual stage EDFAs' type with due implementation for gain-flatness & feed-back gain-control etc. The Optical amplifiers have to work on 40 @ 100GHz channels from day one in case required.

12. MUX/DEMUX

- i. **OADM** sites are equipped with a minimum of 8 Nos of Channel DWDM Mux/De-mux (minimum) with 100 GHz channel spacing with 100 GHz at each direction.
 - ii. **ILA-OADM** sites are equipped with a minimum of 2 Nos. of Channel Mux/De-mux (minimum) at each direction and should also have an express port to pass through channels, if it's not dropping in between nodes.
 - iii. **FOADM** sites are equipped with minimum 2 Nos. of Channel Mux/De-mux (minimum) at each direction and should also have an express port to pass through channels, if it's not dropping in between nodes.
 - iv. **ILA** sites are equipped with a minimum of 1 Nos. of Channel Mux/De-mux (minimum) at each direction and should also have an express port to pass through channels, if it's not dropping in between nodes.
 - v. OADM, ILA-OADM, ILA and FOADM sites should have common wavelengths at each site for drop and continue of Channels.
13. Bidder should propose DWDM components for DWDM Network as per following tables for efficient operational practice.

Sr. No.	Active Component	Types of Models allowed
1	Chassis (OADM)	Max. One Type
2	Chassis (ILA & ILA-OADM)	Max. One Type
2	Amplifiers (Booster, Pre-Amp & Midstate)	Max. Two Type
4	Mux/Demux (Min 8 Ch. Add/drop) at OADM	Only One type
5	Mux/Demux (Min 2 Ch. Add/drop) at ILA-OADM & FOADM	Only One type

14. In the specification wherever support for a feature has been asked for, it will mean that the feature should be available without RailTel requiring any other hardware/software/licenses. Thus, all hardware/software/licenses required for enabling the support/feature shall be included in the offer. The technical specifications are mentioned above.

15. QUALITY ASSURANCE PROGRAM AND IMPLEMENTION METHODOLOGY

The tenderer with quality assurance should prepare Implementation Methodology covering:

- a. Schedule of Factory Acceptance Test (FAT), supply, installation, SAT (Site Acceptance Test), trial runs, commissioning etc.
- b. Allocation of manpower for different activities.
- c. Submission of PERT chart indicating completion of various activities within targeted time frame.

16. MANUFACTURING, SUPPLY AND STORAGE OF EQUIPMENT

The tenderer will be fully responsible for Manufacturing, FAT, Supply of Equipment/cards/interfaces and all related items for installation and commissioning of the network including the following:

- a. Muxponder based equipment with required interfaces as specified in this tender document.
- b. Integration with existing DWDM/SDH/MPLS Transmission Network as required.
- c. **Supply of Patch cords:** The tenderer is required to supply patch cords of suitable interfaces/ length for connection with FDF and client interfaces.
- d. **Maintenance spares-** maintenance spares are not to be used by bidder till expiry of warranty period.
- e. Spares required for Commissioning; maintenance supervision & warranty period shall be maintained by the Contractor at his own cost.
- f. All necessary cables and connectors required.
- g. The tenderer shall be responsible for transportation and storage of Equipment and all other items required for Installation and Commissioning of the network to RailTel's stores/sites as advised.

17. SITE PREPARATION: RailTel's Responsibility

Following shall be arranged by RailTel: -

- a. Rack space for housing the equipment or space in equipment room for new rack as per clause 3.A.3.2 (4) of this chapter.
- b. -48 Volt DC power supply as per clause 3.A.3.2 (5) of this chapter.
- c. Earthing of value less than 1 ohm required for equipment. Earthing will be made available on the earthing bus bar on the wall in the equipment room.
- d. Spare Fiber as applicable.

18. TENDERER's Responsibility

The tenderer will be responsible for supply, installation, commissioning & supervision of complete work for this tender including the System design of network and integration with the existing network, wherever required. It shall be the responsibility of supplier to transport the equipment to site for the Installation & Commissioning.

19. RailTel Solution Requirements: The System Configurations of different types of DWDM Equipment's are below.

SN	SYSTEM REQUIREMENTS
1	DWDM offered should be rack mountable to fit into a standard 19-inch rack.
2	The Power supply and other traffic impacting controller cards should be fully Redundant for hitless switchover and hitless forwarding.
3	The Bidder shall confirm that Software upgrade and Software patches can be performed without any service interruption and that its solution supports the upgrade of all operating software without any traffic interruption or minimal traffic interruption.
4	All EOL parameters need to be considered while designing the network. The EOL parameters will be shared separately link wise and based on network topology.
5	The protection scheme as below shall not interrupt or affect the existing traffic during switchover
6	Channel Protection support
7	Port Protection support
8	Client Protection support
9	Regarding in-service configuration backup and restore features, the Bidder shall confirm that its solution has the capability to batch download software and firmware and switch in bulk.
10	The Bidder shall confirm that their solution is capable of autonomous operation, without assistance from the Management System.
11	The System should be able to support an in-service upgrade hardware/software on the controllers without losing remote communications.
12	The space occupied by the chassis must not exceed 600 mm deep cabinet.
13	Bidder shall support Grid less C-band DWDM channels, with 100/200G Line rates at proposed Muxponder/transponder
14	The equipment is expected to be high density consuming very low power and space with minimum Air conditioning requirement. This shall be a very important consideration while evaluating the technical offer.
15	Equipment should support third party open SFP (MSA compliant) for client (in case of SFP base port). Bidder to specify the SFP make and the OEM product code for all relevant SFP configurations. Bidder can also propose third party open SFP (MSA compliant) for client and line.
16	All EOL parameters need to be considered while designing the network. The EOL parameters will be shared separately link wise and based on network topology.
17	The Bidder shall confirm that SW upgrade and SW patches can be performed without any service interruption and that its solution supports the upgrade of all operating software without any traffic interruption or minimal traffic interruption.
18	There shall be no slot restrictions while deploying traffic cards.
19	No slot shall be wavelength specific. Any transponder type can be installed in any slot after system turn-up.
20	There shall be no human (manual) tuning or intervention (such as power, wavelength adjustment, or dispersion tuning) involved before and after slotting and cabling transponders.

21	<p>Either an RJ45 Ethernet port or an RJ48 serial port performs local management. The Ethernet port provides access to:</p> <ol style="list-style-type: none"> 1. Telnet or SSHv2 session to access the CLI 2. An SNMP interfaces. <p>These management feature should be available at no cost to RailTel.</p>
22	<p>REST Protocol and associated routines and tools should support to provide a full-coverage NE management and control interface. This management feature should be available at no cost to RailTel.</p>
23	<p>The Network Configuration Protocol (NETCONF) should support as defined in RFC 6241, is a management protocol that provides methods to install, manipulate, and delete the configuration of network devices, and retrieve non-configuration data. This management features should be available at no cost to RailTel.</p>
24	<p>The equipment shall also be able to be configured in point-to-point configuration, OTN configuration at module level.</p>
25	<p>All common critical cards for Controller, Management, Switch & Power of the equipment shall be "hot swappable".</p>
26	<p>The proposed equipment shall be able to be remotely configured for the various wavelengths and the controlling of active unit's power level in the transponder.</p>
27	<p>The software upgrade of the proposed equipment shall be performed remotely from the Element Management System/CLI.</p>
28	<p>The Bidder shall describe details of the equalization process during tender submission.</p>
29	<p>The Bidder shall determine with justification whether the infrastructure solution of the offered System shall run on physical server platform or Operator (Virtual Machine/Cloud Server) platform (Operator's preferred platform)</p>
30	<p>The management function of offered equipment shall support the following FCPS functions (Fault Management, Configuration Management, Performance Management and Security Management) through management interface.</p>
31	<p>Bidder shall provide screen shots from all the FCPS functionalities required as evidence.</p>
32	<p>Proposed network solution product and platform should be completely modular in nature so that any changes and upgrades in the network can be achieved with minimum hardware/firmware/software upgrade/replacement. Same would also help to ensure for minimum hardware maintenance/RMA in operational phase of the network.</p>
33	<p>The Bidder should submit complete link engineering details calculations considering margins. This should also include the expected End to end OSNR values, Residual dispersion value, Optical power transmit/receive, Q-factor/BER values (with EOL and BOL parameters). It should be a part of the technical proposal that the offered system meets the performance requirement for the given spacing and spans. The RailTel shall conduct a field evaluation to authenticate the same.</p>
34	<p>The proposed transponder shall be soft-configurable to equivalent service types:</p>
35	<p>The DWDM transponders wavelength shall be able to be tuned to all range of C-Band</p>
36	<p>The proposed system shall facilitate "hitless" or uninterruptible wavelength provisioning such that in-service wavelengths are not interrupted by the addition or deletion of wavelength or hot insertion of necessary system components in order to provision a new wavelength (e.g. transponder)</p>
37	<p>The system shall also be capable to carry 400Gwavelength if required by upgrading the License/Hardware.</p>

38	Minimum 10E-15 or better BER performance is required for all line rates.
39	The line-side rate and modulation should be user-configurable so as to take advantage of reach and capacity both based on user-requirements and network conditions.
40	The design tool should support worsening of span loss while maintaining required BER/Q-factor for 10e-15 BER service performance as target.
41	100G Client should support Ethernet and OTN encapsulation and mapping in QSFP28 (all LR types) form factor modules.
42	The proposed DWDM equipment should support Transponder loopback function for easy maintenance.
43	The 100/200G transponders/Muxponder shall be configured with QPSK.
44	DWDM System shall support Optical Supervisory Channel (OSC) that is inserted and extracted at each node. All network elements shall be managed through the offered OSC.
45	At OADM & ILA-ODAM Locations, to support "East-West separation (EWS) i.e. the add/drop channel traversing the east direction shall not share cards/ modules in DWDM chassis including traffic card (except traffic with protection path) with add/drop channels in west direction.
46	ILA & ILA-ODAM should comply to Operating Temperature: 0 to 40 degree C or better.
47	ODAM should comply to Operating Temperature: 0 to 40 degree C or better
48	Proposed EMS/NMS/SDN Controller should have support to create service trail & physical path trail connectivity in between DWDM OADM Nodes. Proposed DWDM OADM System should have facility to show alarm at physical Path trail & service layer trail on EMS/SDN Controller.
49	Solution must support higher channel rate 400G using single carrier on same proposed System if required in future by upgradation/replacing License/Module/Card
50	All New DWDM locations should support of monitoring of optical power at each direction (Tx and Rx) from Day-1.

20. General System Attributes: Product Quality

- a. Product shall be designed for a minimum lifetime of 8 years.
- b. Equipment shall support non traffic affecting upgrade between subsequent product releases.

21. Materials and Environment Protection

The product shall be compliant to: Product shall be compliant to RoHS (Restriction of certain Hazardous Substances) requirements: - European Union (EU) Directive 2002/95/EC (lead-free design should be a long-term goal)

22. Mechanical Characteristics

- a. The proposed solution shall fit into standard 19" / ETSI /ANSI relay racks / cabinets as a standard form factor.
- b. Interfaces of devices or modules must be accessible from the front.
- c. Equipment shall support insertion/extraction of modules without any special tools.

- d. Equipment shall support insertion/extraction of modules without removal of any other module or external connections.
- e. Equipment shall support insertion/extraction of modules without powering down the equipment and shall not affect the existing services.

23. Environmental Requirements

The product shall meet following standards and regulations:

- a. Generic requirements defined in ETS 300 019 (environmental criteria)
- b. NEBS level 3
- c. Telcordia GR-3028-CORE: Thermal Management, Telecommunication Central Office
- d. Operation: ETS300 019 Class 3.1
- e. Transport: ETS300 019 Class 2.2
- f. Storage: ETS300 019 Class 1.1
- g. EN300386 Telecommunication centres

24. Electromagnetic Compatibility

Compliance with following requirements has to be assured:

ETSI EN 300 386-2: EMC requirements for Telecommunication network equipment.

25. Safety and Security

- a. The optical equipment shall not pass hazard level 1M for any open connector.
- b. It should be possible from remote to disable the communication port on the NE through NMS/controller/CLI

26. Packaging

The packaging and labelling of components and boards containing ESD (electrostatic discharge) components must meet the relevant requirements as specified in DIN EN 100 015 and comparable international standards.

27. Power Supply & Power Consumption

- a. The power supply at rack (from Rectifier to Rack DCDB) and sub-rack must be redundant.
- b. The equipment shall operate with the input voltage in the range of -42 V DC to -60 V DC.
- c. A measure (protective circuit) shall be taken to prevent a failure from being caused by Positive- Negative reverse application of power.
- d. Tenderer has to indicate the typical and maximum power consumption of each module and complete system.

28. Redundancy & Reliability

- a. Software upgrade on the controller card shall not impact traffic.
- b. Equipment shall have redundant power supply. Equipment should be able to run on single power supply without any limitation on the functions or modules supported.
- c. Equipment shall have fan redundancy.
- d. The failure of any individual fan must be signaled both locally and remotely. It must be

possible to distinctly identify the place of installation.

- e. For each replaceable unit (module, pluggable, unit etc.) the supplier has to provide MTBF (in years) and FIT (in 10^9 hours) values.

29. Documentation

- a. The documentation forming part of the scope of delivery must include all necessary descriptions required for the planning, commissioning and operation of the equipment and management systems.
- b. All product documentation shall be available in English Language.

30. Management System

DWDM System shall support management via Element management (LCT) and Network Management (NMS)/Controller.

31. Data Communication Network (DCN)

- a. DWDM 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.
- b. DWDM System shall support DCN realization via Optical Supervisory Chanel (OSC) and OTN frame overhead (GCC0, GCC1, and GCC2 channel) if required.

32. TRAINING OF PURCHASER'S PERSONNEL

40 days man week training on the equipment and network operation shall be provided by the Tenderer to RailTel in RailTel/OEM/Bidder premises with no cost to RailTel.

- 33. Submission of High-Level Design (HLD) HLD to be prepared by OEM only and to be submitted by the bidder with the technical bid. HLD should consist of detailed technical solution for the proposed DWDM/MDWDM system along with system architecture. It should clearly mention make & models of OADM &ILA for DWDM/MDWDM system with overview of the entire system. It should describe the relation between various components and functions of the system.

- 34. Submission of Low-Level design (LLD) – Route wise, Location wise and Site wise LLD to be prepared by OEM and to be submitted by the selected bidder to RailTel authorized representative at least 15 days before start of implementation. Low-Level design should contain detailed installation plan (duly vetted by OEM) for implementation of the technical solution as per HLD. It should contain all the details needed for configuration of all hardware and software of DWDM/MDWDM including NMS (to be supplied by the bidder as per detailed BOM).

- 35. Implementation of Low-level design should either be done directly by OEM or by the bidder under direct supervision of OEM. The OEM should submit an undertaking, regarding methodology to be adopted during implementation phase, along with the technical bid for implementation of Low-level design.

- 36. **Spares:** 8% mandatory spares (for operation and maintenance) shall be provided for all electronic cards including mother boards, back plane, traffic card, Mux/Demux, OSC filter for

each system, subsystem, equipment, etc. (with round off at the higher side with two cards minimum), as against SOR. Spares shall be provided from the same manufacturing facilities/location from where the respective equipment, subsystems are offered. The list of the required spares being supplied with unit cost and total cost should be attached along with the bid.

37. It may kindly be noted that in the specification wherever support for a feature has been asked for, it will mean that the feature should be available without RailTel requiring any other hardware/software/licenses. Thus, all hardware/software/licenses required for enabling the support/feature shall be included in the offer.

(End of Chapter-3A)



CHAPTER 3B

INSPECTION, INSTALLATION AND SUPERVISION OF TESTING, COMMISSIONING & INTEGRATION

3.B.1 INSPECTION: Inspection shall be carried out by RailTel or its authorized agency.

3.B.2 TEST CATEGORIES

- i) The following tests shall be conducted for acceptance of the equipment and the system before final acceptance of the system. Waiver of Part or whole of type tests can be considered if proof of having done the tests by independent body or PTT authority is submitted.
 - a) Pre-Factory Acceptance Testing
 - b) Factory Acceptance Testing (FAT)
 - c) Pre-commissioning test (after installation) for total integrated system.
 - d) Site Acceptance Testing (SAT)
 - e) Trial Run
- ii) These tests shall be carried out on all equipment supplied by Tenderer including those supplied by sub-vendors, if any.
- iii) Tenderer shall arrange all necessary test instruments, manpower, test-gear, accessories etc.
- iv) All technical personnel assigned by Tenderer shall be fully conversant with the system specifications and requirements. They shall have the specific capability to make the system operative quickly and efficiently and shall not interfere or be interfered by other concurrent testing, construction and commissioning activities in progress. They shall also have the capability to incorporate any minor modifications/suggestions put forward by purchaser /Engineer.
- v) DELETED.
- vi) **Test Plan:** The Contractor shall submit to Purchaser 'Test Plans' well in advance of commencement of actual testing in each of the above mentioned test categories.

The plans shall include:

- 1) System/Equipment functional and performance description (in short) and Tests to be conducted and purpose of test.
- 2) Test procedures (including time schedule for the tests) and identification of test inputs details and desired test results.
- 3) **Test Report:**

The observations and test results obtained during various tests conducted shall be compiled and documented to produce Test Reports by Tenderer. The Test Reports shall be given for each equipment/item and system as a whole. The report shall contain the following information to a minimum:

- i) Test results
- ii) Comparison of test results and anticipated (as per specifications) test result as given in test plans and reasons for deviations, if any.
- iii) The data furnished shall prove convincingly that
 - a. The system meets the Guaranteed Performance objectives
 - b. Mechanical and Electrical limits were not exceeded.
 - c. Failure profile of the equipment during the tests are well within the specified limits

iv) **Failure of Cards/Components:**

Till the system is accepted by the Purchaser, a log of each and every failure of components shall be maintained. It shall give the date and time of failure, description of failed component, circuit, module, component designation, effect of failure of component on the system/equipment, cause of failure, date and time of repair, mean time to repair etc. Repair/modification done at any point of time at one site, shall be carried out by Tenderer at all the sites. Detailed documentation for the same shall be submitted to Purchaser for future reference.

If the malfunction and/or failures of a unit/module/sub-system/equipment repeat during the test, the test shall be terminated and Tenderer shall replace the necessary component or module to correct the deficiency. Thereafter, the tests shall commence all over again from the start.

If after the replacement the equipment still fails to meet the specification, Tenderer shall replace the equipment with a new one and tests shall begin all over again. If a unit/ subsystem/module has failed during the test, the test shall be suspended and restarted all over again only after the Tenderer has placed the Equipment back into acceptable operation. Purchaser's approval shall be obtained for any allowable logical time required to replace the failed component/unit/module/sub-system.

v) **Readjustments**

No adjustments shall be made to any equipment during the acceptance tests. If satisfactory test results cannot be obtained unless readjustments are made, Tenderer shall carry out only those readjustment needed to ready the equipment/system for continuance of tests. A log of all such adjustments shall be kept giving date and time, equipment, module, circuit, adjustments, reasons, test result before and after adjustment etc. Fresh acceptance tests shall be conducted after the readjustments have been completed.

3.B.3 Pre Factory Acceptance Testing

The Tenderer on his own exactly in line with FAT shall conduct pre-factory acceptance testing and test reports for the same shall be forwarded to Purchaser/Engineer before start of FAT.

3.B.4 Factory Acceptance Testing (FAT)

Factory acceptance tests shall be carried out after review and approval of FAT procedure/documents as per bid requirements and review of Pre-Factory acceptance results & shall be conducted at the manufacturing facilities from where the respective equipment/subsystems are offered. No additional cost shall be paid to OEM/bidder. The factory acceptance testing shall be conducted in the presence of the Purchaser/Engineer. The tests shall be carried on random sampling of 8% lot size and factory acceptance certificates shall be issued. The factory tests shall include but not be limited to:

A) Equipment Testing:

- i) Mechanical checks to the equipment for dimensions, inner and outer supports, finishing, welds, hinges, terminal boards, connectors, cables, painting etc.
- ii) Electrical checks including internal wiring, external connections to other equipment etc.
- iii) Check for assuring compliance with standards mentioned in the specifications.
- iv) Individual check on each/module/sub-assembly in accordance with the modes and diagnostics programs of the Tenderer.
- v) Checks on power consumption and heat dissipation characteristics of various equipment
- vi) Environment testing and other laid down tests in Type Tests plan of the specification of the equipment.
- vii) Functional testing
- viii) Any other test not included in FAT document but relevant to the project as desired by the Purchaser/Engineer at the time of factory acceptance testing.

B) System Integration Testing

Functional and performance test should be conducted for the complete system/ all major equipment constituting the system (including the equipment supplied by sub-vendors, as applicable) simulating the complete network with appropriate network element. All the functions of software shall be demonstrated in totality (as per requirements/specifications of this document including management of network). All equipment shall be connected using the same cables (interfaces/components) as will be used during final installation so that the system can be tested in its final configuration. This testing shall be conducted at the manufacturing facility of the main equipment.

3.B.5 Installation

After successful completion of factory acceptance testing, equipment shall be sent to site for installation. Equipment without factory acceptance certificates shall not be acceptable at site.

Prior to installation, all equipment shall be checked for completeness as per the specifications of equipment required for a particular station. Installation shall be carried out in accordance with the installation manuals and approved installation drawings in the best workmanship.

Tenderer shall indicate the number of teams and the list of equipment for each team to be required for installation of the total telecom system in order to complete the work within the stipulated time frame.

Tenderer shall bring all installation tools, accessories, special tools, test gears, spare parts etc. at his own cost as required for the successful completion of the job.

If during installation and commissioning under the supervision of the tenderer any repairs are undertaken, the maintenance spares, if supplied with equipment shall not be used for the repair. Tenderer shall arrange his own spare parts for such activities till such time the system has been finally accepted by the Purchaser. A detailed report & log of all such repairs shall be made available by the Tenderer to Purchaser/Engineer and shall include cause of faults and repair details, within 2 weeks of fault occurrence.

A detailed time schedule for these activities shall be submitted by Tenderer to Purchaser/Engineer to enable their representatives to be associated with the job.

Tenderer shall supply all installation materials required for proper installation of the equipment. These shall include but not be limited to, all connectors, interbay and inter equipment cables, power supply cables and connectors, power distribution boxes, anchoring bolts, nuts, screws, washers, main distribution frames, audio distribution frames, voice frequency cables, junction boxes etc.

The installation of equipment shall be supervised by the tenderer in such a manner so as to ensure neat and clean appearance in accordance with approved installation document drawings. All inter bay, power supply and other cables shall be routed through wall mounted cable trays. No cable shall be visible. All through wall openings, trenches etc. shall be properly sealed to prevent the entry of rodents, insects and foreign materials.

Telecom room of one of the attended & unattended sites shall be made as model rooms and Tenderer shall take approval from Purchaser/engineer on various aspects spacing etc. After taking approval Tenderer shall take up installation at other sites in similar fashion in association with RailTel installation team.

3.B.6 Pre-Commissioning

On completion of installation of equipment, the correctness and completeness of the installation as per Manufacturer's manual and approved installation documents shall be checked by the Tenderer on his own.

A list of Pre-Commissioning tests (same as approved by the Purchaser/Engineer for site acceptance testing) and activities shall be prepared by Tenderer and the test shall be carried out by the Tenderer on his own. After the tests have been conducted to the Tenderer's own satisfaction, the Tenderer shall provide the test results for review by Purchaser/Engineer and then offer the system for Site Acceptance Testing.

During pre-commissioning, if any fault occurs to any equipment or system, Tenderer shall identify the same and provide report/history of all faults to the Purchaser.

During installation and pre-commissioning of the telecom system, Tenderer shall have enough number of commissioning spares so that the installation is not held up because of non-availability of commissioning spares. Tenderer shall ensure that the spares meant for operation and maintenance are not used during installation and commissioning.

3.B.7 Site Acceptance Testing (SAT)

On completion of Pre-commissioning & submission of Full-Link Budget Calculation, site acceptance testing shall be conducted on the system as per approved SAT procedures and its constituents by the Tenderer under the presence of Purchaser/Engineer.

The tests shall include, but not be limited the following:

- a) Checks for proper installation as per the approved installation drawings for each equipment/item and system as a whole.
- b) Guaranteed performance specifications of individual equipment/item.
- c) Self diagnostics test on individual equipment
- d) Tests on metering and alarm panels
- e) Tests on remote alarm transmission and reception
- f) System tests on per hop basis and End to End for the system, all complete.

3.B.7.1 PROVISIONAL ACCEPTANCE CERTIFICATE (PAC)

On successful installation, commissioning, Site Acceptance Test and integration of the equipments with the existing network, Provisional Acceptance Certificate (PAC) will be issued by concerned Region in consultation with RNOC/CNOC if required. Part PAC may also be issued for payment purposes. PAC will not be held back for want of minor deficiencies not affecting the functioning of the overall system. Deficiencies, if any, pointed at the time of issuance of PAC, will be rectified by the contractor within one month.

3.B.8 SPARES

3.B.8.1 MAINTENANCE SPARES: Deleted.

3.B.8.2 Commissioning spares

The commissioning spare shall be arranged by the Tenderer to cater to the requirement during installation, commissioning, site acceptance testing, trial run and warrantee period. These spares shall be readily available with the Tenderer, at specified locations.

These commissioning spares are different from maintenance spares and Tenderer shall not use maintenance spares as commissioning spares till expiry of warranty period.

3.B.9 TRIAL RUN/FIELD TRIALS

Upon conclusion of the site acceptance testing the Tenderer shall keep the facilities commissioned for one months for 'TRIAL RUN/FIELD TRIALS'. During this period Tenderer shall provide all specialist Engineers & Technicians including experts to maintain the total log, incidents, failures & for assisting site engineer & for total co-ordination. However, the normal operation and maintenance of the system shall be performed by the personnel of the Purchaser trained for the purpose.

If during 'Trial run' any defect is noted in the system, the Tenderer shall rectify, replace the same to the satisfaction of Purchaser's/Engineer. The decision to repeat the final test or restart the 'Trial' shall be of Purchaser/Engineer depending upon the severity of the defect.

During trial run, if any fault occurs to any equipment of system, Tenderer shall identify and rectify the same and provide report, history of all faults to the Purchaser.

Ideally, during the 'Trial run, no shutdown of the system due to failure of equipment, power supply etc. should happen. A record of all failures shall be kept for each manned/unmanned station and the availability of the system on per hop and end to End basis shall be calculated, accordingly and results submitted to Purchaser/engineer.

If the system fails to come up to the guaranteed performance, the Tenderer, within a period of thirty (30) days shall take any and all corrective measures and resubmit the system for another 'Trial Run' of trial period. All modifications, changes, corrective measures, labour etc. shall be at the cost of the Tenderer. In case the date of completion for the second trial run exceeds the time schedule for the project, he shall be liable to pay liquidated damages. If the system fails to reach the guaranteed performance even after the second trial run, the Purchaser shall be free to take any action as he deems fit against the Tenderer and to bring the system to the guaranteed performance with the help of third party at the expense of the Tenderer.

3.B.10 FINAL ACCEPTANCE

The final acceptance of the works completed shall take effect from the date of successful completion of 12 months after issue of final/last PAC in any case that the contractor has complied fully with his obligations in respect of each item under the contract. The Final Acceptance Certificate shall be signed by authorized representative of RailTel nominated by the ED/RGM of concerned region. Notwithstanding the issue of Final Acceptance Certificate, the contractor and the purchaser shall remain liable for fulfillment of any obligation incurred under the provision of the contract prior to the issue of Final Acceptance Certificate which remains unperformed at the time such certificate is issued

and for determining the nature and extent of such obligation the contract shall be deemed to remain in force between the parties hereto.

3.B.11 QUALITY ASSURANCE

- i) Tenderer shall submit the details of Quality Assurance program followed by him beginning with raw materials, active, passive and fabricated components, units, sub-assemblies, assemblies, wiring, interconnections, structures. etc. to finished product. Tenderer shall obtain and forward the Quality Assurance Program for equipment supplied by Sub-vendor, if any.
- ii) The Purchaser's/engineer reserves the right to inspect and test each equipment at all stages of production and commissioning of the system. The inspection and testing shall include but not be limited to raw materials, components, sub-assemblies, prototypes, production units, guaranteed performance specifications etc.
- iii) For Factory inspection and testing, Tenderer shall arrange all that is required e.g. quality assurance personnel, space, test gear etc. for successful carrying out of the job by the Purchaser/Engineer, at Tenderer's cost, at the Manufacturer's works.
- iv) Purchaser's/Engineer shall have free entry and access to any and all parts of the Manufacturer's facilities associated with manufacturing and testing of the system at any given time.
- v) It shall be explicitly understood that under no circumstances shall any approval of the Purchaser's/Engineer relieve the Tenderer of his responsibility for material, design, quality assurance and the guaranteed performance of the system and its constituents.
- vi) Tenderer shall invite the Purchaser's/Engineer, at least 7 days in advance, of the date at which system shall be ready for Inspection and Testing. All relevant documents and manuals approved Engineering drawings etc. shall be available with the Purchaser/Engineer well in advance of the start of Inspection and Testing.
- vii) Purchaser's Engineer or his representative shall, after completion of inspection and testing to their satisfaction, issue factory acceptance certificates to release the equipment for shipment. No equipment shall be shipped under any circumstances unless a factory acceptance certificate has been issued for it, unless agreed otherwise by Purchaser's Engineer.

3.B.12 DELETED

(End of Chapter-3B)

CHAPTER 4A

COMMERCIAL TERMS & CONDITIONS

4.A.1 Offer letter and Validity of offer

4.A.1.1 The bidder shall complete the offer letter (Chapter 1) and the Price Schedule (Chapter 2) furnished in the tender documents, indicating the goods to be supplied, description of the goods, associated technical literature, quantity and prices etc.

4.A.1.2 The offer should remain valid for a minimum period as per BDS.

4.A.2 Warranty

4.A.2.1 The warranty would be valid for a period of 36 months (comprising of 12 months of maintenance supervision vide clause 4.A.2.5 below, between issue of PAC and FAC, followed by 24 months of warranty support under clause 4.A.2) after the completion of work in all sites and issue of Provisional Acceptance Certificate (PAC) as per clause 3.B.7.1 of Chapter-3B. The supplier shall warrant that stores to be supplied shall be new and free from all defects and faults in material, workmanship and manufacture and shall be of the highest grade and consistent with the established and generally accepted standards of materials of the type ordered and shall perform in full conformity with the specifications and drawings. The supplier shall be responsible for any defects that may develop under the conditions provided by the contract and under proper use, arising from faulty materials, design or workmanship such as corrosion, inadequate quantity of material to meet equipment requirements, inadequate contact protection, deficiencies in design and/ or otherwise and shall remedy such defects at his own cost when called upon to do so by the Purchaser who shall state in writing in what respect the stores are faulty.

4.A.2.2 If it becomes necessary for the contractor to replace or renew any defective portion/portions of the supplies under this clause, the provisions of the clause shall apply to the portion/portions of the equipment so replaced or renewed or until the end of the above mentioned period or twelve months, whichever may be later. If any defect is not remedied within a reasonable time of 30 days, the Purchaser may proceed to do the work at the contractor's risk & cost, but without prejudice to any other rights which the Purchaser may have against the contractor in respect of such defects.

4.A.2.3 Replacement under warranty clause shall be made by the contractor free of all charges at site including freight, insurance and other incidental charges.

4.A.2.4 Warranty Support

4.A.2.4.1 Material for repair during Warranty Period shall be handed over /taken over to contractor's engineer/representative at RailTel's regional NOC locations or sites where equipments are installed.

During the warranty period, the contractor shall remain responsible to arrange replacement within time period as per clause 7.4.1.1 of Chapter-7 and for setting right at his own cost any equipment installed by him which is of defective manufacture or design or becomes unworkable due to any cause whatsoever. The decision of the RailTel's representative in this regard to direct the contractor to attend to any damage

or defect in work shall be final and binding on the Contractor. In case contractor fails to replace any faulty part within time period as per clause 7.4.1.1 of Chapter-7, penalties will be imposed as per clause 7.5.2 of Chapter-7.

4.A.2.4.2 During the warranty period, the contractor shall be responsible to the extent expressed in this clause for any defects that may develop under the conditions provided for by the contract and under proper use, arising from faulty materials, design or workmanship in the plant, or from faulty execution of the plant by the contractor but not otherwise and shall remedy such defects at his own cost when called upon to do so by the Purchaser Engineer who shall state in writing in what respect the portion is faulty.

4.A.2.4.3 During the free warranty maintenance period, contractor shall stabilize the working of the system. Purchaser has the right to extend the period of supervision of the maintenance, free of cost till the system stabilizes and works satisfactorily for a reasonable period of time. If during the time any equipment etc. is to be added or deficiencies are to be rectified to make the system work trouble free, the same also will have to be done by the contractor at no cost to RailTel as to make good all the deficiencies.

4.A.2.5 Maintenance Supervision:

4.A.2.5.1 After the proposed network is commissioned and placed in service and after provisional acceptance certificate is issued, the contractor shall be responsible for proper maintenance supervision of the network free of cost for a period of twelve months from the date of provisional acceptance.

For this purpose, he shall prepare a maintenance plan and make available the services of qualified maintenance engineers stationed at the location approved by Purchaser's Engineer who will guide and supervise the RailTel maintenance staff. The tenderer shall keep minimum two maintenance engineers at the locations approved by RailTel, who will visit the total installation as per the instructions of Purchaser's Engineer or earlier if the situation so warrants with the provision that monthly reports of the failures and health of the equipment is generated from the NMS and is made available jointly signed by contractor and RailTel Official.

4.A.2.5.2 During this period of maintenance supervision if any lacuna is noticed in the functioning, as a result of any deficiency in work, the contractor will rectify the same at no cost to RailTel. During such rectification if any faulty equipment/modules need replacement or repair, they shall be provided by the contractor from the set of equipment or modules that the contractor should bring to the site of installation in addition to all the materials to be supplied against this contract. Use of spare modules covered under the Schedule of material of this tender shall not be permitted to be used during installation, commissioning and period of maintenance supervision.

4.A.2.5.3 To summarize, the total period of warranty as per BDS in Chapter-5, will comprise of first 12 months of Maintenance Supervision (after issue of PAC) extendable by RailTel for reasons as explained above, post which FAC will stand issued. Issue of FAC will be followed by 24 months of warranty as per para 4.A.2 above.

4.A.3. Long Term Maintenance Support

4.A.3.1 Bidder/OEM shall provide maintenance support after successful completion of the warranty obligations for a minimum period of 5 years. The long term maintenance support shall be comprehensive and include all hardware and software equipment supplied against this contract. RailTel should be extended the benefits of software update/up-grades made by OEM on the system from time to time to improve performance. During this period the scope of work as mentioned in clause 4.A.2 above & its sub clauses will be applicable.

4.A.3.2 Bidder/OEM shall be paid @ 3.5% (minimum) of supply cost of SOR-A (basic price excluding taxes, levies and all other charges) per annum towards Long Term Maintenance Support after completion of warranty period, to undertake repairs/replacements of all type of module/card/assembly/subassembly and update/upgrade of software released during this period and /or which may fail in the network after the warranty. Taxes will be as per actual at the time of execution of the AMC i.e. issue of AMC LOA.

If the bidder quotes higher than 3.5%, he will be paid at his quoted rate per annum. Total AMC cost for five years will be taken for evaluation purpose. AMC would have to be valid for minimum period of 5 years after completion of warranty. This period of 5 year may be extended further with mutual consent of RailTel and Bidder/OEM.

In case a bidder quotes AMC rates lower than 3.5% and if the bidder wins the contract, his cost against supply items will be reduced by differential (w.r.t. 3.5%) of AMC rates & he will be paid accordingly against the cost of supply. AMC charges to him, however, will be paid only @ 3.5% per annum.

4.A.3.3 Separate LOA for AMC shall be issued by RailTel 3 months prior to the completion of warranty period and separate Agreement shall be signed with the Bidder/OEM. A fresh Bank Guarantee valid for a period of 3 months beyond the completion of AMC from the date of LOA shall be required to be submitted by OEM/ Tenderer for due fulfillment of long term maintenance support obligation. Value of PBG will be 10% of the total value of LOA issued for AMC for five years. This PBG of AMC shall be submitted by the bidder within 30 days from the date of issue of LOA for the AMC. In case bidder does not submit the PBG in the stipulated time period, RailTel may encash the PBG given with the original LOA (main contract). The contractor will inform to RailTel in writing and ask for the AMC LOA six months prior to expiry of warranty period. In case issue of LOA for AMC is delayed due to non-intimation by the contractor, he will extend the original PBG till issue of LOA for AMC and submission of PBG else original PBG will be encashed.

4.A.3.4 Quarterly payment for AMC Charges would be made by RailTel after successful completion of AMC Services of that quarter and on the certificate furnished by concerned RailTel representative of the Regional General Managers/ Executive Director of the Regions.

4.A.3.5 Detailed standard conditions applicable for the Annual Maintenance Contract between RailTel and the Contractor are given in chapter-7.

Note: The acceptance of the above clauses is mandatory and specific acceptance from OEM is required to be enclosed as per Form no. 3 of Chapter-6. Any deviation / non acceptance may lead to rejection of the bid.

4.A.4. Delivery, Installation, Testing, Commissioning & Integration period

The materials as per SOR-A are required to be delivered, installed, tested, commissioned & integrated within period as per BDS. The bidder is required to submit the PERT chart showing the various activities which are required for supply, installation, testing, commissioning and integration of the equipment. Name of sites are enclosed as Annexure-I. Consignee address and details will be provided to the successful bidder.

4.A.4.1 RailTel's office details

SN	Region	Office	Address
1.	Corporate Office	New Delhi	Plate-A, 6th Floor, Office Tower-2, NBCC Building, East Kidwai Nagar, New Delhi-110023
2.	Northern Region	New-Delhi	6 th Floor, Block-III, Delhi IT Park, Shastri Park. Delhi-110053.
3.	Eastern Region	Kolkata	19 th Floor, Aurora Waterfront Building, Plot no. 34/1, Block - GN, Sector – V, Salt Lake City, Kolkata - 700091.
4.	Southern Region	Secunderabad	2nd Floor B-Block, Rail Nilayam, Secunderabad-500071.
5.	Western Region	Mumbai	Western Railway Microwave Complex, Senapati Bapat Marg, Mahalaxmi, Mumbai-400013.

4.A.5. Payment Terms for Supply items

4.A.5.1 75% payment of the value of supply (Schedule-A) would be made on receipt of material by the consignee duly inspected and on submission of the following documents subject to any deductions or recovery which RailTel may be entitled to make under the contract:

- (i) Valid Tax Invoice
- (ii) Delivery Challan/ E-way bill
- (iii) Packing list.
- (iv) Factory Test Report.
- (v) Purchaser's Inspection certificate
- (vi) Consignee receipt
- (vii) Warranty certificate of OEM
- (viii) Insurance certificate
- (ix) A certificate duly signed by the firm certifying that equipment/ materials being supplied are new and conform to technical specification.

4.A.5.2 15% payment of the value of Schedule-A shall be made by RailTel on successful Installation & Commissioning at site and Site Acceptance Test (SAT) Report issued by concerned region. Further 5% payment of the value of Schedule-A shall be made by RailTel on issue of Provisional Acceptance Certificate (PAC) by concerned region

as per clause 3.B.7.1, Chapter-3B. Last 5% payment of the value of Schedule-A shall be made by RailTel on issue of Final Acceptance Certificate (FAC) by concerned region.

- 4.A.5.3 15% + 5% payment of value of supply items of Schedule-A which could not be installed for want of site readiness, will be made on issue of final PAC as per the decision of Principal Executive Director (PED)/Regional General Manager (RGM) of concerned region and remaining 5% on issue of FAC.
- 4.A.5.4 The breakup of taxes has to be furnished and same should be reflected in the bills so that any input credit can be availed by RailTel.
- 4.A.5.5 **Payment of Service Items**
- 4.A.5.5.1 90% payment of SOR items-B1 & B2 of Schedule-B shall be made by respective Executive Director/Regional General Manager of the Region on issue of Site Acceptance Test (SAT) report, 5% on issue of PAC and final 5% on issue of Final Acceptance Certificate.
- 4.A.5.5.2 Payment of SOR item- B3 of Schedule-B towards “AMC/ Long Term Maintenance Support” would be paid quarterly by the concerned Region as per clause 7.6.4 of Chapter-7.
- 4.A.5.6 In case of supply orders which are not associated with any Design & Installation and Commissioning work, the payment terms against such supply order will be as follows:
 - 4.A.5.6.1 95% of the payment at the time of delivery. All the documents required will be as per clause 4.A.5.1 above.
 - 4.A.5.6.2 Next 5% of the payment shall be made after expiry of one year from the date of delivery.
- 4.A.5.7 Bill passing and paying unit for the items under SOR is respective Regions.

4.A.6. Performance Bank Guarantee (Security Deposit)

- 4.A.6.1 The successful bidder has to furnish security deposit in the form of Performance Bank guarantee @ 10% of issued PO/ LOA value, the same should be submitted within 30 days of issue of LOA/PO, failing which a penal interest of 15% per annum shall be charged for the delay period i.e. beyond 30 (thirty) days from the date of issue of LOA/PO. This PBG should be from a Scheduled Bank and should cover warranty period plus three months for lodging the claim. The performance Bank Guarantee will be discharged by the Purchaser after completion of the supplier's performance obligations including any warranty obligations under the contract.
- 4.A.6.2 The earnest money shall be released on submission of PBG. The Performa for PBG is given in Form no.-1 of Chapter-6. If the delivery period gets extended, the PBG should also be extended appropriately.
- 4.A.6.3 The Performance Bank Guarantee (security deposit) will bear no interest.

- 4.A.6.4 This PBG would be released after satisfactory completion of contract including warranty period and only after submission of PBG towards AMC as per clause 4.A.3.3 of this Chapter.
- 4.A.6.5 A separate advice of the BG will invariably be sent by the BG issuing bank to the RailTel's Bank through SFMS and only after this the BG will become acceptable to RailTel. It is therefore in interest of bidder to obtain RailTel's Bank IFSC code, Its branch and address and advise these particulars to the BG Issuing bank and request them to send advice of BG through SFMS to the RailTel's Bank.
- 4.A.6.6 Wherever the contracts are rescinded, the security deposit/PBG shall be forfeited and the SD/Performance Bank Guarantee shall be en-cashed by RailTel.

4.A.7. Taxes & Duties

- 4.A.7.1 The price quoted in the offer should be firm, fixed indicating the breakup and inclusive of all taxes & duties like import, custom, Anti-Dumping, CGST, SGST, IGST, UTGST etc. The offer should be inclusive of packing, forwarding, freight up to destination, insurance charges.
- 4.A.7.2 Bidder shall issue valid tax invoice to RailTel for availing proper credit of CGST/SGST/IGST/UTGST in case of award of Contract. GST will not be reimbursed in the absence of valid tax invoice.
- 4.A.7.3 For all the taxable supplies made by the vendor, the vendor shall furnish all the details of such taxable supplies in the relevant returns to be filed under GST Act.
- 4.A.7.4 If the vendor fails to comply with any of the above, the vendor shall pay to purchaser any expense, interest, penalty as applicable under the GST Act.
- 4.A.7.5 In case of incorrect reporting of the supply made by the vendor in the relevant return, leading to disallowance of input credit to purchaser, the vendor shall be liable to pay applicable interest under the GST Act to the credit of purchaser. The same provisions shall be applicable in case of debit/credit notes.
- 4.A.7.6 Tenderer shall quote all-inclusive rates, but there shall be break up of basic price and all type of applicable taxes such as SGST/CGST/IGST/UT GST alongwith respective HSN/SAC Code under GST Law (Including tax under reverse charges payable by the recipient.
- 4.A.7.7 Wherever the law makes it statutory for the Purchaser to deduct any amount towards GST at sources, the same will be deducted and remitted to the concerned authority.
- 4.A.7.8 In regards to service support, the tenderer should have registration no. for GST and shall furnish GST registration certificate on award of LOA.
- 4.A.7.9 The imposition of any new tax and/or increase in the aforesaid taxes, duties levies, after the last stipulated date for the receipt of tender including extensions if any and the bidder there upon necessarily and properly pays such taxes/levies/cess, the bidder shall be reimbursed the amount so paid, provided such payments, if any, is not, in the opinion of RailTel attributable to delay in execution of work within the control of bidder. The

bidder shall, within a period of 30 days of the imposition of any such tax or levy or cess, give a written notice thereof to RailTel that the same is given pursuant to this condition, together with all necessary information including details of input credit relating thereto. In the event of non-payment/default in payment of any of the above taxes, RailTel reserves the right to with-hold the dues/payments of bidder and make payment to state/Central Government authorities as may be applicable. However, if the rates are reduced after the last stipulated date for receipt of tender, bidder has to pass on the benefits to RailTel.

4.A.7.10 Deleted.

4.A.7.11 Bidder has to submit an Indemnity Bond as per Form no. 7 of Chapter- 6.

4.A.8. Insurance

4.A.8.1 The Contractor shall take out and keep in force a policy or policies of insurance from the date, the delivery of material starts (including the transit portion) against all liabilities of the Contractor or the Purchaser. The contractor shall take out and keep in force a Policy or policies of Insurance for all materials covered in schedule of requirement irrespective of whether used up in the portion of work already done or kept for the use in the balance portion of the work until such material are provisionally handed over to RailTel. The goods will be issued by purchaser to supplier and risk of goods shall remain with supplier until the issue of PAC by RailTel. Insurance policy has to be kept valid by the contractor till issue of PAC by RailTel.

4.A.8.2 The Contractor should ensure the stores brought to site, against risks in consequence of war and invasion, as required under the Emergency Risk (Goods) Insurance Act inforce from time to time.

4.A.8.3 It may be noted that the beneficiary of the insurance policy should be RailTel or the policies should be pledged in favour of RailTel. The contractor shall keep the policy/policies current till the equipment are handed over to the purchaser. It may also be noted that in the event of contractor's failure to keep the policy current and alive, renewal of policy will be done by purchaser for which the cost of the premium plus 20% of premium shall be recovered from the contractor.

4.A.9. Liquidated Damages

The timely delivery is the essence of this tender. Liquidated damages will be applicable at the rate of half percent per week or part thereof for undelivered portion of SOR subject to a maximum of 10% of the cost of Purchase order/LOA for any reason whatsoever attributed to failure of tenderer. RailTel will have the right to cancel the order, place order on alternative source besides levying the liquidated damages as above.

4.A.10. Transportation

The rates quoted should be CIP destination. The destination shall be defined POP / nominated office of RailTel in the proposed sections which shall be indicated by RailTel's representative.

4.A.11. Statutory Deduction

These will be made at source as per the rules prevalent in the area of work.

4.A.12. Qualification Criteria

Qualifying criteria under this clause lays down minimum acceptable qualifications in various areas to ensure that qualified bidder has necessary experience, technical expertise, equipment and financial and human resources to successfully complete the project. Bids from bidder not meeting these qualification criteria may liable to be rejected. Bids from the consortia of tenderers and Joint Ventures meeting the below defined Qualification criteria would also be considered for award of work. The Tenderer/bidder should be an Original Equipment Manufacturer (OEM) or authorized representative of OEM specifically authorized by OEM for bidding in this tender.

All the document should be in English/Hindi language only. Document other than English/Hindi will not be entertained. However, Tech. Specification and details should be in English only.

4.A.12.1 Deleted

4.A.12.2 Eligibility Criteria Requirements for Bidders:

SN	Eligibility Criteria Requirements	Supporting Document Required
1)	Legal Entity: The bidder should be a Company registered in India under the Companies Act (India) with their registered office in India for the last three years.	<ul style="list-style-type: none"> • Certificate of Incorporation / Registration or • Memorandum of Association (MoA) • Supporting document to prove eligibility for exemption under Startup.
2)	<p>Financial Capability: The bidder should have minimum cumulative turnover from operation of Rs. 47.15 Crs in the last three financial years plus current year upto the date of opening of tender.</p> <p>For Startups* (recognized by Department of Industrial policy and promotion, Ministry of Commerce and Industry) a minimum turnover from operation of Rs. 15.72 Crs is required.</p>	<ul style="list-style-type: none"> • Certificates to this effect which may be an attested Certificate from the concerned department / client or Audited Balance Sheet duly certified by the Chartered Accountant / Certificate from Chartered Accountant duly supported by Audited Balance Sheet. • The contact details of CA/Statutory Auditor along with UDIN No. shall be mandatorily mentioned on copy of certified Balance Sheet/Certificate. • For startups, in addition to above, Certificate of Startup issued by Department of Industries Policy and promotions, Ministry of Commerce and Industries shall also be required.
3)	Technical Capability: The tenderer must have successfully completed any of the following during last 07 (seven)	<ul style="list-style-type: none"> • Completion certificates with Satisfactory working and value of the work completed from the User

SN	Eligibility Criteria Requirements	Supporting Document Required
	<p>years, ending last day of month previous to the one in which tender is invited:</p> <p>Single order of similar works# costing not less than Rs. 18.86 Crs,</p> <p>or</p> <p>Two orders of similar works# each costing not less than Rs. 12.57 Crs,</p> <p>or</p> <p>Three orders of similar work# each costing not less than Rs. 9.43 Crs.</p> <p>For Startups (recognized by Department of Industrial policy and promotion, Ministry of Commerce and Industry), the bidder should have completed in last three financial years plus current year upto the date of opening of tender:</p> <p>Single order of similar work# costing not less than Rs. 11.00 Crs.</p> <p>OR</p> <p>Two orders of similar work# costing not less than Rs. 6.29 Crs.</p> <p>OR</p> <p>Three orders of similar work# costing not less than Rs. 4.72 Crs.</p> <p>Note: Completion of work should fall in the above period. The bidder shall also furnish work completion/ substantial work completion certificate issued by customer/s for the Purchase Orders/ Work Orders. Substantial completion shall be 80% (value wise) or more works completed under the contract. For contracts under which bidder participated as a Joint Venture member or sub-contractor, only the bidder's</p>	<p>Organizations is required to be submitted.</p> <ul style="list-style-type: none"> • The copy of Purchase Order is mandatorily required as supporting document. <p>In case of substantially completed work, certificate from user for bidder share regarding total value of bidders share of work and value of completed work (minimum 80% of total value of bidders share of work) is required to be submitted.</p> <p>In case of composite work purchase orders, bidder shall submit CA certificate certifying the actual amount pertaining to similar work definition as mentioned in the clause.</p> <p>(The set of document(s) submitted should clearly certify eligibility criteria and should be verifiable from the user/customer)</p>

SN	Eligibility Criteria Requirements	Supporting Document Required
	<p>share, by value, shall be considered to meet this requirement.</p> <p># Similar Work: Projects of Telecom Transmission Network /IT /Data Network /Broadband Network /Radio Network in Government /PSUs /Telecom Service Providers network /ISP Network.</p> <p>Note: Work experience certificate issued by Public listed company having average annual turnover of Rs 500 Cr and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, incorporated/registered at least 5 years prior to the date of opening of tender, shall also be considered provided the work experience certificate has been issued by a person authorized by the Public listed company to issue such certificates.</p>	
4)	The bidder (in case of consortium/JV, all members) including Sub contractors should not have been black-listed currently by Central Govt./State Govt./CPSU/any reputed Telecom service provider in India or anywhere globally by Government for the supply of material / security reasons.	<ul style="list-style-type: none"> • Self-Declaration by the Bidder (in case of consortium/JV, all members/ partners) on Company's letter head.
5)	The Bidder or their promoters having equity stake or operating partnership in bidder, should not be holding valid License for Telecom service provider/ISP/ NLD, Services License of Government of India for Telecom Operation.	<ul style="list-style-type: none"> • Undertaking to be submitted by the Bidder (in case of consortium/JV, all members/ partners).
6)	Bidder should have authorization specific to this tender from respective OEM as per Form no. 5 of Chapter-6.	<ul style="list-style-type: none"> • MAF as per Form no. 5 of Chapter-6.
7)	The tenderers shall submit a notarized affidavit on a non-judicial stamp paper stating that they are not liable to be disqualified and all their statement/documents submitted alongwith bid are true and factual. Standard format of the affidavit to be submitted by the	<ul style="list-style-type: none"> • Notarized Affidavit as per Form no. 11 of Chapter-6.

SN	Eligibility Criteria Requirements	Supporting Document Required
	<p>bidder is enclosed as Form No. 11 of Chapter-6. Non submission of an affidavit by the bidder shall result in summarily rejection of his/their bid. And it shall be mandatorily incumbent upon the tenderer to identify, state and submit the supporting documents duly self-attested by which they/he is qualifying the Qualifying Criteria mentioned in the Tender Document. It will not be obligatory on the part of Tender Committee to scrutinize beyond the submitted document of tenderer as far as his qualification for the tender is concerned. The RailTel (RCIL) reserves the right to verify all statements, information and documents submitted by the bidder in his tender offer, and the bidder shall, when so required by the RailTel (RCIL), make available all such in-formation, evidence and documents as may be necessary for such verification. Any such verification or lack of such verification by the RailTel (RCIL) shall not relieve the bidder of its obligations or liabilities here under nor will it affect any rights of the RailTel thereunder.</p>	
8)	Hardware and Software supplied by OEM should not have any malicious code.	<ul style="list-style-type: none"> • No Malicious Code Undertaking Letter to be provided (as per Form No. 14 of Chapter-6).

Note:

Credentials if submitted in foreign currency shall be converted into Indian currency i.e., Indian Rupee as under:

The conversion rate of US Dollars into Rupees shall be the daily representative exchange rates published by the Reserve Bank of India for the relevant date. Where, relevant date shall be as on the last day of month previous to the one in which tender is invited. In case of any other currency, the same shall first be converted to US Dollars as on the last day of month previous to the one in which tender is invited, and the amount so derived in US Dollars shall be converted into Rupees at the aforesaid rate. The conversion rate of such currencies shall be the daily representative exchange rates published by the International Monetary Fund for the relevant date

Explanation for clause - Eligibility Criteria:

1. In case a contract is started prior to 07 (seven) years, ending last day of month previous to the one in which tender is invited, but completed in last 07 (seven) years, ending

last day of month previous to the one in which tender is invited, the completed work shall be considered for fulfillment of credentials.

2. If a contract is physically completed and completion certificate to this extent is issued by the concerned organization but final bill is pending, such contract shall be considered for fulfillment of credentials.
3. If a part or a component of contract is completed but the overall scope of contract is not completed, this work shall not be considered for fulfillment of technical credentials even if the cost of part completed work/component is more than required for fulfillment of credentials.
4. In case a contract is considered similar in nature for fulfillment of technical credentials, the overall cost of that work including PVC amount if any shall be considered and no separate evaluation for each component of that work shall be made to decide eligibility.
5. The value of final bill including PVC amount-if paid, or otherwise in case final bill is pending the contract cost in last approved variation statement plus PVC amount paid or cumulative amount paid up to last on-account bill including PVC amount and statutory deductions whichever is less, shall be considered as the completion cost of contract. In case of newly formed partnership firm, the credentials of individual partners from previous proprietary firm(s) or dissolved previous partnership firm(s) or split previous partnership firm(s), shall be considered only to the extent of their share in previous entity on the date of dissolution / split and their share in newly formed partnership firm. For example, a partner A had 30% share in previous entity and his share in present partnership firm is 20%. In the present tender under consideration, the credentials of partner A will be considered to the extent of 0.3×0.2 * value of the work done in the previous entity. For this purpose, the tenderer shall submit along with his bid all the relevant documents which include copy of previous partnership deed(s), dissolution deed(s) and proof of surrender of PAN No.(s) in case of dissolution of partnership firm(s) etc.
6. In case of existing partnership firm, if any one or more partners quit the partnership firm, the credentials of remaining partnership firm shall be re-worked out i.e., the quitting partner(s) shall take away his credentials to the extent of his share on the date of quitting the partnership firm (e.g. in a partnership firm of partners A, B & C having share 30%, 30% & 40% respectively and credentials of Rs 10 crore; in case partner C quits the firm, the credentials of this partnership firm shall remain as Rs 6 crore). For this purpose, the tenderer shall submit along with his bid all the relevant documents which include copy of previous partnership deed(s), dissolution deed(s) and proof of surrender of PAN No.(s) in case of dissolution of partnership firm(s) etc.
7. In case of existing partnership firm if any other partner(s) joins the firm, the credentials of partnership firm shall get enhanced to the extent of credentials of newly added partner(s) on the same principles as mentioned in item 6 above. For this purpose, the tenderer shall submit along with his bid all the relevant documents which include copy of previous partnership deeds, dissolution/splitting deeds and proof of surrender of PAN No.(s) in case of dissolution of partnership firm etc.
8. Any partner in a partnership firm cannot use or claim his credentials in any other firm without leaving the partnership firm i.e., In a partnership firm of A&B partners, A or

B partner cannot use credentials of partnership firm of A & B partners in any other partnership firm or propriety firm without leaving partnership firm of A & B partners.

9. In case a partner in a partnership firm is replaced due to succession as per succession law, the proportion of credentials of the previous partner will be passed on to the successor.
10. If the percentage share among partners of a partnership firm is changed, but the partners remain the same, the credentials of the firm before such modification in the share will continue to be considered for the firm as it is without any change in their value. Further, in case a partner of partnership firm retires without taking away any credentials from the firm, the credentials of partnership firm shall remain the same as it is without any change in their value.
11. In a partnership firm “AB” of A & B partners, in case A also works as propriety firm “P” or partner in some other partnership firm “AX”, credentials of A in propriety firm “P” or in other partnership firm “AX” earned after the date of becoming a partner of the firm AB shall not be added in partnership firm AB.
12. In case a tenderer is LLP, the credentials of tenderer shall be worked out on above lines similar to a partnership firm.
13. In case company A is merged with company B, then company B would get the credentials of company A also.

4.A.12.3 Eligibility Criteria Requirements for OEM’s:

OEM’s whose products are proposed to be used in this deployment should meet following criteria –

SN	Eligibility Criteria Requirements	Supporting Document Required
1.	OEM should have proven facilities for Engineering, manufacture, assembly, integration and testing of Data Network equipment and basic facilities with respect to space, Engineering, Personnel, Test equipment, Manufacture, Training, Logistic Supports for at least past three years.	<ul style="list-style-type: none"> • The certificates/Undertaking along with the complete address for the same will have to be submitted along with bid.
2.	i) The Equipment offered by the tenderer or equipment of the same series/family (an undertaking by the OEM has to be submitted in support in case of immediate predecessor) from the same OEM should have been satisfactorily working in Government/ PSUs/Telecom Service Providers network for 100G deployment of DWDM system for minimum length of 500 Kms for at least 12 months as on date of opening of tender, in India or Abroad and	<ul style="list-style-type: none"> • Satisfactory Working Performance of the same series/family from the same OEM by the user is required to be submitted for i & ii and it should be issued during last one year from the date of opening of Tender. • The copy of Purchase Order is mandatorily required as supporting document.

SN	Eligibility Criteria Requirements	Supporting Document Required
	<p>ii) The Equipment offered by the tenderer or equipment of the same series/family (an undertaking by the OEM has to be submitted in support in case of immediate predecessor) from the same OEM should have been satisfactorily working in Government/ PSUs/Telecom Service Providers network for 100G Alien wavelength deployment in live network over 3 rd party DWDM network for minimum length of 500 Kms for at least 12 months, in India or Abroad.</p> <p>Note: Work experience certificate issued by Public listed company having average annual turnover of Rs 500 Cr and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, incorporated/registered at least 5 years prior to the date of opening of tender, shall be considered provided the work experience certificate has been issued by a person authorized by the Public listed company to issue such certificates.</p>	<ul style="list-style-type: none"> • An undertaking by the OEM has to be submitted in support in case of immediate predecessor
3.	<p>OEM should have supplied the equipment/software offered or equipment/software of the same series/family at least of the value Rs. 11.00 Cr during last preceding 3 financial years (i.e. current year and three previous financial years) as on opening of bid to Government /PSUs / Telecom Service Providers.</p> <p>Note:</p> <p>(i) For Startups* (recognized by Department of Industrial policy and promotion, Ministry of Commerce and Industry) only 1/3 of value as mentioned above is required.</p> <p>(ii) Public listed company having average annual turnover of Rs 500 Cr and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, incorporated/registered at least 5 years prior to the date of opening of tender, shall be considered.</p>	<ul style="list-style-type: none"> • OEM should submit self-certificate with proper contact detail of clients along with PO reference and amount supplied (Firm Name, Contact person, Designation, Telephone Number, Fax, Official mail id etc.). The same should be issued by authorized signatory. • The copy of Purchase Order is mandatorily required as supporting document.

SN	Eligibility Criteria Requirements	Supporting Document Required
4.	OEM and its subcontractors should not have been black-listed currently by Central Govt./State Govt./CPSU/any reputed Telecom service provider in India or anywhere globally by Government for the supply of material / security reasons.	<ul style="list-style-type: none"> • Self- Declaration by the OEMs on Company's letter head.
5.	Hardware and Software supplied by OEM should not have any malicious code.	<ul style="list-style-type: none"> • No Malicious Code Undertaking Letter to be provided (as per Form No. 14 of Chapter-6).
6.	<p>The OEM shall ensure that Intellectual Property Rights of Hardware (including MAC address) and Source Code of Software must not reside in any Country that shares a Land Border with India. Moreover, OEM must ensure that they are not getting 3rd party manufacturing from any Country that shares a Land Border with India.</p> <p>Note –</p> <p>OEM's from country that shares a Land Border with India are allowed to offer their products provided OEM's is registered with DPIIT as per para 4.A.41.2, Chapter-4A of tender.</p>	<p>OEM Undertaking on their Respective Letter Heads:-</p> <p>We certify that our offered products are genuine, have our own manufacturing setups and IPR for the hardware(s)/software(s), and not have 3rd party manufacturing from any company blacklisted in India or abroad (due to proven backdoor access and data vulnerability) or any company sharing land border with India. The Intellectual Property Rights (IPR) of all offered product and source code of all offered software are not residing in countries sharing land borders with India.</p> <p>Proof of IPR & source code will be provided by the OEM.</p> <p style="text-align: center;">Or</p> <p style="text-align: center;">(in case of OEM from country that shares a land border with India)</p> <p>IPR of offered products and source code of offered software including are residing in country (Please mention the country name) and OEM has been registered with the Competent Authority of Govt. of India and are eligible to be considered (evidence of valid registration by the competent authority is enclosed)</p>

* Relaxations given in eligibility criteria are indicative in nature and startup companies are required to submit their proposal for seeking relaxation in above mentioned eligibility criteria. Their proposal will be dealt on case to case basis only.

Note: Bidder shall submit proper contact detail of all the users (Firm Name, Contact person, Designation, Telephone Number, Fax, Official mail id etc.) for all the certificates asked in the Qualification Criteria. The bidder is required to submit complete chain of

credentials, e.g. purchase order (prices blanked out), showing relevant value of the PO and satisfactory working/implementation certificate issued by the user/customer. Purchase orders without relevant organization's confirmation through a credential letter will not be considered as implementation certificate from the client.

4.A.12.4 Bidder shall provide details of offered equipment and details of credentials submitted against eligibility criteria in Form no. 15 of Chapter-6.

4.A.13. CONSORTIUM BIDS

4.A.13.1 In view of nature of work, it is anticipated that some of the intending tenderers will pool their resources and experience to form consortia. Consortium bids are permitted with each consortia of tenderers allowed to have at maximum three members, the consortia of tenderers must clearly define the lead bidder of the consortia along with its roles and responsibilities.

4.A.13.2 The Lead bidder should meet the eligibility criteria. In their own interest the tenderers who form such a consortia are advised to investigate capabilities, availability of resources, experienced personnel, financial soundness, past experience and concurrent engagements of Constituting partners.

4.A.13.3 Consortia of tenderers, if any, must clearly define role/scope of store/work of each partner/member. Further the legal agreement for a consortium must accompany the bid and should clearly define the leader of such a consortium who will be the contractor and will be responsible for timely completion of work as also during execution of work, if awarded, coordinate with Purchaser on behalf of the consortium, receive payments for the works executed and be liable for due performance of the contract in all respect.

4.A.13.4 Qualification documents, details etc. must however, be provided for each member firm complete in all respects strictly in requisite proforma.

4.A.13.5 A consortium formed will not be subject to alteration with regard to change in constituting firms and/or reorientation of roles. Any changes, if proposed by consortium to take advantage of certain developments during evaluation stage will render the bid liable to be rejected. As all details are required to be furnished along with the bids and will be critically examined during evaluation of bids, it is imperative that such details should have been thoroughly examined as a safeguard against a possible disqualification of bids on these grounds.

4.A.13.6 All partners of the consortium shall be jointly and severally liable to RailTel for the execution of the entire contract in accordance with its terms.

4.A.13.7 Deleted.

4.A.13.7.1 Deleted.

4.A.13.7.2 Deleted.

4.A.13.8 Consortium shall not have more than three members and each consortium member shall have minimum 20% contribution in the work. A Consortium must submit a Power of Attorney by the other member of the Consortium in favor of the Lead Member. This is also to be enshrined in Memorandum of Agreement signed by the Consortium Members

and submitted along with the bid. **Members of consortium should sign every sheet of price bid as a token of acceptance of all quoted prices by members, failing which the offer will stand summarily rejected.**

4.A.13.9 An individual bidder or a member of Consortium cannot be a member of another Consortium or a JV partner and participate in this tender.

4.A.13.10 Firms should submit the affidavit (As per Form no. 8 of Chapter-6) & Consortium Agreement (As per Form no. 9 of Chapter-6) along with the bid/offer.

4.A.13.11 Each consortium member shall make equal contribution towards the total PBG amount to be submitted along with acceptance of LOA.

4.A.14. Participation Of Joint Venture (JV) Firms in Works Tender:

4.A.14.1 Separate identity/name shall be given to the Joint Venture.

4.A.14.2 Number of members in a JV shall not be more than three, if the work involves only one aspect. One of the members of the JV shall be its Lead Member who shall have a majority (at least 51%) share of interest in the JV. The other members shall have a share of not less than 20% each in case of JV with upto three members. In case of JV with foreign member(s), the Lead Member has to be an Indian firm/company with a minimum share of 51%.

4.A.14.3 A member of JV shall not be permitted to participate either in individual capacity or as a member of another JV in the same tender.

4.A.14.4 The tender form shall be purchased and submitted only in the name of the JV and not in the name of any constituent member. The tender form can however be submitted by JV or any of its constituent member or any person authorized by JV through Power of Attorney to submit tender.

4.A.14.5 Earnest Money Deposit (EMD) shall be deposited by JV or authorized person of JV through e-payment gateway or as mentioned in tender document.

4.A.14.6 A copy of Memorandum of Understanding (MoU) duly executed by the JV members on a stamp paper, shall be submitted by the JV along with the tender. The complete details of the members of the JV, their share and responsibility in the JV etc. particularly with reference to financial, technical and other obligations shall be furnished in the MoU (Form No. 10).

4.A.14.7 Once the tender is submitted, the MoU shall not be modified / altered / terminated during the validity of the tender. In case the tenderer fails to observe/comply with this stipulation, the full Earnest Money Deposit (EMD) shall be liable to be forfeited.

4.A.14.8 Approval for change of constitution of JV shall be at the sole discretion of the RailTel. The constitution of the JV shall not be allowed to be modified after submission of the tender bid by the JV, except when modification becomes inevitable due to succession laws etc., provided further that there is no change in qualification of minimum eligibility criteria by JV after change of composition. However, the Lead Member

shall continue to be the Lead Member of the JV. Failure to observe this requirement would render the offer invalid.

4.A.14.9 Similarly, after the contract is awarded, the constitution of JV shall not be allowed to be altered during the currency of contract except when modification become inevitable due to succession laws etc. and minimum eligibility criteria should not get vitiated. Failure to observe this stipulation shall be deemed to be breach of contract with all consequential penal action as per contract conditions.

4.A.14.10 On award of contract to a JV, a single Performance Guarantee shall be submitted by the JV as per tender conditions. All the Guarantees like Performance Guarantee, Bank Guarantee for Mobilization Advance, Machinery Advance etc. shall be accepted only in the name of the JV and no splitting of guarantees amongst the members of the JV shall be permitted.

4.A.14.11 On issue of LOA (Letter of Acceptance), the JV entity to whom the work has been awarded, with the same shareholding pattern as was declared in the MOU/JV Agreement submitted along with the tender, shall be got registered before the Registrar of the Companies under 'The Companies Act -2013' (in case of Company) or before the Registrar/Sub-Registrar under the 'The Indian Partnership Act, 1932' (in case of Partnership Firm) or under 'The LLP Act 2008' (in case of LLP). A separate PAN shall be obtained for this entity. The documents pertaining to this entity including its PAN shall be furnished to the RailTel before signing the contract agreement for the contract. In case the tenderer fails to observe/comply with this stipulation within 60 days of issue of LOA, contract is liable to be terminated. In case contract is terminated RailTel shall be entitled to forfeit the full amount of the Earnest Money Deposit and other dues payable to the Contractor under this contract. The entity so registered, in the registered documents, shall have, inter-alia, following Clauses:

- a) Joint And Several Liability - Members of the entity to which the contract is awarded, shall be jointly and severally liable to the RailTel for execution of the project in accordance with General and Special Conditions of Contract. The members of the entity shall also be liable jointly and severally for the loss, damages caused to the RailTel during the course of execution of the contract or due to non-execution of the contract or part thereof.
- b) Duration of the Registered Entity - It shall be valid during the entire currency of the contract including the period of extension, if any and the maintenance period after the work is completed.
- c) Governing Laws - The Registered Entity shall in all respect be governed by and interpreted in accordance with Indian Laws.

4.A.14.12 Authorized Member - Joint Venture members in the JV MoU shall authorize one of the members on behalf of the Joint Venture to deal with the tender, sign the agreement or enter into contract in respect of the said tender, to receive payment, to witness joint measurement of work done, to sign measurement books and similar such action in respect of the said tender/contract. All notices/correspondences with respect to the contract would be sent only to this authorized member of the JV.

4.A.14.13 No member of the Joint Venture shall have the right to assign or transfer the interest right or liability in the contract without the written consent of the other members and that of the RailTel in respect of the said tender/contract.

4.A.14.14 Documents to be enclosed by the JV along with the tender:

- a) In case one or more of the members of the JV is/are partnership firm(s), following documents shall be submitted:
 - i) A notarized copy of the Partnership Deed,
 - ii) A copy of consent of all the partners or individual authorized by partnership firm, to enter into the Joint Venture Agreement on a stamp paper,
 - iii) A notarized or registered copy of Power of Attorney in favour of the individual to sign the MOU/JV Agreement on behalf of the partnership firm and create liability against the firm.
- b) In case one or more members is/are HUF, the following documents shall be enclosed:
 - i) A copy of notarized affidavit on Stamp Paper declaring that he who is signing the affidavit on behalf of HUF is in the position of „Karta“ of Hindu Undivided Family (HUF) and he has the authority, power and consent given by other members to act on behalf of HUF.
- c) In case one or more members of the JV is/are companies, the following documents shall be submitted:
 - i) A copy of resolutions of the Directors of the Company, permitting the company to enter into a JV agreement,
 - ii) The copies of MOA (Memorandum of Association) / AOA (Articles of Association) of the company
 - iii) A copy of Certificate of Incorporation
 - iv) A copy of Authorization/copy of Power of Attorney issued by the Company (backed by the resolution of Board of Directors) in favour of the individual to sign the tender, sign MOU/JV Agreement on behalf of the company and create liability against the company.
- d) All the Members of JV shall certify that they are not blacklisted or debarred by RailTel or Railways or any other Ministry / Department of the Govt. of India from participation in tenders/contract on the date of opening of bids either in their individual capacity or as a member of the JV in which they were/are members.
- e) All other documents in terms of explanatory notes in clause 4.A.14.14 above.
- f) Credentials & Qualifying Criteria: Technical, financial eligibility and Bid capacity of the JV shall be adjudged based on satisfactory fulfillment of the following criteria:

4.A.14.15 **Technical Eligibility Criteria (‘a’ or ‘b’ mentioned hereunder):**

- (a) **For Contracts without composite components**

The technical eligibility for the contract as per para 12.2 above, shall be satisfied by either the 'JV in its own name & style' or 'any member having min 26% share'. Each other member of JV shall have technical capacity of minimum 10% of the cost of work i.e., each JV member must have satisfactorily completed during the last 07 (seven) years, ending last day of month previous to the one in which tender is invited, one similar single work for a minimum of 10% of advertised value of the tender.

(b) For Contracts with composite components

- (i) The technical eligibility for each component of contract as per para 4.A.12.2 above, shall be satisfied by either the 'JV in its own name & style' or 'any member of JV having min 26% share'. Each other member of JV shall have technical capacity of minimum 10% of the cost of any component of contract i.e., each JV member must have satisfactorily completed during the last 07 (seven) years, ending last day of month previous to the one in which tender is invited, one similar single contract for a minimum of 10% of cost of any component of contract.

OR

- (ii) The technical eligibility for major component of contract as per para 4.A.12.2 above, shall be satisfied by either the 'JV in its own name & style' or 'any member of JV having min 26% share' and technical eligibility for other components of contract, shall be satisfied by either the 'JV in its own name & style' or 'any member of the JV'. Each other member of JV shall have technical capacity of minimum 10% of the cost of any component of contract. i.e., each JV member must have satisfactorily completed during the last 07 (seven) years, ending last day of month previous to the one in which tender is invited, one similar single work for a minimum of 10% of cost of any component of contract.

Note for Clause 4.A.14.15:

- (a) The Major component of the contract for this purpose shall be the component of contract having highest value. In cases where value of two or more component of contract is same, any one work can be classified as Major component of contract.
- (b) Value of a completed contract done by a Member in an earlier JV shall be reckoned only to the extent of the concerned member's share in that JV for the purpose of satisfying his/her compliance to the above mentioned technical eligibility criteria in the tender under consideration).

4.A.14.16 Financial Eligibility Criteria

The JV shall satisfy the requirement of "Financial Eligibility" mentioned at para 4.A.12.2 above. The "financial capacity" of the lead partner of JV shall not be less than 51% of the financial eligibility criteria mentioned at para 4.A.12.2 above.

The arithmetic sum of individual “financial capacity” of all the members shall be taken as JV’s “financial capacity” to satisfy this requirement.

(Note: Contractual payment received by a Member in an earlier JV shall be reckoned only to the extent of the concerned member’s share in that JV for the purpose of satisfying compliance of the above mentioned financial eligibility criteria in the tender under consideration).

4.A.14.17 Participation of Partnership Firms in contracts:

- i) The Partnership Firms participating in the tender should be legally valid under the provisions of the Indian Partnership Act.
- ii) The partnership firm should have been in existence or should have been formed prior to submission of tender. Partnership firm should have either been registered with the Registrar or the partnership deed should have been notarized prior to date of tender opening as per the Indian Partnership Act.
- iii) Separate identity / name should be given to the partnership firm. The partnership firm should have PAN / TAN number in its own name and PAN / TAN number in the name of any of the constituent partners shall not be considered. The valid constituents of the firm shall be called partners.
- iv) Once the tender has been submitted, the constitution of the firm shall not normally be allowed to be modified / altered / terminated during the validity of the tender as well as the currency of the contract except when modification becomes inevitable due to succession laws etc., in which case prior permission should be taken from RailTel and in any case the minimum eligibility criteria should not get vitiated. The re-constitution of firm in such cases should be followed by a notary certified Supplementary Deed. The approval for change of constitution of the firm, in any case, shall be at the sole discretion of the RailTel and the tenderer shall have no claims what-so-ever. Any change in the constitution of Partnership firm after opening of tender shall be with the consent of all partners and with the signatures of all partners as that in the Partnership Deed. Failure to observe this requirement shall render the offer invalid and full EMD shall be forfeited.

If any Partner/s withdraws from the firm after opening of the tender and before the award of the contract, the offer shall be rejected and EMD of the tenderer will be forfeited. If any new partner joins the firm after opening of tender but prior to award of contract, his / her credentials shall not qualify for consideration towards eligibility criteria either individually or in proportion to his share in the previous firm. In case the tenderer fails to inform RailTel beforehand about any such changes / modification in the constitution which is inevitable due to succession laws etc. and the contract is awarded to such firm, then it will be considered a breach of the contract conditions liable for determination of the contract under Clause 7.6.11 of Chapter-7.

- iv) A partner of the firm shall not be permitted to participate either in his individual capacity or as a partner of any other firm in the same tender.
- v) The tender form shall be submitted only in the name of partnership firm. The EMD shall be deposited by partnership firm through e-payment gateway or as mentioned in

tender document. The EMD submitted in the name of any individual partner or in the name of authorized partner (s) shall not be considered.

- vi) One or more of the partners of the firm or any other person (s) shall be designated as the authorized person (s) on behalf of the firm, who will be authorized by all the partners to act on behalf of the firm through a “Power of Attorney”, specially authorizing him / them to submit & sign the tender, sign the agreement, receive payment, witness measurements, sign measurement books, make correspondences, compromise / settle / relinquish any claim (s) preferred by the firm, sign “No Claim Certificate”, refer all or any dispute to arbitration and to take similar such action in respect of the said tender / contract. Such “Power of Attorney” shall be notarized / registered and submitted along with the tender.
- vii) On issue of Letter of Acceptance (LOA) to the partnership firm, all the guarantees like Performance Guarantee, Guarantee for various Advances to the Contractor shall be submitted only in the name of the partnership firm and no splitting of guarantees among the partners shall be acceptable.
- viii) On issue of Letter of Acceptance (LOA), contract agreement with partnership firm shall be executed in the name of the firm only and not in the name of any individual partner.
- ix) In case the Letter of Acceptance (LOA) is issued to a partnership firm, the following undertakings shall be furnished by all the partners through a notarized affidavit, before signing of contract agreement.

Joint and several liabilities:

The partners of the firm to which the Letter of Acceptance (LOA) is issued, shall be jointly and severally liable to the RailTel for execution of the contract in accordance with General and Special Conditions of the Contract. The partners shall also be liable jointly and severally for the loss, damages caused to the RailTel during the course of execution of the contract or due to non-execution of the contract or part thereof.

Duration of the partnership deed and partnership firm agreement:

The partnership deed/partnership firm agreement shall normally not be modified/altered/ terminated during the currency of contract and the maintenance period after the work is completed as contemplated in the conditions of the contract. Any change carried out by partners in the constitution of the firm without permission of RailTel, shall constitute a breach of the contract, liable for determination of the contract under clause 7.6.11, chapter-7 of the tender document.

Governing laws: The partnership firm agreement shall in all respect be governed by and interpreted in accordance with the Indian laws.

No partner of the firm shall have the right to assign or transfer the interest right or liability in the contract without the written consent of the other partner/s and that of the RailTel.

- x) The tenderer shall clearly specify that the tender is submitted on behalf of a partnership firm. The following documents shall be submitted by the partnership firm, with the tender:

A notarized copy of partnership deed: A notarized or registered copy of Power of Attorney in favor of the individual to tender for the work, sign the agreement etc. and create liability against the firm.

(i) An undertaking by all partners of the partnership firm that they are not blacklisted or debarred by RailTel or Railways or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of opening of bids, either in their individual capacity or in any firm in which they were / are partners. Concealment / wrong information in regard to above shall make the contract liable for determination under clause 7.6.11, chapter-7.

(ii) All other documents in terms of explanatory notes in Clause 4.A.12 above.

- xi) **Evaluation of eligibility of a partnership firm:**

Technical and financial eligibility of the firm shall be adjudged based on satisfactory fulfillment of the eligibility criteria laid down in Clause 4.A.12 above.

4.A.15. System Performance Guarantee

4.A.15.1. The tenderer shall give unqualified and unconditional guarantee that when the equipment / material supplied by him is installed and commissioned at site, it shall achieve the desired objective and that in the event of performance of the system when installed not complying with the end objective or with the specifications, he shall provide further inputs to enable the RailTel to realize the end objectives with full compliance of the specifications contained in these documents. No additional payment will be made to the contractor for supply of any additional goods and service required in this regard.

4.A.15.2. This certificate in the Proforma given in Chapter 6, Form No. 2, shall accompany the final offer. Absence of this certificate which will form part of the agreement shall disqualify the tenderer automatically.

4.A.16. Evaluation of Offer

4.A.16.1. Evaluation of bids will be done, based on total cost of SOR A & B including taxes.

4.A.16.2. Additional features offered by the bidder, over and above the ones asked for in the tender documents, shall not be considered for evaluation of bids.

4.A.16.3. The tenderer shall make available the offered products during technical evaluation of offered equipment for testing and benchmarking to RailTel in New Delhi-Ghaziabad Section or any other section as decided by RailTel. Testing shall be completed by bidder within 30 days from the date of intimation to bidder. Testing shall be conducted by RNOC/CNOC for technically qualified bidders as defined in clause 4.A.47, Chapter-4A. Testing and Benchmarking may be exempted in case equipment offered by any

bidder is already working in RailTel's network successfully, however decision of RailTel in this regard will be final and binding on bidder.

4.A.16.4. The bidders should quote for all items & the offer will be evaluated in totality. The bidders should indicate brand name, type/model number of the products offered. The equipment should be supplied as per Technical Specifications given in Chapter-3A.

4.A.16.5 Price bid will be opened only for the technically qualified bidders. Bid evaluation will be done based on the quote received as per Chapter-2. Inter se position of the offers will be determined on total unit rate on CIP destination basis which will include basic rate, custom duty, CGST, SGST, IGST, GST, freight, insurance and any other charge or cost quoted by the tenderer, including GST payable on reverse charge by RailTel, wherever applicable.

4.A.17. Security Considerations & Security Agreement

4.A.17.1 While evaluating the tender, regards would be paid to National Defence and Security considerations.

4.A.17.2 The directives issued from time to time by the Department of Telecommunications (DoT), Ministry of Communications and IT or any other Ministry of Govt. of India on security considerations shall be applicable to the present tender. Accordingly, as per the extent amendment of the National Long Distance (NLD) Service License Agreement for Security related concerns for expansion of Telecom Services in various zones of the country issued vide Department of Telecommunication, Ministry of Communication and IT, Govt. of India's letter no. 10-54/2010-CS-III (NLD) dated: 31.05.2011, the successful tenderer (OEM) shall comply with the provisions stated in the above mentioned directive of DoT and shall have to enter into an agreement with RailTel as per the mutual agreement between Telecom Service Provider and the vendor of equipment, product and services (based on template, available on DoT website), covering all relevant clauses. **The tenderer must submit a declaration along with their bid in this regard.**

4.A.17.3 Deleted

4.A.18. Purchaser's Right to Vary Quantities

4.A.18.1 The purchaser shall be at liberty to enhance or reduce the quantity mentioned in the LOA/Sub PO/PO as indicated in Bid Data Sheet (BDS) Chapter 5 without assigning any reasons. The bidder shall comply with such modifications unconditionally provided these are made before completion of the deliveries under the purchase order/LOA. Any such change in quantity shall have no impact on the rates mentioned in the purchase order/LOA for any such item.

4.A.18.2 Rate Contract:

4.A.18.2.1 RailTel, if required, may enter into Rate Contract with the firm to whom the contract is awarded for catering to additional requirement of Equipment & Cards as and when arise in future. Rate Contract on the successful tenderer would be placed separately and would be operative from the date of PAC/part PAC and would be valid for a period of 12 months. The validity of rate contract may be extended for further 12 months with mutual agreement. This Rate Contract would be at the same rates as finalized in

main contract. During the validity of Rate Contract, RailTel will place Sub Purchase Orders for Equipment & Cards detailed in SOR, as per requirement. The total value of all the Sub Purchase Orders under Rate Contract shall be restricted to 50% of the contract value for these SOR items, however, there is no guaranteed off take against this Rate Contract. A standing Performance Bank Guarantee of Rs. 10 lakh for due fulfillment of the rate contract with validity of three months beyond contract period will be submitted by the tenderer within 30 days of issue of LOA for Rate Contract. The contractor shall have to supply against these Sub Purchase Orders within 60 days from the date of issue of such Sub Purchase Orders and should submit a Performance Bank Guarantee (PBG) within 30 days of the issue of such Sub Purchase orders @ 10% of the value (rounded off to nearest Thousands of Rupees) of the Sub PO as per proforma given in Chapter 6, Form No.1. The PBG submitted against Sub PO is for the satisfactory performance of materials and should be valid for a period of 3 months beyond warranty period. Terms & conditions of this tender document will be applicable for the Sub POs issued against rate Contract, if any. If the delivery period gets extended, the PBG should also be extended appropriately.

4.A.18.2.2 **Fall Clause:-** The tenderer shall undertake that in case the tenderer offers same type of material at a lower price to any other purchaser including the purchaser, Central/State/ Government Organization or Public Sector Undertaking/Enterprise in India, during the validity of purchase order/LOA, the equal benefit of lower prices will be passed on to RailTel. The tenderer will submit an undertaking to this effect while claiming the payment.

4.A.18.2.3 **The payment conditions against Rate Contract will be as under:**

4.A.18.2.3.1 75% of the payment at the time of delivery as per clause 4.A.5 of this Chapter-4A.

4.A.18.2.3.2 Additional 15% of the payment at the time of delivery, if installation, testing, commissioning & integration are not included in PO/LOA. In case if installation, testing, commissioning & integration is included, the terms will remain same as in clause 4.A.5 of this Chapter-4A.

4.A.18.2.3.3 Additional 5% of the payment at the time of delivery, if installation, testing, commissioning & integration are not included in PO/LOA. In case if installation, testing, commissioning & integration is included, the terms will remain same as in clause 4.A.5 of this Chapter-4A.

4.A.18.2.3.4 5% of the payment after expiry of one year from the date of delivery, if installation, testing, commissioning & integration is not included in PO/LOA. In case if installation, testing, commissioning & integration is included, the terms will remain same as in clause 4.A.5 of this Chapter-4A.

4.A.19.Purchaser's Right to accept any offer / Bid and to reject any or all offer/ Bid

4.A.19.1 The Purchaser reserves the right to accept or reject any offer / bid, and to annul the bidding process and reject all offers / bids, at any time prior to award of order without assigning any reason whatsoever and without thereby incurring any liability to the affected bidder or bidders on the grounds for the Purchaser's action.

4.A.20. Execution of Purchase Order/LOA

4.A.20.1 POs will be issued Region wise.

4.A.20.2 The successful bidder has to submit the copy of the Purchase order/LOA duly signed on each page including Annexure & will submit the Performance Bank Guarantee as per Clause no. 4.A.6 of this chapter for due fulfillment of the PO/LOA.

4.A.20.3 If the successful bidder fails to submit the accepted copy of PO/LOA within 15 days from the date of issue, it shall constitute a breach of the agreement affected by the acceptance of the tender in which case the full value of the earnest money accompanying the tender shall stand forfeited without prejudice to any other rights or remedies.

4.A.20.4 In the event of any tenderer whose tender is accepted and refuses to execute the PO/LOA as herein before provided, RailTel may determine that such tenderer has abandoned the Purchase Order/LOA and thereupon his tender and acceptance thereof shall be treated as cancelled and RailTel shall be entitled to forfeit the full amount of the Earnest Money and to recover the damages for such default.

4.A.21. Annulment of Award

Failure of the successful bidder to comply with the requirement of various clauses of tender document shall constitute sufficient ground for the annulment of the award and forfeiture of EMD in which event the Purchaser may make the award to any other bidder at the discretion of the Purchaser or call for new offers/ bids.

4.A.22. Earnest Money Deposit (EMD) and Cost of Tender Document

4.A.22.1 All the Bidders/OEM are required to deposit Tender Cost and EMD amount as mentioned in NIT and BDS through e-Nivida Portal as “Tender Cost” & “Earnest Money”. Tender cost and EMD in no other form shall be accepted. **Offers without applicable EMD amount and tender cost shall be summarily rejected.**

4.A.22.3 The EMD may be forfeited if a bidder withdraws his offer or modifies the terms and conditions of the offer during validity period and in the case of a successful bidder, if the bidder fails to accept the Purchase order/LOA and fails to furnish performance bank guarantee (security deposit) in accordance with clause 4.A.6 of this chapter.

4.A.22.4 Offers without complete amount of Earnest Money shall be summarily rejected.

4.A.22.5 Earnest Money of unsuccessful bidders during first stage i.e. technical evaluation etc. shall be returned within 30 days of declaration of result of first stage.

4.A.22.6 The successful bidder’s EMD will be discharged upon the bidder’s acceptance of the purchase order/LOA satisfactorily and furnishing the performance bank guarantee and verification by RailTel in accordance with clause 4.A.6 (Chapter-4A).

4.A.22.7 Earnest Money will bear no interest.

4.A.23. For Micro and Small Enterprises (MSEs)

- 4.A.23.1 RailTel is registered with m1xchange TReDS Platform having Buyer registration Number “BUYER00001496”. The URL for m1xchange Platform is <https://www.m1xchange.com>. MSE suppliers/Vendors are required to register themselves on m1xchange Platform for availing the facility of bill discounting on TReDS portal. The bidder is mandatorily required to submit its TReDS registration number (as provided by m1xchange portal) and GRN (Goods/Service Receipt Note) Number (as provided by RailTel on delivery of Goods/Service) while submitting the invoices if requires to avail TReDS facility.
- 4.A.23.2 MSE vendor will bear all costs relating to availing the facility of discounting on TReDS platform including but not limited to Registration charges, Transaction charges for financing, Discounting Charges, Interest on financing, or any other charges known by any name shall be born by MSE Vendor.
- 4.A.23.3 MSE Vendor hereby agrees to indemnify, hold harmless and keep RailTel and its affiliates, Directors, officers, representatives, agents and employees indemnified, from any and all damages, losses, Claims and liabilities (including legal costs) which may arise from Sellers submission, posting or display, participation, in any manner, on the TReDS Platform or form the use of Services or from the Buyer’s breach of any of the terms and conditions of the Usage Terms or of this Agreement and any Applicable Law on a full indemnity basis.
- 4.A.23.4 RailTel shall not be liable for any special, indirect, punitive, incidental or consequential damages or any damages whatsoever (including but not limited to damages for loss of profits or savings, business interruption, loss of information), whether in contract, tort, equity or otherwise or any other damages resulting from using TReDS platform for discounting their (MSE Vendors) invoices.

4.A.24. Offer/ Bid Prices

- 4.A.24.1 The bidder shall give the prices indicating all levies and taxes, packing forwarding, freight and insurance etc. The basic unit price and all other components of the price need to be individually indicated against the goods it proposes to supply under the tender document asper schedule given in Chapter 2. The price shall be quoted in Indian Rupees (FOR/CIP destination).
- 4.A.24.2 The breakup of price of each item of SOR in terms of basic Unit price, Custom duty, CGST/SGST/IGST/GST and other taxes and any other Levies/charges already paid or payable by the tenderer shall be quoted in Annexure-A & B of Chapter 2. Any changes in statutory duties/taxes after opening of technical bid will be to RailTel’s account within the contracted delivery period.
- 4.A.24.3 All prices and other information like discounts etc. having a bearing on the price shall be written both in figures and in words in the prescribed offer form (SOR). In case of difference in words and figures, the amount written in words will be taken into consideration. In the event of any discrepancy between total unit cost and total cost, the value shown in total unit cost will be taken for evaluation purpose.
- 4.A.24.4 Deleted.

4.A.25 Clause wise Compliance

4.A.25.1 **For Bidder** – Bidder has to submit Nil Deviation (Form No. 12, Chapter-6) form as a compliance against all the terms and conditions of Tender document. Bidder may submit Deviation, if any, in his bid from Tender document in the format given in Form no. 12. **However, in case of submission of any Deviation from Tender conditions, RailTel reserves the right to reject the bid without giving any justification.**

Note: In case of non-submission of Form no. 12 (Chapter-6) with bid, the bidders bid may be rejected.

4.A.25.2 **For OEM** - Clause wise compliance statement of Technical Specifications (Chapter-3A).

4.A.26 Inspection

4.A.26.1 Pre-shipment / pre-dispatch inspection shall be carried out at manufacturer's / tenderer's works by RailTel's authorized representative. Material should be offered for inspection ensuring supply, installation, testing, commissioning and integration within the period as specified in tender. Traveling, lodging & boarding expenses of RailTel's representative and charges for 3rd party inspection, if any shall be borne by RailTel but necessary facilities to carry out tests/witness inspection shall be provided by the manufacturer/ tenderer, free of cost. Under exceptional circumstances, if it is not possible to carry out pre-dispatch inspection at Manufacturer's premises, exemption for the same shall be obtained from competent authority.

4.A.26.2 Along with inspection call, the tenderer/manufacturer shall submit details of test procedures, test programme, test parameters together with permitted values, etc., and their Quality Assurance Plan.

4.A.26.3 In case material fails during inspection, the fresh lot of material shall be offered without any extra cost, by the manufacturer/tenderer. In such a case, total cost of re-inspection including travel, lodging & boarding of the inspecting officials shall be to manufacturer's/ tenderer's account.

4.A.27 Force Majeure

4.A.27.1 If during the Agreement, the performance in whole or in part, by either party, of any obligation under this is prevented or delayed, by reason beyond the control of the parties including war, hostility, acts of the public enemy, civic commotion, sabotage, Act of State or direction from Statutory Authority, explosion, epidemic, quarantine restriction, strikes and lockouts (as are not limited to the establishments and facilities of the parties), fire, floods, earthquakes, natural calamities or any act of GOD (hereinafter referred to as EVENTS), provided notice of happenings of any such EVENT is given by the affected party to the other, within twenty one (21) days from date of occurrence thereof, neither party shall have any such claims for damages against the other, in respect of such non-performance or delay in performance. Provided service under this Agreement shall be resumed as soon as practicable, after such EVENT comes to an end or ceases to exist.

4.A.27.2 In the event of a Force Majeure, the affected party will be excused from performance during the existence of the Force Majeure. When a Force Majeure occurs, the affected

party after notifying the other party will attempt to mitigate the effect of the Force Majeure as much as possible. If such delaying cause shall continue for more than sixty (60) days from the date of the notice stated above, the party injured by the inability of the other to perform shall have the right, upon written notice of thirty (30) days to the other party, to terminate this Agreement. Neither party shall be liable for any breach, claims, damages against the other, in respect of non-performance or delay in performance as a result of Force Majeure leading to such termination.

4.A.28 Settlement of Disputes

In case of any dispute concerning this order both the tenderer and RailTel shall try to settle the same amicably through mutual discussion/negotiations. Any unsettled dispute shall be settled in terms of Indian Act of Arbitration and conciliation 1996 or any amendment thereof. Place of arbitration shall be New Delhi. Arbitrator shall be appointed by Chairman & Managing Director, RailTel Corporation of India Limited.

4.A.29 Governing Laws:

The APO/Sub PO/Purchase Order shall be interpreted in accordance with the laws of India. The courts at New Delhi shall have exclusive jurisdiction to entertain and try all matters arising out of this contract.

4.A.30. Termination for Default

4.A.30.1 The purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default, sent to the Tenderer, terminate this contract in whole or in part.

- a) If the tenderer fails to deliver any or all of the goods within the time period(s) specified in the contract.
- b) If the tenderer fails to perform any other obligation(s) under the contract; and
- c) If the tenderer, in either of the above circumstance(s) does not remedy his failure within a period of 30 days (or such longer period as the Purchaser may authorize in writing) after receipt of the default notice from the Purchaser.

4.A.31 Risk & Cost

If the contractor fails to deliver the equipment or honour the contractual commitment within the period fixed for such delivery in the contract, the Purchaser may terminate the Purchase order/LOA/ contract in whole or in part, the Purchaser may proceed to purchase, upon such terms and in such manner as it deems appropriate, goods similar to those undelivered at no risk and cost to contractor. However, the security deposit of tenderer shall be forfeited/ Performance Bank Guarantee shall be encashed. The failed tenderer shall not be permitted to take part in the tender for balance work.

4.A.31.1 The Maximum Liability of tenderer to any Loss/Damages to RailTel including Liquidity Damages and Performance Guarantee shall be limited to 100% of Value of contract.

4.A.32. Termination for Insolvency

The purchaser may at any time terminate the LOA/Sub PO/PO by giving written notice to the tenderer, without compensation to the tenderer, if the tenderer becomes bankrupt or otherwise insolvent as declared by the competent court provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Purchaser.

4.A.33. Rates During Negotiation

The tenderer/s shall not increase his/their quoted rates including payment terms in case the RailTel Administration negotiates for reduction of rates. Such negotiations shall not amount to cancellation or withdrawal of the original offer and the rates originally quoted will be binding on the tenderer/s.

4.A.34. Deleted

4.A.35. Submission of Offers

This e-tender should be duly submitted online using e-Procurement Portal <https://railtel.enivida.com>.

- a. The offer shall be submitted in two packet on eNivida Portal as per instructions given in Chapter-4B & 4C of tender.
- b. Tenderer shall quote in SOR provided in eNivida portal. In case the schedule of requirement quoted by tenderer is incomplete with reference to tender document, the offer is liable to be rejected.
- c. Any document submitted/uploaded in eNivida portal must be duly signed & stamped by the tenderer in each page.
- d. The rates quoted should be written both in words and figures. The unit of rates should be in metric system and as per tendered specification/schedule. In case of difference between words and figures, the rate in words will prevail. If there is a discrepancy between the unit price and total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected by the purchaser accordingly.
- e. Tenderers are requested to go through all the conditions of the tender document and note that, by submitting the tender documents, duly signed, they have accepted these conditions and undertake to abide by these conditions (unless specifically disagreed to clause wise).
- f. ATTESTATION OF ALTERATION: No scribbling is permissible in the tender documents. Tender containing erasures and alterations in the tender documents are liable to be rejected. Any correction made by the tenderer/ tenderers in his/their entries must be signed (not initialed) by him/them.

4.A.36. Constitution of Firm and power of Attorney

- 4.A.36.1. Any individual(s) signing the tender or other documents connected therewith should specify whether he is signing:-

- (a) As sole proprietor of the concern or as attorney of the sole Proprietor.
- (b) As a partner or partners of the firm.
- (c) As a Director, Manager or Secretary in the case of Limited Company duly authorized by a resolution passed by the Board of Directors or in pursuance of the authority conferred by Memorandum of Association.

4.A.36.2. In the case of a firm not registered under the Indian Partnership Act, all the partners or the attorney duly authorized by all of them should sign the tender and all other connected documents. The original Power of Attorney or other documents empowering the individual or individuals to sign should be furnished to the Purchaser for verification, if required.

4.A.36.3. The RailTel will not be bound by Power of Attorney granted by the tenderer or by the changes in the composition of the firm made subsequent to the execution of the contract agreement.

4.A.36.4. In case where the Power of Attorney partnership deed has not been executed in English, the true and authenticated copies of the translation of the same by Advocate, authorized translators of Courts and Licensed Petition Writers should be supplied by the Contractor(s) while tendering for the work.

4.A.36.5. The duly notarized Power of Attorney shall be submitted in original or duly signed.

4.A.37. Opening of Tender

4.A.37.1 Tenderer's Bid will be opened on specified date & time as mentioned in BDS (Chapter 5) of the tender in presence of such Tenderers/ Representatives who choose to be present.

4.A.38. Non-Transferability & Non-Refundability

The tender documents are not transferable.

4.A.39. Errors, Omissions & Discrepancies

The Contractor(s) shall not take any advantage of any mis-interpretation of the conditions due to typing or any other error and if in doubt, shall bring it to the notice of the purchaser without delay. In case of any contradiction only the printed rules, and books should be followed and no claim for the mis-interpretation shall be entertained.

4.A.40. Wrong Information by Tenderer

If the tenderer/s deliberately gives/give wrong information in his/their tender which creates/create circumstances for the acceptance of his/their tender the RailTel reserves the right to reject such tender at any stage.

4.A.41. Public Procurement:

4.A.41.1 Preference to Make in India: The provisions of the revised “Public Procurement (Preference to Make in India) Order 2017” dated 16.09.2020 (or subsequent revisions, if any till opening of tender) by Department of Promotion of Industry and Internal Trade (DPIIT), GoI shall apply to this tender.

- i. Only Class-I local suppliers (meeting minimum 50% local content) & Class-II local suppliers (meeting minimum 20% local content) are eligible to participate in this tender.
- ii. Minimum Local Content shall be 50% for purchase preference or as per the Notification No. 18-10/2017-IP dated 29th August 2018 issued by Department of Telecommunications, Ministry of Communications and Notification No. 33(1)/2017-IPHW dated 14.09.2017 issued by MeitY or latest notification issued till opening of tender.
- iii. Among all qualified bids, the lowest bid will be termed as L1. If L1 is Class-I local supplier, the contract will be awarded to L1. If L1 is not Class-I local supplier, the lowest bidder among the Class-I local supplier, will be invited to match the L1 price subject to local supplier’s quote price falling within the margin of purchase preference of 20%, and the contract shall be awarded to such Class-I local supplier subject to matching the L1 price. In case such lowest eligible Class-I local supplier fails to match the L1 price, the Class-I local supplier with the next higher bid within the margin of purchase preference of 20%, shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the Class-I local supplier within the margin of purchase preference of 20%, matches the L1 price, the contract may be awarded to the L1 bidder. Please refer clause-4.A.41.1 of Chapter-4A of this tender.
- iv. As per para 9 of PPP-MIII order 16.09.2020, bidder shall be required to indicate percentage of local content and provide self-certification in his bid (without mention of any price) that the item offered meets the local content requirement for Class-I/Class-II local supplier, as the case may be and shall also give details of the location(s) at which the local value addition is made. In case of procurement for a value in excess of Rs. 10 Crores, the bidder shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content. Bidder shall upload the certificate along with their techno-commercial bid. The bidder shall also provide calculation of Local Content with price Break-up of “Local Content” and “Imported Content” for each SOR item (certified by CA/Statutory Auditor) as per DPIIT’s PMI Policy and its clarifications and same shall be uploaded by the bidder along with their price bid. In case of any false declaration, action shall be taken in line with the provisions of the PPP-MIII order. **Performa for self-certification regarding local content is given in the Notification No. 18-10/2017-IP dated 29th August 2018 issued by Department of Telecommunications. Self certification in the prescribed performa is required to be submitted by both bidder and OEM. The cost of transportation, insurance, installation, commissioning, training and after sales service support like AMC/CMC etc. will not be taken into account for calculating local content in any item. The contact details of CA/Statutory Auditor along with UDIN No. shall be mandatorily mentioned on certificate from CA/Statutory Auditor.**

- v. **Self-certification of bidder as above shall be supported by the following certificate from Statutory Auditor engaged by the bidder, on the letter head of such Statutory Auditor. “We _____ the statutory auditor of M/s. __ (name of the bidder) hereby certify that M/s. _____ (name of bidder) meet the mandatory Local Content requirements of the Project Work under this tender i.e. __% (to be filled by the work center) quoted vide offer No. _____ dated _____ against RAILTEL tender No. _____ by M/s. _____ (Name of the bidder).**

Note: In case of bidder(s) for whom Statutory Auditor is not required as per law, required certificates shall be provided by a practicing Chartered Accountant.

- vi. Office Memorandum Dated 19.02.2020 (or latest) issued by Department of Telecommunications, Ministry of Communications shall be applicable for Clause 10(d) of Public Procurement (Preference to Make in India) Order, 2017.
- vii. **Official website of Department of Promotion of Industry and Internal Trade (DPIIT) i.e. “<https://dpiit.gov.in/public-procurements>” may be referred by tenderers for above mentioned orders or any revision issued. Frequently Asked Question (FAQ) available there may also be referred by tenderers.**

4.A.41.2 Bidders sharing a land border with India: Office Memorandum F.No.6/18/2019-PPD dated 23.07.2020 by Ministry of Finance, Department of Expenditure, Public Procurement Division shall also apply to this tender. **A certificate as per Appendix-I shall be submitted by all the bidders regarding their compliance with this order.** If such certificate given by a bidder whose bid is accepted is found to be false, this would be a ground for immediate termination and further legal action in accordance with law. Registration should be valid at the time of submission of bids and at the time of acceptance of bids. In respect of supply otherwise than by tender, registration should be valid at the time of placement of order.

4.A.42 Updation of Labour data on Railway’s shramikkalyan Portal:

A. Contractor is to abide by the provisions of Payment of Wages Act & Minimum Wages Act in terms of clause 54 and 55 of Indian Railways General Condition of Contract. In order to ensure the same, an application has been developed and hosted on website ‘www.shramikkalyan.indianrailways.gov.in’. Contractor shall register his firm/company etc. and upload requisite details of labour and their payment in this portal. These details shall be available in public domain. The Registration/updation of Portal shall be done as under:

- (a) Contractor shall apply for one-time registration of his company/firm etc. in the Shramikkalyan portal with requisite details subsequent to issue of Letter of Acceptance. Engineer shall approve the contractor’s registration on the portal within 7 days of receipt of such request.
- (b) Contractor once approved by any Engineer, can create password with login ID (PAN No.) for subsequent use of portal for all LOAs issued in his favour.
- (c) The contractor once registered on the portal, shall provide details of his Letter of Acceptance (LoA)/Contract Agreements on shramikkalyan portal within 15 days of issue of any LoA for approval of concerned engineer. Engineer shall

update (if required) and approve the details of LoA filled by contractor within 7 days of receipt of such request.

(d) After approval of LOA by Engineer, contractor shall fill the salient details of contract labours engaged in the contract and ensure updating of each wage payment to them on shramikkalyan portal on monthly basis.

(e) It shall be mandatory upon the contractor to ensure correct and prompt uploading of all salient details of engaged contractual labour & payments made thereof after each wage period.

B. While processing payment of any 'On Account bill' or 'Final bill' or release of 'Advances' or 'Performance Guarantee / Security deposit', contractor shall submit a certificate to the Engineer or Engineer's representatives that "I have uploaded the correct details of contract labours engaged in connection with this contract and payments made to them during the wage period in Railway's Shramikkalyan portal at 'www.shramikkalyan.indianrailways.gov.in' till _____Month, _____ Year."

4.A.43. Integrity Pact Program

RailTel has adopted Integrity Pact Program and for implementation thereof all tenders relating to procurement of OFC, quad cable, pre-fab shelters, electronic equipment and its installation and/or commissioning etc and other item(s) or activity/activities proposed to be carried out or required by the Company for the value exceeding Rs. 15 crores at a time including for repair and maintenance of cable/network and any other items required for special works assigned to RailTel will be covered under the Integrity Pact Program and the vendors are required to sign the IP document and submit the same to RailTel before or along with the bids.

a) Only those vendors who have purchased the tender document and signed the IP document can send their grievances, if any, to the Independent External Monitors (IEMNs) through the nodal officer, i.e. Chief Vigilance Officer (CVO), RailTel.

Name of IEMs and contact details:

1. Shri. Vinit Kumar Jayaswal
Add: E-34, Brahma Apartments, Plot-7, Sector-7,
Dwarka, New Delhi-110075.
E-Mail: gkvinit@gmail.com
Mob. No. +91-9871893484

2. Shri. Punati Sridhar
Add: 8C, Block 4, 14-C Cross, MCHS Colony,
HSR 6th Sector, Bangaluru560102
E-Mail: poonatis@gmail.com
Mob. No. +91-9448105097

Name & contact details of Nodal Officer (IP) in RailTel:

Shri Himanshu Kumar
GM/TP
RailTel Corporation of India Ltd
6th Floor, Office Block Tower-2, NBCC Complex,
East Kidwai Nagar, New Delhi-110023
E-Mail: himanshu@railtelindia.com

- b) If the order, with total value equal to or more than the threshold value, is split to more than one vendor and even if the value of PO placed on any/each vendor(s) is less than the threshold value, IP document having been signed by the vendors at bid stage itself, the Pact shall continue to be applicable.
- c) Bidder of Indian origin shall submit the Integrity Pact (in 2 copies) on a non-judicial stamp paper of Rs. 100/- duly signed by the person signing the bid. If the bidder is a partnership or a consortium, the Integrity Pact shall be signed by all the partners or consortium members.
- d) Deleted.
- e) The 'Integrity Pact' shall be submitted by the Bidder duly signed in all pages along with the Bid in a separate envelope, duly superscripted with 'Integrity Pact'. Tender received without signed copy of the Integrity Pact document will be liable to be rejected. Proforma for signing the Integrity Pact is available in Chapter-6 (Section-I) of this tender document (Form No. -13).
- f) One copy of the Integrity Pact shall be retained by RailTel and the 2nd copy will be issued to the representative of the bidders during bid opening. If the Bidders representative is not present during the Bid opening, the 2nd copy shall be sent to the bidder by post/courier.
- g) The Integrity Pact is applicable in this tender vide CVC circular no. 10/05/09 dated 18/05/09 and revised guideline of CVC circular no. 015/VGL/091 dated 13.01.17 or the latest updated from time to time shall be followed.

4.A.44 Compliance for procurement of Telecommunication equipment from trusted source

Department of Telecommunication (DOT) notification no. 20-1236/2021-AS-I Dated: 30.03.2021 regarding procurement of Telecommunications equipment from trusted source shall be applicable to this tender. Bidder/OEM should be registered on Trusted Telecom Portal. Bidder/OEM shall obtain Trusted Source certificate from concerned department of Government of India as defined in above mentioned notification before delivery of the equipment. Undertaking from OEM in this regard shall be submitted by the bidder along with technical bid.

4.A.45 Offered equipment should comply Mandatory Testing and Certification of Telecommunications equipment (MTCTE). MTCTE certificate for the offered equipment shall be submitted by the bidder.

4.A.46 Availability of Spares

4.A.46.1 The Tenderer shall warrant that spare part for the system would be available for minimum of 8 years from the date of commissioning.

4.A.46.2 Tenderer shall give at least one year advance intimation regarding stoppage of production of spares for the installed equipment besides ensuring their availability for a minimum period of 8 years.

4.A.46.3 RailTel shall hold successful bidder responsible for all SLAs mentioned in the RFP and subsequently in the contract document. However, for ensuring the same, Certificates from OEM and/or authorized vendors/representatives will be produced to confirm the life time maintenance support (three years warranty & five years AMC) by provisioning of spares.

4.A.47 Testing and Benchmarking

- 4.A.47.1 All parameters/specifications mentioned in this document will be verified by RailTel in the presence of authorized representative of the Bidder during testing and benchmarking.
- 4.A.47.2 Before start of testing, bidders will install their offered solution (as offered in their technical bid) in Delhi-Agra section or any other section as decided by RailTel and offer installation for checking by RailTel.
- 4.A.47.3 Bidders must ensure that make and model of Hardware & Software used should be same as offered in their submitted bids. The same will be verified by the RailTel representative. No deviation in make and model/version of Hardware/Software will be accepted. In case of any deviation from bidders offered solution, bidder will be declared unsuccessful.
- 4.A.47.4 RailTel will certify at the start of testing that the bidder has installed complete solution as per its offered solution submitted in bid documents clearly mentioning Make & Model, number of the hardware and make & version of software. RailTel will also ensure that the setup of bidder's solution remain same and intact during complete testing process.
- 4.A.47.5 Testing shall be completed by bidder within 30 days from the date of intimation to bidder. Bidder is required to meet all functional requirements given in Annexure-VI in this document for successful completion of testing & benchmarking. In case bidder fails either to arrange testing or to meet any functional requirement as per tender within given timeline, RailTel reserves the right to REJECT their bid. Extension of testing time period will be given only in exceptional cases beyond the control of bidder.
- 4.A.47.6 RailTel and authorized representative of Bidder are required to Jointly sign the report on completion of testing and benchmarking. In case of refusal to sign the Joint report by bidder, copy of report signed by RailTel will be sent to the bidder for information only. Final report for each bidder will be evaluated further for qualifying technically.
- 4.A.47.7 Financial bids will be opened for those bidders who have successfully completed the testing and benchmarking and qualified in technical bid.
- 4.A.47.8 Any additional Software/Hardware required for conducting testing and benchmarking shall be arranged by the bidder without any cost to the RailTel.
- 4.A.47.9 All type of charges for above testing shall be bear by the bidder. RailTel shall provide only rack space and power supply.

(End of chapter- 4A)

CHAPTER-4B

INSTRUCTIONS TO THE BIDDERS

4.B.0 General

These are the Special Instructions to the Bidders for Tendering.

The RailTel Tenders are published on www.railtelindia.com and on e-Procurement Portal <https://railtel.enivida.com>

For E-Tendering bids /information by bidders is to be submitted “Online” on e-Procurement Portal <https://railtel.enivida.com>. Any document / information pertaining to this tender will have to be submitted by the bidder on line. The digital signature of the tenderer on the e-tender form will be considered as confirmation that the tenderer has read, understood and accepted all the documents, unless special deviation is quoted by the tenderer in the technical & commercial deviation templates.

PLEASE NOTE ALL COLUMNS SHOULD BE FILLED AND BLANK COLUMNS, IF ANY, SHOULD BE MARKED AS NIL.

PLEASE READ CAREFULLY ALL THE CLAUSES OF THE TENDER BEFORE UPLOADING THE TENDER FORM. PLEASE SIGN ON EACH PAGE.

THE TENDERER MAY DOWNLOAD TENDER FORM FROM THE WEB SITE ‘www.railtelindia.com’ OR FROM THE e-Procurement Portal <https://railtel.enivida.com>’,

NOTE: For online bid submission the tenderer will have to necessarily download an official online copy of the tender documents from e-Procurement Portal <https://railtel.enivida.com> and this should be done well before the deadline for bid-submission.

4.B.1 Submission of the bid:

The bidder is required to submit the Technical bid and Price bid in eNivida portal before due date & time of submission of bids specified in this tender document.

4.B.2 Following documents shall be submitted in Technical and Price bid as given below:

(a) **“TECHNICAL BID”**; -The bid shall consist of the following:-

- 1) Offer Letter complete.
- 2) Signed Copy of Tender Document/ Corrigenda
- 3) **E-receipt of EMD**
- 4) **E-receipt of Tender fee.**
- 5) **Power of attorney** to be submitted in accordance with Clause-4.A.36.5, Chapter-4A of Tender Document.
- 6) **Indemnity Bond** (Form No. 7 of Chapter-6).
- 7) **In case bidder happens to be an eligible MSE**, the documentary evidence for same shall be submitted (clause 4.A.23, chapter-4A).

- 8) Specific authorization addressed to RailTel from the OEM (Parent Company) for Indian Subsidiary or authorized partner i.e. **Manufacturer Authorization Form** (Form no. 5 of Chapter-6).
- 9) Complete technical data and particulars of the equipment offered, as specified in the Tender document together with descriptive literature, leaflets, Drawings, if any, complete with list etc.
- 10) **System Performance Guarantee** (form no. 2, chapter-6).
- 11) **Acceptance for Long Term Maintenance Support** as per Clause 4.A.3.5, Chapter-4A of Tender Document (form no. 3, chapter-6).
- 12) Declaration regarding acceptance of clarification issued from DoT (Clause 4.A.17.2, Chapter 4A of Tender Document).
- 13) Schedule of Requirements with quantities but with prices blanked out (this will be a replica of price bid with prices blanked out) and detailed unpriced Bill of Material including break up of common units/cards/backplane/Fan Tray unit etc. for building up the SOR items for supply.
- 14) Clause wise compliance to tender conditions as per clause 4.A.25 of Chapter-4A.
- 15) Documentary proof of qualifying criteria (Clause 4.A.12 of Chapter 4A of Tender Document)
- 16) Form no. 4,6,10,11, 12, 13, 14 & 15 of Chapter-6.
- 17) Form No. 8 & 9 of Chapter-6, if applicable
- 18) Certificate of Local Content as per clause 4.A.41.1, Chapter-4A
- 19) Certificate by bidders sharing a land border with India as per clause 4.A.41.2, Chapter-4A.
- 20) Any other document asked in the tender but not listed above.
- 21) Any Other information desired to be submitted by the tenderer.
- 22) Un-priced SOR & Un-priced BOM (duly vetted by OEM)

b) “Price Bid” Shall contain

The price bid for “Schedule of requirements” as per Note of Chapter 2 along with “Bill of Material” (BOM) for each item quoted exactly according to the proforma, as also submitted along with “Technical Bid”. Calculation of Local Content as per clause 4.A.41.1, Chapter-4A.

Note: Non submission of the above-mentioned documents may lead to rejection of the bid

4.B.3. Fax Quotations & Late Tenders:

Fax Tender documents and Late/Delayed tenders would not be considered.

4.B.4. Attendance of Representatives for Tender Opening:

Representatives of tenderers desirous to attend the tender opening can do so on production of a proper letter of authority from the respective firm, failing which they may not be allowed to attend the tender opening.

4.B.5. Addenda / Corrigenda:

Addenda / Corrigenda to the tender documents may be issued by RailTel prior to the date of opening of the tenders, to clarify or reflect modifications in the contract terms and conditions or in the design. Such addendum/corrigendum shall be available on RailTel Website, eNivida portal and CPP. Tenderers who are unable or unwilling to bring their tenders to conform to the requirements of the RailTel are liable to be rejected.

4.B.6 Bid submission and Opening date

1. The bid should be submitted along with Technical & Price bid document (all documents) in eNivida portal as per date & time given in the Bid Data Sheet (BDS).
2. The tenderer's bids will be opened at the time & date of opening of the tender given in the Bid Data Sheet (BDS) in presence of such Tenderers/ Representatives who choose to be present.
3. Bids received after due date and time shall be summarily rejected and shall not be opened.

4.B.7 Submission of offline documents:

Original copy of following documents is needed to be submitted by the bidders offline before due date & time of submission of bids at RailTel Corporation of India Ltd., Institutional area, plot no. 143, Sector 44, Gurugram, Haryana. The packet containing the original copies should be sealed by the personal seal of the bidder. The envelop shall bear name of work, the tender no. and the words "DO NOT OPEN Before" (-due date and time -).

- a. Power of Attorney.
- b. Form No. 2 (System Performance Guarantee), Form No, 3 (Performa for Long Term Maintenance Support), Form No. 5 (Manufacturer Authorization Form), Form No. 7 (Standing Indemnity Bond), Form no. 8 (Affidavit), Form no. 9 (Consortium agreement), Form No. 10 (Joint venture agreement), Form no. 11 (Affidavit) and 2 original copies of Form no. 13 (Integrity Pact).

Non submission of original copy of above documents may lead to rejection of the bid.

4.B.8 Clarification Requests:

The written queries/ clarification request may be sent to RailTel's office through e-mail to savita.singla@railtelindia.com with copy to ravi_viswakarma@railtelindia.com (in pdf & excel format) or by post latest by the date as indicated in the Bid Data sheet (BDS).

Reply of relevant clarifications sought will be uploaded in eNivida portal. Clarifications sought shall be submitted in the following format:

Queries/Clarifications from M/s -----						
SN	Clause no. & Chapter no.	Page no.	Sub-clause no./ Point no.	Content of the clause requires clarification	Points of clarification required	Remarks

(End of Chapter- 4B)

CHAPTER-4C

E-tendering Instructions to Bidders

4.C.0 GENERAL:

These Special Instructions (for e-Tendering) supplement 'Instruction to Bidders', as given in Chapter- 4B of the Tender Document. Submission of Bids only through online process is mandatory for this Tender.

E-Tendering is a new methodology for conducting Public Procurement in a transparent and secured manner. Now, the Government of India has made e-tendering mandatory. Suppliers/ Vendors will be the biggest beneficiaries of this new system of procurement. For conducting electronic tendering, RailTel has decided to use the portal <https://railtel.enivida.com>. Bidder Enrolment can be done using "Online Bidder Enrolment".

The instructions given below are meant to assist the bidders in registering on the e-tender Portal, and submitting their bid online on the e-tendering portal as per uploaded bid. More information for submitting online bids on the eNivida Portal may be obtained at: <https://railtel.enivida.com>

4.C.1 GUIDELINES FOR REGISTRATION:

1. Bidders are required to enroll on the e-Procurement Portal:
<https://railtel.enivida.com/bidderRegistration/newRegistration> or click on the link "Bidder Enrolment" available on the home page of e-tender Portal by paying the Registration fee of Rs.2000/-+Applicable GST.
2. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their account.
3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication with the bidders.
4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (**Only Class III Certificates with signing + encryption key usage**) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.) with their profile.
5. Only valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
6. Bidder then logs in to the site through the secured log-in by entering their user ID /password and the password of the DSC /e-Token.
7. The scanned copies of all original documents should be uploaded in pdf format on e-tender portal.

8. After completion of registration payment, bidders need to send their acknowledgement copy on our help desk mail id eprocurement@railtelindia.com for activation of account.

4.C.2 SEARCHING FOR TENDER DOCUMENTS:

1. There are various search options built in the e-tender Portal, to facilitate bidders to search active tenders by several parameters.
2. Once the bidders have selected the tenders they are interested in, bidders can pay the Tender fee and processing fee (NOT REFUNDABLE) by net-banking / Debit / Credit card then bidder may download the required documents / tender schedules, Bid documents etc. Once bidder pay both fee tenders will be moved to the respective 'requested' Tab. This would enable the e- tender Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.

4.C.3 PREPARATION OF BIDS:

1. Bidder should take into account any corrigendum published on the tender document before submitting their bid.
2. Please go through the tender notice and the tender document carefully to understand the documents required to be submitted as part of the bid.
3. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF formats. Bid Original documents may be scanned with 100 dpi with Colour option, which helps in reducing size of the scanned document.
4. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, GST, Annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Documents" available to them to upload such documents.
5. These documents may be directly submitted from the "My Documents" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process. Already uploaded documents in this section will be displayed. Click "New" to upload new documents.

4.C.4 SUBMISSION OF BIDS:

1. Bidder should log into the website well in advance for the submission of the bid so that it gets uploaded well in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
2. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document as a token of acceptance of the terms and conditions

laid down by RailTel.

3. Bidder has to select the payment option as “e-payment” to pay the tender fee / EMD as applicable and enter details of the instrument.
4. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the white Colored (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.
5. The server time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
6. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
7. Upon the successful and timely submission of bid click “Complete” (i.e. after Clicking “Submit” in the portal), the portal will give a successful Tender submission acknowledgement & a bid summary will be displayed with the unique id and date & time of submission of the bid with all other relevant details.
8. The tender summary has to be printed and kept as an acknowledgement of the submission of the tender. This acknowledgement may be used as an entry pass for any bid opening meetings.

Note: Bidder has to submit all required document online only. Original copy is needed to be submitted by the successful bidder before due date and time of submission of bids.

4.C.5 For any clarification in using eNivida Portal:

1. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
2. Any queries relating to the process of online bid submission or queries relating to e-tender Portal in general may be directed to the Helpdesk Support.

Please feel free to contact eNivida Helpdesk (as given below) for any query related to e-tendering.

Phone No. 011-49606060/8448288988, EMail id: eprocurement@railtelindia.com

(End of Chapter- 4C)

CHAPTER- 5
BID DATA SHEET (BDS)

The section consists of provisions that are specific to various Clauses of the tender document.

Clause	Description
Clause A.A.1.2, Chapter-4A	Validity of offer 120 days from the date of opening of tender including date of opening.
Clause 4.A.2.1, Chapter-4A	Warranty 36 months from the date of issue of PAC ((comprising of 12 months of Maintenance Supervision between issue of PAC and FAC, followed by 24 months of warranty support).
Clause 4.A.3.1, Chapter-4A	Long Term Maintenance Support (AMC) 5 Years from the date of completion of Warranty.
Clause 4.A.4, Chapter-4A	Delivery, installation, Commissioning & Integration period 180 days from date of issue of LOA/Purchase Order.
Clause 4.A.6, Chapter-4A	Performance Bank Guarantee (Security Deposit) Performance Bank Guarantee of 10% of total value of the LOA/PO is required to be submitted within 30 days of issue of LOA/PO. Validity of this shall be 3 months beyond warranty period.
Clause 4.A.12, Chapter-4A	Qualifying Criteria
Clause 4.A.18.1, Chapter-4A	Purchaser's Right to Vary Quantities (A) Upto maximum extent of +/- 50% subject to following condition i. Upto +25% with no rebate. ii. From +25% to +40% with 2% rebate iii. From +40% to +50% with 4% rebate (B) For variation beyond +50% of the quantity mentioned in the SOR may be done after proper negotiation with the selected bidder.
Clause 4.A.22.1, Chapter-4A	Earnest Money Deposit (EMD)/ Bid Security Rs. 31.44 Lakhs
Clause 4.B.8, Chapter-4B	Last date of submission of queries/ clarification request: Date: 28.08.2024
Tender Notice	Last date & time of submission of offer (Online) Date: 09.09.2024 and Time: 15:00 hours
Clause 4.A.37.1, Chapter-4A	Date & time of Opening of Tender (Online) Date: 09.09.2024 and Time: 15:30 hours

Note: If the details given in BDS contradict with referred clause in the detailed tender document, the details in BDS will have overriding priority over the referred clause in the tender document.

(End of Chapter- 5)

CHAPTER- 6

Form No. 1

PROFORMA FOR PERFORMANCE BANK GUARANTEE

PERFORMANCE BANK GAURANTEE BOND
(On Stamp Paper of Rs one hundred)
(To be used by approved Scheduled Banks)

1. In consideration of the RailTel Corporation of India Limited., Plate-A, 6th Floor, Office Tower-2, NBCC Building, East Kidwai Nagar, New Delhi-110023 (Herein after called RailTel) having agreed to exempt(Hereinafter called “the said Contractor(s)”) from the demand, under the terms and conditions of an Agreement No.....dated.....made between.....and..... for (hereinafter called “the said Agreement”) of security deposit for the due fulfillment by the said Contractor (s) of the terms and conditions contained in the said Agreement, on production of a Bank Guarantee for Rs.(Rs only). We (indicate the name of the Bank) hereinafter referred to as “the Bank”) at the request of Contractor(s) do hereby undertake to pay the RailTel an amount not exceeding Rs. against any loss or damage caused to or suffered or would be caused to or suffered by the RailTel by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the said Agreement.
2. We , Bank and our local branch at New Delhi (indicate detail address of local New Delhi branch with code no.) do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on demand from the RailTel stating that the amount is claimed is due by way of loss or damage caused to or would be caused to or suffered by the RailTel by reason of breach by the said Contractor(s) of any of terms or conditions contained in the said Agreement or by reason of the Contractor(s) failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs
3. We, bank undertake to pay to the RailTel any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) / Tenderer(s) in any suit or proceedings pending before any court or Tribunal relating thereto our liability under this present being, absolute and unequivocal. The payment so made by us under this Bond shall be a valid discharge of our liability for payment there under and the Contractor(s) / Tenderer(s) shall have no claim against us for making such payment.
4. We, Bank further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the RailTel under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till RailTel certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the

said Contractor(s) and accordingly discharges this Guarantee. Unless a demand or claim under the Guarantee is made on us in writing on or before the We shall be discharged from all liability under this Guarantee thereafter.

5. We,..... (indicate the name of Bank) further agree with the RailTel that the RailTel shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the Agreement or to extend time of to postpone for any time or from time to time any of the powers exercisable by the RailTel against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension to the said Contractor(s) or for any forbearance, act or omission on the part of RailTel or any indulgence by the RailTel to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have affect of so relieving us.

This Guarantee will not be discharged due to the change in the Constitution of the Bank or the Contractor(s) / Tenderer(s).

We, the Bank further agree that this guarantee shall be invokable at our place of business at/New Delhi (indicate detailed address of local New Delhi Branch with code no.). The branch at New Delhi is being advised accordingly.

(indicate the name of Bank) lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the RailTel in writing.

Dated the day of ,20--

for
(indicate the name of the Bank)

Witness

1. Signature
Name

2. Signature
Name

PROFORMA FOR THE SYSTEM PERFORMANCE GUARANTEE
(On Stamp Paper of Rs. one hundred)

To

**RailTel Corporation of India Limited
Plate-A, 6th Floor, Office Tower-2,
NBCC Building, East Kidwai Nagar,
New Delhi-110023**

I / We hereby guarantee that the design on the basis of which we have submitted our tender no. has been carefully made to conform to the end objectives in the tender documents and to technical specification therein. We further guarantee that in the event of the performance of the system, when installed, not complying with the end objectives or with the specifications contained in the tender documents, we shall provide further inputs to enable the RailTel to realize the end objectives contained in these documents without any additional payment for any additional equipment which may be required in this regard. We further guarantee that all the expenses for providing the additional inputs under the System Guarantee will be borne by us. We further guarantee that these additional inputs will be provided by us to make the system workable within 1 month from the date on which this guarantee is invoked by the Purchaser. The guarantee is valid for a period of one year from the date of commissioning of the system.

(Signature of Firm's Authorized Officer)
Seal

Signature of witness:

1.

2.

**PROFORMA FOR THE LONG TERM MAINTENANCE SUPPORT
(To be signed O.E.M. on their respective Letter Head)**

To
**RailTel Corporation of India Limited,
Plate-A, 6th Floor, Office Tower-2,
NBCC Building, East Kidwai Nagar,
New Delhi-110023**

Applicable for OEM directly participating in the tender

I / We hereby confirm that we have read specifications & tender conditions of RailTel Tender No.and accept that the requirement of Long Term Maintenance Support as per Clause 4.A.3 of Chapter-4A shall be met **by us directly or through our subsidiary in India** as per rates quoted in the Price Bid. I / We shall provide services as per terms and conditions pertaining to Long Term Maintenance Support of tender document.

Or

Applicable for Authorized representative of OEM participating in the tender (To be signed by OEM)

I / We hereby confirm that we have read specifications & tender conditions of RailTel Tender No.and accept that the requirement of Long Term Maintenance Support as per Clause 4.A.3 of Chapter-4A shall be met **by Authorized Distributor/Partner of OEM. However, if Authorized Distributor/Partner fails to fulfil the support obligation due to any un-foreseen circumstances, the same shall be provided by us directly or through our subsidiary in India or through authorized Indian representative for the mentioned/remaining period at the quoted prices by the bidder. I/We have gone through the requirement mentioned in the Tender Document and shall provide services as per terms and conditions** pertaining to Long Term Maintenance Support of tender document.

(Signature of OEM's Authorized Officer)
Seal

Signature of witness:

1.
2.

Note: Submission of above format is mandatory and required to be submitted by both OEM and Bidder separately on their respective letter heads. Any deviation / non acceptance may lead to rejection of the bid.

CHECKLIST OF ESSENTIAL DOCUMENTATION/ACTIVITY

Note: Tenderer is required to submit offer as per following check list by giving page no. of submitted documents

SN	Item/Clause of Tender Document	Details/Remarks
1	Signed Copy of Tender Document/ Corrigenda	
2	EMD & Cost of Tender document	
3	Offer Letter duly signed by authorized signatory (Chapter -1 of Tender Document)	
4	Bidder should have authorization specific to this tender from respective OEM as per Form no. 5 of Chapter-6. (Point-6, Clause 4.A.12.2, Chapter- 4A of Tender Document)	
5	Power of Attorney to Signing the Bid & Board resolution (Clause 4.A.36, Chapter- 4A of Tender Document)	
6	Clause wise compliance (Clause 4.A.25.1 and 4.A.25.2 of Chapter-4A)	
7	Declaration regarding acceptance of clarification issued from DoT for Latest Security Clause which includes sign of Agreement between RailTel & Vendor/OEM (Clause 4.A.17.2, Chapter- 4A of Tender Document)	
8	Documentary proof for qualifying criteria (Clause 4.A.12, Chapter 4A of Tender Document)	
9	Complete technical data and particulars of the equipment offered, as specified in the Tender papers together with descriptive literature, leaflets, Drawings, if any, complete with list etc.	
10	Form no. 2 (System Performance Guarantee) (Clause 4.A.15.2 Chapter-4A of Tender Document)	
11	Form no. 3 (Undertaking for Long Term Maintenance Support from OEM) (Clause 4.A.3, Chapter-4A of Tender Document)	
12	Form No. 6 of Chapter-6- RTGS Payment	
13	Form No. 7 of Chapter-6- Indemnity Bond.	
14	Form No. 8, 9 & 10 of Chapter-6, if applicable	
15	Form No. 11 of Chapter-6- Affidavit as per clause 4.A.12 of Chapter- 4A	
16	Form No. 12 of Chapter-6 (Nil Deviation Component Compliance)	
17	Form no. 13 of Chapter-6- Integrity Pact	
18	Form no. 14 of Chapter-6- No Malicious Code	

SN	Item/Clause of Tender Document	Details/Remarks
19	Form no. 15 of Chapter-6 (details of offered equipment and credentials submitted against eligibility criteria)	
20	i) Schedule of Requirements (SOR) with quantities but with prices blanked out (this will be a replica of price bid with prices blanked out) and ii) Detailed unpriced Bill of Material including break up of common units/cards/backplane/SFP/Fan Tray unit etc. for building up the SOR items for supply. iii) Site wise distribution of materials as per BOM.	
21	Certificate of Local Content as per clause 4.A.41.1 of Chapter-4A (without calculation sheet)	
22	Appendix-I: Certificate by bidders sharing a land border with India as per clause 4.A.41.2 of Chapter-4A	
23	Certificate of MSME, if applicable as per clause 4.A.23 of Chapter-4A	
24	Documents/certificates as asked in Chapter-3A (Technical requirement and Specifications)	
25	Undertaking of Trusted Source of offered equipment as per clause 4.A.44 of Chapter-4A	
Document uploaded along with Financial Bid/Price Bid Only.		
1	Price Bid for Schedule of Requirements as per Chapter-2	
2	Unit rate analysis of each SOR item with break-up of taxes/duties as per proforma attached as Annexure- A and B of Chapter-2	
3	Bill of Material (BOM) with prices of each module/cards etc.	
4	Calculation sheet of Local Content as per clause 4.A.41.1 of Chapter-4A	

Note:

- i. All document need to be submitted online only. Original documents as mentioned in Clause 4.B.7 of Chapter-4B are needed to be submitted by the bidders before due date and time of bid submission.**
- ii. Document submitted along with technical bid should not include any prices, if found so, the bid may liable to be rejected.**
- iii. Non submission/ non-compliance of above documents as detailed in above Check List will make the offer liable to be rejected.**

Manufacturer Authorisation form (MAF)

To
RailTel Corporation of India Limited,
Plate-A, 6th Floor, Office Tower-2,
NBCC Building, East Kidwai Nagar,
New Delhi-110023

Dated: _____

Subject: Manufacturer Authorisation form (MAF) to M/s for
.....

Ref: Tender No.....dated.....

Dear Sir,

We, M/s....., are established and reputed manufacturer and service provider of
.....(Product details), having our registered office at
.....

We hereby authorise M/s (bidder name), Office
..... to participate in bid and subsequently upon
award of the bid to execute -----(Name of work) & AMC of our range of products against your
above said bid.

We further extend our warranty for three years for our range of products offered by M/s
..... against the above-said bid.

Thanking you,
Best regards,

Authorised Signatory of OEM

Format for instruction to be provided by vendor/contractor for RTGS payment to be made to them by RailTel against tenders.

Date:

To

RailTel Corporation of India Ltd.
Plate-A, 6th Floor, Office Tower-2,
NBCC Building, East Kidwai Nagar,
New Delhi-110023.

Dear Sir,

Re: Option for payment of our bills/dues relating to tenders floated by RailTel.

Kindly refer to tender no. _____ dated _____
Which was awarded /participated to / by our company as per your award letter no. _____ dated _____ against the above PO/LOA participated/awarded to us, we authorize you make payment of dues/bills to us in RTGS/EFT mode against the particulars mentioned below:

1. Name of the agency as given in Bank account
2. Name of the Bank
3. Bank Branch & address
4. Bank account no.
5. Bank account type (savings / current/Over Draft)
6. IFSC code
7. NEFT Code
8. Agency's Address
9. Agency's telephone & mobile no.
10. GST Registration Details.

We also enclose herewith a copy of canceled cheque of the above mentioned bank account for verification of particulars.

I hereby declare that the above particulars given above are correct and complete.

Encl: As above.

(Sign & Seal of the Vendor)

Certified that the particulars furnished at item no. 1 to 6 above are correct as per our records.

**Signature of Authorized
Official from the bank.**

STANDING INDEMNITY BOND

(For on Account Payments and Stores supplied by RailTel)
(On Stamp Paper of Rs one hundred)

We, M/s _____ hereby undertake that we hold at our Stores Depot/s at _____ for and on behalf of RailTel Corporation of India Limited in the premises through ED/RGM/RailTel/----- Region or his successor hereinafter referred to as “the Purchaser” all materials for which ‘On Account’ payments have been made to us against the Contract for _____ vide letter of Acceptance/PO of Tender No. _____ and the materials handed over to us by the Purchaser for all purpose of execution of the said Contract, until such time the materials are duly erected or otherwise handed over to him.

We shall be entirely responsible for the safe custody and protection of said materials against all risk till they are duly delivered as erected equipment to the purchaser or as he may direct otherwise and shall indemnify the Purchaser against any loss, damage or deterioration whatsoever in respect of the said materials while in our possession and against disposal of surplus materials. The said materials shall at all times be open to inspection by any engineer authorized by the Regional General Manager (RGM)/Executive Director (ED) ----- Region (whose address will be intimated in due course).

Should any loss, damage or deterioration of materials occur or surplus materials disposed off and refund becomes due, the purchaser shall be entitled to recover from us the full cost as per prices included in the Contract (as applicable) and also compensation for such loss or damage, if any, along with the amount to be refunded without prejudice to any other remedies available to him by deduction from any sum due or any sum which at any time hereafter becomes due to us under the said or any other Contract.

In the event of any loss, damage or deterioration as aforesaid the assessment of such loss or damage and the assessment of such compensation therefore would be made by the RGM/ED/RailTel/-----Region, or his authorized nominee and the said assessments shall be final and binding upon us.

Dated this _____ day of _____, 20--

for and on behalf of M/s
_____ (Contractor)

Signature of witness
Name and witness in Block letters
Address

AFFIDAVIT

(To be given separately by each Consortium/Joint Venture Member of the Bidder on Stamp Paper of appropriate value)

I, _____ S/o _____, Resident of _____, the _____ [insert designation] of the [insert name of single bidder / Consortium/Joint Venture member if Consortium/Joint Venture] do solemnly affirm and state as follows:

1. I say that I am the authorized signatory of [insert name of Company/Consortium/Joint Venture member (here in after referred to as “Bidder/Consortium/Joint Venture Member”) and I am duly authorized by the Board of Directors of the Bidder/Consortium/Joint Venture Member to swear and depose this Affidavit on behalf of the Bidder/Consortium/Joint Venture Member.
2. I say that I have submitted information with respect to our eligibility for RailTel Corporation of India Ltd. (herein after referred to as “RailTel”) (**NAME OF WORK**) (hereinafter referred to as “Project”) Request for Proposal (‘RFP’) document and I further state that all the said information submitted by us is accurate, true and correct and is based on our records available with us.
3. I say that, we hereby also authorize and request any bank, authority, person or firm to furnish any information, which may be requested by RailTel to verify our credentials /information provided by us under this tender and as may be deemed necessary by RailTel.
4. I say that if at any point of time including the extension period, incase RailTel requests any further/additional information regarding our financial and/or technical capabilities, or any other relevant information, we shall promptly and immediately make available such information accurately and correctly to the satisfaction of RailTel.
5. I say that, we fully acknowledge and understand that furnishing of any false or misleading information by us in our RFP shall entitle us to be disqualified from the tendering process for the said Project. The costs and risks for such disqualification shall be entirely borne by us.
6. I state that all the terms and conditions of the Request for Proposal (RFP) Document has been duly complied with.

DEPONENT

VERIFICATION

I, the above-named deponent, do verry that the contents of paragraphs 1 to 6 of this affidavit are true and correct to my own knowledge. No part of it is false and nothing material has been concealed. Verified at _____, on this _____ day of _____,20--.

DEPONENT

CONSORTIUM AGREEMENT/MEMORANDUM OF AGREEMENT
(On Stamp Paper of Rs one hundred)

This Consortium Agreement is executed at _____ on this _____ day of 20--

BETWEEN

M/s _____, a company incorporated under the Companies Act, 1956 and having its Registered Office at _____ acting through its Managing Director, duly authorized by a resolution of the Board of Directors dated _____ (hereinafter referred to as the 'LEAD MEMBER' which expression unless executed by or repugnant to the subject or context be deemed to mean and include its successors in interest, legal representatives, administrations, nominees and assigns) of the ONE Part;

AND

M/s _____, a Company having its Office at and Office at _____, acting through its Joint President/ MD/..., duly authorized by are solution of the Board of Directors dated (hereinafter referred to as the ('Participant member') which expression unless excluded by or repugnant to the subject or context be deemed to mean and include its success or sin interest legal representatives, administrators, nominees and assigns) of the OTHER PART'

AND

M/s., a Company having its Office at and Office at _____, acting through its Joint President/ MD/..., duly authorized by are solution of the Board of Directors dated (hereinafter referred to as the ('Participant member') which expression unless excluded by or repugnant to the subject or context be deemed to mean and include it success or sin interest legal representatives, administrators, nominees and assigns) of the OTHER PART'

Whereas RailTel Corporation of India Ltd. (hereinafter referred to as 'RailTel') has invited tenders for the "**(NAME OF WORK)**" in terms of the tender documents issued for the said purpose and the eligibility conditions required that the applicants bidding for the same should meet the conditions stipulated by RailTel for participating in the bid by the Consortium for handling the project for which the tender has been floated by RailTel.

AND WHEREAS in terms of the bid documents the parties jointly satisfy the eligibility criteria laid down for a bidder for participating in the bid process by forming a Consortium between themselves.

AND WHEREAS the parties here to have discussed and agreed to form a Consortium for participating in the aforesaid bid and have decided to reduce the agreed terms to writing.

NOW THIS CONSORTIUM Agreement here by WITNESSES:

1. That in the premises contained herein the Lead Member and the Participant Member having

decided to pool their technical know-how, working experiences and financial resources, have formed themselves into a Consortium to participating the tender process for “(NAME OF WORK)” in terms of the tender invited by RailTel Corporation of India Ltd. (RailTel).

2. That the members of the Consortium have represented and assured each other that they shall abide by and be bound by the terms and conditions stipulated by RailTel for awarding the tender to the Consortium so that the Consortium may take up the aforesaid “(NAME OF WORK)” in case the Consortium turns out to be the successful bidder in the bid being invited by RailTel for the said purpose.
3. That the members of the Consortium have satisfied themselves that by pooling their technical know-how and technical and financial resources, the Consortium fulfills the prequalification/ eligibility criteria stipulated for a bidder, to participate in the bid for the said tender process for “(NAME OF WORK)”
4. That the Consortium have agreed to nominate any one of _____, _____ and _____ as the common representative who shall be authorized to represent the Consortium for all intents and purposes for dealing with the Government and for submitting the bid as well as doing all other acts and things necessary for submission of bid documents such as Tender Application Form etc., Mandatory Information, Financial Bid. Etc. and such other documents as maybe necessary for this purpose.
5. That if any change in the membership of the Consortium be required to be made by the members of the Consortium, the same shall be done with the consent of RailTel subject to the conditions as maybe stipulated by them in this regard.
6. That in case to meet the requirements of bid documents or any other stipulations of RailTel, it becomes necessary to execute and record any other documents amongst the members of the Consortium, they undertake to do the needful and to participate in the same for the purpose of the said project.
7. That it is clarified by and between the members of the Consortium that execution to this Consortium Agreement by the members of the Consortium does not constitute any type of partnership for the purposes of provisions of the Indian Partnership Act and that the members of the Consortium shall otherwise be free to carry on their independent business or commercial activities for their own respective benefits under their own respective names and styles. This Consortium Agreement is limited in its operation of the specified project.
8. That the Members of the Consortium under take to specify their respective roles and responsibilities for the purposes of implementation of this Consortium Agreement and the said project, if awarded to the Consortium, to meet the requirements and stipulations of RailTel.
9. The consortium formed will not be subject to alteration with regard to change in constituting firms and/or reorientation of roles. Any changes, if proposed by Consortium to take advantage of certain developments during evaluation stage will render the bid liable to be rejected.
10. All partners of the consortium shall be jointly and severally liable to RailTel for the execution of the entire contract in accordance with its terms.

11. Each Consortium member has minimum 20% contribution in the work and role/scope of each member is enclosed.
12. Power of Attorney by all members of the Consortium in favor of the Lead Member is also enclosed.

IN FAITH AND TESTIMONY WHEREOF, THE PARTIES HERE TO HAVE SIGNED THESE PRESENTS OF THE DATE, MONTH AND YEAR FIRST ABOVE WRITTEN.

1. _____	2. _____	3. _____
Managing Director	Managing Director	Managing Director
(_____) For (Name of company)	(_____) For (Name of company)	(_____) For (Name of company)

WITNESSES:

1. _____

2. _____

Enclosure:

Board resolution of each of the Consortium Members authorizing:
 (i) Execution of the Consortium Agreement, and
 (ii) Appointing the authorized signatory for such purpose.

JOINT VENTURE AGREEMENT/ MEMORANDUM OF AGREEMENT

(On Stamp Paper of Rs one hundred)

This Joint Venture Agreement/Memorandum of Agreement is executed at _____ on this day of ,20--.

BETWEEN

M/s _____, a company incorporated under the Companies Act, 1956 and having its Registered Office at _____ acting through its Managing Director, _____ duly authorized by a resolution of the Board of Directors dated _____ (hereinafter referred to as the 'LEAD MEMBER' which expression unless executed by or repugnant to the subject or context be deemed to mean and include its successors in interest, legal representatives, administrations, nominees and assigns) of the ONE Part;

AND

M/s _____, a Company in corporate under the Companies Act,1956 and having its Registered Office at _____ and office at _____, acting through its Joint President, duly authorized by a resolution of the Board of Directors dated _____ (hereinafter referred to as the ('Participant member') which expression unless excluded by or repugnant to the subject or context be deemed to mean and include its successors in interest, legal representatives, administrators, nominees and assigns) of the OTHERPART'

AND

M/s. _____, a Company incorporated under the Companies Act, 1956 and having its Registered Office at _____ and Office at _____, acting through its Joint President, duly authorized by a resolution of the Board of Directors dated _____ (hereinafter referred to as the ('Participant member') which expression unless excluded by or repugnant to the subject or context be deemed to mean and include its successors in interest, legal representatives, administrators, nominees and assigns) of the OTHERPART'

Whereas RailTel Corporation of India Ltd. (hereinafter referred to as 'RailTel') has invited tenders for the "(NAME OF WORK)" in terms of the tender documents issued for the said purpose and the eligibility conditions required that the applicants bidding for the same should meet the conditions stipulated by RailTel for participating in the bid by the Joint Venture for handling the project for which the tender has been floated by RailTel.

AND WHEREAS in terms of the bid documents the parties jointly satisfy the eligibility criteria laid down for a bidder for participating in the bid process by forming a Joint Venture between themselves.

AND WHEREAS the parties here to have discussed and agreed to form a Joint Venture for participating in the afore said bid and have decided to reduce the agreed terms to writing. NOW THIS JOINT VENTURE AGREEMENT/Memorandum of Agreement here by WITNESSES:

1. That in the premises contained herein the Lead Member and the Participant Member having

decided to pool their technical know-how, working experiences and financial resources, have formed themselves into a Joint Venture to participate in the tender process for “(NAMEOFWORK)” in terms of the tender invited by RailTel Corporation of India Ltd. (RailTel).

2. That the members of the Joint Venture have represented and assured each other that they shall abide by and be bound by the terms and conditions stipulated by RailTel for awarding the tender to the Joint Venture so that the Joint Venture may take up the aforesaid “(NAMEOFWORK)” in case the Joint Venture turns out to be the successful bidder in the bid being invited by RailTel for the said purpose.
3. That the members of the Joint Venture have satisfied themselves that by pooling their technical know-how and technical and financial resources, the Joint Venture fulfills the prequalification/eligibility criteria stipulated for a bidder, to participate in the bid for the said tender process for “(NAMEOF WORK)”
4. That the Joint Venture have agreed to nominate anyone of, and as the common representative who shall be authorized to represent the Joint Venture for all intents and purposes for dealing with the Government and for submitting the bid as well as doing all other acts and things necessary for submission of bid documents such as Tender Application Form etc., Mandatory Information, Financial Bid. Etc. and such other documents as may be necessary for this purpose.
5. That the shareholding of the members of the Joint Venture for this specified purpose shall be as follows:
 - (i) The Lead Member shall have percent (%) of share Holding/participation with reference to the Joint Venture for this specified project.
 - (ii) The Participant Member shall have percent (%) of shareholding/participation with reference to the Joint Venture for this specified project.
 - (iii) The Participant Member shall have percent (%) of shareholding/participation with reference to the Joint Venture for this specified project.
6. That in order to fulfill the requirement of the tender process and also keep an altogether separate legal entity of the Joint Venture, the Members of the Joint Venture undertake to provide their own nominees as shareholders to the extent of their respective shareholding for the purpose of formation of a Special Purpose Company (SPC) through which the Joint Venture proposes to undertake the of RailTel.
7. That if any change in the membership of the Joint Venture be required to be made by the members of the Joint Venture, the same shall be done with the consent of RailTel subject to the conditions as may be stipulated by them in this regard.
8. That in case to meet the requirements of bid documents or any other stipulations of RailTel, it becomes necessary to execute and record any other documents amongst the members of the Joint Venture, they undertake to do the needful and to participate in the same for the purpose of the said project.
9. That it is clarified by and between the members of the Joint Venture that execution to this

Joint Venture Agreement/Memorandum of Agreement by the members of the Joint Venture does not constitute any type of partnership for the purposes of provisions of the Indian Partnership Act and that the members of the Joint Venture shall otherwise be free to carry on their independent business or commercial activities for their own respective benefits under their own respective names and styles. This Joint Venture Agreement is limited in its operation to the specified project.

10. That the Members of the Joint Venture undertake to specify their respective role and responsibilities for the purposes of implementation of this Joint Venture Agreement and the said project if awarded to the Joint Venture in the Memorandum & Articles of Association of the proposed Special Purpose Company to be got incorporated by the Joint Venture Members to meet the requirements and stipulations of RailTel.

IN FAITH AND TESTIMONY WHERE OF, THE PARTIES HERE TO HAVE SIGNED THESE PRESENTS OF THE DATE, MONTH AND YEAR FIRST ABOVE WRITTEN.

1. (_____)	2. (_____)	3. (_____)
Managing Director	Managing Director	Managing Director
(_____)	(_____)	(_____)
For (Name of company)	For (Name of company)	For (Name of company)

WITNESSES:

1. _____
2. _____

Enclosure:

- Board resolution of each of the Joint Venture Members authorizing:
- (i) Execution of the Joint Venture Agreement, and
 - (ii) Appointing the authorized signatory for such purpose.

FORMAT FOR AFFIDAVIT TO BE UPLOADED BY TENDERER ALONGWITH THE TENDER DOCUMENTS

(To be executed in presence of Public notary on non-judicial stamp paper of the value of Rs.100/-.
The stamp paper has to be in the name of the tenderer)

I.....(Name and designation)** appointed as the attorney/authorized signatory of the tenderer (including its constituents), M/s._____ (hereinafter called the tenderer) for the purpose of the Tender documents for the work of _____ as per the tender No. _____ of RailTel, do hereby solemnly affirm and state on the behalf of the tenderer including its constituents as under:

1. I/We the tenderer (s), am/are signing this document after carefully reading the contents.
2. I/we the tenderer(s) also accept all the conditions of the tender and have signed all the pages in confirmation thereof.
3. I/We hereby declare that I/We have downloaded the tender documents from electronic tender portal. I/We have verified the content of the document from the website and there is no addition, no deletion or no alteration to the content of the tender document. In case of any discrepancy noticed at any stage i.e. evaluation of tenderers, execution of work or final payment of the contract, the master copy available with the RailTel Administration shall be final and binding upon me/us.
4. I/We declare and certify that I/we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
5. I/We also understand that my/our offer will be evaluated based on the documents/credentials submitted alongwith the offer and same shall be binding upon me/us.
6. I/We declare that the information and documents submitted alongwith the tender by me/us are correct and I/we are fully responsible for the correctness of the information and documents submitted by us.
7. I/We understand that if the content of the certificates submitted by us are found to be forged/false at any time during process for evaluation of tenders, it shall lead to forfeiture of the tender EMD and may also lead to any other action provided in the contract including banning of business for a period upto two years in RailTel. Further, I/we (insert name of the tenderer)** _____ and all my/our constituents understand that my/our offer shall be summarily rejected.
8. I/we also understand that if the content of the certificates submitted by us are found to be false/forged at any time after the award of the contract, it will lead to termination of the contract, alongwith forfeiture of EMD and Performance Guarantee and may lead to any other action provided in the contract including banning of business for a period of two years in RailTel.

**DEPONENT
SEAL AND SIGNATURE
OF THE TENDERER**

VERIFICATION

I/We above named tenderer do hereby solemnly affirm and verify that the contents of my/our above affidavit are true and correct. Nothing has been concealed and no part of it is false.

**DEPONENT
SEAL AND SIGNATURE
OF THE TENDERER**

Place:

Dated:

*** The contents in Italics are only for guidance purpose. Details as appropriate, are to be filled in suitably by tenderer. Attestation before Magistrate/Notary Public*

**PROFORMA FOR Nil Deviation Component Compliance Undertaking Letter
(TO BE SIGNED BY BIDDER)**

To

**RailTel Corporation of India Ltd.
Plate-A, 6th Floor, Office Block Tower-2,
East Kidwai Nagar,
New Delhi-110023**

Date: dd-mm-yyyy

Dear Sir,

Sub: NIL Deviation Compliance for Tender no.

Over and above all our earlier conformations and submissions as per your requirements of the RFP, we confirm that,

1. We will ensure our unconditional compliance of all the terms and conditions as mentioned in the Tender document. In case of any deviation, the same should be attached as an Annexure (as per Format given below) to this form. **In case of any deviation, RailTel reserves the right to reject the bid without giving any justification.**

Format of Annexure (Deviation Statement)

S. No.	Clause No. & Chapter No.	Existing Clause of Tender	Proposed Clause	Remarks, if any

2. All the proposed Hardware and Software to be supplied as per SOR are compliant to the technical specifications as mentioned in Chapter-3A of Tender document.
3. We hereby certify that the hardware and software mentioned in our Bill of Material (BOM) are complete.
4. We confirm that there is no requirement of any other hardware and software to fulfill requirements as per scope against the RFP. If any additional hardware and software is required to meet in scope requirements, then it would be provided by us at no extra cost to RailTel.

Place:

Date:

Seal and signature of the bidder

(This Form along with Annexure (if required) should be on the letterhead of the bidder duly signed by an authorized signatory)

PROFORMA FOR SIGNING THE INTEGRITY PACT
(On Stamp Paper of Rs one hundred)

RailTel Corporation of India Limited, hereinafter referred to as “The Principal”.

AND

....., hereinafter referred to as “The Bidder/ Contractor”

Preamble

The Principal intends to award, under laid down organizational procedures, contract/s forThe Principal values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relations with its Bidder(s) and /or Contractor(s).

In order to achieve these goals, the Principal will appoint an Independent External Monitor (IEM), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1- Commitments of the Principal

1. The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-
 - a. No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - b. The Principal will during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the process or the contract execution.
 - c. The Principal will exclude from the process all known prejudiced persons.
2. If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

Section 2- Commitments of the Bidder(s) / Contractor(s)

1. The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
 - a. The Bidder(s)/contractor(s) will not, directly or through any other persons or firm, offer promise or give to any of the Principal’s employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage during tender process or during the execution of the contract.
 - b. The Bidder(s)/Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
 - c. The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s) /Contractors will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

- d. The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly, the bidder(s)/contractor(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further details as mentioned in the “Guidelines on Indian Agents of Foreign Suppliers” shall be disclosed by the Bidder(s)/Contractor(s). Further, as mentioned in the Guidelines all the payments made to the Indian agent/representative have to be in Indian Rupees only. Copy of the “Guidelines on Indian Agents of Foreign Suppliers’ as annexed and marked as Annexure A.
 - e. The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
2. The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3: Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/Contractor(s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or take action as per the procedure mentioned in the “Guidelines on Banning of business dealings”. Copy of the “Guidelines on Banning of business dealings” is annexed and marked as Annex-“B”.

Section 4: Compensation for Damages

1. If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/Bid Security.
2. If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to be terminated the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages of the Contract value or the amount equivalent to Performance Bank Guarantee.

Section 5: Previous Transgression

1. The Bidder declares that no previous transgressions occurred in the last three years with any other company in any country conforming to the anti-corruption approach or with any other public sector enterprise in India that could justify his exclusion from the tender process.
2. If the bidder makes incorrect statement on this subject, he can be disqualified from the tender process for action can be taken as per the procedure mentioned in “Guidelines on Banning of business dealings”.

Section 6: Equal treatment of all Bidders / Contractors/Subcontractors.

1. The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.
2. The Principal will enter into agreements with identical conditions as this one with all bidders, contractors and subcontractors.
3. The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7: Criminal charges against violation by Bidder(s) / Contractor(s) / Sub contractor(s)

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer.

Section 8: Independent External Monitor / Monitors

1. The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
2. The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, RailTel.
3. The Bidder(s)/Contractor(s) accepts that the Monitor has the right to access without restriction to all project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s)/Subcontractor(s) with confidentiality.
4. The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
5. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
6. The Monitor will submit a written report to the CMD, RailTel within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.
7. Monitor shall be entitled to compensation on the same terms as being extended to provided to Independent Directors on the RailTel Board.
8. If the Monitor has reported to the CMD, RailTel, a substantiated suspicion of an offence under relevant IPC/PC Act, and the CMD, RailTel has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.
9. The word 'Monitor' would include both singular and plural.

Section 9: Pact Duration

This pact begins when both parties have legally signed it. It expires for the Contractor 10 months after the last payment under the contract, and for all other Bidders 6 months after the contract has been awarded.

If any claim is made / lodged by either party during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged / determined by CMD of RailTel.

Section 10: Other Provisions

1. This agreement is subject to Indian Law, Place of performance and jurisdiction is the Registered Office of the Principal, i.e. New Delhi.
2. Changes and supplements as well as termination notices need to be made in writing.
3. If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
4. Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(For & on behalf of the Principal)
(Office Seal)

(For & On behalf of Bidder/Contractor)
(Office Seal)

Place _____

Date _____

Witness 1:

GUIDELINES FOR INDIAN AGENTS OF FOREIGN SUPPLIERS

- 1.0 There shall be compulsory registration of agents for all global (Open) Tender and Limited Tender. An agent who is not registered with RailTel Units shall apply for registration in the prescribed Application-Form.
- 1.1 Registered agents will file an authenticated Photostat copy duly attested by a Notary Public/ Original certificate of the principal confirming the agency agreement and giving the status being enjoyed by the agent and the commission/ remuneration/retainer-ship being paid by the principal to the agent before the placement of order by RailTel.
- 1.2 Wherever the Indian representatives have communicated on behalf of their principals and the foreign parties have stated that they are not paying any commission to the Indian agents, and the Indian representative is working on the basis of salary or as retainer, a written declaration to this effect should be submitted by the party (i.e. Principal) before finalizing the order.

2.0 DISCLOSURE OF PARTICULARS OF AGENTS/ REPRESENTATIVES IN INDIA, IF ANY.

- 2.1 Tenderers of Foreign nationality shall furnish the following details in their offer:
 - 2.1.1 The name and address of the agents/representatives in India, if any and the extent of authorization and authority given to commit the Principals. In case the agent/representative be a foreign Company, it shall be confirmed whether it is real substantial Company and details of the same shall be furnished.
 - 2.1.2 The amount of commission/ remuneration included in the quoted price(s) for such agents/representatives in India.
 - 2.1.3 Confirmation of the Tenderer that the commission/ remuneration if any, payable to his agents/ representatives in India, may be paid by RAILTEL in Indian Rupees only.
- 2.2 Tenderers of Indian Nationality shall furnish the following details in their offers:
 - 2.2.1 The name and address of the foreign principals indicating their nationality as well as their status, i.e. whether manufacturer or agents of manufacturer holding the Letter of Authority of the Principal specifically authorizing the agent to make an offer in India in response to tender either directly or through the agents/representatives.
 - 2.2.2 The amount of commission /remuneration included in the price(s) quoted by the tenderer for himself.
 - 2.2.3 Confirmation of the foreign principals of the Tenderer that the commission/ remuneration, if any, reserved for the Tenderer in the quoted price(s), may be paid by RAILTEL in India in equivalent Indian Rupees on satisfactory completion of the Project or supplies of Stores and Spares in case of operation items.
- 2.3 In either case, in the event of contract materializing, the terms of payment will provide for payment of the commission/ remuneration, if any payable to the agents/representatives in India in Indian Rupees on expiry of 90 days after the discharge of the obligations under the contract.
- 2.4 Failure to furnish correct and detailed information as called for in paragraph 2.0 above will render the concerned tender liable to rejection or in the event of a contract materializing, the same liable to termination by RAILTEL. Besides this there would be a penalty of banning business dealings with RAILTEL or damage or payment of a named sum.

GUIDELINES ON BANNING OF BUSINESS DEALINGS

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1. Introduction

- 1.1 RailTel Corporation of India Ltd (RAILTEL), being a Public Sector Enterprise, under the administrative control of the Ministry of Railways and therefore being an authority deemed to be 'the state' within the meaning of Article 12 of Constitution of India, has to ensure preservation of rights enshrined in Chapter III of the Constitution. RAILTEL has also to safeguard its commercial interests. RAILTEL deals with Agencies, who have a very high degree of integrity, commitments and sincerity towards the work undertaken. It is not in the interest of RAILTEL to deal with Agencies who commit deception, fraud or other misconduct in the execution of contracts awarded / orders issued to them. In order to ensure compliance with the constitutional mandate, it is incumbent on RAILTEL to observe principles of natural justice before banning the business dealings with any Agency.
- 1.2 Since banning of business dealings involves civil consequences for an Agency concerned, it is incumbent that adequate opportunity of hearing is provided and the explanation, if tendered, is considered before passing any order in this regard keeping in view the facts and circumstances of the case.

2. Scope

- 2.1 The General Conditions of Contract (GCC) of RAILTEL generally provide that RAILTEL reserves its rights to remove from list of approved suppliers/ contractors or to ban business dealings if any Agency has been found to have committed misconduct and also to suspend business dealings pending investigation. If such provision does not exist in any GCC, the same may be incorporated.
- 2.2 Similarly, in case of sale of material there is a clause to deal with the Agencies/ customers/ buyers, who indulge in lifting of material in unauthorized manner. If such a stipulation does not exist in any Sale Order, the same may be incorporated.
- 2.3 However, absence of such a clause does not in any way restrict the right of Company (RAILTEL) to take action / decision under these guidelines in appropriate cases.
- 2.4 The procedure of (i) Removal of Agency from the List of approved suppliers/ contractors; (ii) Suspension and (iii) Banning of Business Dealing with Agencies, has been laid down in these guidelines.
- 2.5 These guidelines apply to Corporate Office, all Regions and Subsidiaries of RAILTEL.
- 2.6 It is clarified that these guidelines do not deal with the decision of the Management to avoid entertaining any particular Agency due to its poor / inadequate performance or for any other reason.

2.7 The banning shall be with prospective effect, i.e., future business dealings.

3. Definitions

In these Guidelines, unless the context otherwise requires:

- i) 'Party / Contractor / Supplier / Purchaser / Customer' shall mean and include a public limited company or a private limited company, a firm whether registered or not, an individual, a cooperative society or an association or a group of persons engaged in any commerce, trade, industry, etc. 'Party / Contractor / Supplier / Purchaser / Customer' in the context of these guidelines is indicated as 'Agency'.
- ii) 'Inter-connected Agency' shall mean two or more companies having any of the following features:
 - a) If one is a subsidiary of the other;
 - b) If the Director(s), Partner(s), Manager(s) or Representative(s) are common;
 - c) If management is common;
 - d) If one owns or controls the other in any manner;
- iii) 'Competent Authority' and 'Appellate Authority' shall mean the following:
 - a) For Company (entire RAILTEL) wide Banning: The Director shall be the 'Competent Authority' for the purpose of these guidelines. CMD, RAILTEL shall be the 'Appellate Authority' in respect of such cases except banning of business dealings with Foreign Suppliers of imported items.
 - b) For banning of business dealings with Foreign Suppliers of imported items, RAILTEL Directors Committee (RDC) shall be the 'Competent Authority'. The Appeal against the Order passed by RDC, shall lie with CMD, as First Appellate Authority.
 - c) In case the foreign supplier is not satisfied by the decision of the First Appellate Authority, it may approach Railway Board as Second Appellate Authority.
 - d) For RailTel Regions only: Any officer not below the rank of General Manager appointed or nominated by the Executive Director of concerned Region shall be the 'Competent Authority' for the purpose of these guidelines. The Executive Director of the concerned Region shall be the 'Appellate Authority' in all such cases.
 - e) For Corporate Office only: For procurement of items / award of contracts, to meet the requirement of Corporate Office only, Concerned Group General Manager / General Manager shall be the 'Competent Authority' and concerned Director shall be the 'Appellate Authority'.
 - f) CMD, RAILTEL shall have overall power to take suo-moto action on any information available or received by him and pass such order(s) as he may think appropriate, including modifying the order(s) passed by any authority under these guidelines.
- iv) 'Investigating Department' shall mean any Department or Unit investigating into the conduct of the Agency and shall include the Vigilance Department, Central Bureau of Investigation, the State Police or any other department set up by the Central or State Government having powers to investigate.
- v) 'List of approved Agencies - Parties / Contractors / Suppliers/ Purchaser/ Customers' shall mean and include list of approved /registered Agencies - Parties/ Contractors / Suppliers / Purchasers / Customers, etc.

4. Initiation of Banning / Suspension

Action for banning / suspension of business dealings with any Agency should be initiated by the department having business dealings with them after noticing the irregularities or misconduct on their part. Besides the concerned department, Vigilance Department of each Region / Unit/ Corporate Office may also be competent to initiate such action.

5. Suspension of Business Dealings

- 5.1 If the conduct of any Agency dealing with RAILTEL is under investigation by any department (except Foreign Suppliers of imported items), the Competent Authority may consider whether the allegations under investigation are of a serious nature and whether pending investigation, it would be advisable to continue business dealing with the Agency. If the Competent Authority, after consideration of the matter including the recommendation of the Investigating Department, if any, decides that it would not be in the interest to continue business dealings pending investigation, it may suspend business dealings with the Agency. The order to this effect may indicate a brief of the charges under investigation. If it is decided that inter-connected Agencies would also come within the ambit of the order of suspension, the same should be specifically stated in the order. The order of suspension would operate for a period not more than six months and may be communicated to the Agency as also to Investigating Department. The Investigating Department may ensure that their investigation is completed and whole process of final order is over within such period.
- 5.2 The order of suspension shall be communicated to all the departmental heads within the unit/ region/ Corporate Office as the case may be. During the period of suspension, no business dealing may be held with the agency.
- 5.3 As far as possible, the existing contract(s) with the Agency may continue unless the Competent Authority, having regard to the circumstances of the case, decides otherwise.
- 5.4 If the gravity of the misconduct under investigation is very serious and it would not be in the interest of RAILTEL, as a whole, to deal with such an Agency pending investigation, the Competent Authority may send his recommendation to Chief Vigilance Officer (CVO), RAILTEL Corporate Office along with the material available. If Corporate Office considers that depending upon the gravity of the misconduct, it would not be desirable for all the units/ regions of RAILTEL to have any dealings with the Agency concerned, an order suspending business dealings may be issued to all the units/ Regions / Corporate Office by the Competent Authority of the Corporate Office, copy of which may be endorsed to the Agency and all concerned. Such an order would operate for a period of six months from the date of issue.
- 5.5 For suspension of business dealings with Foreign Suppliers of imported items, following shall be the procedure:
- i) Suspension of the foreign suppliers shall apply throughout the Company/ Regions including Subsidiaries.
 - ii) Based on the complaint forwarded by ED / GGM / GM or received directly by Corporate Vigilance, if gravity of the misconduct under investigation is found serious and it is felt that it would not be in the interest of RAILTEL to continue to deal with such agency, pending investigation, Corporate Vigilance may send such recommendation on the matter to Executive Director / GGM / GM, to place it before a Committee consisting of the following:
 - 1. ED / GGM/ GM (viz. Representative of Corporate Finance).
 - 2. ED / GGM/ GM (viz. Representative of Department concerned with procurement of imported items)- Convener of the Committee.
 - 3. ED / GGM/ GM (to be nominated on case to case basis).
 - 4. ED / GGM/ GM ((viz. Representative of Corporate Law).

The committee shall expeditiously examine the report and give its comments / recommendations within twenty one days of receipt of the reference by ED/ GGM/ GM.

- iii) The comments / recommendations of the Committee shall then be placed by ED/GGM/GM, before RAILTEL Directors' Committee (RDC) constituted for import of items. If RDC opines that it is a fit case

for suspension, RDC may pass necessary orders which shall be communicated to the foreign supplier by the ED/GGM/GM.

- 5.6 If the Agency concerned asks for detailed reasons of suspension, the Agency may be informed that its conduct is under investigation. It is not necessary to enter into correspondence or argument with the Agency at this stage.
- 5.7 It is not necessary to give any show-cause notice or personal hearing to the Agency before issuing the order of suspension. However, if investigations are not complete in six months time, the Competent Authority may extend the period of suspension by another three months, during which period the investigations must be completed.

6. Ground on which Banning of Business Dealings can be initiated

- 6.1 If the security consideration, including questions of loyalty of the Agency to the State, so warrants;
- 6.2 If the Director / Owner of the Agency, proprietor or partner of the firm, is convicted by a Court of Law for offences involving moral turpitude in relation to its business dealings with the Government or any other public sector enterprises or RAILTEL, during the last five years;
- 6.3 If there is strong justification for believing that the Directors, Proprietors, Partners, owner of the Agency have been guilty of malpractices such as bribery, corruption, fraud, substitution of tenders, interpolations, etc;
- 6.4 If the Agency continuously refuses to return / refund the dues of RAILTEL without showing adequate reason and this is not due to any reasonable dispute which would attract proceedings in arbitration or Court of Law;
- 6.5 If the Agency employs a public servant dismissed / removed or employs a person convicted for an offence involving corruption or abetment of such offence;
- 6.6 If business dealings with the Agency have been banned by the Govt. or any other public sector enterprise;
- 6.7 If the Agency has resorted to Corrupt, fraudulent practices including misrepresentation of facts;
- 6.8 If the Agency uses intimidation/ threatening or brings undue outside pressure on the Company (RAILTEL) or its official in acceptance/ performances of the job under the contract;
- 6.9 If the Agency indulges in repeated and / or deliberate use of delay tactics in complying with contractual stipulations;
- 6.10 Willful indulgence by the Agency in supplying sub-standard material irrespective of whether pre-dispatch inspection was carried out by Company (RAILTEL) or not;
- 6.11 Based on the findings of title investigation report of CBI / Police against the Agency for malafide/ unlawful acts or improper conduct on his part in matters relating to the Company (RAILTEL) or even otherwise;
- 6.12 Established litigant nature of the Agency to derive undue benefit;
- 6.13 Continued poor performance of the Agency in several contracts;
- 6.14 If the Agency misuses the premises or facilities of the Company (RAILTEL), forcefully occupies tampers or damages the Company's properties including land, water resources, etc.

(Note: The examples given above are only illustrative and not exhaustive. The Competent Authority may decide to ban business dealing for any good and sufficient reason).

7. Banning of Business Dealings

7.1 Normally, a decision to ban business dealings with any Agency should apply throughout the Company including subsidiaries. However, the Competent Authority of the Region/ Unit except Corporate Office can impose such ban Region-wise only if in the particular case banning of business dealings by respective Region/ Unit will serve the purpose and achieve its objective and banning throughout the Company is not required in view of the local conditions and impact of the misconduct/ default to beyond the Region/ Unit. Any ban imposed by Corporate Office shall be applicable across all Regions/ Units of the Company including Subsidiaries.

7.2 For Company-wide banning, the proposal should be sent by ED of the Region/ Unit to the CVO/RailTel setting out the facts of the case and the justification of the action proposed along with all the relevant papers and documents except for banning of business dealings with Foreign Suppliers of imported items.

The Corporate Vigilance shall process the proposal of the concerned Region/ Unit for a prima-facie view in the matter by the Competent Authority nominated for Company-wide banning.

The CVO shall get feedback about that agency from all other Regions/ Units. Based on this feedback, a prima-facie decision for banning / or otherwise shall be taken by the Competent Authority.

If the prima-facie decision for Company-wide banning has been taken, the Corporate Vigilance shall issue a show-cause notice to the agency conveying why it should not be banned throughout RAILTEL.

After considering the reply of the Agency and other circumstances and facts of the case, a final decision for Company-wide banning shall be taken by the competent Authority.

7.3 There will be a Standing Committee in each Region/ Unit to be appointed by Chief Executive Officer for processing the cases of "Banning of Business Dealings" except for banning of business dealings with foreign suppliers. However, for procurement of items/ award of contracts, to meet the requirement of Corporate Office only, the committee shall be consisting of General Manager/ Dy. General Manager each from Operations, Finance, Law & Project. Member from Project shall be the convener of the committee. The functions of the committee shall, inter-alia include:

- (i) To study the report of the investigating Agency and decide if a prima-facie case for Company-wide / Region wise banning exists, if not, send back the case to the Competent Authority.
- (ii) To recommend for issue of show-cause notice to the Agency by the concerned department.
- (iii) To examine the reply to show-cause notice and call the Agency for personal hearing, if required.
- (iv) To submit final recommendation to the Competent Authority for banning or otherwise.

7.4 If the Competent Authority is prima-facie of view that action for banning business dealings with the Agency is called for, a show- cause notice may be issued to the Agency and an enquiry held accordingly.

7.5 Procedure for Banning of Business Dealings with Foreign Suppliers of imported items.

- i) Banning of the agencies, shall apply throughout the Company including subsidiaries.
- ii) Based on the complaint forwarded by Executive Director or received directly by Corporate Vigilance, an investigation shall be carried out by Corporate Vigilance. After investigation, depending upon the gravity of the misconduct, Corporate Vigilance may send their report to Executive Director/ GGM/ GM, to be placed before a Committee consisting of the following:
 - 1. ED / GGM/ GM (viz. Representative of Corporate Finance).
 - 2. ED / GGM/ GM (viz. Representative of Department concerned with procurement of imported items)- Convener of the Committee.

3. ED / GGM/ GM (to be nominated on case to case basis).
4. ED / GGM/ GM ((viz. Representative of Corporate Law).

The Committee shall examine the report and give its comments/ recommendations within 21 days of receipt of the reference by ED.

- iii) The comments/recommendations of the Committee shall be placed by ED/ GGM/ GM before RAILTEL Directors' Committee (RDC) constituted for import of foreign items. If RDC opines that it is a fit case for initiating banning action, it will direct ED/ GGM/ GM to issue show-cause notice to the agency for replying within a reasonable period.
- iv) On receipt of the reply or on expiry of the stipulated period, the case shall be submitted by ED to RDC for consideration & decision.
- v) The decision of the RDC shall be communicated to the agency by ED/GGM/GM concerned.

8. Removal from List of Approved Agencies – Suppliers/ Contractors, etc.

- 8.1 If the Competent Authority decides that the charge against the Agency is of a minor nature, it may issue a show-cause notice as to why the name of the Agency should not be removed from the list of approved Agencies - Suppliers / Contractors, etc.
- 8.2 The effect of such an order would be that the Agency would not be disqualified from competing in Open Tender Enquiries but LTE (Limited Tender Enquiry) may not be given to the Agency concerned.
- 8.3 Past performance of the Agency may be taken into account while processing for approval of the Competent Authority for awarding the contract.

9. Show-cause Notice

- 9.1 In case where the Competent Authority decides that action against an Agency is called for, a show-cause notice has to be issued to the Agency. Statement containing the imputation of misconduct or misbehavior may be appended to the show-cause notice and the Agency should be asked to submit within 15 days a written statement in its defence.
- 9.2 If the Agency requests for inspection of any relevant document in possession of RAILTEL, necessary facility for inspection of documents may be provided.
- 9.3 The Competent Authority may consider and pass all appropriate speaking order:
 - a) For one rating the Agency if the charges are not established.
 - b) For removing the Agency from the list of approved Suppliers/ Contractors, etc.
 - c) For banning the business dealing with the Agency.
- 9.4 If it decides to ban business dealings, the period for which the ban would be operative may be mentioned. The order may also mention that the ban would extend to the interconnected Agencies of the Agency.

10. Appeal against the Decision of the Competent Authority

- 10.1 The agency may file an appeal against the order of the Competent Authority banning business dealing, etc. The appeal shall lie to Appellate Authority. Such an appeal shall be preferred within one month from the date of receipt of the order banning business dealing, etc.

- 10.2 Appellate Authority would consider the appeal and pass appropriate order which shall be communicated to the Agency as well as the Competent Authority.

11. Review of the Decision by the Competent Authority

Any petition / application filed by the Agency concerning the review of the banning order passed originally by Chief Executive / Competent Authority under the existing guidelines either before or after filing of appeal before the Appellate Authority or after disposal of appeal by the Appellate Authority, the review petition can be decided by the Chief Executive / Competent Authority upon disclosure of new facts / circumstances or subsequent development necessitating such review. The Competent Authority may refer the same petition to the Standing Committee for examination and recommendation.

12. Circulation of the names of Agencies with whom Business Dealings have been banned

- 12.1 Depending upon the gravity of misconduct established, the Competent Authority of the Corporate Office may circulate the names of Agency with whom business dealings have been banned, to the Government Departments, other Public Sector Enterprises, etc. for such action as they deem appropriate.
- 12.2 If Government Departments or a Public Sector Enterprise requests for more information about the Agency with whom business dealings have been banned, a copy of the report of the Inquiring authority together with a copy of the order of the Competent Authority / Appellate Authority may be supplied.
- 12.3 If business dealings with any Agency have been banned by the Central or State Government or any other Public Sector Enterprise, RAILTEL may, without any further enquiry or investigation, issue an order banning business dealing with the Agency and its interconnected Agencies.
- 12.4 Based on the above, Regions / Units may formulate their own procedure for implementation of the guidelines.

**PROFORMA FOR “NO MALICIOUS CODE UNDERTAKING LETTER
BY BIDDER and OEM”**

To

**RailTel Corporation of India Ltd.
Plate-A, 6th Floor, Office Block Tower-2,
East Kidwai Nagar,
New Delhi-110023**

Tender Reference No.: _____

Sub: Undertaking for No Malicious Code.

Dear Sir,

Over and above all our earlier conformations and submissions as per your requirements of the RFP, we confirm that,

1. All proposed hardware and software components in scope of supplies when shipped by _____, does not contain embedded malicious code that would activate procedures to:-
 - a. Inhibit the desired and designed function of the equipment.
 - b. Cause physical damage to the user or equipment during the exploitation.
 - c. Tap information resident or transient in the equipment/networks.
2. We, _____ will be considered to be in breach in case physical damage or malfunctioning is caused due to activation of any such malicious code in embedded software and thus be liable to repair, replace or refund the price of the infected software if reported (or, upon request, return) to the party supplying the software to Customer, if different than _____
3. Security breach or damages to system, if any, so caused by any embedded malicious code or otherwise, due to the act of either OEM or bidder or both, the OEM as well as the bidder would be considered liable jointly or severally and shall be banned for conducting any business with RailTel. Also the present contract, may liable to be terminated by the purchaser.

Place:

Date:

Seal and signature of the bidder/OEM

(This letter should be on the letter head of the Bidder & OEM duly signed by an authorized signatory)

DETAILS OF OFFERED EQUIPMENT:

SN	SOR Item no.	Item Description	Make	Model	Data Sheet Placed at Page No. of Bid
1					
2					
3					
4					

DETAILS OF CREDENTIALS SUBMITTED AGAINST ELIGIBILITY CRITERIA OF BIDDER:

S N	Clause no.	Supporting documents	Details/Remarks (PO no. & date, user certificate no. & date etc.)	Page no of the Bid
1				
2				
3				
4				

DETAILS OF CREDENTIALS SUBMITTED AGAINST ELIGIBILITY CRITERIA OF OEM:

S N	Clause no.	Supporting documents	Details/Remarks (PO no. & date, user certificate no. & date etc.)	Page no of the Bid
1				
2				
3				
4				

CONTRACT AGREEMENT
(On Stamp paper of Rs. One hundred)

(CA No.)

This AGREEMENT is made at <Location> on this _____ day of _____ two thousand and twenty -----, by and between RailTel Corporation of India Limited (A Govt. of India Undertaking) having its Registered & Regional office at Plat-A, 6th Floor, Office Block-II, East Kidwai Nagar, New Delhi-110023, acting in the premises through Principal Executive Director/Infra or his authorized representative (hereinafter referred to as 'RailTel', which expression should unless repugnant to the context or meaning thereof include its successors and permitted assigns) of the one part;

And _____ having its registered office at ----- acting in the premises through..... (hereafter referred to as "Contractor", which expression should unless repugnant to the context or meaning thereof include its successor and permitted assigns) of the other part.

Whereas in response to a call for Tender by RailTel for the work of "....." for RailTel Corporation of India Limited as per tender papers at Annexure 'A' read with Corrigendum..... issued by RailTel hereto, the Contractor has submitted offer letter as per Annexure 'B' hereto

AND WHEREAS the said Tender of the Contractor has been accepted for the work of "....." for RailTel Corporation of India Limited as per copy of Letter of Acceptance of Tender No. _____ dated _____ complete with enclosures at the accepted rates and agreed deviations from tender papers as per Annexure-C hereto at contract value of Rs. _____ (Rupees _____ Only) duly accepted by the contractor.

Now this agreement witnesses that in consideration of the premises and the payment to be made by the Purchaser (RailTel) to the Contractor provided for herein, the Contractor shall supply all equipment and materials and execute and perform all works for which the said Tender of the Contractor has been accepted strictly according to the various provisions in Annexure 'B' and 'C' hereto and upon such supply, execute and performance to the satisfaction of the purchaser (RailTel) and the purchaser (RailTel) shall pay to the Contractor at the rates accepted as per the said Annexure 'C' and in terms of the provisions therein.

IN WITNESS whereof both the parties have hereunto set and subscribed their respective hands and/or seals on the day and year respectively mentioned against their respective signatures.

Signed and delivered by Shri _____ for and on behalf of RailTel Corporation of India Ltd. in the presence of:

- 1. Signatures
- Date

Name in Block Capitals
Address:

2. Signatures
Date
Name in Block Capitals
Address:

Signed and delivered by Shri. _____ for and on behalf of
_____ in the presence of :

1. Signatures
Date
Name in Block Capitals
Address:

2. Signature
Date
Name in Block Capitals
Address:

Annexure 'A' : Tender Document No..... with Corrigendum(s), if any.
Annexure 'B' : Contractor's offer letter.
Annexure 'C' : Letter of Acceptance/Purchase order No..... with all enclosures.
Annexure 'D' : Copy of Performance Bank Guarantee (PBG)

(End of Chapter-6)

CHAPTER-7

Detailed standard conditions applicable for the Annual Maintenance Contract

7.1.0 Introduction

This document contains the standard conditions applicable for the Annual Maintenance Contract between RailTel and the Contractor. Contractor is defined as the company whose products/equipments have been deployed over the RailTel telecommunication network and the warranty of these equipments has expired or going to be expire shortly. All the equipments/ cards/ modules of SOR-A will be covered under this contract. This Annual Maintenance Contract will cover up the provision of remote services to be provided by the contractor for proper working of Network created through the contractor's equipments. This document will also cover up the Repair and Return services for the rectification of defective modules/cards/parts etc. which are the key tools in use for uninterrupted traffic. It also includes the Key performance parameter which will decide the outcome of the contractor within reasonable time frame along with the provision of penalties. This Annual Maintenance Contract will cover the following services:

- **Technical Support service.**
- **Repair and Return Service.**
- **Software Updates.**

7.2.0 Basic Definitions and terminology used:-

RailTel: RailTel Corporation of India Limited having its registered and Corporate office office at Plate-A, 6th Floor, Office Tower-2, NBCC Building, East Kidwai Nagar, New Delhi-110023.

Contractor: Contractor means firm/company whom equipments are deployed over the Telecommunication Network of RailTel.

TSC: Technical Support Center created by the Contractor for 2nd level support.

TEC: Telecom Excellence Center created by the contractor for 3rd level support.

WC: Welcome Center of contractor through which the RailTel may interact with contractor.

AR: Assistance Request created by WC of contractor for a specific request of RailTel which will be used for all references until its closure and also for future correspondence.

Maintained Products: Details of equipments with location wise deployment and serial identification numbers to be incorporated in a statement jointly signed by RailTel and Contractor, which will be covered under AMC contract.

Severity Levels:

Severity Levels are defined as the condition of the system when RailTel submits an Assistance Request (AR). There are three severity levels for reported problems. Severity levels are defined as follows:

“Critical” (also known as Severity Level 1, SL1): The system is inoperative and RailTel’s inability to use the product has a critical effect on RailTel’s operations. This condition is generally characterized by complete system failure and requires immediate correction.

“Major” (also known as Severity Level 2, SL2): The system is partially inoperative but still usable by RailTel. The inoperative portion of the product severely restricts RailTel’s operations, but has a less critical effect than a severity level 1 condition.

“Minor” (also known as Severity Level 3, SL3): The system is usable by RailTel, with little or limited impact to the function of the system. This condition is not critical and does not severely restrict overall RailTel operations.

RailTel shall inform the severity based on above definitions, at the time of opening of AR with Contractor’s TSC. If TSC feels to disagree on the severity, may discuss with RailTel on correction of severity. Where parties disagree on the classification of a particular reported problem, RailTel and Contractor’s technical contacts will discuss the classification in good faith to reach a mutually acceptable classification. In the event, the parties are unable to reach agreement on the classification, the reported problem shall be classified at the discretion of RailTel.

7.2.1 Key Performance Indicators (KPIs):

The key performance indicators (KPI) established by contractor and RailTel, are dependent on the severity level of the request as reported by RailTel to the TSC through telephone. Contractor’s KPIs extend to Maintained Products running on a currently supported software version release only. These are KPIs which will decide the penalties to be imposed on contractor if he fails to achieve the fixed parameter for both remote services and Repair & Return services.

“Response Time” (also known as Specialist Call-back) means the time period from when RailTel first notifies the Contractor’s welcome center of a reported problem to when an contractor’s expert attempts to contact RailTel via telephone or preferred contact method as defined when submitting the request.

“Restore Time” (also known as Remote Neutralization) means a measure of the length of time from when contractor is contacted and an event is determined to be loss of service and/or functionality affecting, to the time when contractor provides the means to return a system to operational status. This will be applicable only for services impacting cases. Travel time of field’s engineers or TSC engineers and spare arrangement times will be excluded in this.

Resolve Time (Also known as Final Resolution Time) means a measure of the length of time from when RailTel first notifies the contractor's welcome center to the time when a solution to address the issue is made available to RailTel. This may or may not occur simultaneously with Restore Time.

Patch Releases/Maintenance Releases:-

“Patch Release” means a software release that contains minor modifications to address a specific problem and help restore a system. A Patch Release may also be known as “Craft Release”.

“Maintenance Release” means a software release that contains modifications intended to resolve problems that prevent products from performing up to the manufacturer's technical specification. Typically they are comprised of a collection of Patch Releases. Maintenance Release may also be known as an “Update Release” or a “Point Release”.

7.3.0 Technical Support Service:-

During this AMC period, whenever needed, RailTel may contact the Contractor's Support center (WC) through a dedicated phone no. or e-mail address or Web for every issue or request. The Welcome Center of the Contractor (WC) will be available 24 hours a day and 365 days of the year. Welcome Centre creates the Assistance Request (AR) in the database and this AR will be used for all future correspondence /references and it will route to either for Repair or Return services or to Technical support center (TSCs) for remote assistance. These level 2 services provided through Technical support center may escalate to Technical Experts centre or to OEM dedicated technical support centers (for OEM support for hardware and /or software portion of the products).

The Welcome centre of contractor (WC) keeps track of the assistance request (AR) or part request until closure.

7.3.1 Contractor's responsibilities:

Contractor shall login RailTel Network in support of product related questions troubleshooting assistance, diagnostic procedures, and Patch & Maintenance Releases, as are made available, to restore and resolve network troubles. The following services will be provided:

- 7.3.1.1 Troubleshoot network problems via phone, virtual private network, or modem connection down to Maintained product component level, or sufficiently to the maintained products as the root cause.
- 7.3.1.2 Provide technical advice and guidance via telephone or email by Contractor's product specialists located in their Technical Support Centers (TSC). Upon request from RailTel, RailTel will receive information, advice and assistance for the Maintained Products.
- 7.3.1.3 Provide Patch & Maintenance Releases for Maintained Products, as provided in accordance with the applicable product software support policy. For selected products

noted on Maintained Products Contractor will remotely install software fixes, patches, and updates that may be made available.

7.3.1.4 For Severity Level Critical (Severity 1) and Major (Severity 2) will restore Maintained Products to operational status by identifying defective hardware components or providing software and/or procedural workarounds, where feasible. All software workarounds will be licensed subject to the same terms, restrictions, and limitations as contained in the licenses under which the software was acquired.

7.3.1.5 Not Used.

7.3.1.6 Not Used.

7.3.1.7 **Software Update:**

RailTel will be extended the benefits of software updates made by OEM on the installed systems on existing release from time to time to improve performance. If required to restore or rectification of severe problems all the software up-gradation, re-installation will be done by contractor during the period of AMC.

7.3.2 **RailTel Responsibility:-**

When reporting an AR, RailTel shall include Severity Level of problem and output of any diagnostic, printed logs, already performed to help reproduce the conditions under which the trouble occurred. Identify site ID or contact number, submitter name & location, callback telephone number and/or email address, system name and location, processor location, type and serial number, and alternate contact.

7.3.2.1 RailTel will notify contractor in writing immediately of any change in the employment or authorization status of any personnel having authorized access to the Web site.

7.3.2.2 RailTel will provide remote access to Contractor's TSC to access their network, either through VPN, ISDN or Team viewer.

7.3.2.3 RailTel will perform first level diagnostics before handing over the ticket to the Contractor. RailTel will share all network layouts, link details etc which may be needed by Contractor to help troubleshooting the issue.

7.3.2.4 RailTel will provide all necessary documents for repair of cards.

7.3.2.5 RailTel will provide all necessary technical field support in the form of field technical staff equipped with necessary equipments etc. to give remote access to Contractor.

7.4.0 Repair and Return Services

7.4.1 Repair

7.4.1.1 Contractor's Responsibility:-

1. The Contractor will take- over the defective cards/SFPs from RNOC/site where equipment is installed and hand-over the repaired card at the same location. The following activities will be performed by the contractor:
2. After receiving a defective part request through Welcome Centre (dedicated phone line or e-mail), the defective part will be taken over by the contractor from RNOC/site where equipment is installed. All the documentation including identification number (Serial number) will be provided by RailTel.
3. There will be initial one time activity of all existing faulty cards being repaired by Contractor before commencement of the AMC. AMC will cover only equipments which are in working condition.
4. The received defective part will be got repaired by the contractor **within 30 days** from the date of receiving and will be installed/handed over to RailTel authorized representative at RNOC/site. The contractor will also give probable reason for repeated failure of cards/ modules.

Uninterrupted Network: For smooth and uninterrupted traffic during the repair being carried out by the contractor.

1. Contractor shall make spares available at his own cost.
2. All transportation, freight and insurance charges will be borne by the contractor.
3. Contractor will keep the record of repair on each defective part/cards/SFP with serial numbers (unique identification) particulars.

7.4.1.2 RailTel's Responsibility

RailTel will hand over the defective card/SFP/Parts/etc. to the contractor's authorized representative at RNOC/site along with the following relevant information & documentation.

1. Identification/serial number and location of use.
2. Fault report document duly filled-in in a format as per requirements of Contractor.
3. All relevant documentation including failure description, diagnostic tests results.
4. Adequate packing material to protect against reasonable risk of damages.
5. Provide all necessary government authorization and documentation necessary to facilitate custom clearance processing.
6. Perform a physical check test on the repaired parts.

7.4.2 Return

If any part goes beyond repair due to Contractor at the time of repair being carried out, this is to be communicated to RailTel and after agreed upon, it will be labeled as “unworkable”. If it will be required to deploy a new part on that location that will be provided by the contractor to RailTel free of cost. To achieve this, contractor is required to always keep adequate spares with it during the period of AMC. However, this excludes damaged, spoiled, rusted or misused parts. Any such parts will be not-repairable and no replacements shall be provided by contractor. RailTel will have to purchase fresh spares in case the cards are non repairable due to these reasons.

7.5.0 Services Level Agreement Values (SLA):

As described above, if the contractor fails to provide the Technical Support Services and Repair services within the reasonable time, the following KPIs will be used.

7.5.1 Technical Support Services KPIs & SLA:

Severity Levels/KPIS	Critical	Major	Minor
Respond	1Hr	3Hr	5Hr
Restore	6 Hr	BE	BE

***BE-Best Effort**

7.5.2 Repair and Return Services

If the contractor fails to return the card within 30 days from the date of receipt , the following penalties will be imposed:

Equipment	Duration of repair	Deduction/Penalties
All Modules and accessories	More than 30 days and up to 40 days	10% of the cost of affected Equipment.
All Modules and accessories	More than 40 days and up to 50 days	25% of the cost of affected Equipment.
All Modules and accessories	More than 50 days and up to 60 days	75% of the cost of affected Equipment.
All Modules and accessories	More than 60 days	Full cost of affected part/module.

Note:

- a. OEM should provide facility to RailTel for direct fault case open on TAC Support in case of emergency.
- b. The above replacement services will be applicable during maintenance supervision, warranty and AMC period.**

7.6.0 General Conditions:

7.6.1 Period of AMC:

This Annual Maintenance Contract will be valid for a period of 5 years from the date of issue of LOA/PO for AMC. This period (i.e. 5 years) may be extended further with mutual consent of RailTel and Contractor.

RailTel at its discretion is free to change the location of the equipments installed during the currency of AMC and the contractor shall carry out the AMC with same commercial terms.

7.6.2 **Performance Bank Guarantee:-**

The contractor is required to submit a Performance Bank Guarantee (PBG) within 30 days from the date of issue of LOA for AMC @ 10% of the total AMC cost of five years valid for a period 3 months beyond the AMC period of 5 years from the date of issue of LOA. The Proforma for PBG is given in Form No. 1 of tender document. If the AMC period got extended, the PBG will also be extended accordingly.

The performance Bank Guarantee will bear no interest.

7.6.3 **Prices and Taxes:-**

- The prices for the services shall be in INR which will be the currency of account invoicing and payment.
- If in respect of the provision of services, Contractor has to pay the additional admissible taxes, the same will be get reimbursed after receiving the documentary proof by RailTel.
- Price will not include the cost of any financing (if any).
- The Octroi/entry tax shall be paid extra as per actual on production of proof of payment/document.

7.6.4 **Payment Terms:-**

AMC charges shall be paid on quarterly basis by the respective Regional General Managers/ Executive Director of the concerned Region after successful completion of maintenance within 30 days from the date of invoicing accompanied with Invoice, Monthly trouble ticket report, Monthly repair report subject to any deductions or recovery (which the RailTel may be entitled to make under contract) through RTGS. Monthly reports will be shared with RailTel regularly. Format will be mutually decided by RailTel and Contractor.

7.6.5 **Execution of contract**

The Regional General Managers/ Executive Directors of respective regions or his nominated representatives will be responsible for the execution of the contract under their respective jurisdiction. Certificate regarding proper execution of the AMC along with proposed deductions/penalties with reasons thereof shall be prepared for every billing cycle (quarterly) for arranging payment to the contractor.

7.6.6 **Tenderers Address**

Tenderer shall state in the tender his postal address fully and clearly. Any communication sent to the Tenderers by post at his said address shall be deemed to

have reached the tenderer duly & timely, notwithstanding the fact the communication could not reach the tenderer at all or in time for whatever reason. Important documents shall be sent by Registered post.

7.6.7 Law governing the contract.

The contract shall be governed by the law for the time being in force in the Republic of India. Compliance to regulations and bye-laws-The contractor shall conform to the provision of any statute relating to the works and regulations and bye-laws of any local authority and of any water and lighting companies or undertakings, with whose system the work is proposed to be connected and shall before making any variation from the drawings or the specifications that may be necessitated by so confirming give to the Engineer notice specifying the variation proposed to be made and the reason for making the variation and shall not carry out such variation until he has received instructions from the Engineer in respect thereof. The Contractor shall be bound to give all notices required by statute, regulation or bye-laws as aforesaid and to pay all fees and taxes payable to any authority in respect thereof.

7.6.8 Force Majeure clause:-

If at any time, during the continuance of this contract, the performance, in whole or part, by either party, of any obligation under this contract shall be prevented or delayed by reason of any war, hostility, act of the public enemy, Civil Commotion, Sabotage, Fires, Floods, Earth quakes, explosions, strikes, epidemics, quarantine restrictions, lockouts, any statute, statutory rules/regulation, order of requisitions issued by any Government Department of Competent Authority or acts of God (here-in-after referred to as event) then provided notice of the happening of any such event is given by either party to the other within twenty one days from the date of occurrence thereof, neither party shall, by reason of such event, be entitled to terminate this contract nor shall either party have any claim for damage against the other in respect of such non-performance or delay in performance, and the obligations under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist, Provided further that if the performance in whole or part of any obligation under this contract of prevented or delayed by reason of any such event beyond a period as mutually agreed to by the RailTel and the Contractor after any event or 60 days in the absence of such an agreement whichever is more, either party may at its option to terminate the contract provided also that if the contract is so terminated under this clause the RailTel may at the time of such termination take over from the Contractor at prices as provided for in the contract, all works executed or works under execution.

7.6.9 Illegal Gratification

Any bribe, commission, gift or advantage given, promised or offered by or on behalf to the contractor or his partner, agent or servant or anyone on his behalf to any officer or employees of the RailTel, or to any person on his behalf in relation to obtaining or the execution of this or any other contract with the RailTel shall, in addition or any criminal liability which he may incur, subject the contractor to the rescission of the contract and all other contracts with the RailTel and to the payment of any loss or damage resulting from such decision and the RailTel shall be entitled to deduct the

amounts so payable from any moneys due to the Contractor (s) under this contract or any other contracts with the RailTel.

The contractor shall not lend or borrow from or have or enter into any monetary dealings or transactions either directly or indirectly with any employee of the RailTel and if he shall do so, the RailTel shall be entitled forthwith to rescind the contract and all other contracts with the RailTel. Any question or dispute as to the commission or any shall offence or compensation payable to the RailTel under this clause shall be settled by the Regional General Manager of RailTel, in such a manner as shall consider fit and sufficient and his decision shall be final and conclusive. In the event of rescission of the contract under this clause, the contractor will not be paid any compensation whatsoever except payment for the work done up to date of rescission.

7.6.10 **LABOUR**

Wages to Labour- The contractor shall be responsible to ensure compliance with the provisions of the Minimum Wages Act, 1948 (hereinafter referred to as the “said Act”) and the Rules made there-under in respect of any employees directly or through petty contractors or sub contractors employed by him on road construction or in building operations or in stone breaking or stone crushing for the purpose of carrying out this contract. If in compliance with the terms of the contract, the contractor supplied any labour to be used wholly or partly under the direct orders and control of the RailTel whether in connection with any work being executed by the contractor or otherwise for the purpose of the RailTel such labour shall, for the purpose of the clause, still be deemed to be persons employed by the contractor. If any moneys shall as a result of any claim or application made under the said Act be directed to be paid by the RailTel, such moneys shall be deemed to be moneys payable to the RailTel by the Contractor and on failure by the contractor to repay any moneys paid by it as aforesaid with seven days after the same shall have been demanded, the RailTel shall be entitled to recover the same form any moneys due or accruing to the contractor under this or any other contractor with the RailTel.

7.6.10.1 **Apprentices Act**

The contractor shall be responsible to ensure compliance with the provisions of the Apprentices Act 1961 and the Rules and Orders issued the re-under from time to time in respect of apprentices directly through petty contractors or sub-contractors employed by him for purpose of carrying out the contract. If the Contractor directly or through petty contractor or sub-contractors fails to do so, his failure will be breach of the contract and the RailTel may, in its discretion, rescind the contract. The Contractor shall also be liable for any pecuniary liability arising on account of any violation of the provisions of the Act.

7.6.10.2 **Provisions of Payments of Wages Act**

The Contractor shall comply with the provisions of the payment of Wages Act, 1936 and the rules made there under in respect of all employees directly or through petty contractors or sub-contractors employed by him in the works. If in compliance with the terms of the contract, the contractor directly or through petty contractors or sub-contractors shall supply any labour to be used wholly or partly under the direct orders and control of the Engineer whether in connection with the works to be executed

hereunder or otherwise for the purpose of the Engineer such labour shall nevertheless be deemed to comprise persons employed by the contractor, and any moneys which may be ordered to be paid by the Engineers shall be deemed to be moneys payable by the Engineer on moneys due to the contractor in terms of the contract (whether under this contract or any other contract all moneys paid or payable by the RailTel by way of compensation of aforesaid or for costs of expenses in connection with any claim thereto and the decision of the Engineer upon any question arising out of the effect or force of this clause shall be final and binding upon the contractor.

7.6.10.3 **Provision of Contract Labour (Regulation and Abolition) Act 1970**

1. The contractor shall comply with the provision of the Contract Labour (Regulation and Abolition) Act 1970 and the Contract Labour (Regulation and Abolition) Act, Central Rules 1971 as modified from time to time, whenever applicable and shall also indemnify the RailTel from and against any claims under the aforesaid Act and the Rules.
2. The contractor shall obtain a valid license under the aforesaid Act as modified from time to time before the commencement of the work and continue to have a valid license until the completion of the work. Any failure to fulfill this requirement shall attract the penal provision of the Contract arising out of the resultant non-execution of the work.
3. The contractor shall pay to the labour employed by him directly or through sub-contractors the wages as per provisions of the aforesaid Act and the Rules wherever applicable. The Contractor shall notwithstanding the provisions of the contract to the contrary, cause to be paid the wages to labour indirectly engaged on the work including any engaged by his sub contractors in connection with the said work, as if the labour had been immediately employed by him.
4. In respect of all labour directly or indirectly employed in the work for performance of the contractor's part of the contract the contractor shall comply with or cause to be complied with the provisions of the aforesaid Act and the Rules wherever applicable.
5. In every case in which, by virtue of the provisions of the aforesaid Act or the Rules, the RailTel is obliged to pay any amount of wages to a workmen employed by the contractor or his sub-contractor in execution of the work or to incur any expenditure in providing welfare and health amenities required to be provided under the aforesaid Act and the Rules or to incur any expenditure in providing welfare and health amenities required to be provided under the aforesaid Act the Rules or to incur any expenditure on account of the contingent liability of the RailTel due to contractor's failure to fulfill his statutory obligations under the aforesaid Act or the Rules the RailTel will recover from the contractor, the amount of wages so paid or the amount of expenditure so incurred, and without prejudice to the rights of the RailTel under section 20, sub section (2) and section 2 sub-section (4) of the aforesaid Act, the

RailTel shall be at liberty to recover such amount or part thereof by deducting it from the security deposit and/or from any sum due by the RailTel to the contractor whether under the contract or otherwise. The RailTel shall not be bound to contest any claim made against it under sub section (1) of section 20 and sub section (4) of section 21 of the aforesaid Act except on the written request of the contractor and upon his giving to the RailTel full security for all costs for which the RailTel might become liable in contesting such claim. The decision of the RailTel regarding the amount actually recoverable from the contractor as stated above shall be final and binding on the contractor.

7.6.10.4 **Reporting of Accidents to Labor**

The contractor shall be responsible for the safety of all employees directly or through petty contractors or sub-contractors employed by him on the works and shall report serious accidents to any of them however and wherever occurring on the works to the Engineer or the Engineer's representative and shall make every arrangement to render all possible assistance.

7.6.10.5 **Provisions of Workmen's Compensation Act**

In every case, in which by virtue of the provision of section 12 sub section (1) of the Workmen's Compensation Act, 1923, RailTel is obliged to pay compensation to workman directly or through the petty contractor employed by the contractor or sub-contractor, in executing the work, RailTel will recover from the contractor the amount of the compensation so paid, and without prejudice to the right of RailTel under section 12 sub section (2) of the said Act. RailTel shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by RailTel to the Contractor whether under these conditions or otherwise, RailTel shall not be bound to contest any claim made against it under Section 12, Sub Section (1) of the said Act except on the written request of the contractor and upon his giving to RailTel full security for the all costs for which RailTel might become liable in consequence of contesting such claim.

7.6.11 **Determination of Contract**

Right of RailTel to determine the contract: The RailTel shall be entitled to determine and terminate the contract at any time, should in the RailTel's opinion, the cessation of the work becomes necessary owing to paucity of funds or from any other cause whatever, in which case the value of approved materials at site and of work done to date by the Contractor will be paid for in full at the rate specified in the contract. Notice in writing from the RailTel of such determination and the reasons thereof shall be conclusive evidence thereof.

Payment on determination of contract: Should the contract be determined under sub clause (1) of this clause and the Contractor claims payment for expenditure incurred by him in the expectation of completing the whole of the work, the RailTel shall admit and consider such claims as are deemed reasonable and are supported by vouchers to the satisfactions of the Engineer. The RailTel's decision on the necessity and property of such expenditure shall be final and conclusive.

The contractor shall have no claim to any payment of compensation of otherwise, however on account of any profit or advantage which he might have derived from the execution of the work in full but which he did not derive in consequence of determination of contract.

7.6.12 TERMINATION OF CONTRACT OWING TO DEFAULT OF CONTRACTOR:

As per clause 4.A.30, Chapter-4A of tender document.

7.6.13 RIGHT OF RAILTEL AFTER TERMINATION OF CONTRACT OWING TO DEFAULT OF CONTRACTOR :

- a) The contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any commitments or made any advances on account of or with a view to the execution of the works or the performance of the contract and contractor shall not be entitled to recover or be paid any sum for any works thereto not actually performed under the contract, unless or until the Engineer shall have certified the performance of such work and the value payable in respect thereof and the Contractor shall only be entitled to be paid the value so certified.
- b) The Engineer or Engineer's Representative shall be entitled to take possession of any materials, tools, implements, machinery or buildings on the works or on the property on which these are being or ought to have been executed, and to retain the employ the same in further execution of the works without the contractor being entitled to any compensation for the use and employment thereof or for wear and tear or destruction thereof.
- c) The Engineer shall, as soon as may be practicable after removal of the contractor fix and determine expert or by or after reference to the parties or after such investigation or enquiries as he may consider fit to make or institute and shall certify what amount (if any) has at the time of termination of the contract been reasonably earned by or would reasonably accrue to the Contractor in respect of the work then actually done by him under the contract what was the value of any unused or partially use materials, any constructional plants and any temporary works upon the site. The legitimate amount due to the contractor after making necessary deductions and certified by the Engineer should be released expeditiously.

7.6.14 SETTLEMENT OF DISPUTE AND ARBITRATION:-

- Any dispute or difference whatsoever arising between the parties out of relating to the construction, meaning, scope, operation or effect of this contract or the validity or the breach thereof shall be settled by a sole arbitrator in accordance with provisions contained in Arbitration and Conciliation Act, 1996 as amended and the award made

in pursuance thereof shall be binding on the parties. The venue of such arbitration or proceedings thereof shall be New Delhi.

- All arbitration proceedings shall be conducted in English. Resources against any Arbitral award so rendered may be entered into court having jurisdiction or application may be made to such court for the order of enforcement as the case may be.
- The arbitral tribunal shall consist of the sole Arbitrator if the value of claim is upto Rs. 10 lakhs. The arbitrator will be appointed by the Managing Director of RailTel Corporation of India Ltd. If the value of claim or amount under dispute is more than Rs. 10 lakhs, the matter shall be referred to the adjudication of arbitral council. Managing Director/RailTel shall furnish a panel of three names to the contractor, out of which the contractor will recommend one name to be his nominee and then Managing Director/RailTel shall appoint out the panel, one name as RailTel's nominee and these two arbitrators with mutual consent appoint a third arbitrator who shall act as deciding. The award of sole arbitrator or Arbitral council, as the case may be, shall be final and binding on both the parties, i.e. contractor and RailTel Corporation of India Ltd.
- Each of the parties agree that notwithstanding that the matter may be referred to Arbitrator as provided therein, the parties shall nevertheless pending the resolution of the controversy or disagreement continue to fulfill their obligation under this agreement so far as they are reasonably able to do so.

(End of Chapter- 7)

Appendix-I

- I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority [The Competent Authority for the purpose of registration under this Order shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT)].
- II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- III. "Bidder from a country which shares a land border with India" for the purpose of this Order means: -
 1. An entity incorporated, established or registered in such a country; or
 2. A subsidiary of an entity incorporated, established or registered in such a country; or
 3. An entity substantially controlled through entities incorporated, established or registered in such a country; or
 4. An entity whose beneficial owner is situated in such a country; or
 5. An Indian (or other) agent of such an entity; or
 6. A natural person who is a citizen of such a country; or
 7. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.
- IV. The beneficial owner for the purpose of (III) above will be as under:
 1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means. Explanation-
 - a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;
 - b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;
 2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
6. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.
7. The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

Certificate to be given by the Tenderer:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that I am not from such a country or, if from such a country, I have been registered with the Competent Authority. I hereby certify that I fulfill all requirements in this regard and I am eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

Certificate to be given by Tenderer for Works involving possibility of sub-contracting:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that I am not from such a country or, if from such a country, I have been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that I fulfill all requirements in this regard and I am eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

Annexure-I

DWDM (Optical Layer)

SN	Section	Site Name	OADM/ILA	Directions	Name of Direction	Existing Optical layer
1	SR: Villupurm-Virudhu Nagar	Villupuram	OADM	1-D	1.Villupuram-Trichy	No
2		Cuddalore	ILA-OADM			No
3		Chidambaram	ILA-OADM			No
4		Mayavaram	ILA-OADM			No
5		Tanjore	ILA-OADM			No
6		Trichy	OADM	2-D	1.Trichy-Villupuram 2.Trichy-Virudunagar	No
7		Pudukkottai	ILA-OADM			No
8		Karaikkudi	ILA-OADM			No
9		Manamadurai	ILA-OADM			No
10		Virudunagar	OADM	1-D	1.Virudunagar-Trichy	No
11	SR: Chikjajur-Bellary	Bellary	OADM	1-D	1.Bellary-Chikjajur	No
12		Rayadurg	ILA			No
13		Challakere	ILA			No
14		Chitradurga	ILA			No
15		Chikjajur	OADM	1-D	1.Chikjajur-Bellary	No
16	SR: Solapur-Gadag	Solapur	OADM	1-D	1.Solapur-Gadag	No
17		Indi Road	ILA			No
18		Vijayapura	ILA			No
19		Almatti	ILA			No
20		Bagalkot	ILA			No
21		Hole Alur	ILA			No
22		Gadag	OADM	1-D	1. Gadag-Solapur	No
23	ER: North East Network (Rangiya-Jorhat)	Rangiya	OADM	2-D	1. Rangiya-Ranagapara North 2. Rangiya-Guwahati	No
24		Guwahati	OADM	1-D	Guwahati- Rangiya	No
25		Khoriyabar	ILA			No
26		Udalguri	ILA-OADM			No
27		Ranagapara North	OADM	3-D	1.Ranagapara North-Dibrugarh 2.Ranagapara North-Rangiya	No

				3.Ranagapara North-Chaparmukh	
28	Viswanath	ILA			No
29	Helan	ILA-OADM			No
30	Gopur	ILA			No
31	Harmoti	ILA-OADM			No
32	North Lakhimpur	ILA			No
33	Gogamukh	ILA-OADM			No
34	Silapathar	ILA			No
35	Dibrugarh	OADM	3-D	1. Dibrugarh-Duliajan 2.Dibrugarh-Shimalguri 3. Dibrugarh-Ranagapara	No
36	Tinsukia	ILA-OADM			No
37	Duliajan	OADM	3-D	1.Duliajan-Tinsukia 2.Duliajan-Shimalguri 3.Duliajan-Jorhat	No
38	Namrup	ILA			No
39	Bhojo	ILA-OADM			No
40	Shimalgurii	OADM	3-D	1. Shimalguri-Duliajan 2.Shimalguri -Mariani 3.Shimalguri-Dibrugarh	No
41	Amguri	ILA			No
42	Mariani	OADM	1-D	1.Mariani-Shimalgurii	
43	Moran Hut	ILA-OADM			No
44	Sivasagar	ILA			No
45	Moran Oil	ILA			No
46	Jorhat	OADM	1-D	1. Jorhat-Duliajan	No
47	Tejpur/Dekargaon	ILA			No
48	Amoni	ILA-OADM			No
49	Chaparmukh	OADM	1-D	1. Chaparmukh-Ranagapara North	
50	Rayagada	OADM	1-D	1.Rayagada-Koraput	No
51	Bhalumaska	ILA			No
52	Tikiri	ILA-OADM			No
53	Laxmipur Road	ILA			No
54	Damanjodi	ILA			No

55		Koraput	OADM	2-D	1.Koraput-Rayagada 2.Koraput-Kottavalasa	No
56		Bheja	ILA			No
57		Araku	ILA			No
58		Kottavalasa	OADM	1-D	1.Kottavalasa-Koraput	
59	ER: Bankura- Ranaghat	Bankura	OADM	1-D	1.Bankura-Burdwan	No
60		Patrasayer	ILA-OADM			No
61		Burdwan	OADM	2-D	1.Burdwan-Bandel 2.Burdwan-Bankura	No
62		Bandel	OADM	2-D	1.Bandel-Burdwan 2.Bandel-Dum Dum	No
63		Dum Dum	OADM	2-D	1.Dum Dum-Bandel 2.Dum Dum-Habra	No
64		Barasat	ILA-OADM			No
65		Habra	OADM	2-D	1.Habra-Dum-Dum 2. Habra-Ranaghat	No
66		Bongaon	ILA-OADM			No
67		Ranaghat	OADM	1-D	1. Ranaghat-Habra	No
68		NR: Moradabad- Bareilly	Moradabad	OADM	2-D	1.Moradabad-Lal Kuan 2.Moradabad-Rampur
69	Kashipur		ILA-OADM			No
70	Lal Kuan		OADM	3-D	1.Moradabad-Lal Kuan 2. Lal Kuan-Bareilly 3. Lal Kuan-Rampur	No
71	Baheri		ILA			No
72	Bhojipura		ILA			No
73	Bareilly		OADM	2-D	1.Bareilly-Lal Kuan 2.Bareilly-Rampur	No
74	Rudrapur		ILA-OADM			No
75	Rampur		OADM	3-D	1.Rampur-Lal Kuan 2.Rampur-Bareilly 3.Rampur-Moradabad	No
76	SR: Akola- Purna	Akola	OADM	1-D	1.Akola-Purna	No
77		Amanwadi	ILA			No
78		Washim	ILA-OADM			No
79		Hingoli	ILA-OADM			No
80		Chondi	ILA			No
81		Purna	OADM	1-D	1.Purna-Akola	No
82	ER: Narkatiyaganj- Hazipur	Valmikinagar	OADM	1-D	1. Valmikinagar- Narkatiyaganj	No
83		Narkatiyaganj	OADM	2-D	1.Narkatiyaganj- Sitamani 2. Valmikinagar- Narkatiyaganj	No

84		Raxol	ILA-OADM			No
85		Sitamani	OADM	3-D	1. Sitamani-Narkatiyaganj 2. Sitamani-Darbhangha 3. Sitamani-Muzaffarpur	No
86		Darbhangha	OADM	2-D	1.Darbhangha-Sitamani 2.Darbhangha-Samastipur	No
87		Samastipur	OADM	1-D	1.Samastipur-Darbhangha	No
88		Muzaffarpur	OADM	1-D	1. Muzaffarpur-Sitamani	No
89	WR: Guna-Shivpuri-Gwalior	Gwalior	OADM		1.Gwalior-Shivpuri	No
90		Panihar	ILA			No
91		Ghatigaon	ILA			No
92		Mohana	ILA-OADM			No
93		Padar Khera	ILA			No
94		Shivpuri	OADM	2-D	1.Shivpuri-Gwalior 2.Shivpuri-Guna	No
95		Kolaras	ILA			No
96		Bhadarwas	ILA-OADM			No
97		Mayana	ILA			No
98		Guna	OADM	1-D	1.Guna-Shivpuri	No
99	WR: KRCL: Panvel-Ratnagiri-Madgaon	Panvel	OADM	1-D	1. Panvel-Roha	No
100		Pen	ILA-OADM			No
101		Nagothane	FOADM			No
102		Roha	OADM	2-D	1. Roha-Panvel 2. Roha-Mangon	No
103		Kolad	ILA-OADM			No
104		Indapur	FOADM			No
105		Mangon	OADM	2-D	1. Mangon-Roha 2. Mangon-Karanjadi	No
106		Goregaon	FOADM			No
107		Veer	ILA-OADM			No
108		Sapevamne	FOADM			No
109		Karanjadi	OADM	2-D	1. Karanjadi-Mangon 2. Karanjadi-Khed	No
110		Vinhare	FOADM			No
111		DWV	ILA-OADM			No
112		Kalambani	FOADM			No
113		Khed	OADM	2-D	1. Khed-Karanjadi 2. Khed-Chiplun	No
114		Anjani	FOADM			No
115		Chiplun	OADM	2-D	1. Chiplun-Khed 2. Chiplun-Savarda	No
116		Kamathe	FOADM			No

117		Savarda	OADM	2-D	1. Savarda-Chiplun 2. Savarda-Sangameshwar	No
118		Aravali	ILA-OADM			No
119		Kadwai	FOADM			No
120		Sangameshwar	OADM	2-D	1. Sangameshwar-Savarda 2. Sangameshwar-Ratnagiri	No
121		Uksi	ILA-OADM			No
122		Bhoke	FOADM			No
123		Ratnagiri	OADM	2-D	1. Ratnagiri-Sangameshwar 2. Ratnagiri-Adavali	No
124		Nivsar	FOADM			No
125		Adavali	OADM	2-D	1. Adavali-Vilvade 2. Adavali-Ratnagiri	No
126		Verawali	FOADM			No
127		Vilvade	OADM	2-D	1. Vilvade-Adavali 2. Vilvade-Vaibhavwadi	No
128		Rajapur	ILA-OADM			No
129		Kharepatan	FOADM			No
130		Vaibhavwadi	OADM	2-D	1. Vaibhavwadi-Vilvade 2. Vaibhavwadi-Kudal	No
131		Achirene	ILA-OADM			No
132		Nandgaon	FOADM			No
133		Kankavali	ILA-OADM			No
134		Sindhurg	FOADM			No
135		Kudal	OADM	2-D	1. Kudal-Vaibhavwadi 2. Kudal-Sawantwadi	No
136		Zarap	FOADM			No
137		Sawantwadi	OADM	2-D	1. Sawantwadi-Kudal 2. Sawantwadi-Thivim	No
138		Madure	ILA-OADM			No
139		Pernem	FOADM			No
140		Thivim	OADM	2-D	1. Thivim-Sawantwadi 2. Thivim-Karmali	No
141		Karmali	OADM	2-D	1. Karmali-Thivim 2. Karmali-Madgaon	No
142		Verna	ILA-OADM			No
143		Majroda	FOADM			No
144		Madgaon	OADM	1-D	1. Madgaon-Karmali	No
145	WR: CCG EXCG- Badhwar	CCG EXCG	OADM	2-D	1. CCG-DIT Mantralaya 2. CCG-CSTM	No

146	Park- PRS/CSTM	DIT Mantralaya	OADM	3-D	1. DIT Mantralaya- CCG 2. DIT Mantralaya- CSTM 3. DIT Mantralaya- Nariman point	No
147		CBI NP	FOADM			No
148		Nariman Point	OADM	2-D	1. Nariman Point-DIT Mantralaya 2. Nariman Point- Badhwar Park	No
149		Navy Nagar	FOADM			No
150		Badhwar Park	OADM	2-D	1. Badhwar Park- Nariman Point 2. Badhwar Park-BSE	No
151		BSE	OADM	2-D	1. BSE-CSTM 2. BSE-Badhwar Park	No
152		Fort Mint	FOADM			No
153		WR: Ratlam- Kota	Ratlam	OADM	1-D	Ratlam-Kota
154	Jaora		ILA			No
155	Mandsor		ILA			No
156	Nimach		ILA			No
157	Nimbahera		ILA			No
158	Chittaurgarh		ILA			No
159	Bassi		ILA			No
160	Mandalgarh		ILA			No
161	Jalindari		ILA			No
162	Bundi		ILA			No
163	Kota		OADM	1-D	Ratlam-Kota	No
164	WR: Different customer deliveries	MX (LVSB)	OADM	2-D	MX-MX (LVSB) both path	No
165		MX	OADM	2-D	MX-MX (LVSB) both path	No
166		Bandra	OADM	2-D	Bandra-GPX (both path)	No
167		GPX	OADM	2-D	Bandra-GPX (both path)	No
168		Kalyan	OADM	2-D	Kalyan- BSNL/Kalatalab (both path)	No
169		BSNL/Kalatalab	OADM	2-D	Kalyan- BSNL/Kalatalab (both path)	No
170		Pune	OADM	2-D	Pune-NIC/Pune (both path)	No
171		NIC/Pune	OADM	2-D	Pune-NIC/Pune (both path)	No
172		Mankhurd	OADM	2-D	1. Mankhurd-Vashi 2. Mankhurd-Kurla	No

173		Vashi	OADM	1-D	1.Vashi-Mankhurd	No
174		Kurla	OADM	1-D	1.Kurla-Mankhurd	No
175		Nagpur	OADM	2-D	Nagpur-NIC/Nagpur (both path)	No
176		NIC/Nagpur	OADM	2-D	Nagpur-NIC/Nagpur (both path)	No
177		Bhopal	OADM	2-D	Bhopal-NIC/Bhopal (both path)	No
178		NIC/Bhopal	OADM	2-D	Bhopal-NIC/Bhopal (both path)	No
179		Indore	OADM	4-D	1. Indore-IIT/Indore (two path) 2. Indore-Fatehabad 3. Indore-Dewas	No
180		IIT/Indore	OADM	2-D	Indore-IIT/Indore (both path)	No
181		Dewas	OADM	3-D	1. Dewas-Maksi 2. Dewas-Ujjain 3. Indore-Dewas	No
182		Fatehabad	OADM	3-D	1. Fatehabad-Ujjain 2. Fatehabad-Nagda 3. Fatehabad-Indore	No
183	NR: Jodhpur- Jaisalmer	Phalodi	OADM	1-D	1. Phalodi-Jaisalmer	No
184		Pokaran	ILA-OADM			No
185		Jetha	ILA-OADM			No
186		Jaisalmer	OADM	1-D	1. Jaisalmer-Phalodi	No
187	WR: Saurashtra	SAMAKHAYALI	OADM	2-D	1. SAMAKHAYALI- MALIYA 2. SAMAKHAYALI- BHILDI	No
188		AADESAR	ILA-OADM			No
189		SATALPUR	ILA-OADM			No
190		RADHANPUR	ILA-OADM			No
191		DEODAR	ILA-OADM			No
192		BHILDI	OADM	3-D	1. Bhidli-Mehsana 2. Bhidli-Palanpur 3. Bhildi-Samakhyali	No
193		PALANPUR	OADM	3-D	1. Palanapur-Abu Road 2. Palanpur- Mehsana 3. Palanpur- Bhildi	No
194		Abu Road	ILA-OADM			No

195	Sirohi	ILA-OADM		To be added between Abu Rd-Marwar Jn. OADM	No
196	Falna	ILA-OADM		To be added between Abu Rd-Marwar Jn. OADM	No
197	Marwar	OADM	1-D	Marwar-Abu Rd	No
198	SIDDHPUR	ILA-OADM			No
199	PATAN	ILA-OADM			No
200	MEHSANA	OADM	2-D	Existing direction: 1. MEHSANA-Kalol 2. MSH-VIRAMGAM New direction: 1.Mehsana- Palanpur 2.Mehsana-Bhildi	No
201	KATOSAN RD	ILA-OADM			Yes
202	VIRAMGAM	OADM	3-D	Existing direction: 1.VIRAMGAM-MEHSANA 2.VIRAMGAM-SAC Bopal New direction: 1. VIRAMGAM-SURENDRANAGAR 2. VIRAMGAM-CHANDLODIYA 3. VIRAMGAM-DHANGADHRA	No
203	KALOL-1	OADM	2-D	Existing direction: 1. KALOL-MEHSANA (Adva) 2. KALOL-KHODIYAR (Adva) New Direction: KALOL-GANDHINAGAR	Yes
204	KALOL-2	OADM	1-D		NO
205	KHODIYAR	OADM	2-D	Existing direction: 1. KHODIYAR-AHMADABAD(Adva) 2. KHODIYAR-KALOL (Adva) New Direction: 1. KHODIYAR-GANDHINAGAR 2. KHODIYAR-CHANDLODIYA	Yes
206	KHODIYAR-2	OADM	2-D		No
207	AHMADABAD			No hardware required	

208	CHANDLODIYA	OADM	3-D	Existing direction: 1. CHANDLODIYA-ADI 2. CHANDLODIYA-GANDHIGRAM (Adva) New Direction: 1. CHANDLODIYA-GANDHINAGAR 2. CHANDLODIYA-KHODIYAR 3. CHANDLODIYA-VIRAMGAM	No
209	GANDHINAGAR	OADM	4-D	1. GANDHINAGAR-KALOL 2. GANDHINAGAR-KHODIYAR 3. GANDHINAGAR-CHANDLODIYA 4. GANDHINAGAR- NIC GANDHINAGAR	No
210	GANDHIGRAM	OADM	1-D	Existing direction: 1.CHANDLODIYA-GANDHIGRAM 2.GANDHIGRAM-TTSL New Direction: GANDHIGRAM-BOTAD	No
211	Dholka	ILA-OADM		New location added between Gandhigram-Botad OADM	No
212	Dhankuda	ILA-OADM		New location added between Gandhigram-Botad OADM	No
213	SURENDRANAGAR	OADM	4-D	1.SURENDRANAGAR-VIRAMGAM 2. SURENDRANAGAR-BOTAD 3.SURENDRANAGAR-WAKANER 4.4SURENDRANAGAR-DHANGADHRA	No
214	Chuda	ILA-OADM		New location added between SURENDRANAGAR - Botad OADM	No
215	BOTAD	OADM	3-D	1.BOTAD-SURENDRANAGAR 2. BOTAD-DHOLA 3. BOTAD-GANDHIGRAM	No

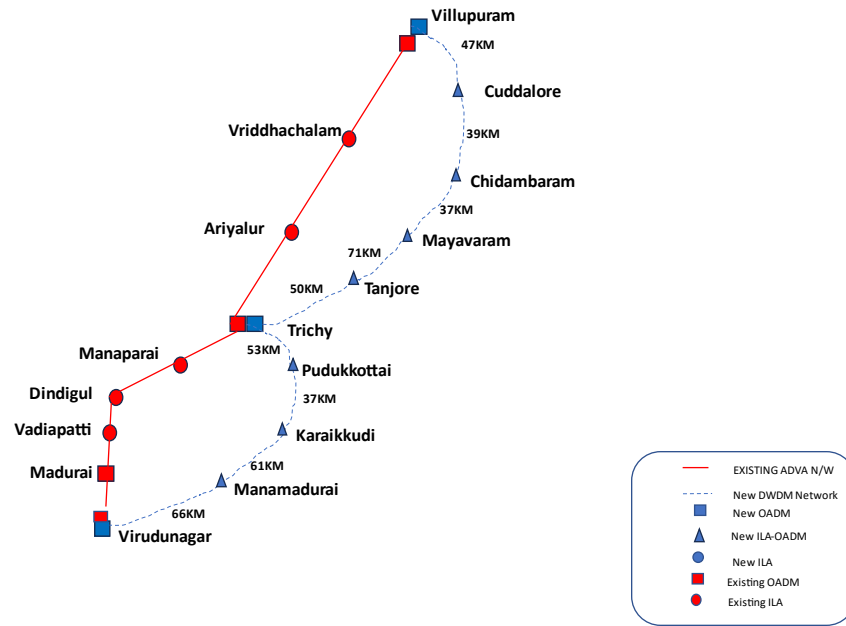
216	MALIYA	OADM	3-D	1.MALIYA- WAKANER 2.MALIYA- DHANGADHRA 3. MALIYA- SAMAKHAYALI	No
217	HALVAD	ILA-OADM			No
218	DHANGADHRA	OADM	3-D	1. DHANGADHRA- SURENDRANAGAR 2. DHANGADHRA- VIRAGAM 3. DHANGADHRA- MALIYA	No
219	BAJANA	ILA-OADM			No
220	MORBI	ILA-OADM			No
221	WAKANER	OADM	3-D	1. WAKANER - MALIYA 2. WAKANER -RAJKOT 3. WAKANER- SURENDRANAGAR	No
222	VAGADIYA	ILA-OADM			No
223	DHOLA	OADM	2-D	1. DHOLA-BOTAD 2. DHOLA-DHASA	No
224	DHASA	OADM	2-D	1. DHASA-DHOLA 2. DHASA- KHIJADIYA	No
225	KHIJADIYA	OADM	2-D	1. KHIJADIYA- DHASA 2. KHIJADIYA - JETALSAR	No
226	KHAKHARIYA	ILA-OADM			No
227	JETALSAR	OADM	3-D	1. JETALSAR-RAJKOT 2. JETALSAR- KHIJADIYA 3. JETALSAR-WANJALIYA	No
228	RAJKOT	OADM	3-D	1 RAJKOT-JETALSAR 2. RAJKOT-WAKANER 3. RAJKOT- JAMNAGAR	No
229	HADMATIYA	ILA-OADM			No
230	HAPA	ILA-OADM			No
231	JAMNAGAR	OADM	2-D	1.JAMNAGAR- RAJKOT 2. JAMNAGAR- KALANUS	No
232	KALANUS	OADM	2-D	1. KALANUS- JAMNAGAR 2. KALANUS-WANJALIYA	No
233	GONDAL	ILA-OADM			No
234	UPLETA	ILA-OADM			No
235	JAMJODHPUR	ILA-OADM			No
236	WANJALIYA	OADM	2-D	1.WANJALIYA- KALANUS 2.	No

					WANJALIYA- JETALSAR	
237		GOPJAM	ILA-OADM			No

Network Topology

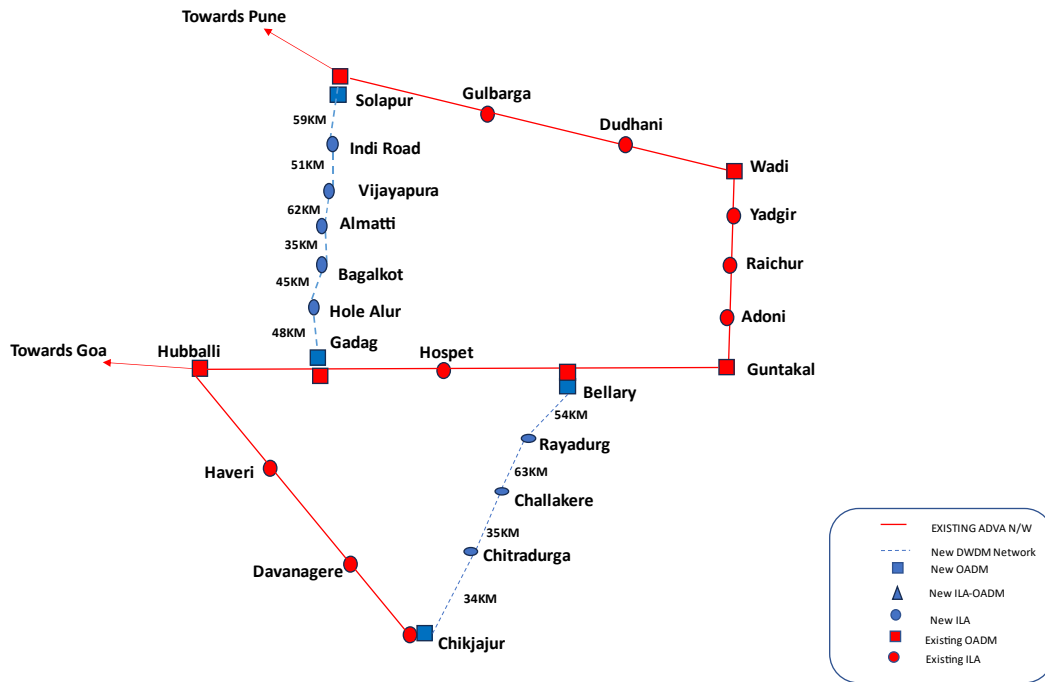
Network Diagram

Route: SR : Villupurm- Virudhu Nagar



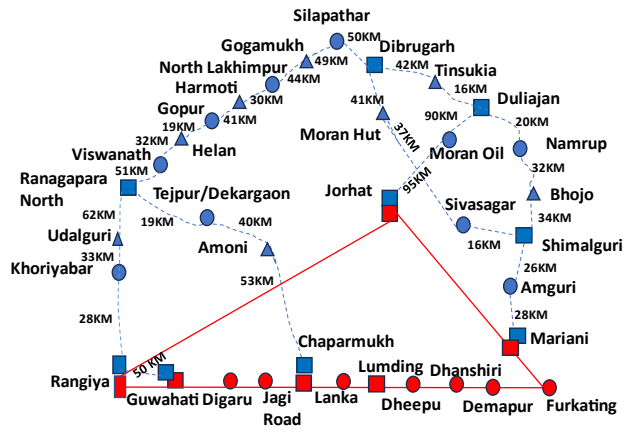
Network Diagram

Route: SR : Chikjajur- Bellary & Gadag-Solapur



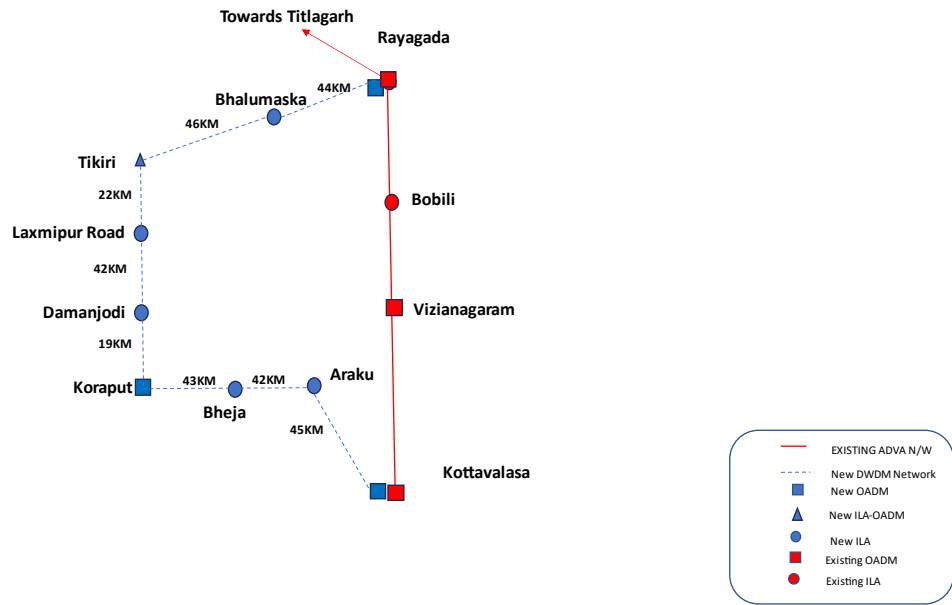
Network Diagram

Route: ER : Rangiya-Jorhat



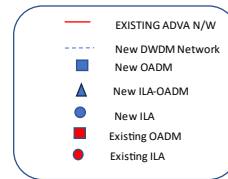
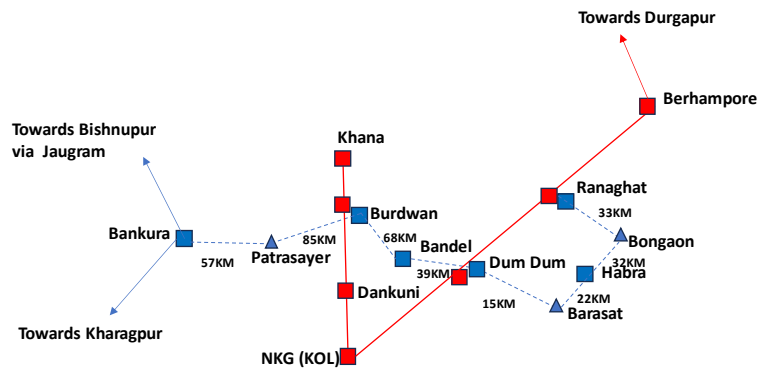
Network Diagram

Route: ER : Rayagada-Kottavalasa



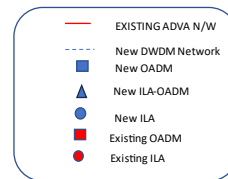
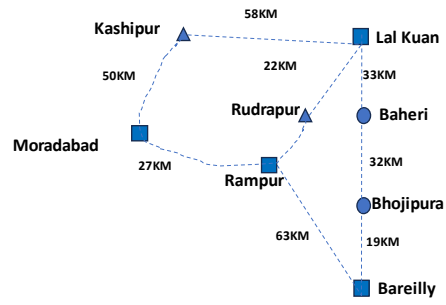
Network Diagram

Route: ER : Bankura-Ranaghat



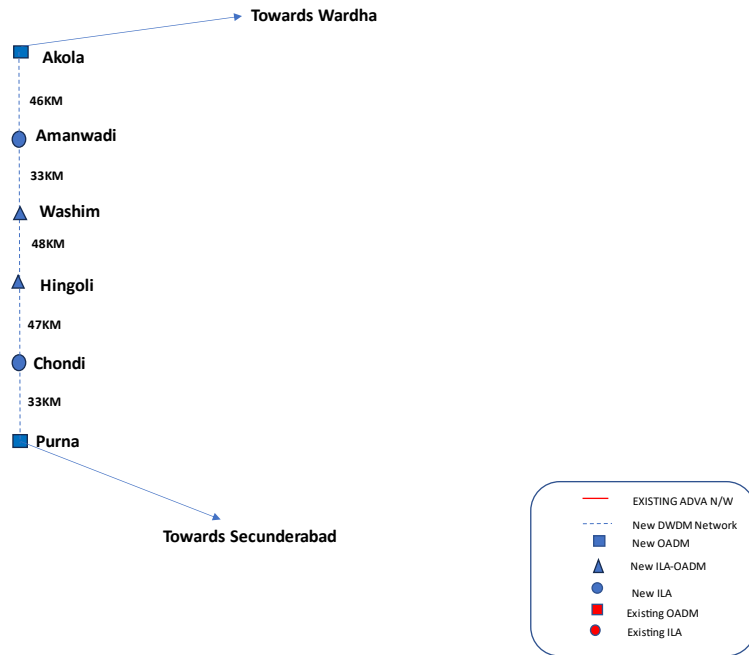
Network Diagram

Route: NR : Moradabad-Kasipur-Lalkuan & Rampur-Rudrapur-Lalkuan-Bareilly



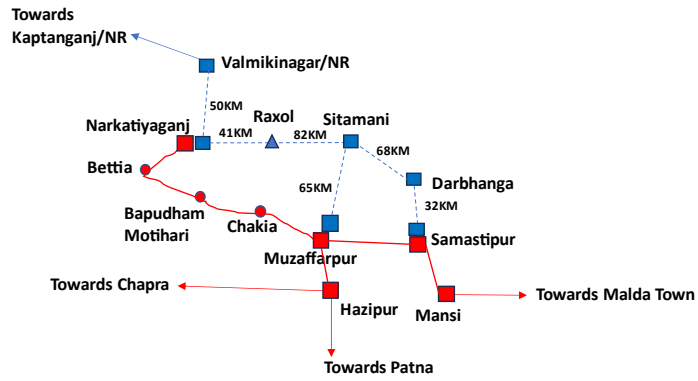
Network Diagram

Route: SR : Akola-Purna



Network Diagram

Route: ER : Narkatiyaganj-Hazipur



Network Diagram

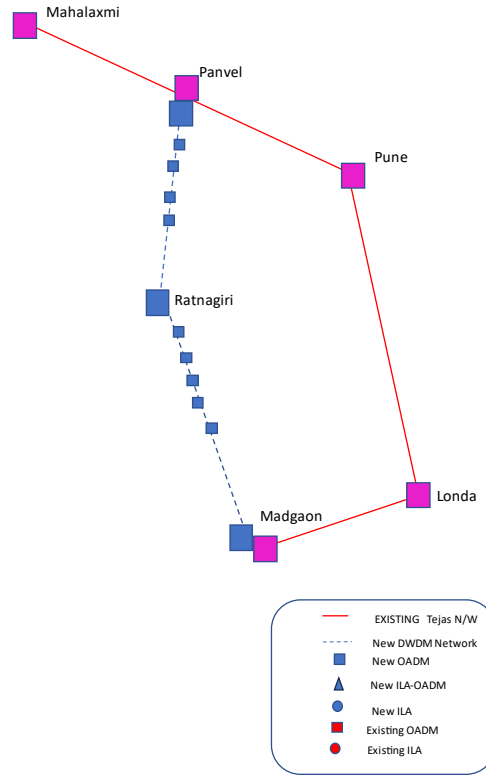
Route: WR : Gwalior-Shivpuri-Guna



Network Diagram

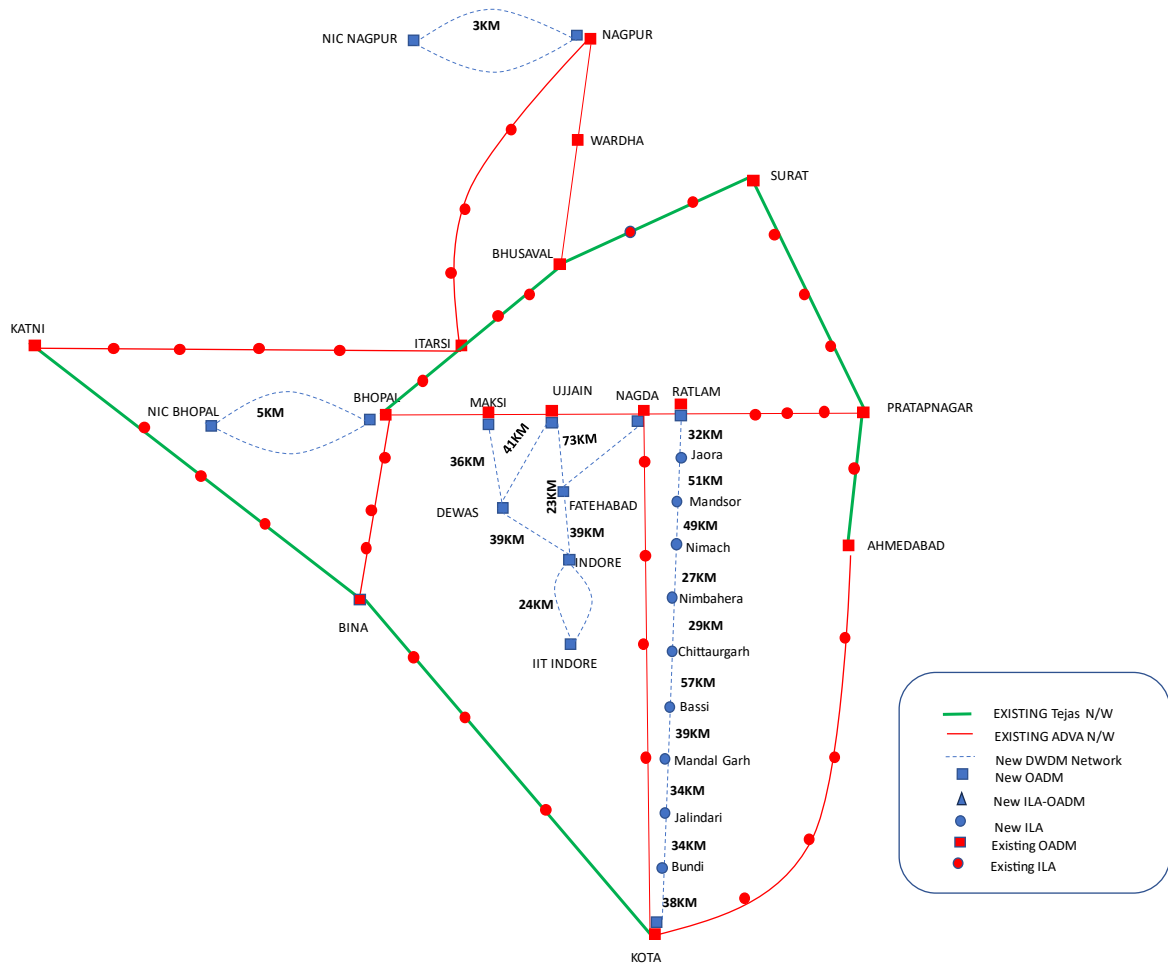
Route: WR: KRCL: Panvel-Ratnagiri-Madgaon

SN	Site Name	OADM/ILA	END A	END B	Fiber Length (in KM)
1	Panvel	OADM	Panvel	Pen	35
2	Pen	ILA-OADM	Pen	Nagothane	27
3	Nagothane	FOADM	Nagothane	Roha	13
4	Roha	OADM	Roha	Kolad	26
5	Kolad	ILA-OADM	Kolad	Indapur	11
6	Indapur	FOADM	Indapur	Mangon	7
7	Mangon	OADM	Mangon	Goregaon	10
8	Goregaon	FOADM	Goregaon	Veer	6
9	Veer	ILA-OADM	Veer	Sapevamne	8
10	Sapevamne	FOADM	Sapevamne	Karanjadi	8
11	Karanjadi	OADM	Karanjadi	Vinhare	8
12	Vinhare	FOADM	Vinhare	DWV	10
13	DWV	ILA-OADM	DWV	Kalambani	10
14	Kalambani	FOADM	Kalambani	Khed	8
15	Khed	OADM	Khed	Anjani	13
16	Anjani	FOADM	Anjani	Chiplun	16
17	Chiplun	OADM	Chiplun	Kamathe	10
18	Kamathe	FOADM	Kamathe	Savarda	9
19	Savarda	OADM	Savarda	Aravali	4
20	Aravali	ILA-OADM	Aravali	Kadwai	13
21	Kadwai	FOADM	Kadwai	Sangameshwar	7
22	Sangameshwar	OADM	Sangameshwar	Uksi	14
23	Uksi	ILA-OADM	Uksi	Bhoke	13
24	Bhoke	FOADM	Bhoke	Ratnagiri	7
25	Ratnagiri	OADM	Ratnagiri	Nivsar	15
26	Nivsar	FOADM	Nivsar	Adavali	16
27	Adavali	OADM	Adavali	Veravali	10
28	Veravali	FOADM	Veravali	Vilvade	6
29	Vilvade	OADM	Vilvade	Rajapur	17
30	Rajapur	ILA-OADM	Rajapur	Kharepatan	9
31	Kharepatan	FOADM	Kharepatan	Vaibhavwadi	8
32	Vaibhavwadi	OADM	Vaibhavwadi	Achirene	9
33	Achirene	ILA-OADM	Achirene	Nandgaon	7
34	Nandgaon	FOADM	Nandgaon	Kankavali	15
35	Kankavali	ILA-OADM	Kankavali	Sindhurg	18
36	Sindhurg	FOADM	Sindhurg	Kudal	11
37	Kudal	OADM	Kudal	Zarap	10
38	Zarap	FOADM	Zarap	Sawantwadi	11
39	Sawantwadi	OADM	Sawantwadi	Madure	8
40	Madure	ILA-OADM	Madure	Pernem	11
41	Pernem	FOADM	Pernem	Thivim	11
42	Thivim	OADM	Thivim	Karmali	17
43	Karmali	OADM	Karmali	Verna	16
44	Verna	ILA-OADM	Verna	Majroda	5
45	Majroda	FOADM	Majroda	Madgaon	8
46	Madgaon	OADM			



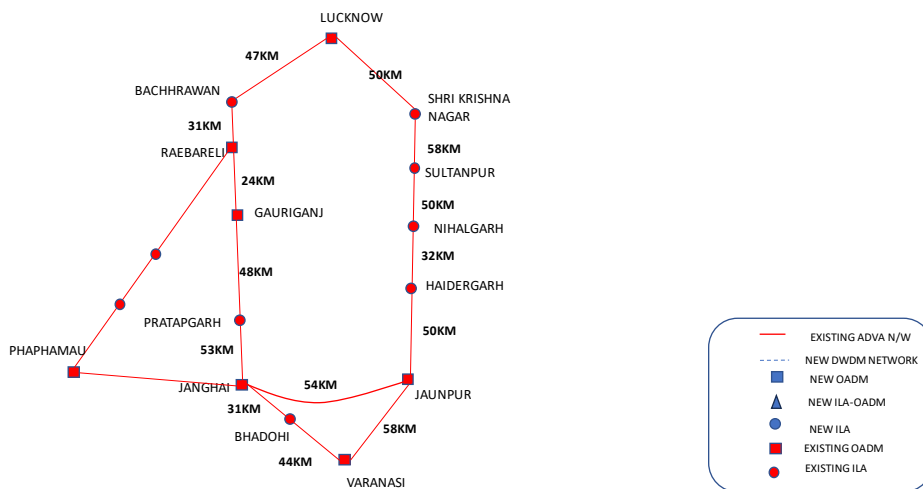
Network Diagram

Route: WR : Ratlam-Kota, NIC/Nagpur, NIC/Bhopal & IIT/Indore



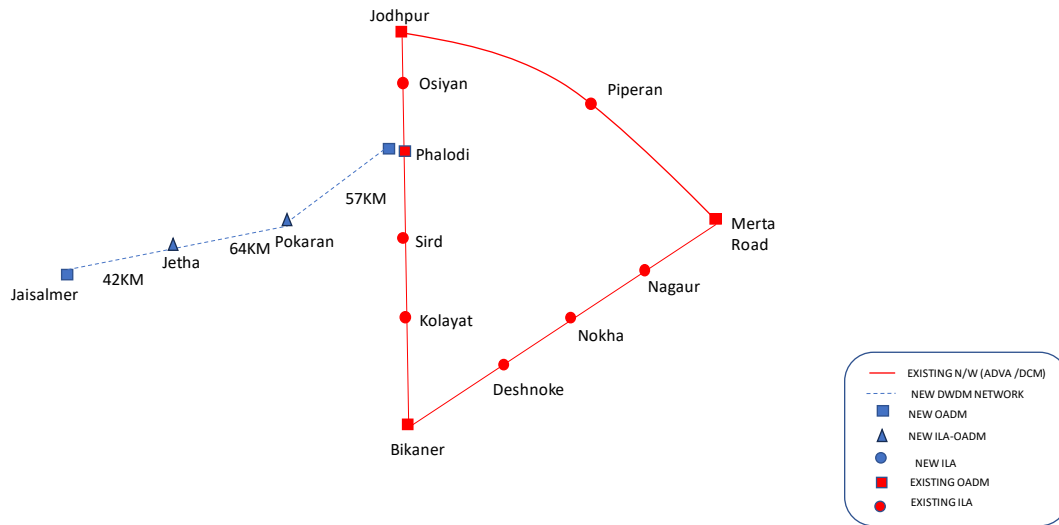
NETWORK DIAGRAM

NR : RGIPT/Amethi



NETWORK DIAGRAM

NR : Jodhpur-Jaisalmer



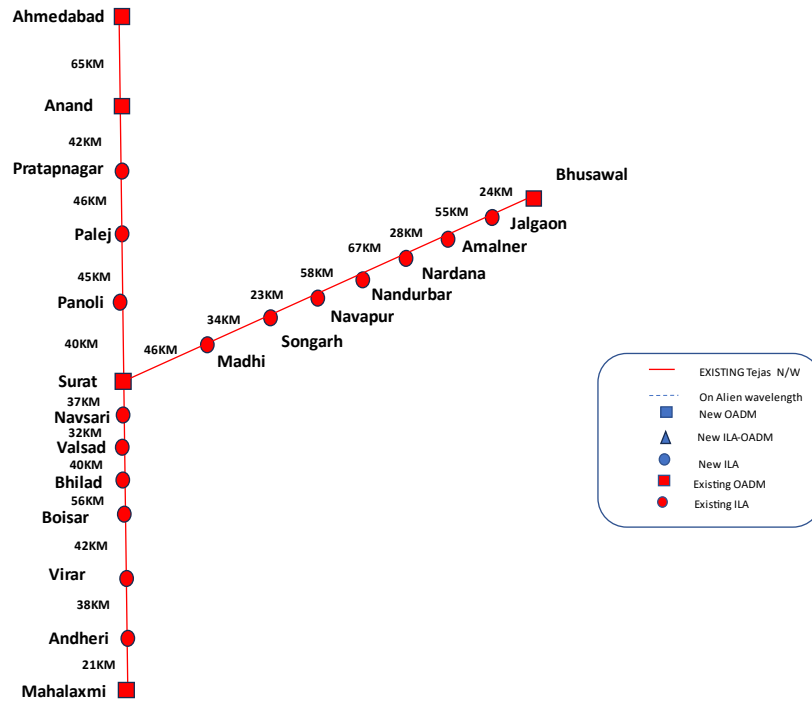
Network Diagram

Route : NR : Okhla-Jhansi (CDOT)

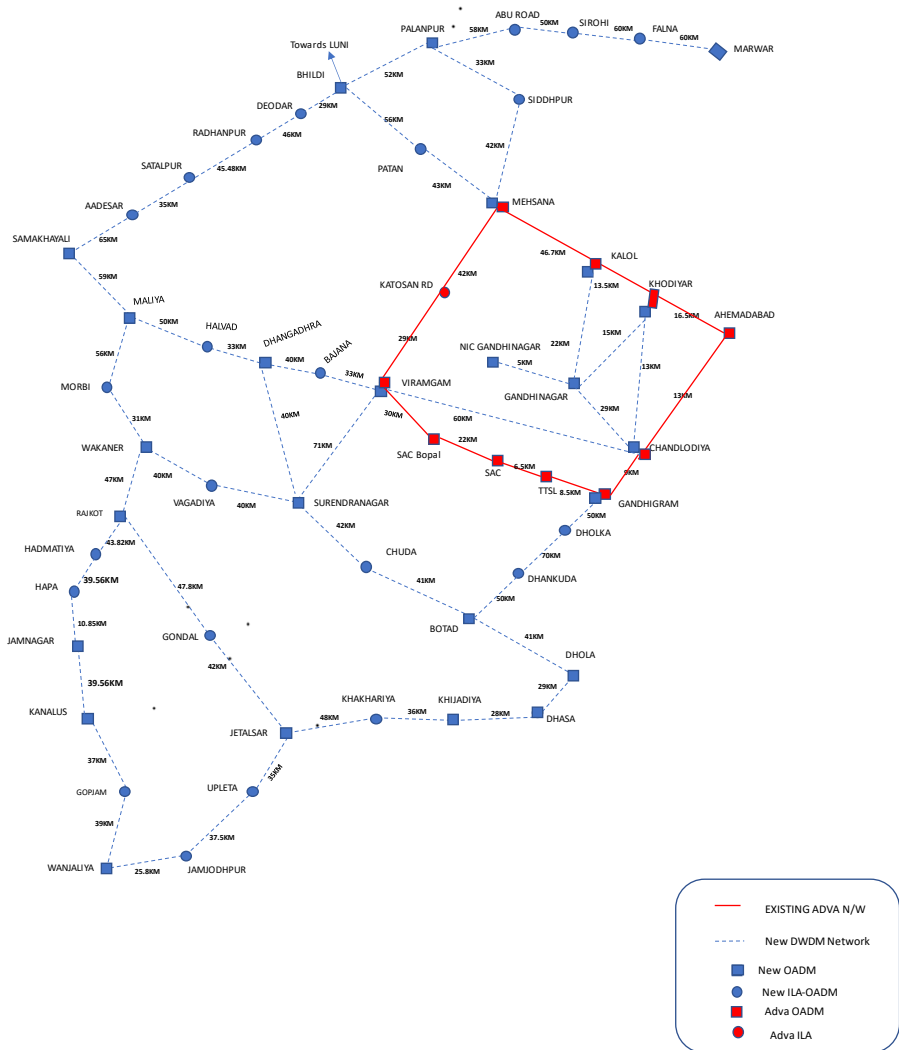


Network Diagram

Route: WR: Shifting of Surat Pop



Network Diagram WR : Saurashtra



Fiber Length

SN	Section	END A	END B	Fiber Length (in KM)	Fiber Type
1	SR: Villupurm- Virudhu Nagar	Villupuram	Cuddalore	47	G652D
2		Cuddalore	Chidambaram	39	G652D
3		Chidambaram	Mayavaram	37	G652D
4		Mayavaram	Tanjore	71	G652D
5		Tanjore	Trichy	50	G652D
6		Trichy	Pudukkottai	53	G652D
7		Pudukkottai	Karaikkudi	37	G652D
8		Karaikkudi	Manamadurai	61	G652D
9		Manamadurai	Virudunagar	66	G652D
10	SR: Chikjajur- Bellary	Bellary	Rayadurg	54	G652D
11		Rayadurg	Challakere	63	G652D
12		Challakere	Chitradurga	35	G652D
13		Chitradurga	Chikjajur	34	G652D
14	SR: Solapur-Gadag	Solapur	Indi Road	59	G652D
15		Indi Road	Vijayapura	51	G652D
16		Vijayapura	Almatti	62	G652D
17		Almatti	Bagalkot	35	G652D
18		Bagalkot	Hole Alur	45	G652D
19		Hole Alur	Gadag	48	G652D
20	ER: North East Network (Rangiya-Jorhat)	Rangiya	Khoirayabari	28	G652D
21		Khoirayabari	Udalguri	33	G652D
22		Udalguri	Rangapara North	62	G652D
23		Rangapara North	Viswanath	51	G652D
24		Viswanath	Helem	32	G652D
25		Helan	Gohpur	19	G652D
26		Gopur	Harmoti	41	G652D
27		Harmoti	North Lakhimpur	30	G652D
28		North Lakhimpur	Gogamukh	44	G652D
29		Gogamukh	Silapathar	49	G652D
30		Silapathar	Dibrugarh	50	G652D
31		Dibrugarh	Tinsukia	42	G652D
32		Tinsukia	Duliajan	16	G652D
33		Duliajan	Namrup	20	G652D
34		Namrup	Bhojo	32	G652D
35		Bhojo	Shimalguri	34	G652D
36		Shimalgurii	Amguri	26	G652D
37		Amguri	Mariani	28	G652D
38		Dibrugarh	Moran Hut	41	G652D
39		Moran Hut	Sivasagar	37	G652D
40		Sivasagar	Shimalguri	16	G652D
41		Duliajan	Moran Oil	104	G652D
42		Moran Oil	Jorhat	118	G652D

43		Rangapara North	Tejpur/Dekargaon	19	G652D
44		Tejpur/Dekargaon	Amoni	40	G652D
45		Amoni	Chaparmukh	53	G652D
46	ER: Rayagada-Kottavalasa	Rayagada	Bhalumaska	44	G652D
47		Bhalumaska	Tikiri	46	G652D
48		Tikiri	Laxmipur Road	22	G652D
49		Laxmipur Road	Damanjodi	42	G652D
50		Damanjodi	Koraput	19	G652D
51		Koraput	Bheja	43	G652D
52		Bheja	Araku	42	G652D
53		Araku	Kottavalasa	45	G652D
54	ER: Bankura-Ranaghat	Bankura	Patrasayer	57	G652D
55		Patrasayer	Barddhaman	85	G652D
56		Barddhaman	Bandel	68	G652D
57		Bandel	Dum Dum	39	G652D
58		Dum Dum	Barasat	15	G652D
59		Barasat	Habra	22	G652D
60		Habra	Bongaon	32	G652D
61		Bongaon	Ranaghat	33	G652D
62	NR: Moradabad-Bareilly	Moradabad	Kashipur	50	G652D
63		Kashipur	Lal Kuan	58	G652D
64		Lal Kuan	Baheri	33	G652D
65		Baheri	Bhojipura	32	G652D
66		Bhojipura	Bareilly	19	G652D
67		Bareilly	Rampur	63	G652D
68		Rudrapur	Rampur	45	G652D
69		Rampur	Moradabad	27	G652D
70		Lal Kuan	Rudrapur	22	G652D
71	SR: Akola-Purna	Akola	Amanwadi	46	G652D
72		Amanwadi	Washim	33	G652D
73		Washim	Hingoli	48	G652D
74		Hingoli	Chondi	47	G652D
75		Chondi	Purna	33	G652D
76	ER: Narkatiyaganj-Hazipur	Valmikinagar/NR	Narkatiyaganj	50	G652D
77		Narkatiyaganj	Raxol	41	G652D
78		Raxol	Sitamani	82	G652D
79		Sitamani	Darbhanga	68	G652D
80		Darbhanga	Samastipur	32	G652D
81		Sitamani	Muzaffarpur	65	G652D
82	WR: Guna-Shivpuri-Gwalior	Gwalior	Panihar	25	G652D
83		Panihar	Ghatigaon	12	G652D
84		Ghatigaon	Mohana	26	G652D
85		Mohana	Padar Khera	28	G652D
86		Padar Khera	Shivpuri	34	G652D
87		Shivpuri	Kolaras	26	G652D
88		Kolaras	Bhadarwas	28	G652D
89	Bhadarwas	Mayana	18	G652D	

90		Mayana	Guna	31	G652D
91	WR: KRCL: Panvel-Ratnagiri-Madgaon	Panvel	Pen	35	G652D
92		Pen	Nagothane	27	G652D
93		Nagothane	Roha	13	G652D
94		Roha	Kolad	26	G652D
95		Kolad	Indapur	11	G652D
96		Indapur	Mangon	7	G652D
97		Mangon	Goregaon	10	G652D
98		Goregaon	Veer	6	G652D
99		Veer	Sapevamne	8	G652D
100		Sapevamne	Karanjadi	8	G652D
101		Karanjadi	Vinhare	8	G652D
102		Vinhare	DWV	10	G652D
103		DWV	Kalambani	10	G652D
104		Kalambani	Khed	8	G652D
105		Khed	Anjani	13	G652D
106		Anjani	Chiplun	16	G652D
107		Chiplun	Kamathe	10	G652D
108		Kamathe	Savarda	9	G652D
109		Savarda	Aravali	4	G652D
110		Aravali	Kadwai	13	G652D
111		Kadwai	Sangameshwar	7	G652D
112		Sangameshwar	Uksi	14	G652D
113		Uksi	Bhoke	13	G652D
114		Bhoke	Ratnagiri	7	G652D
115		Ratnagiri	Nivsar	15	G652D
116		Nivsar	Adavali	16	G652D
117		Adavali	Veravali	10	G652D
118		Veravali	Vilvade	6	G652D
119		Vilvade	Rajapur	17	G652D
120		Rajapur	Kharepatan	9	G652D
121		Kharepatan	Vaibhavwadi	8	G652D
122		Vaibhavwadi	Achirene	9	G652D
123		Achirene	Nandgaon	7	G652D
124		Nandgaon	Kankavali	15	G652D
125		Kankavali	Sindhurg	18	G652D
126	Sindhurg	Kudal	11	G652D	
127	Kudal	Zarap	10	G652D	
128	Zarap	Sawantwadi	11	G652D	
129	Sawantwadi	Madure	8	G652D	
130	Madure	Pernem	11	G652D	
131	Pernem	Thivim	11	G652D	
132	Thivim	Karmali	17	G652D	
133	Karmali	Verna	16	G652D	
134	Verna	Majroda	5	G652D	
135	Majroda	Madgaon	8	G652D	
136		Churchgate	CSMT	26	G652D

137	WR: CCG EXCG-Badhwar Park-PRS/CSTM	CSMT	Fort Mint	1.4	G652D
138		Fort Mint	BSE	1.2	G652D
139		BSE	Badhwar park	3	G652D
140		Badhwar park	Navy Nagar	4	G652D
141		Navy Nagar	Nariman point	5	G652D
142		Nariman point	CBI NP	16.7	G652D
143		CBI NP	DIT Mantralaya	4	G652D
144		DIT Mantralaya	Churchgate	1.6	G652D
145	WR: Ratlam-Kota	Ratlam	Jaora	32	G652D
146		Jaora	Mandsor	51	G652D
147		Mandsor	Nimach	49	G652D
148		Nimach	Nimahaera	27	G652D
149		Nimahaera	Chittaurgarh	29	G652D
150		Chittaurgarh	Bassi	57	G652D
151		Bassi	Mandalgarh	39	G652D
152		Mandalgarh	Jalindari	34	G652D
153		Jalindari	Bundi	34	G652D
154	Bundi	Kota	38	G652D	
155	WR: Different customer deliveries	MX (LVSB)	MX	8	G652D
156		Bandra	GPX	16	G652D
157		Kalyan	BSNL/Kalatalab	3	G652D
158		Pune	NIC/Pune	6	G652D
159		Mankhurd	Vashi	7	G652D
160		Mankhurd	Kurla	6	G652D
161		Nagpur	NIC/Nagpur	3	G652D
162		Bhopal	NIC/Bhopal	5	G652D
163		Indore	IIT/Indore	24	G652D
164	NR: Jodhpur-Jaisalmer	Phalodi	Pokaran	57	G652D
165		Pokaran	Jetha	64	G652D
166		Jetha	Jaisalmer	42	G652D
167	NR: Okhla-Jhansi (CDOT)	Okhla	Faridabad	17	G652D
168		Faridabad	Palwal	30	G652D
169		Palwal	Kosi	42	G652D
170		Kosi	Mathura	41	G652D
171		Mathura	Agra	54	G652D
172		Agra	Dholpur	53	G652D
173		Dholpur	Gwalior	66	G652D
174		Gwalior	Dabra	42	G652D
175		Dabra	Jhansi	45	G652D
176	WR: Shifting of Surat Pop	Ahmedabad	Anand	65	G652D
177		Anand	Pratapnagar	42	G652D
178		Pratapnagar	Palej	46	G652D
179		Palej	Panoli	45	G652D
180		Panoli	Surat	40	G652D
181		Surat	Navsari	37	G652D

182		Navsari	Valsad	32	G652D
183		Valsad	Bhilad	40	G652D
184		Bhilad	Boisar	56	G652D
185		Boisar	Virar	42	G652D
186		Virar	Andheri	38	G652D
187		Andheri	Mahalaxmi	21	G652D
188		Surat	Madhi	46	G652D
189		Madhi	Songarh	34	G652D
190		Songarh	Navapur	23	G652D
191		Navapur	Nandurbar	58	G652D
192		Nandurbar	Nardana	67	G652D
193		Nardana	Amalner	28	G652D
194		Amalner	Jalgaon	55	G652D
195		Jalgaon	Bhusawal	24	G652D
196	WR: Saurashtra	SAMAKHAYALI	AADESAR	65	G652D
197		AADESAR	SATALPUR	35	G652D
198		SATALPUR	RADHANPUR	45.48	G652D
199		RADHANPUR	DEODAR	46	G652D
200		DEODAR	BHILDI	29	G652D
201		BHILDI	PALANPUR	52	G652D
202		PALANPUR	Abu Road	58	G652D
203		Abu Road	Sirohi	50	G652D
204		Sirohi	Falna	60	G652D
205		Falna	Marwar	60	G652D
206		PALANPUR	SIDDHPUR	33	G652D
207		SIDDHPUR	MEHSANA	42	G652D
208		BHILDI	PATAN	56	G652D
209		PATAN	MEHSANA	43	G652D
210		VIRAMGAM	GANDHIGRAM	60	G652D
211		KALOL	GANDHINAGAR	22	G652D
212		GANDHINAGAR	CHANDLODIYA	29	G652D
213		GANDHINAGAR	KHODIYAR	15	G652D
214		KHODIYAR	CHANDLODIYA	13	G652D
215		GANDHINAGAR	NIC GANDHINAGAR	5	G652D
216		GANDHIGRAM	Dholka	50	G652D
217		Dholka	Dhankuda	70	G652D
218		Dhankuda	BOTAD	50	G652D
219		SAMAKHAYALI	MALIYA	59	G652D
220		MALIYA	HALVAD	50	G652D
221		HALVAD	DHANGADHRA	33	G652D
222		DHANGADHRA	BAJANA	40	G652D
223	BAJANA	VIRAMGAM	33	G652D	
224	VIRAMGAM	SURENDRANAGAR	71	G652D	
225	DHANGADHRA	SURENDRANAGAR	40	G652D	
226	MALIYA	MORBI	56	G652D	
227	MORBI	WAKANER	31	G652D	

228	WAKANER	VAGADIYA	40	G652D
229	VAGADIYA	SURENDRANAGAR	10	G652D
230	SURENDRANAGAR	Chuda	42	G652D
231	Chuda	BOTAD	41	G652D
232	BOTAD	DHOLA	41	G652D
233	DHOLA	DHASA	29	G652D
234	DHASA	KHIJADIYA	28	G652D
235	KHIJADIYA	KHAKHARIYA	36	G652D
236	KHAKHARIYA	JETALSAR	48	G652D
237	JETALSAR	UPLETA	35	G652D
238	UPLETA	JAMJODHPUR	37.5	G652D
239	JAMJODHPUR	WANJALIYA	25.8	G652D
240	WANJALIYA	GOPJAM	39	G652D
241	GOPJAM	KALANUS	37	G652D
242	KALANUS	JAMNAGAR	39.56	G652D
243	JAMNAGAR	HAPA	10.85	G652D
244	HAPA	HADMATIYA	39.56	G652D
245	RAJKOT	HADMATIYA	43.82	G652D
246	RAJKOT	GONDAL	47.8	G652D
247	GONDAL	JETALSAR	42	G652D
248	WAKANER	RAJKOT	47	G652D

100G Optical Layer Traffic Matrix

SN	Section	Links	Client side capacity	Path (protected/ Linear)	Route
1	SR: Villupurm-Virudhu Nagar	Villupurm- Trichy	100G	Linear	Villupurm- Tanjore-Trichy
2		Trichy- Virudhu Nagar	100G	Linear	Trichy- Karaikkudi-Virudhu Nagar
3	SR: Chikjajur-Bellary	Chikjajur- Bellary	100G	Linear	Chikjajur- Chitradurga-Bellary
4	SR: Solapur-Gadag	Solapur-Gadag	100G	Linear	Solapur-Almatti-Gadag
5	ER: North East Network (Rangiya-Jorhat)	Guwahati-Duliajan	100G	Linear	Guwahati-Rangiya(Alien)-Ranagapara-Dibrigarh-Duliajan
6		Duliajan-Jorhat	100G	Linear	Duliajan--Moran Oil-Jorhat
7		Jorhat-Guwahati	100G	Protected	Path-1:Jorhat-Rangiya-Guwahati (Alien) Path-2:Jorhat-Lumding-Guwahati (Alien)
8		Duliajan-Mariani	100G	Linear	Duliajan-Shimalguri-Mariani
9	ER: Rayagada-Kottavalasa	Rayagada-Kottavalasa	100G	Linear	Rayagada-Laxmipur Road-Koraput-Araku-Kottavalasa
10	NR: Moradabad-Bareilly	Moradabad-Rampur	100G	Protected	Path-1: Moradabad-Rampur Path-2: Moradabad-Lal Kuan-Rampur
11		Rampur-Bareilly	100G	Protected	Path-1: Rampur-Bareilly Path-2: Rampur-Lal Kuan-Bareilly
12	SR: Akola-Purna	Akola-Purna	100G	Linear	Akola-Washim-Chondi-Purna
13	ER: Narkatiyaganj-Hazipur	Samastipur-Valmikinagar	100G	Linear	Samastipur-Darbhanga-Sitamani-Narkatiyaganj-Valmikinagar
14	WR: Guna-Shivpuri-Gwalior	Gwalior-Guna	100G	Linear	Guna-Bhadarwas-Shivpuri-Padar Khera-Gwalior
15	WR: KRCL: Panvel-Ratnagiri-Madgaon	Panvel-Roha	100G & STM-16	100G-Linear & Stm-16 Protected	Direct
16		Roha-Khed	100G & STM-16	100G-Linear & Stm-16 Protected	Direct
17		Khed-Ratnagiri	100G & STM-16	100G-Linear &	Direct

				Stm-16 Protected	
18		Ratnagiri-Kudal	100G & STM-16	100G- Linear & Stm-16 Protected	Direct
19		Kudal-Madgaon	100G & STM-16	100G- Linear & Stm-16 Protected	Direct
20		Madgaon-Panvel	100G & STM-16	100G- Linear & Stm-16 Protected	Madgaon-LD-Pune-Panvel (Alien)
21	WR: Ratlam- Kota	Ratlam-Kota	100G	Linear	
22	WR: Different customer deliveries	Maksi-Bhopal	100G	Linear	
23		Kurla-MX	100G	Linear	
24		Itarsi-Bhopal	100G	Linear	
25		Bhopal-Bina	100G	Linear	
26		Bina-Katni	100G	Linear	
27		Katni-Itarsi	100G	Linear	
28		Pratapnagar- Ahamedabad	100G	Linear	
29		Itarsi-Bhusawal	100G	Linear	
30		Ahamedabad-Kota	100G	Linear	
31		Kota-Bina	100G	Linear	
32		Kota-Nagda	100G	Linear	
33		Bhusawal-Nagpur	100G	Linear	
34		Nagpur-Itarsi	100G	Linear	
35		Maksi-Nagda	100G	Linear	
36		Nagda- Pratapnagar	100G	Linear	
37		NIC/Belapur- Panvel	100G	Protected	NIC/Belapur-Panvel (both path)
38		MX-MX (LVSB)	100G	Protected	MX-MX (LVSB) both path
39		Panvel-Karajat	100G	Linear	
40		Panvel-Vasai	100G	Linear	
41		Vasai-Kurla	100G	Linear	
42		MX-Bandra	100G	Linear	
43		Bandra-Vasai	100G	Linear	
44		Vasai-Kopar	100G	Linear	
45		Kopar-Thane	100G	Linear	
46	Thane-Kurla	100G	Linear		

47		Kurla-Vashi	100G	Linear	
48		Karajat-Kalyan	100G	Linear	
49		Kalyan-Kopar	100G	Linear	
50		Kalyan-Manmad	100G	Linear	
51		Kurla-CSTM	100G	Linear	
52		CSTM-MX	100G	Linear	
53		Manmad-Pune	100G	Linear	
54		Vasai-Surat	100G	Linear	
55	NR: RGIPT/Amethi	JANGHAI-RAE BARELI	100G	Protected	Path1:JANGHAI-RAE BARELI (Direct) Path-2:JANGHAI-PHAPHAMAU-RAE BARELI
56		JANGHAI-VARANSAI	100G	Protected	Path1:JANGHAI-BHADOHI-VARANSAI (Direct) Path-2:JANGHAI-JAUNPUR-VARANSAI
57	NR: Jodhpur-Jaisalmer	Jodhpur-Bikaner	100G	Protected	
58	NR: Okhla-Jhansi	Okhla-Faridabad	100G	Linear	Okhla-Faridabad (Direct-Alien)
59		Faridabad-Mathura	100G	Linear	Faridabad-Palwal-Kosi-Mathura (Direct-Alien)
60		Mathura-Jhansi	100G	Linear	Mathura-Agra-Dholpur-Gwalior-Dabra-Jhansi (Direct-Alien)
61	WR: Shifting of Surat Pop	Surat-Ahmedabad	100G	Linear	Surat-Palej-Anand-Ahmedabad (Direct-Alien)
62		Surat-Mumbai/MX	100G	Linear	Surat-Boisar-Virar-Mumbai/MX (Direct-Alien)
63		Surat-Bhusawal	100G	Linear	Surat-Nardana-Jalgaon-Bhusawal (Direct-Alien)
64	WR: Saurashtra	AHEMEDABAD-GANDHINAGAR	100G	Protected	Path-1: AHEMEDABAD-CHANDLODIYA- GANDHINAGAR Path-2: AHEMEDABAD- KHODIYAR GANDHINAGAR
65		AHMEDABAD-Mehsana	100G	Linear	AHMEDABAD-KALOL-Mehsana (Alien)
66		AHMEDABAD-CHANDLODIYA	100G	Protected	Path-1 :AHMEDABAD-CHANDLODIYA (direct-Alien) Path-2:AHMEDABAD-KHODIYAR -CHANDLODIYA
67		Mehsana-Palanpur	100G	Linear	Mehsana-Palanpur (direct)
68		Mehsana-VIRAMGAM	100G	Linear	Mehsana-KATOSAN RD-VIRAMGAM (Alien)
69		Mehsana-BHILDI	100G	Linear	Mehsana-PATAN-BHILDI

70	Palanpur-BHILDI	100G	Linear	Palanpur-BHILDI (direct)
71	Palanpur-Marwar Jn	100G	Linear	Palanpur-Abu Road-Marwar Jn
72	BHILDI-SAMAKHAYALI	100G	Linear	BHILDI-SATALPUR-SAMAKHAYALI
73	VIRAMGAM-GANDHIGRAM	100G	Linear	VIRAMGAM-TTSL - GANDHIGRAM (Alien)
74	VIRAMGAM-SURENDRANAGAR	100G	Linear	VIRAMGAM-SURENDRANAGAR (direct)
75	VIRAMGAM-MALIYA	100G	Linear	VIRAMGAM-DHANGADHRA-MALIYA
76	GANDHIGRAM-BOTAD	100G	Linear	GANDHIGRAM-Dholka-BOTAD
77	CHANDLODIYA-GANDHIGRAM	100G	Linear	CHANDLODIYA-GANDHIGRAM (direct-Alien)
78	SURENDRANAGAR-BOTAD	100G	Linear	SURENDRANAGAR-Chuda-BOTAD
79	JETALSAR-BOTAD	100G	Linear	JETALSAR-DHOLA -BOTAD
80	SURENDRANAGAR-WAKANER	100G	Linear	SURENDRANAGAR-VAGADIYA-WAKANER
81	WAKANER-MALIYA	100G	Linear	WAKANER-MORBI-MALIYA
82	WAKANER-RAJKOT	100G	Linear	WAKANER-RAJKOT (direct)
83	RAJKOT-JETALSAR	100G	Protected	Path-1: RAJKOT-GONDAL-JETALSAR Path-2: RAJKOT-JAMNAGAR-JETALSAR
84	MALIYA - SAMAKHAYALI	100G	Linear	MALIYA -SAMAKHAYALI (direct)
85	VIRAMGAM-CHANDLODIYA	100G	Linear	VIRAMGAM-CHANDLODIYA (direct)

10G/STM-16 Layer Traffic Matrix

SN	Section	Links	Client side capacity	Path (Protected/ Linear)	Route
1	ER: North East Network (Rangiya-Jorhat)	Rangiya-Rangapara North	2*10G	Linear	Rangiya-Khoriabar-Rangapara North
2		Rangapara North-Chaparmukh	2*10G	Linear	Rangapara North-Amoni-Chaparmukh
3		Rangapara North-Dibrugarh	2*10G	Linear	Rangapara North-Gogamukh-Dibrugarh
4		Dibrugarh-Duliajan	2*10G	Linear	Dibrugarh-Tinsukia-Duliajan
5		Duliajan-Shimalguri	2*10G	Linear	Duliajan-Bhojo-Shimalguri
6		Shimalguri-Dibrugarh	2*10G	Linear	Shimalguri-Moran Hut-Dibrugarh
7		Shimalguri-Mariani	2*10G	Linear	Shimalguri-Amguri-Mariani
8		Guwahati-Rangiya	2*10G	Linear	
9		Guwahati-Jorhat	4*10G & STM-16	Protected	
10	ER: Bankura-Ranaghat	Bankura-Burdwan	2*10G	Linear	Bankura-Patrasayer-Burdwan
11		Burdwan-Dum Dum	2*10G	Linear	Burdwan-Bandel-Dum Dum
12		Dum Dum-Habra	2*10G	Linear	Dum Dum-Barasat-Habra
13		Habra-Ranaghat	2*10G	Linear	Habra-Bongaon-Ranaghat
14	WR: KRCL: Panvel-Ratnagiri-Madgaon	Panvel-Pen	2*10G & STM-16	Linear	Linear path
15		Pen-Nagothane	2*10G & STM-16	Linear	Linear path
16		Nagothane -Roha	2*10G & STM-16	Linear	Linear path
17		Roha-Kolad	2*10G & STM-16	Linear	Linear path
18		Kolad-Indapur	2*10G & STM-16	Linear	Linear path
19		Indapur-Mangon	2*10G & STM-16	Linear	Linear path
20		Mangaon-Goregaon	2*10G & STM-16	Linear	Linear path
21		Goregaon-Veer	2*10G & STM-16	Linear	Linear path
22		Veer-Sapevamne	2*10G & STM-16	Linear	Linear path

23	Sapevamne-Karanjadi	2*10G & STM-16	Linear	Linear path
24	Karanjadi-Vihare	2*10G & STM-16	Linear	Linear path
25	Vihare-DWV	2*10G & STM-16	Linear	Linear path
26	DWV-Kalambani	2*10G & STM-16	Linear	Linear path
27	Kalambani-Khed	2*10G & STM-16	Linear	Linear path
28	Khed-Anjani	2*10G & STM-16	Linear	Linear path
29	Anjani-Chiplun	2*10G & STM-16	Linear	Linear path
30	Chiplun-Kamathe	2*10G & STM-16	Linear	Linear path
31	Kamathe-Savarda	2*10G & STM-16	Linear	Linear path
32	Savarda-Aravli	2*10G & STM-16	Linear	Linear path
33	Aravli-Kadwai	2*10G & STM-16	Linear	Linear path
34	Kadwai-Sangameshwar	2*10G & STM-16	Linear	Linear path
35	Sangameshwar-Uksi	2*10G & STM-16	Linear	Linear path
36	Uksi-Bhoke	2*10G & STM-16	Linear	Linear path
37	Bhoke-Ratnagiri	2*10G & STM-16	Linear	Linear path
38	Ratnagiri-Nivasar	2*10G & STM-16	Linear	Linear path
39	Nivasar-Adavali	2*10G & STM-16	Linear	Linear path
40	Adavali-Verawali	2*10G & STM-16	Linear	Linear path
41	Verawali-Vilvade	2*10G & STM-16	Linear	Linear path
42	Vilvade-Rajapur	2*10G & STM-16	Linear	Linear path
43	Rajapur-Kharepatan	2*10G & STM-16	Linear	Linear path
44	Kharepatan-Vaibhavwadi	2*10G & STM-16	Linear	Linear path
45	Vaibhavwadi-Achirene	2*10G & STM-16	Linear	Linear path

46		Achirene-Nandgaon	2*10G & STM-16	Linear	Linear path
47		Nandgaon-Kankavali	2*10G & STM-16	Linear	Linear path
48		Kankavali-Sindhurg	2*10G & STM-16	Linear	Linear path
49		Sindhurg-Kudal	2*10G & STM-16	Linear	Linear path
50		Kudal-Zarap	2*10G & STM-16	Linear	Linear path
51		Zarap-Sawantwadi	2*10G & STM-16	Linear	Linear path
52		Sawantwadi-Madure	2*10G & STM-16	Linear	Linear path
53		Madure-Pernem	2*10G & STM-16	Linear	Linear path
54		Pernem-Thivim	2*10G & STM-16	Linear	Linear path
55		Thivim-Karmali	2*10G & STM-16	Linear	Linear path
56		Karmali-Verna	2*10G & STM-16	Linear	Linear path
57		Verna-Majroda	2*10G & STM-16	Linear	Linear path
58		Majroda-Madgaon	2*10G & STM-16	Linear	Linear path
59	WR: CCG EXCG-Badhwar Park-PRS/CSTM	CCG EXCG-Nariman Point	2*10G & STM-16	Linear	CCG EXCG- CBI NP-Nariman Point
60		Nariman Point-Badhwar Park	2*10G & STM-16	Linear	Nariman Point-Navy Nagar-Badhwar Park
61		PRS/CSTM-CCG EXCG	2*10G & STM-16	Linear	PRS/CSTM-CCG EXCG
62		Badhwar Park-PRS/CSTM	2*10G & STM-16	Linear	Badhwar Park-BSE-PRS/CSTM
63		PRS/CSTM-BSE	2*10G & STM-16	Linear	PRS/CSTM-Fort Mint-BSE
64		PRS/CSTM-DIT Mantralaya	2*10G	Protected	
65	WR: Different customer deliveries	Ujjain-Indore	2*10G	Protected	Path-1: Ujjain-Fatehabad-Indore Path-2: Ujjain-Maksi-Dewas-Indore
66		Indore-IIT/Indore	2*10G	Protected	Indore-IIT/Indore (both path)
67		Bhopal-NIC/Bhopal	2*10G	Protected	Bhopal-NIC/Bhopal (both path)
68		Nagpur-NIC/Nagpur	2*10G	Protected	Nagpur-NIC/Nagpur (both path)

69		Kurla-SBI Rabale	2*10G	Protected	
70		Kurla-Mankhurd	2*10G	Protected	
71		Thane-Sify Airoli	2*10G	Protected	
72		Kalyan-BSNL Kalatalab	2*10G	Protected	
73		Pune-NIC Pune	2*10G	Protected	
74		Bhopal-Itarsi	2*10G	Protected	
75		Panvel-CSTM	2*10G	Protected	
76		Panvel-Nagpur	2*10G	Protected	
77		Vasai-LVSB	2*10G	Protected	
78		Maksi-Bhopal	2*10G	Protected	
79		Pune-Panvel	2*10G	Protected	
80		MX-Kurla	2*10G	Protected	
81		Kurla-Panvel	2*10G	Protected	
82		MX-Bandra	2*10G	Protected	
83	NR: Jodhpur-Jaisalmer	Jodhpur-Jaisalmer	2*10G	Linear/Protected	1. Jodhpur-Phalodi (Protected) 2. Phalodi-Jaisalmer (Linear)
1	WR: Saurashtra	AHMEDABAD-GANDHINAGAR NIC	4*10GbE	Protected upto GANDHINAGAR	
2		AHMEDABAD-Mehsana	2*10GbE & Stm-16	Protected	
3		AHMEDABAD-SURENDRANAGAR	2*10GbE & Stm-16	Protected	
4		AHMEDABAD-JETALSAR	2*10GbE & Stm-16	Protected	
5		AHEMEDABAD-Rajkot	2*10GbE & Stm-16	Protected	
6		AHMEDABAD-Palanpur	2*10GbE & Stm-16	Protected	
7		AHMEDABAD-BOTAD	2*10GbE & Stm-16	Protected	
8		Palanpur-BHILDI	2*10GbE & Stm-4	Protected	
9		SURENDRANAGAR-VIRAMGAM	2*10GbE & Stm-4	Protected	
10		VIRAMGAM-BOTAD	2*10GbE & Stm-4	Protected	
11		SURENDRANAGAR-RAJKOT	2*10GbE & Stm-4	Protected	

12	SURENDRANAGAR- JETALSAR	2*10GbE & Stm-4	Protected	
13	AHMEDABAD- CHANDLODIYA	2*10GbE & Stm-4	Protected	

FORMAT FOR TESTING OF DWDM EQUIPMENTS

1. **Date of Testing:**
2. **Bidder Name:**
3. **OEM Name:**
4. **Section for Testing:**
5. **Network Inventory offered by Bidder:**

1.2

S.N.	Material Type to be used for POC	Qty	OEM Part No	Serial Nos
1				
2				
3				
4				
5				
6				
7				
8				

6. Test case**6.1 4-hours test using the RFC 2544 standard ("RFC 2544 Test") for 10G Traffic**

Description	
RFC 2544 Test	
Protection mechanism offered by OEM (Client/Path/Line)	
Expected Results	Result
1)For client services pass the RFC 2544 test error free Traffic Type: Ethernet Throughput: 10Gbps Frame Loss: 0.01%	PASS/FAIL
Comments	
Duration	4h

6.1.1 Test Setup

Proposed chassis equipped with Traffic module and client plug for client port, and filter and amplifier modules as per link offered design.

Configure the Single channel on the Traffic module based on solution offered in bid.



6.1.2 Test Procedure

1. Provision 10GbE services with protection (minimum three paths) at a 100G link according to the design. Provision amplifiers parameters and filters according to the design.
2. Commission the link. Verify that the power levels for all client and network interfaces are in range, FEC level is acceptable, and the client traffic runs error free in a short-term test – 5 to 15 minutes.
3. Run the 4 hours RFC test long-term test for 10GbE client service: Traffic is running error free.
4. Record the results consisting of
 - a) Throughput Test
 - b) Frame Loss
 - c) Latency
5. Test to be done for all frame lengths including jumbo frame more than 9200 size.
6. Test to be done for any of free frequency available in the chosen section.
7. Observe in the tester / PM counters on card, there should not be any error.

6.2 Power supply Protection:

Description	
Power down one side of the shelf (disconnect mains from one PSU) and show that services continue to run. Power is supplied to the shelf from only one power supply (PSU).	
Expected Results	Result
1) Traffic should not impact, and no Error should be reported on tester during this event.	PASS/FAIL
Comments	
Duration	10 min

6.2.1 Prerequisites

Shelf is power on with dual power supply.

6.2.2 Test Procedure

Power down one side of the shelf (disconnect mains from one PSU) and show that services continue to run. Power is supplied to the shelf from only one power supply (PSU).

6.3 The Failure of controller card of DWDM non-traffic affecting:

Description
The purpose of this test is to verify failure of controller card is non-traffic affecting

Expected Results		Result
1) The controller module of DWDM removed without impacting traffic on the BERT testers and no Error should be reported on tester during this event.		PASS/FAIL
Comments		
Duration	30min	

6.3.1 Test Procedure

1. Setup the system as shown in the network topology.
2. Configure the Traffic cards and run the traffic using the BERT tester.
3. Remove the controller module and check the traffic status on the both the BERT testers.

6.4 Traffic Protection Test for 10G & 100G circuit.

Description	
a) The signal should switch to protection path in case of LOS or fibre cut and Signal Degrade within 50ms and no traffic interruption except the switching duration. b) For 100G, the signal should switch to protection path in case of Pre-FEC BER/OSNR/Q-factor Signal Failure within 50ms and no traffic interruption except the switching duration.	
Protection mechanism offered by OEM (Client/Path/Line)	
Expected Results	Result
a) Switching time should be within 50ms on the both side BERT Testers in case of LOS or fibre cut. b) For 100G Protection, switching time within 50ms on both side BERT Testers in case of Pre-FEC BER Signal failure & Degrade signal failure.	PASS/FAIL
Comments	
Duration	30min

6.4.1 Test Setup

Proposed chassis equipped with Traffic module and client plug for client port, and filter and amplifier modules as per link design in offered solution.

Test setup for 100GbE/OTU4 & 10GbE/OTU2.

6.4.2 Test Procedure (LOS or Fiber Cut)

1. Provision of 100GbE & 10GbE services (with minimum three paths) at a Traffic link according to the offered design. Provision amplifiers parameters and filters according to the offered design.
2. Commission the link. Verify that the power levels for all client and network interfaces are in range, FEC level is acceptable, and the client traffic runs error free in a short-term test 5 to 15 minutes.
3. Configure the Single channel line protection/Path protection/Client on the Traffic module based on solution offered in bid.
4. Perform the logical switching (Tx off) and check switching time on BERT testers.
5. Test to be done for any of the available free wavelengths on chosen section.

6.4.3 Test Procedure (Signal Degrade & Pre-FEC BER Signal Failure)

1. Provision of 100GbE services at a Traffic link according to the offered design. Provision amplifiers parameters and filters according to the offered design.
2. Commission the link. Verify that the power levels for all client and network interfaces are in range, FEC level is acceptable, and the client traffic runs error free in a short-term test 5 to 15 minutes.
3. Configure the Single channel line protection/Path protection/Client on the Traffic module based on solution offered in bid.
4. Perform the variable attenuation (variable attenuator to be placed before amp in work path) and check switching time on BERT testers.
5. During Perform of variable attenuation Conditions, Traffic bit error either be corrected on work path or switch to Protection path. Attenuation may increase up to the value of switching condition. Client traffic should run error free except for the switching duration.
6. Test to be done for any of the available free wavelengths in the chosen section.

6.5 Line port post FEC BER (24 Hrs) for 100G traffic:

Description	
Configure the end-to-end service with line rate 100G	
Expected Results	Result
<p>1. Measure and capture the post-FEC BER value from PM logs of Line port or from the connected Ethernet Tester after completion of first 24Hrs RFC test. Record the value and it should be equal or greater than 10-15 in case of PM logs of Line port or it should be “0” in case of BER value from Ethernet Tester.</p> <p>2. Configure the Single channel line protection/Path protection/Client on the Traffic module based on solution offered in bid.</p> <p>Measured value:</p>	PASS/FAIL
Comments	

6.6 NMS/EMS/SDN CONTROLLER for DWDM

Description	
<ol style="list-style-type: none"> 1. Web session can be established from the NMS to a NE. 2. Configure the end-to-end service. 3. Creation of Service trail and Physical Path trail from EMS/NMS/SDN Controller. 4. to verify that user can view & acknowledge multiple alarms and events, filtered by their age. 5. Performance & Inventory Report. 6. Web session gets established, and all the populated cards are visible. 7. Alarm on Service trail and Physical Path trail. 	
Expected Results	Result
<ol style="list-style-type: none"> 1. Service Created (100G). 2. Multiple Alarms/events can be acknowledged by their age. 3. User is able to sort alarms 	PASS/ FAIL

4. User is able to filter alarms and only the alarms matching the filter is displayed.	
5. Alarm on Service trail and Physical Path trail.	
Comments	

Note: I- Test shall be performed on RailTel existing Network using Alien wavelength in between New Delhi to Ghaziabad or OEM Lab.

Note: II- In case of OEM has proposed two or more type protection in their offer, in that case, OEM should perform the test cases for all type of protection as proposed in their offer.

Note: III -Alien wavelength POC should be designed without impacting existing channel however few tuning (Amplifier Gain, tilt.) allowed for optimization. In case amplifier parameters is required to be change then RailTel Regional NOC will arrange the required changes.

Note: IV – RailTel Regional NOC will arrange the end-to-end tested frequency.

**Signature of
OEM's Representative**

**Signature of
RailTel's Representative**

(END OF TENDER DOCUMENT)