

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

NORTHERN REGION

ELECTRONIC TENDER DOCUMENT

FOR

“ Supply, installation and commissioning of switches, core switches & NMS with associated accessories for Railnet Up-Gradation at Rail Bhawan, New Delhi”

Tender No. RailTel/Tender/OT/NR/2017-18/NDRB LAN UPGRADATION/26

Cost of the Tender Document : Rs 5900/-

रेलटेल
RAILTEL

RailTel Corporation of India Limited

(A Govt. of India Enterprise)
Regional Office: 6th floor, Block-III, Delhi IT Park
Shastri Park, Delhi-110 053

OPEN TENDER NOTICE

No. RailTel/Tender/OT/NR/2017-18/NDRB LAN UPGRADATION/26

Dated: 12.03.2018

Executive Director/RailTel Corporation of India Limited, Northern Region , Delhi, invites the **Open E-Tenders** in “single packet” system from established tenderers with proven experience for awarding **“Supply installation and commissioning of switches, core switches & NMS with associated accessories for Railnet Up-Gradation at Rail Bhawan, New Delhi”** as per following details:

Sale of Tender Document	Printed copy shall not be sold but may be downloaded from TCIL E-Tender portal.
Last date & time of submission of tender:	Up to 15:00 hrs. on 16.04.2018
Date & time of opening of tender:	15:00 hrs. on 16.04.2018 (If the date of opening happens to be a holiday the tender will be opened on next working day at same time.)
Estimated Cost of Work :	Rs. 6,14,89,501/-
EMD :	Rs. 5,00,000/-
Completion period :	120 days from the date of issue of LOA.
Validity of offer:	90 days from the date of opening of tender.
Cost of Tender Document:	Rs. 5,900/- (Five Thousand Nine Hundred only) – including GST @18%.
<p>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://www.tcil-india-electronictender.com For online bid submission the tenderer will have to necessarily download an official online copy of the tender documents from TCIL’s e- portal. All future Information viz. corrigendum /addendum/ amendments etc. for this Tender shall be posted on the e-Tendering Portal only. Printed copy of Tender document will not be sold from RailTel office.</p> <p>The bidder shall bear all costs associated with the preparation, submission/participation in the bid. Purchaser in no way will be responsible or liable for these costs regardless of the conduct or outcome of the bidding process.</p>	

The cost of Tender document shall, however, have to be deposited along with tender bid in the form of Demand Draft as detailed above.

DGM/Plg/NR
For Executive Director / Northern Region

Check List: (For Submission)

S.NO	List of Documents	Tick
1	Offer letter complete (Form No 1) duly signed.	Yes/No
2	Earnest Money in prescribed form	Yes/No
3	Clause-wise compliance to tender conditions & Statement of Deviations (Form No 5)	Yes/No
4	Tender Document each page including corrigendum, addendums etc. duly signed & stamped	Yes/No
5	Offered rates are submitted (both in figures and words) in Tenderer's Offer given in schedule of Requirement (SOR)/Excel/Word File.	Yes/No
6	Cost of Tender Document i.e Rs 5900/ as applicable in the form of DD along with the offer.	Yes/No
7	OEM authorisation letters for equipments being offered for item Nos. A & B of SOR	Yes/No
8	List of equipments being offered along with their make/model against SOR items.	Yes/No
9	Clause-wise compliance to technical specifications.	Yes/No
10	Valid Power of Attorney for signing the tender document	Yes/No
11	Documents such as verified balance sheets and work completion certificates for fulfillment of eligibility condition.	Yes/No

SIGNATURE OF AUTHORISED SIGNATORY
RUBBER STAMP

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PREAMBLE

1. Name of the Work :

“Supply installation and commissioning of switches, core switches & NMS with associated accessories for Railnet Up-Gradation at Rail Bhawan, New Delhi”.

2. Scope of work:

Rail Bhawan, Raisina Road, New Delhi is having a LAN network (Railnet) within the building which is presently 1 Gbps network. It is proposed to replace the 1Gbps network by 10 Gbps network for which this work is proposed. The work is to be carried out in such a way that the minimum interruption to the working network is caused. The scope of the work involves the supply of various electronics items such as switches, servers SFPs, UPSs etc. and replacement of existing OFC cables also. Old LAN cabling which is in good condition will be retained and only poor performing cables shall be replaced. In addition to this, cabling for some additional points will also be done as per requirement.

3. The quantities given in the Schedule of Requirement (SOR) are estimated and indicative to give an idea to the tenderer of the volume of work which is being proposed for execution. However, total quantities may vary at the time of actual execution. Tenderers are required to get the actual idea of the work by visiting the sites before quoting for the tender.
4. Broad responsibility of Tenderer under the scope of work of this tender will be as under :
 - a) **Supply :** Supply of all items confirming to industry standards as per Schedule of Requirements and the technical specifications.
 - b) **Services:** Laying, splicing, termination, testing and commissioning of Optical Fiber Cable, LAN cables, patch chords, switches, servers, UPSs etc as per SOR as per specifications given in Tender document.
5. **Tender Bid :** The tender bid shall be submitted through e-tender with hard copies in a **Sealed Cover** super scribing it with the “Name of Tender” and “Due date of Opening” as per the details given in Section-1 chapter -2A shall be addressed to :

**Executive Director/Northern Region
RailTel Corporation of India Limited,
6th floor, Block-III, Delhi IT Park,
Shastri Park, Delhi-110 053**

6. Qualifying Criteria:

6.1 Technical Criteria

- 1 The tenderer must have experience of execution of similar works. He should have completed at least one similar work of a value not less than 35% of the estimated cost of

tenders in the current and the last 3 financial years before the date of opening of this tender for Govt./Semi Govt/State Govt/Reputed Telcos, Organisations, Institutes or firms etc. Documentary evidence for the completion of such experience must be furnished along with the offer.

- 2 Similar nature of work physically completed within the qualifying period, i.e. the last 3 financial year and current financial year (even though the work might have commenced before the qualifying period) shall only be considered in evaluating the eligibility criteria.
- 3 The total value of similar nature of work completed during the qualifying period and not the payments received within qualifying period alone, shall be considered.

Note: Similar Work means work related with the supply and installation/commissioning of Network switches/ routers/ Wi-Fi Access Points.

6.2 Financial Criteria

- (a) The tenderer should have received total contract amount of 150% of the estimated cost of tender in the last three financial year (i.e 2014-15, 2015-16 & 2016-17).
- (b) The tenderer should produce the Audited Profit/Loss account and Balance Sheet for the last 3 financial year (i.e 2014-15, 2015-16 & 2016-17).

6.3 Not Used.

6.4 TECHNICAL REQUIREMENTS

Tenderer must have sufficient Man power, Equipments and Machinery to accomplish the work. A declaration may be submitted towards having such manpower, Equipments and Machinery by the tenderer along with the offer.

Eligibility Clause no.	Actual Available	Whether Requirement Fulfilled (Yes/No)	Documentary evidence enclosed at
6.1 1. The tenderer must have experience of execution of similar works. He should have completed at least one similar work of a value not less than 35% of the estimated cost of tenders in the current and the last 3 financial years before the date of opening of this tender for Govt./Semi Govt/State Govt/Reputed Telcos, Organisations, Institutes or firms etc. Documentary evidence for such experience must be furnished along with the offer. 2 Similar nature of work physically completed within the qualifying period, i.e. the last 3 financial year and current financial year (even though the work might have commenced before the qualifying period) shall only be			

considered in evaluating the eligibility criteria. 3 The total value of similar nature of work completed during the qualifying period and not the payments received within qualifying period alone, shall be considered. Note: Similar Work means work related with the supply and installation/commissioning of Network switches/ routers/ Wi-Fi Access Points.			
6.2 The tenderer should have received total contract amount of 150% of the estimated cost of tender in the last three financial year (i.e 2014-15, 2015-16 & 2016-17)			
6.4 Tenderer must have sufficient Man power, Equipments and Machinery to accomplish the work. A declaration may be submitted towards having such manpower, equipment and Machinery by the tenderer along with the offer.			

7. **Schedule of Requirements (SORs):**

There is **only one SOR** as given in the tender document. These are **Schedule items** for which tenderer shall quote a single price against each item (both in figures and words) in the **Tenderer's Offer** as per the SOR in the tender document/Excel/Word file. In case of any discrepancy/ ambiguity in rates in words and figures, the rates written in words shall be taken as offered rates. These offered rates shall be inclusive of all taxes and freight etc. However a breakup of taxes along with HSN No. may also be furnished separately.

8. **Tenderers are required to read the following instructions carefully.**

- a) The work awarded shall be executed as per technical specification of the tender document.
- b) The rates quoted should be in INR (Rupees)
- c) **After issue of LOA, tenderer has to deposit an amount equivalent to 10 % of the cost of LOA as Security Deposit/ Performance Bank Guarantee strictly within the period of Fifteen days from the date of issue of the LOA. The Bank Guarantee shall be valid for 4 months beyond the five years of issue of PAC i.e. "Date of issue of PAC+ 5 Years+4 Months.**
- d) The tenderer will advise the issuing bank to send bank guarantee directly to the office of Executive Director/RailTel, Northern Region. Similar advise for each BG extensions as and when required by the Bank to be sent by Registered Post directly to RailTel.
- e) In case the tenderer fails to execute the work in specified time the penalties will be imposed as per the tender conditions. Railtel reserves the right to terminate the work order after issue of 7 days notice. The security deposit submitted by the tenderer will be forfeited if the work order is terminated on tenderer's account. Railtel may also delete the name of such tenderer from the approved list of tenderer.

- f) The time of completion of work shall be 120 days from the date of issue of LOA/PO.
- g) Timely completion of the work is the essence of the contract and paramount importance to RailTel and any extension would be considered only in exceptional circumstances.
- h) All the tender conditions, mentioned as above, shall supersede any conditions of GCC/SCC.
- i) Liquidated damages shall be imposed at the rate of 0.5 % per week or part thereof (rounded off to the nearest whole number) of the total value of the work order, subject to a maximum of 10% of the value of the work order.

9. Last Date of submission of Tender:

(Refer Section-I, chapter 2A)

10. Date of Opening of Tender:

The tenders shall be opened at **15:00 hrs** on **16.04.2018** at the same address as mentioned in para 9 above.

11. Completion Time:

The completion Period of shall be 120 days from the date of issue of LOA.

12. Address for Communication:

All Correspondences and clarifications must be addressed to the:
**Executive Director/Northern Region, GM/Mktg & Plg & DGM/Plg.,
RailTel Corporation of India Limited,
6th floor, Block-III, Delhi IT Park
Shastri Park, Delhi-110 053.**

(Reference of the tender name/number must be given in all the correspondence).

13. Earnest Money:

Tenderer shall deposit Earnest Money (EMD) as specified in the tender notice in the form of **Bank draft** in favour of **RailTel Corporation of India Limited**, payable at **Delhi**. The earnest money deposit by the successful tenderer shall be released after the submission of SD/PBG or may be adjusted against SD/PBG on the request of the tenderer.

Govt of India guidelines for exemption of EMD and tender documents for NSIC and MSME registered firms shall be applicable.

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SECTION I
CHAPTER - 1

ITEMWISE TECHNICAL SPECIFICATION & LAYOUT DRAWINGS:

1. All Switches and NMS should be from same OEM.
2. All SFP, SFP+ and QSFP should be from same OEM as of switches.
3. All active Equipment like Switches, Servers and NMS should be with minimum 5 years OEM warranty support services with advance hardware replacement.

Item A-1 L3 Core Switch:

SN	Generic Requirements	Compliance	Remarks
1	General Hardware and Interface requirements		
1.1	Switch should have minimum 48 Nos. of SFP+ ports and minimum 4 nos. of 100 Gig ports. Should be equipped with 1 x 100Gig DAC 3m cable .		
1.2	Switch should have hot swappable 1:1 redundant internal power supply and hot swappable fan modules.		
2	Performance Requirements		
2.1	Switching system shall have minimum 1.76 Tbps of switching fabric and 1.3 bpps of forwarding rate		
2.2	Shall have minimum 48K MAC Addresses.		
2.3	Shall have minimum 1K Active VLANs.		
2.4	Shall have minimum 16K IPv4 and IPv6 unicast routes.		
2.5	Shall have minimum 8K IPv4 and IPv6 multicast groups.		
2.6	Shall have minimum 1K IPv4 and IPv6 QoS and Security ACLs.		
2.7	Shall have static routing, OSPFv2, OSPFv3 and BGPv4.		
2.8	Shall have policy based routing and virtual routing and forwarding feature and should support 1K VRFs entries.		
2.9	Shall have Protocol-independent multicast (PIM) for IP multicast routing is supported, including PIM sparse mode (PIM-SM)/PIM dense mode (PIM-DM)/PIM sparse-dense mode and source-specific multicast (SSM).		
3	IEEE Standards		
3.1	Should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3ab, 802.3z, 802.3ae, 802.1Qaz, 802.1Qbb		
4	Quality of Service (QoS) requirements		
4.1	Switch shall have 802.1p class of service, IP differentiated service code point (DSCP) and cross stack QoS.		
4.2	Switch shall have minimum 8 egress queues per port and strict priority queuing.		
5.	System Management and Administration		
5.1	Switch should support SSHv2, SNMPv2c, SNMPv3, NTPv3/ NTPv4.		

5.2	Switch should support AAA using RADIUS and TACACS+.		
5.3	Switch should support software upgrades via TFTP or FTP.		
5.4	Switch should support IPv4 and IPv6 ACLs, VLAN , Port and Time based access list with time ranges.		
5.5	Switch shall have Switch Port Analyzer (SPAN) and Remote Switch Port Analyzer (RSPAN) .		
5.6	Switch shall have secure VTP protocol or equivalent protocol to reduce administrative burden of configuring VLANs on multiple switches in turn eliminating the configuration errors & troubleshooting in secure manner or equivalent secure protocol.		
5.7	Switch shall have Internet Group Management Protocol (IGMP) Snooping for IPv4 and IPv6, MLD v1 and v2 Snooping.		
5.8	Switch shall have per port broadcast, multicast and unicast storm control.		
5.9	Switch shall have Unidirectional Link Detection Protocol (UDLD) or equivalent functionality and Link Aggregation Control Protocol (LACP)/Port Aggregation Protocol (PagP)		
5.10	Switch should be Software Defined Networking Ready with Open flow protocol support.		
6	Regulatory Compliance		
6.1	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.		
6.2	Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.		
7	Evaluation Compliance		
7.1	Switch / Switch's Operating System should be tested and certified for EAL 2/NDPP or above under Common Criteria Certification.		
7.2	Switch should be IPv6 Certified/IPv6 ready.		

Item A-2. L2 Switch 48 Port PoE/PoE+

SN	Generic Requirements	Compliance	Remarks
1	General Hardware and Interface requirements		
1.1	Switch shall have minimum 48 nos. 10/100/1000 Base-T ports with PoE+ capability and minimum 720W of PoE Power and additional 2 nos. SFP + uplink ports.		
1.2	Switch shall one dedicated slot for minimum 40 Gbps of stacking bandwidth with dedicated stacking ports and cables with minimum 8 switch in stack.		
1.3	Switch should support internal/external redundant power supply.		
2	Performance Requirements		
2.1	Shall have minimum 136 Gbps of switching fabric and 101 Mpps of forwarding rate.		
2.2	Shall have minimum 12K MAC Addresses.		
2.3	Shall have minimum 1K Active VLANs.		

2.4	Shall have minimum 1K IPv4 and IPv6 multicast groups.		
2.5	Shall have minimum 1K IPv4 and IPv6 QoS and Security ACLs.		
3	IEEE Standards		
3.1	Should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.1x, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3, 802.3ab, 802.3z, 802.3az, 802.3af, 802.3at.		
4	Quality of Service (QoS) requirements		
4.1	Switch shall have 802.1p class of service, IP differentiated service code point (DSCP) and cross stack QoS.		
4.2	Switch shall have committed information rate, rate limiting and flow based rate limiting.		
4.3	Switch shall have minimum 8 egress queues per port and strict priority queuing.		
5.	System Management and Administration		
5.1	Switch should support SSHv2, SNMPv2c, SNMPv3, NTPv3 and NTPv4.		
5.2	Switch should support AAA using RADIUS and TACACS+.		
5.3	Switch should support port security, DHCP snooping, Dynamic ARP inspection, IP Source guard, BPDU Guard, Spanning tree root guard and IPv6 Security features.		
5.4	Switch should support software upgrades via TFTP or FTP.		
5.5	Should support 802.1x authentication and accounting with Dynamic VLAN assignment.		
5.6	Switch should support IPv4 and IPv6 ACLs, VLAN , Port and Time based access list with time ranges.		
5.7	Switch Shall have Switch Port Analyzer (SPAN) and Remote Switch Port Analyzer (RSPAN) .		
5.8	Switch shall have secure VTP or equivalent protocol to reduce administrative burden of configuring VLANs on multiple switches in turn eliminating the configuration errors & troubleshooting in secure manner or equivalent secure protocol.		
5.9	Switch shall have Layer 2 or 3 trace route for ease of troubleshooting by identifying the physical path that a packet takes from source to destination.		
5.10	Switch shall have Internet Group Management Protocol (IGMP) Snooping for IPv4 and IPv6, MLD v1 and v2 Snooping and Multicast VLAN Registration protocol.		
5.11	Switch shall have per port broadcast, multicast and unicast storm control.		
5.12	Switch shall have Unidirectional Link Detection Protocol (UDLD) or equivalent functionality and Link Aggregation Control Protocol (LACP)/Port Aggregation Protocol (PAgP)/Dynamic Trunking Protocol (DTP).		
6	Regulatory Compliance		
6.1	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.		
6.2	Switch shall conform to EN 55022 Class A/B or CISPR22		

	Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.		
7	Evaluation Compliance		
7.1	Switch / Switch's Operating System should be tested and certified for EAL 2/NDPP or above under Common Criteria Certification.		
7.2	Switch should be IPv6 Certified/IPv6 ready.		

Item A-3. L2 Switch 48 Port PoE/PoE+

SN	Generic Requirements	Compliance	Remarks
1	General Hardware and Interface requirements		
1.1	Switch shall have minimum 48 nos. 10/100/1000 Base-T ports with PoE+ capability and minimum 720W of PoE Power and additional 2 nos. SFP uplink ports.		
1.2	Switch shall one dedicated slot for minimum 40 Gbps of stacking bandwidth with dedicated stacking ports and cables with minimum 8 switch in stack.		
1.3	Switch should support internal/external redundant power supply.		
2	Performance Requirements		
2.1	Shall have minimum 136 Gbps of switching fabric and 77 Mpps of forwarding rate.		
2.2	Shall have minimum 12K MAC Addresses.		
2.3	Shall have minimum 1K Active VLANs.		
2.4	Shall have minimum 1K IPv4 and IPv6 multicast groups.		
2.5	Shall have minimum 1K IPv4 and IPv6 QoS and Security ACLs.		
3	Standards		
3.1	Should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.1x, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3, 802.3ab, 802.3z, 802.3az, 802.3af, 802.3at.		
4	Quality of Service (QoS) requirements		
4.1	Switch shall have 802.1p class of service, IP differentiated service code point (DSCP) and cross stack QoS.		
4.2	Switch shall have committed information rate, rate limiting and flow based rate limiting.		
4.3	Switch shall have minimum 8 egress queues per port and strict priority queuing.		
5.	System Management and Administration		
5.1	Switch should support SSHv2, SNMPv2c, SNMPv3, NTPv3 and NTPv4.		
5.2	Switch should support AAA using RADIUS and TACACS+.		
5.3	Switch should support port security, DHCP snooping, Dynamic ARP inspection, IP Source guard, BPDU Guard, Spanning tree root guard and IPv6 Security features.		
5.4	Switch should support software upgrades via TFTP or FTP.		

5.5	Should support 802.1x authentication and accounting with Dynamic VLAN assignment.		
5.6	Switch should support IPv4 and IPv6 ACLs, VLAN , Port and Time based access list with time ranges.		
5.7	Switch Shall have Switch Port Analyzer (SPAN) and Remote Switch Port Analyzer (RSPAN) .		
5.8	Switch shall have secure VTP or equivalent protocol to reduce administrative burden of configuring VLANs on multiple switches in turn eliminating the configuration errors & troubleshooting in secure manner or equivalent secure protocol.		
5.9	Switch shall have Layer 2 or 3 trace route for ease of troubleshooting by identifying the physical path that a packet takes from source to destination.		
5.10	Switch shall have Internet Group Management Protocol (IGMP) Snooping for IPv4 and IPv6, MLD v1 and v2 Snooping and Multicast VLAN Registration protocol.		
5.11	Switch shall have per port broadcast, multicast and unicast storm control.		
5.12	Switch shall have Unidirectional Link Detection Protocol (UDLD) or equivalent functionality and Link Aggregation Control Protocol (LACP)/Port Aggregation Protocol (PAgP)/Dynamic Trunking Protocol (DTP).		
6	Regulatory Compliance		
6.1	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.		
6.2	Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.		
7	Evaluation Compliance		
7.1	Switch / Switch's Operating System should be tested and certified for EAL 2/NDPP or above under Common Criteria Certification.		
7.2	Switch should be IPv6 Certified/IPv6 logo ready.		

Item A-4. L3 Distribution Switch

SN	Generic Requirements	Compliance	Remarks
1	General Hardware and Interface requirements		
1.1	Switch should have minimum 12 nos. SFP+ ports and additional 4 nos. SFP+ uplink ports		
1.2	Switch should have minimum 240 Gbps of stacking bandwidth with dedicated stacking ports and cables with minimum 4 switch in stack.		
1.3	Switch should have 1:1 redundant internal power supply and fan modules		
1.4	Power supply modules, fan modules and transceivers modules should be hot swappable.		

2	Performance Requirements		
2.1	Switch shall have minimum 280 Gbps of switching fabric and 208 Mpps of forwarding rate.		
2.2	Shall have minimum 24K MAC Addresses.		
2.3	Shall have minimum 1K Active VLANs.		
2.4	Shall have minimum 8K IPv4 and IPv6 unicast routes.		
2.5	Shall have minimum 4K IPv4 and IPv6 multicast groups.		
2.6	Shall have minimum 1K IPv4 and IPv6 QoS and Security ACLs.		
2.7	Shall have minimum 24K Netflow/Jflow or S flow entries.		
2.8	Shall have static routing, OSPFv2, OSPFv3 and BGPv4.		
2.9	Shall have policy based routing and virtual routing and forwarding feature.		
2.10	Shall have Protocol-independent multicast (PIM) for IP multicast routing is supported, including PIM sparse mode (PIM-SM)/PIM dense mode (PIM-DM)/PIM sparse-dense mode and source-specific multicast (SSM).		
3	IEEE Standards		
3.1	Should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.1x, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3, 802.3ab, 802.3z.		
4	Quality of Service (QoS) requirements		
4.1	Switch shall have 802.1p class of service, IP differentiated service code point (DSCP) and cross stack QoS.		
4.2	Switch shall have committed information rate, rate limiting and flow based rate limiting.		
4.3	Switch shall have minimum 8 egress queues per port and strict priority queuing.		
5.	System Management and Administration		
5.1	Switch should support SSHv2, SNMPv2c, SNMPv3, NTPv3 and NTPv4.		
5.2	Switch should support AAA using RADIUS and TACACS+.		
5.3	Switch should support port security, DHCP snooping, Dynamic ARP inspection, IP Source guard, BPDU Guard, Spanning tree root guard and IPv6 Security features.		
5.4	Switch should support software upgrades via TFTP or FTP.		
5.5	Switch should support IPv4 and IPv6 ACLs, VLAN , Port and Time based access list with time ranges.		
5.6	Switch shall have Switch Port Analyzer (SPAN) and Remote Switch Port Analyzer (RSPAN) .		
5.7	Switch shall have secure VTP equivalent protocol to reduce administrative burden of configuring VLANs on multiple switches in turn eliminating the configuration errors & troubleshooting in secure manner.		
5.8	Switch shall have Layer 2 or 3 trace route for ease of troubleshooting by identifying the physical path that a packet takes from source to destination.		

5.9	Switch shall have Internet Group Management Protocol (IGMP) Snooping for Ipv4 and Ipv6, MLD v1 and v2 Snooping and Multicast VLAN Registration protocol.		
5.10	Switch shall have per port broadcast, multicast and unicast storm control.		
5.11	Switch shall have Unidirectional Link Detection Protocol (UDLD) or equivalent functionality and Link Aggregation Control Protocol (LACP)/Port Aggregation Protocol (PagP).		
5.12	Switch should be Software Defined Networking Ready with Open flow protocol support.		
6	Regulatory Compliance		
6.1	Switch shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.		
6.2	Switch shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.		
7	Evaluation Compliance		
7.1	Switch / Switch's Operating System should be tested and certified for EAL 2/NDPP or above under Common Criteria Certification.		
7.2	Switch should be IPv6 Certified/IPv6 ready.		

ITEM A-5. MINIMUM SPECIFICATIONS OF RACK SERVER:

1. Processor card: 2 Nos. Intel Xeon Octa Core E 5 or E7 series.
2. RAM 64 GB DDR3 or DDR4
3. 3X1TB SATA HDD (Hot Swappable) with Raid 5 support
4. 2 Nos. of hot swappable power supply.
5. 4 Nos. of 3.0 USB Ports.
6. 1 DVD/CD ROM.
7. Should be of 1U height and accommodate in 19" standard rack.
8. Make: hp/IBM/Dell
9. 2x10G gigabit port

ITEM A-6. Network Management System (Software Along with associated Hardware to be supplied)

SN	Specifications	Compliance (Yes/No)	Remarks
1	The Network Management System should provide a single integrated solution for comprehensive lifecycle management of the network switches and should support rich visibility into end-user connectivity and application performance assurance issues.		
2	The Network Management System should be licensed for asked managed switches of the same OEM. Management system should have scalability to manage minimum 500 managed switches.		
3	The NMS should support an open database schema.		

4	The NMS should support configuration, administration, monitoring and troubleshooting of Switches.		
5	The NMS should support guided workflows based on best practices with built-in con-figuration templates.		
6	The NMS should support the capability to view the network topology.		
7	The NMS should support Layer 2 Services.		
8	The NMS should support Fault Management.		
9	The NMS should support Performance Management and Device Performance Management.		
10	The NMS should support integration with third-party management platform and should support integration with NetView, HP OpenView etc.		
11	The NMS should support Flexible web-based portal framework.		
12	The NMS should support creation of user-defined views.		
13	The NMS should support Lightweight HTML interface.		
14	The NMS should support multiple protocols such as https, SSL, SCP, SSH, FTP, TFTP, Telnet and SNMP (v1, v2c and v3).		
	Inventory Management:		
1	The NMS should automatically discover IP devices on the network.		
2	The NMS should detect SNMP compliant network devices on the network and manage them.		
3	The NMS should present graphical view of the LAN/WAN topology of the network including all stations, Div. HQ under respective divisions.		
4	The NMS should detailed network inventory and management support for platforms.		
5	The NMS should support equipment details - chassis, module, interface.		
6	The NMS should support a single menu for discovery status, device status, user track-ing, and inventory dashboards.		
	Monitoring and Troubleshooting:		
1	The NMS should support centralized fault and event browser (consolidated, syslog, traps, and events and alarms).		
2	The NMS should support Simple Network Management Protocol (SNMP)-based polling to identify availability and performance issues.		
3	The NMS should support dashboard to provide fault and availability statistics of Video endpoints and devices and to allow for real-time performance and event monitoring.		
4	The NMS should support features to help validate whether the network is ready for vid-eo and rich media applications.		
	Configuration Management:		
1	The NMS should identify the hosts connected to specific switches or interfaces by MAC address.		
2	The NMS should support configuration backup of switches.		

3	The NMS should support User roles and privileges.		
4	The NMS should support software image management of switches.		
5	The NMS should support compliance of switches.		
6	The NMS should support change management required to maintain and update network devices.		
7	The NMS should support setting up auto configuration of switch ports.		
	Reporting:		
1	The NMS should support network reporting feature for collecting data and threshold settings of Network devices (CPU Usage, Memory Usage, Port Usage etc.). The NMS should support customizable user roles to control permissions on device views, device actions, and system actions.		
2	The NMS should support Audit Trail reports or equivalent.		
3	The NMS should support Change Audit report or equivalent.		
4	The NMS should support Syslog report or equivalent.		
	Installation:		
1	The NMS should be provided on dedicated appliance/ installed as a virtual appliance/ Intel based servers/ AMD based server.		
2	The NMS should support installation on Windows/ Linux.		
3	The NMS should support High Availability solution via internal or 3rd part software components if required in future.		
	Network Based Application Monitoring & Troubleshooting :		
1	The NMS should provide comprehensive network-based visibility for end-user experience.		
2	The NMS should be able to manage multiple modules/ appliances providing network analysis functionality and traffic monitoring.		
3	The NMS should provide End-to-End Performance Visibility by proactive network-based monitoring of Latency ,Packet drop, Jitter and etc .		

ITEM A-7 10 Gig SFP Module (MMF)

SN	Generic Requirements	Compliance	Remarks
1	General Hardware and Interface requirements		
1.1	Connector types LC		
1.2	10G Base-SR		
1.3	Support 10 Gbps upto 300 M on MMF		
1.4	Should be from same OEM of switches.		

ITEM A-8. 1 Gig UTP Module

SN	Generic Requirements	Compliance	Remarks
1	General Hardware and Interface requirements		
1.1	Connector types RJ-45		
1.2	1000 Base-T		

1.3	Support 1 Gbps upto 100 M on Cat 5 UTP		
1.4	Should be from same OEM of switches.		

ITEM B-1. SPECIFICATIONS FOR RACK

1. Rack should be of Vero President/Rittal make or superior.
2. Approx. external size of rack: 42U Height 600mm Width & 800mm Depth excluding top bolted canopy.
3. Dust & water protection to IP41 level should be provided in each rack.
4. 2 pairs of adjustable 19" equipment mounting rails should be provided in each rack.
5. 42U usable space should be there.
6. 3 pairs of depth support rails should be there.
7. Bolted canopy at the top (may be extending up to 50 mm outside on all four sides).
8. Top and bottom with cable entry cut out & gland plate. Sufficient nos. of holes should be provided at top and bottom of rack with grommets for cable entry.
9. Two integrated (fixed) sides with louvers covered with fine wire mesh from the inside for air entry.
10. Front door with transparent toughened glass fitted on MS sheet on sides with rubber beading, locks & keys.
11. MS plain rear panel having ventilation holes at bottom side with dust filters. Panel should be bolted and openable via LN key.
12. The minimum thickness of the MS sheet used in manufacturing should be 1.6 mm.
13. Minimum 2 Nos. branded compact 90 CFM fan modules working on 230 V AC properly fitted at top of rack should be provided with each rack.
14. 2 Nos. Vertical and 2 Nos. Horizontal cable managers to be provided with each rack.
15. Rack should have 4 holes for floor grouting and equipped with 4 leveling screws & grouting bolts.
16. The rack should be fitted with one sliding shelf adjustable over the rails of the rack.
17. One 19" rack mounted copper earth bus bar with dimensions 485mm x 25mm x 5mm having 12 holes and 3 brass nut bolts and washers for fixing of earthing cables should be fixed near the bottom of the rack.
18. Overall dimensions are subject to the tolerance of ± 5 mm and centre to centre ± 2 mm.
19. Rack should be provided with four nos. of adjustable 19" rails of minimum 2mm thickness having holes for fixing equipments throughout the internal height of rack.
20. The rack frame should be MIG welded for increased strength and rigidity.
21. Finish: powder coated light Grey RAL 7035 on outside & powder coated white on the inside.
22. Sufficient nos. of MCBs or 3 pin power sockets as per site requirements of equipment being supplied should be provided with rack.
23. MCBs or sockets (in the form of power strip) whatever provided as per site requirement should be of Havells or Anchor or equivalent make.
24. Only copper/Brass hardware to be provided with earthing kit.
25. Transparent Acrylic cover to be provided over MCBs (if provided) to prevent the accidental operation of MCBs.
26. Rack mounted dual power supply ACDB panel with bolted front cover as per detail given below:
 - (i) It should have provision to install up to 12 SP MCBs or 3 pin AC sockets as per requirement.
 - (ii) Nut/Bolts for fixing the ACDB on rack (min 4 Nos.)

- (iii) Bolts/Screws for fixing the box cover on base unit (min 4 Nos.)
 - (iv) Brass make Bolts/Screws for cable fixing on +ve and –ve Bus bar (min 8 Nos.)
 - (v) Arrangement for fixing MCBs on base unit of distribution box.
 - (vi) The material should be MS with 1.6mm thickness or more with powder coated in light grey colour.
 - (vii) Cable entry holes should preferably be provided with suitable soft material (rubber type) to prevent the damage to the cables from hard metal of the box.
 - (viii) The minimum dimensions of the bus bars should be 25x3mm (02 Nos. for –ve and 01 Nos. for +ve).
 - (ix) The +ve and –ve bus bars/ Phase, Neutral & earth should be painted with standard red blue/black and green colour respectively all over except near the point of contacts of cable thimbles.
27. Rack drawing along with the model of rack and bill of material shall be submitted by the tenderer as per above specs for approval of RailTel. Before offering complete lot of racks, tenderer shall offer a sample for inspection as per approved drawing. Inspection of racks shall be conducted by authorized representative of RailTel.

ITEM B-2, 3 & 4. ONLINE UPS 2 KVA/3 HRS, 3KVA/3 HRS & 5KVA/2 HRS. BATTERY BACKUP :

SN	Parameter	Required Parameter
1	UPS Ratings KVA	2 KVA/ 3KVA/ 5 KVA
2	Qty / Configuration	Standalone UPS Unit
3	Back-up	2 Hrs for 2 & 3 KVA and 2 Hrs for 5 KVA UPS at 80% load
4	Make	APC or equivalent standard (to be specified by vendor)
5	Battery Type /Make	VRLA SMF
6	UPS Model No. Offered	APC or equivalent standard (to be specified by vendor)
7	Input /Output Phases	Single Phase + Neutral
8	Technology	True on line UPS with Double Conversion, VFI Technology
9	Paralleling	Parallel able up to 4 units (Required for future expansion of load)
9	Rectifier Section	
10	Technology	Fully DSP Based Active Front End IGBT Rectifier.
11	Input voltage	110-276 V (load dependent)
12	Input Power Factor	0.99 @ full resistive load
13	Input frequency	45-55 Hz
14	Input Current THDI	<5% with full resistive load
15	DG Set Requirement	Should be workable over DG Supply.
16	Cold Start	UPS can be started on battery without availability of mains
17	Inverter Section	
18	Technology	Microprocessor / DSP based PWM - IGBT based Technology
19	UPS output Power factor	0.9~1
20	Output voltage rating	220/230/240 V – selectable
21	Output voltage regulation	± 1% - 100% linear load condition
22	Output Frequency	± 0.1 hz or better(Battery Mode)
23	Overload Capacity	125% - 150% - 30 seconds (Battery Mode)

24	Output harmonic distortion (Ph/N)	3% THD maximum and 1% any single harmonic for a 100% linear load.
25		5% THD maximum for 100% non linear load.
26	Crest Factor	3:1 minimum
27	Battery	
28	Type /Make	VRLA SMF of Amara Raja/Rocket/ Exide
29	Battery Placement	Suitable Battery Rack and Accessories provided for battery interconnections and UPS to Battery connections etc
30	Battery AH rating & Quantity	180 minutes for 2 & 3 KVA and 120 Minutes for 5 KVA on 80% load, with minimum 80 AH. Vendor to provide calculations to achieve it (full load test will be performed pre-dispatch of material).
31	Battery Charger Capacity	Capable of Charging Batteries, minimum 4 Amps
32	End of Battery discharge Voltage for battery calculation	1.7 to 1.75 V / cell
33	Bypass	
34	Automatic integral bypass	The integral bypass performs an automatic transfer of the critical load from the inverter to the bypass, in the events of overload, over temperature, or inverter failure conditions with zero transfer time.
35	General	
36	Acoustical Noise @ 1 Meter	Less than 50 dB @ 1 meter
37	Output wave form	Pure sine wave
38	Display and control	LCD/LED
39	Metered parameters	Input AC voltage
40		Input AC Current
41		Input AC frequency
42		Output AC voltage
43		Output AC current
44		Output frequency / voltage
45	Audible Alarms	Required
46	ECO Mode	Required for improving Efficiency to >96%
47	Efficiency (Normal Mode)	>91% @ full load and battery fully charged.
48	Monitoring ON LAN	SNMP card to monitor & store all the data related to UPS. Software Should be compatible to LINUX/ Windows/ Sun Solaris Platforms.
49	Warranty	As per tender
50	EPO	Emergency Power off contact required in UPS to switch off UPS remotely in event of emergency.
51	Communication Options	USB/AS400/Relay Card/SNMP Card should be available
52	OEM Certifications	OEM should have valid ISO 9000 and ISO 14000 certification.

C OPTICAL FIBER COMPONENTS:

1. The Proposed Optical SCS must consist of individual components provided by the same manufacturer. This includes cables, Pigtails, Patch cords, and connectors/adapters etc. All the optical fiber cables and accessories are required to be multimode OM-4 specifications.
2. Only LC connectors type pigtails, adapters, panels and patch cords shall be proposed in response to this RFP.

ITEM C-1 & 2. SPECIFICATIONS OF OFC CABLE (6 & 12 CORE MULTIMODE OM-4):

The optical patch chord should be multimode (OM-4) complying the technical specs “TIA/EIA-568-B.3 (Revision of TIA/EIA-568-A) or latest” of Telecom Industry association.

SN	Laser Optimized OM4 Fiber optics based SCS shall be proposed.	
1	The maximum attenuation shall be 3.5dB/Km at 850 nm and 1.0dB/Km at 1300nm	
2	The Proposed OM4 Optical Fiber Cabling System must support 1000 Base SX to the following distances:	
i	<i>With 2 LC Connectors and 2 splices in a link: 1000m.</i>	
ii	<i>With 4 LC Connectors and 4 splices (typically when a link is looped into another link in the backbone) in a link: 930m.</i>	
3	The Proposed OM4 Optical Fiber Cabling System must support 10G Base SX to the following distances:	
i	<i>With 2 LC Connectors and 2 splices in a link: 550m.</i>	
ii	<i>With 4 LC Connectors and 4 splices (typically when a link is looped into another link in the backbone) in a link: 500m.</i>	
(a)	Optical Fiber Cable specifications	
1	Cable Construction: Bend Insensitive, Low Smoke Zero Halogen Riser Distribution, Tight Buffer, Gel-free cable	
2	Non Armoured but with strengthening member.	
3	The cable construction should be able to support 200 N max. pulling tension (N) short term.	
4	The cable should be able to support a vertical rise of 500 m & 1640 ft (backbone riser)	
5	Operating Temperature: -10 Degree C to +65 Degree C	
6	Temperature Cycle: FOTP-3 or IEC 60794-1-22 F1	
7	Safety Standard: Reaction to fire - IEC 60332-3-24 Smoke density - IEC 61034-2 Halogen acid gas content - IEC 60754-1 Degree of acidity of gases - IEC 60754-2 (Min. 4.3 pH & Max. 10 µS/mm) Cable Water Blocking - IEC 60794-1-22-F5 Cable Max. Crush Resistance Installation - IEC 60794-1-21-E3	
8	Cable Qualification Standards ANSI/ICEA S-83-596 / Telcordia GR-409	
9	ROHS 2011 / 65 / EU compliant	
10	Designed, manufactured and distributed under ISO 9001:2008 quality system	
(b)	OM-4 Optical Fiber Specifications: Multimode optical fiber according to IEC60793-2-10	
	Standards Compliance:	TIA-492AAAD (OM4)
1	Attenuation, maximum:	1.00 db/km @ 1300 nm
		3.5 db/km @ 850 nm

2	Index of Refraction:	1.479 @ 1300 nm
		1.483 @ 850 nm
3	1 Gbps Ethernet Distance:	600 m @ 1300 nm
		1110 m @ 850 nm
4	10 Gbps Ethernet Distance:	550 m @ 850 nm
		1804 ft @ 850 nm
5	Bandwidth, Laser:	500 MHz-km @ 1300 nm
		4700 MHz-km @ 850 nm
6	Bandwidth, OFL:	500 MHz-km @ 1300 nm
		3500 MHz-km @ 850 nm
7	Differential Mode Delay:	0.70 ps/m @ 850 nm
		0.88 ps/m @ 1300 nm
8	Backscatter Coefficient:	-75.7 dB @ 1300 nm
		-68.0 dB @ 850 nm
9	Cladding Diameter:	125.0 μ m
10	Core Diameter:	50.0 μ m
11	ROHS 2011 / 65 / EU compliant	
12	Designed, manufactured and distributed under ISO 9001:2008 quality system	

ITEM C-3,4 & 5 SPECIFICATIONS OF RACK MOUNTABLE FIBER PATCH PANEL :

The FMS (Fiber Patch Panel) should be confirming to broadly to TEC NO.: GR/FDM-01/02/APR-2007 (Type-I) with latest amendment No. TEC/T/OFC-FDMS/149/2012 or ANSI/TIA-568-C.2 or latest” of Telecom Industry association. All the accessories i.e. cables/pigtails/adapters etc. should be confirming to OM-4 classification of ISO/TIA. However it should have the following:

- i) It should be mountable in standard 19” rack.
- ii) The connectors preferred make : 3M, Huber-Shuner, R&M, TE Connectivity/Raychem.
- iii) There should be arrangement of termination of 6/12/24 Nos. of fibers (as per SOR) 50 μ m multimode fiber (OM4).
- iv) It should be supplied with 6/12/24 Nos. of pigtails (MM OM-4) of respective type of connector (as per SOR) of minimum 3 meter length.
- v) Color coded pigtails (900 μ m tight jacket) shall be provided for easy identification. The pigtail shall be assembled using 900 micron buffered fiber
- vi) The Fiber Patch Panel should be supplied with arrangement of required Nos. of adapters (as per SOR).
- vii) The adaptors shall be fixed in such a way that these shall be easily accessible protecting the eye from direct exposure to laser.
- viii) There should be minimum two nos. of trays for the provision of termination of the fibers & sufficient space for routing of the fibers in the trays.

- ix) Trays shall be numbered bottom to top (tray no. 1 is lower most).
- x) Pigtails shall follow tray numbering.
- xi) Pigtails shall be color coded similar to the fiber color coding.
- xii) Adaptors shall be numbered Bottom to Top or Left to Right in ascending order.
- xiii) All adaptors shall be provided with dust protection caps.
- xiv) Important Do's and Don'ts about the operation of the "Fiber Patch Panel" shall be clearly indicated at convenient place on it.
- xv) Insertion Loss: ≤ 0.1 dB
- xvi) Return Loss: ≥ 65 dB
- xvii) The Fiber Patch Panel shall be manufactured as per latest state of art technology.
- xviii) The Fiber Patch Panel shall be protected against the entry of dust and insects, rodents etc. All the adaptor slots must be provided with adopters.
- xix) Body should be of MS steel; powder coating painting (min. 70 micrometer thickness) shall be provided with rust resistance paint.
- xx) **Marking:** The marking on the system shall be indelible and following minimum information shall be provided by way of engraving or Laser printing method (exemption may be given where not possible):
 - a) "RAILTEL" should be written on each Fiber Patch Panel to be visible from front.
 - b) Manufacturer's name & date/ year of production.
 - c) Model No./Batch No./ Serial No.
 - d) Capacity i.e. No. of cables and the fibers.
 - e) Identification details/ cables/ Fiber/ labelling facility.

ITEM C-6 SPECIFICATIONS OF PATCH CORDS:

The Patch cords should be broadly confirming to TEC NO.: **TEC/GR/TX OFJ-01/05/NOV-09 with latest amendment No. TEC/T/OFC-OFJ/155/2013 or all specifications of multimode (OM-4) cables of "ANSI/TIA-568-Cor latest"** of Telecom Industry association. The Patch cords should have the following:

- i) Operating Temperature: -10°C to $+65^{\circ}\text{C}$.
- ii) Insertion Loss:
 - a) Insertion Loss of complete patch cord including adapter when tested from each direction in all conditions of operations: ≤ 0.3 dB
 - b) Insertion Loss of Adaptors: ≤ 0.1 dB
- iii) Return Loss for each connector of patch cord should be ≥ 50 dB
- iv) The length and type of connector of each Patch Cord: As per SOR.
- v) The connectors preferred make : 3M, Huber-Shuner, R&M, TE Connectivity/Raychem.

- vi) Connector Body: PEI (Polyetherimide)/ PPS (Polyphenylene Sulphide)
vii) The OEM shall be ISO 9001:2000 & ISO 14000 certifications

ITEM D-1. CAT 6A CABLE

Characteristic	Min. Required Specification
Features	Category 6a Unshielded Twisted Pair 4 pair 100Ω cable shall be compliant with ANSI/TIA-568-C.2 or latest Additional Transmission Performance Specifications for 4-pair100Ω Category 6a Cabling.
	Category 6a UTP cables shall extend between the work area location and its associated telecommunications closet and consist of 4 pair, 23 AWG, UTP LS0H cable jacket.
	The 4 pair Unshielded Twisted Pair cable shall be UL Listed and ETL Verified to ANSI/TIA-568-C.2 Category 6a.
	All Category 6a cables shall meet or exceed the following characteristics:
Mechanical Characteristics	Construction: 4 twisted pairs preferably separated by round flex double H spline.
	Conductor: Solid Copper
	Conductor Diameter: ~23AWG
	Primary Insulation: Solid Polyethylene
	Jacket: LS0H (Low Smoke Zero Halogen)
	Outer Diameter: 7.2mm to 7.5 mm
	Operating Temperature: -10°C to 65°C
	Tested Frequency: As per TIA.
	Propagation Delay: 537.6@100MHz
	Delay Skew: 45ns Max
	Fire Propagation Test: IEC 60332-1 or IEC 60332-3-22
RoHS Compliant	Cable shall be RoHS Compliance.

ITEM D-2 & 3: MOULDED CAT 6A RJ45 PATCH CABLE (0.3M & 2 MTR)

Characteristic	Min. Required Specification
Features	Category 6a Equipment cords (Length – 0.3 mtr & 2mtr.)
	The work area equipment cords shall, at a minimum comply with proposed ANSI/TIA/EIA-568-C-2 Commercial Building Cabling Standards Transmission Performance Specifications for 4 pair 100Ω Category 6a Cabling.
	Category 6a modular equipment cords: Shall be round, and consist of eight insulated 24AWG, stranded copper conductors, arranged in four colour-coded twisted-pairs within a LSZH jacket.
	Equipped with modular 8-position modular plugs on both ends, wired straight through with standards compliant wiring.
	Should have 50 micro inches of gold plating over nickel contacts.
	Modular cords should include a moulded strain relief boot.
	Should be covered by ETL verification program for compliance with TIA 568B.C-2.Certificate to be submitted with bid.
	Approvals: ETL & UL
Mechanical Characteristic:	Conductor size: 24 AWG stranded bare copper
	Max O.D.: As per TIA.

Cable	Jacket: LSOH Type
	Temperature range: -10 °C to +65 °C
Mechanical Characteristic:- Plug	Operating life: Minimum 750 insertion cycles
	Contact Material: Copper alloy
	Contact plating: 50μ “Gold/100μ” Nickel
	Plug dimensions & tolerances compliant with FCC Part 68 and IEC 60603-7
Electrical Characteristics:- Plug	Max voltage: 150 VAC (max)
	Max current: 1.5A @ 25 °C
	Operating Temperature range: -20 °C to +65 °C
RoHS Compliant	Patch Cords shall be RoHS Compliance

ITEM D.4 WALL MOUNTED I/O BOX FOR CAT6A AND JACK PANEL (FOR BOTH FACE PLATE OF I/O BOX & PATCH PANEL)

Cat6A UTP Modular Jacks	
Parameters	Specifications
Type	Wall mounted I/O Box and Modular Jacks shall meet and exceed channel specification of ANSI/TIA/EIA-568-C.2 Category 6a and ISO/IEC 11801:2002/Amd 1:2002 Ed2 when used as a component in a properly installed UTP channel.
Front Connection	RJ 45 : Copper Clad Flexible PCB, 50uin Gold plated contacts over Nickel
Rear Connection	Copper alloy, Gold plated contacts over Nickel
Connector Body	PBT glass reinforced UL94V-0
Termination Interface	Front Mated Connection: 750 Cycles
	Rear Mated Connection: 20 Cycles
IEEE Specification (PoE)	IEEE 802.3at type 1 and 2 (up to 30W)
	IEEE 802.3bt/D1.7 type 3 and 4 (up to 100W)
Termination Pattern	TIA / EIA 568 A and B
Performance tests	Modular Jacks shall be tested for performance to ANSI/TIA/EIA-568-C.2
Guaranteed Bandwidth	500 Mhz Guaranteed Bandwidth for 100 MT Channel Link
Other Specifications	UL 1863, IEC 60603-7, FCC part 68-F
Operating Temperature	-10° to 65°C
Dielectric Strength	1,000 V RMS @ 60 Hz for 1 minute (Signals to Ground)
Electrical Performance @ 625 Mhz	Insertion Loss: Max. 0.48 dB NEXT: Min. 37.0 dB FEXT: Min. 31.1 dB RL: Min. 12.9 dB PSANEXT: Min 56.0 dB PSACRF: Min 56.0 dB Balanced TCL: Min 19.0 dB

ITEM D-5 .1 PORT CAT 6A, FACE PLATE, SQUARE WITH SHUTTERS

Details	Specification
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Type	Simplex/Duplex
Material	Fire -retardant Plastic, ABS, Almond color, preferred UK Style.
Acceptability	Should be able to accept Cat6A, Cat6 and Cat5e information outlets
Approvals	UL94V0
No. of plates	2 Plates/Pieces Face Plate for better aesthetic look (Premium Type)
Mounting screws	2 pcs, M3.5 x 25mm, with covers
Compliant	RoHS
Dimensions	(H x W x D) 86 x 86 x 14.42 mm (preferred)

ITEM D-6: 24 PORT, 1U JACK PANEL

24 PORT ANGLED JACK PANEL, 1U	
Parameters	Specifications
Type	-24 Port 1U Straight Patch Panel with Discrete Angled Modules -Patch panels IDC (IDC of Information Outlet) Connectivity should be at rear end & RJ-45 jack on front panel, 19" rack mountable. -Patch panels Ports should be individually replaceable & Consistent port-to-port performance.
Availability	Patch Panel should be available with 24 Ports in 1U (48 ports in 2U).
Cable management	-The modules in Patch panel should have sideways orientation of Information Outlet that makes patch cord routing easier and eliminate the need for Horizontal Cable Management. -Patch Panel to be supplied with Inserts/modules (preferable four removable modules with 6 no. of IO slot per Module)
Compatibility	Patch Panel should be able to accept Cat6A, Cat6 and Cat5e information outlets for backward and forward compatibility
Height	1U (1.75")
Storage Temperature Range	-10Deg C to +65 Deg C
Operating Temperature range	-10Deg C to +65 Deg C
Color and Material	Steel, 16 gauge, powder paint finish, black, plastic inserts, UL94V-0 plastic, Black. Cable support bar should be provided separately with panel.
Loading	All the patch panels are to be loaded fully (24 port) modular jack panels as per the specifications given in D-4 (above)
Approvals:	UL Listed
RoHS Compliant	Jack Panel shall be RoHS Compliance

ITEM E-1: PVC CASING CAPPING FOR UTP CABLING (25X16MM):

1. Material: PVC
2. The offered products should be designed with standard industry norms.
3. The size should be 25x16mm.
4. It should be ISI marked and as per BIS standard IS: 14027 (Part-2) or latest.

ITEM E-2, 3 & 4: PVC CONDUIT PIPES FOR CABLING (16, 25MM & 50MM):

Rigid PVC Conduit Pipes ISI marked of desired diameter (16, 25 & 50 mm and conforming to IS: 9537 (Part - 3) 1983 (Reaffirmed 2007/.2017) The conduits should be suitable for medium and heavy Mechanical Stresses as per the site requirement.

ITEM E-5: PVC FLEXIBLE CONDUIT PIPES FOR CABLING (16, 25 & 50MM):

Flexible PVC Conduit Pipes ISI marked of desired diameter (16, 25 & 50 mm) and conforming to IS: 9537 (Part - 3) 1983 The conduits should be suitable for medium and heavy Mechanical Stresses as per the site requirement.

ITEM F-6: REMOTE NETWORK MANAGER:

1. Intel Core i5 Processor (7th Gen) or better.
2. 8 GB DDR4 RAM
3. 64 bit Windows 10 Operating System
4. 1 TB HDD
5. 15.6 inch Display.
6. 1 Year Onsite Warranty.
7. Software for Remote Network Manager (As applicable)

Note: All applicable softwares must be provided along with the applicable licenses.

ITEM G: TESTING EQUIPMENT:

ITEM G-1. LAN CABLE TESTER METER (MAKE: FLUKE NETWORK OR BETTER):

1. Network LAN Cable Tester RJ45 Cat 6a UTP Cables.
2. Cable Tester, 1 x 9v Battery
3. Color: White, Yellow or black.

ITEM G-2. VACUUM CLEANER WITH BLOWER (MAKE: BOCH OR BETTER):

1. Vacuum Cleaner should work on 230V, 50Hz Ac supply
2. Innovative Dust Bag Holding System
3. Wet & Dry Cleaner
4. Dust Collecting Feature: Dust Bag
5. Should be equipped with 4 Nos. of wheels for easy carrying.
6. Should have both vacuum cleaner as well as blower.
7. All accessories required for cleaning must be the part of cleaner.

ITEM G-3 DIGITAL AC/DC CLAMP METER (MAKE: FLUKE OR BETTER):

1. Make: Fluke (Model 325 True RMS 400 Amp. AC/DC Clamp Meter) or better
2. Type: Digital
3. Display Type: LCD
4. Primary Functions: 400 Amp. AC and DC Current Measurements., 600 V AC and DC Voltage Measurement.
5. True-RMS AC Voltage and Current for accurate measurements on non-linear

- signals., Resistance measurement up to 40 k with continuity detection.
6. Number of Counts: 6000
 7. LED Indicators: Yes
 8. Operating Temperature: 10°C to 50°C
 9. Audible Continuity Test: Yes
 10. Data Freeze: Yes
 11. Auto-ranging: Yes
 12. Reading Storage: Yes
 13. Backlight: Yes
 14. + 12 Months Warranty.
 15. All accessories including probes, battery etc. to be provided.

ITEM G-4 FIBER FAULT LOCATOR TESTER METER (MAKE: FLUKE OR BETTER):

1. Shall be workable on Multimode Fiber. And shall be capable of indicating distance of Fault Locator.
2. Shall Work on multimode fiber, 50/125µm and 62.5/125 µm (Multi mode OM-4).
3. 850 nm output wavelength. Shall be capable of measuring 1,500 metres of fiber.
4. Shall be able to locate severe bends, high-loss splices, breaks and dirty connectors in multimode fibers.
5. Shall be capable of measuring and locate high-loss splices
6. Shall be able to locate the end of a fiber.
7. Shall be able to find potential sources of high bit error rates caused by reflectance from dirty or poor connections.
8. Shall detects live optical signals before it begins testing
9. Shall have the quick set-up.
10. Shall be capable of change the Index of Refraction (IOR) to improve fiber length accuracy.
11. Shall be visible in dark areas. Back lighted display turns off automatically.
12. Should have preferably removable SC adapter for easily cleaning.
13. Should have interchangeable adapters (SC & LC).
14. Shall have changeable Long life battery/ chargeable batteries.
15. Shall have rugged construction; vibration and drop tested.

ITEM G-5. CRIMPING TOOL WITH CABLE CUTTER:

1. Suitable For Stripping & Cutting for All kind of Cables (Except CCS-Copper Clad Steel low quality cables)
2. Suitable for Crimp RJ45(8P8C) Network & Telecom Connector Plugs
3. Specially design with Labour saving Ratch and Soft-Plastic Hand Shank
4. Package should include 1 x Clip Network & Telecom RJ45 Crimping Tool.

ITEM G-6 KRONE TOOL/IMPACT TOOL FOR I/O PUNCHING:

1. Ethernet Cable Punch Down Tool Idc Faceplate Krone suitable for use with UTP Cat 6a cables.

2. It should have a an Insertion Sensor to ensures The Conductor Is Fully Inserted Into The Block Contacts Before Allowing Any Excess Wire To Be Cut Off.
3. Should be suitable For Connecting Cables, Modules And Distribution Frames

ITEM H. COMPLETE INSTALLATION & COMMISSIONING INCLUDING WIRING, TERMINATION, CASING, CAPING ETC:

The complete installation and commissioning of the above supplied material as per the standard industry practices and as per the instructions of site engineer shall have to be completed. Any other material required to complete the work but not included in the SOR may be included and brought out in item I. In case the same is not added and later on it is found to be required, it has to be supplied without any additional cost by the tenderer.



SECTION I

CHAPTER 2

List of Address for Specification & Drawings

2.0 Address from where specification copy can be purchased:

The copy of IRS, RDSO, TEC and BIS specification used in the tender documents can be purchased from following sources.

- 2.1 IRS Specification :**
- I) Manager Publications,
Government of India
Civil Lines, New Delhi- 110054
 - ii) Government of India Book Depot,
8 - S.K. Roy Road, Calcutta – 700001

- 2.2 RDSO Specification :**
- RDSO, Manak Nagar, Lucknow

- 2.3 DOT/TEC/ITD Specification :**
- Khurshid Lal Bhavan, Janpath,
New Delhi- 110001

- 2.4 B.I.S. Specification :**
- Directorate General ,
Indian Standards Institution,
9- Bahadur Shah Zafar Marg,
New Delhi -110002

F- block, Unity Building,
Narsimhraja Square,
Bangalore- 560002

534- Sardar Vallabh Bhai Patel Road , Mumbai.

5- Chowringhee Approach, PO Princep street, Calcutta-
700072

Ahinsa Building (1st floor) , SCO 82-83, Sector 27-C,
Chandigarh- 160017

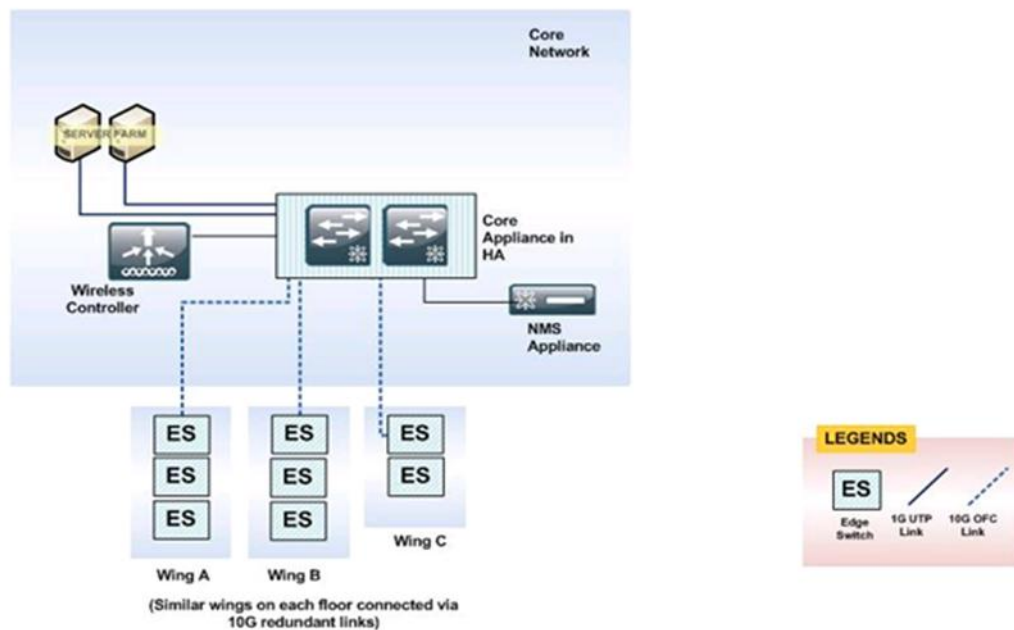
5-8-56/57, L.N. Gupta Marg, Hyderabad- 208005.

117/418-B, Sarvoday Nagar, Kanpur – 208005

C.I.T. Campus, Adyar, Madras – 600020.

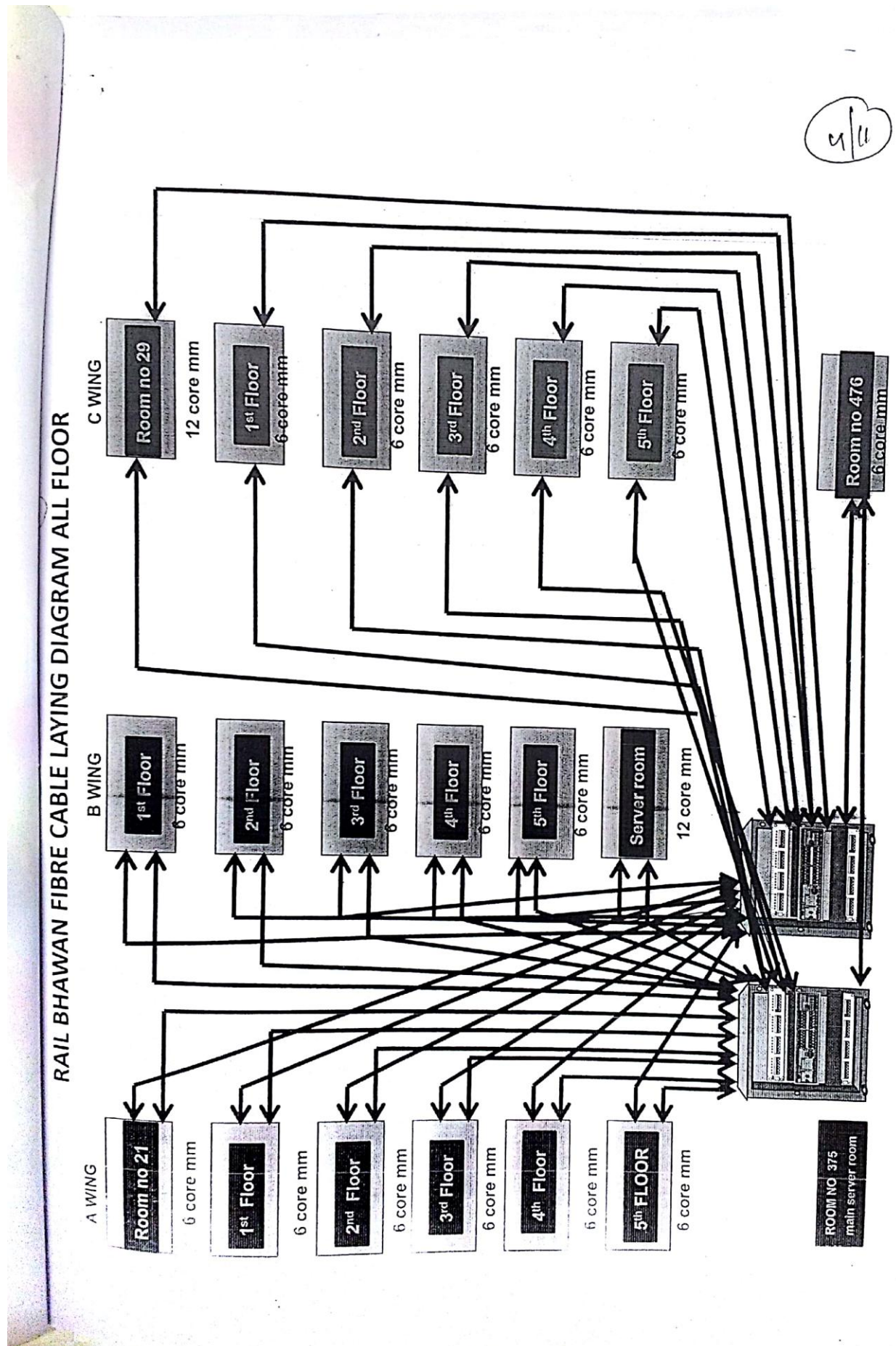
- 2.5** The specifications and drawings referred but not enclosed in the tender documents may be seen in the RCIL's office on any working day.

Logical Layout of Rail Bhavan



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Section-I
Chapter - 2-A

E-tendering Instructions to Bidders

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://www.tcil-india-electronictender.com>** through TCIL, a Government of India Undertaking. This portal is based on the most 'secure' and 'user friendly' software from Electronic Tender®. A portal built using Electronic Tender's software is also referred to as Electronic Tender System® (ETS).

Benefits to Suppliers are outlined on the Home-page of the portal.

1. Tender Bidding Methodology:

Sealed Bid System - 'Single Stage - Single Envelope': In this, bidder has to submit both Technical as well as Financial bid in single envelope "ONLINE."

2. Broad outline of activities from Bidders Perspective:

1. Procure a Digital Signing Certificate (DSC)
2. Register on Electronic Tendering System® (ETS)
3. Create Users and assign roles on ETS
4. View Notice Inviting Tender (NIT) on ETS
5. Download Official Copy of Tender Documents from ETS (Important)
6. Clarification to Tender Documents ETS
 - ☐ Query to RailTel (Optional)
 - ☐ View response to queries posted by RailTel, as addenda.
7. Bid-Submission on ETS
8. Attend Public Online Tender Opening Event (TOE) on ETS.
9. View/Post-TOE Clarification posted by RailTel on ETS (Optional), Respond to RailTel's Post-TOE queries

For participating in this tender online, the following instructions need to be read carefully. These instructions are supplemented with more detailed guidelines on the relevant screens of the ETS.

3. Digital Certificates

For integrity of data and its authenticity/ non-repudiation of electronic records, and be compliant with IT Act 2000, it is necessary for each user to have a Digital Certificate (DC). also referred to as Digital Signature Certificate (DSC), of Class 2 or above, issued by a Certifying Authority (CA) licensed by Controller of Certifying Authorities (CCA) [refer <http://www.cca.gov.in>].

4. Registration

To make use of the Electronic Tender[®] portal ([https:// www.tcil-india-electronictender.com](https://www.tcil-india-electronictender.com)), vendor needs to register on the portal (if not registered earlier). Registration of each organization is to be done by one of its senior persons who will be the main person coordinating for the e-tendering activities. In ETS terminology, this person will be referred to as the Super User (SU) of that organization. For further details, please visit the website/portal (<https://www.tcil-india-electronictender.com>), and click on the 'Supplier Organization' link under 'Registration' (on the Home Page), and follow further instructions as given on the site.

Pay Annual Registration Fee as applicable.

Note: After successful submission of Registration details and Annual Registration Fee (as applicable), please contact TCIL/ ETS Helpdesk (as given below), to get your registration accepted/activated.

TCIL Helpdesk

Contact Person Telephone/ Mobile E-mail ID

Helpdesk Executives :011-2624 1071, 011-2624 1072
ets_support@tcil-india.com

(Mobile Nos. for Emergency Help): 9868393775, 9868393717, 9868393792.

RailTel Contact-1 (for general Information)

RailTel's Contact Person
Ashwani Kumar:DGM/PLG
Telephone 011-22185934
Mobile : 9717644105
E-mail ID: ashwani@railtelindia.com

RailTel Contact-II (for general Information)

RailTel's Contact Person
Jeet Singh: GM/M&P
Telephone 011-22185934
Mobile : 9717644279
E-mail ID :jeetsingh@railtelindia.com

5. Bid related Information for this Tender (Sealed Bid)

The entire bid-submission would be online on ETS.

Broad outline of submissions are as follows:

1. Submission of Bid Security/ Earnest Money Deposit (EMD)
2. Submission of digitally signed copy of Tender Documents/Addenda
3. Single Envelope (including Technical +Financial part)
The electronic envelope consists of Main bid and Electronic Form (both mandatory) and Bid Annexure (Optional).

4. Online response to General Terms & Conditions (GTC) and Special Terms & Conditions (STC)
5. (Optional) Online Submission of modification, substitution bids for technical or financial parts, or withdrawal bid.

NOTE: Bidder must ensure that after following above, the status of bid submission must become “Complete” indicating successful submission of the online bid.

6. Offline Submissions:

The bidder is required to submit the following documents offline to RailTel Corporation of India Ltd, 6Th Floor, Block-III, Delhi I.T.Park, Shastri Park, New Delhi-110053 before due date & time of submission of bids specified in covering letter of this tender document, in a Sealed Envelope. The envelope shall bear (the tender name), the tender number and the words ‘DO NOT OPEN BEFORE’ (due date & time).

- a) **EMD-Bid Security** in Original, in favour of RailTel Corporation of India, Payable at Delhi. (with Tender No., Name of Firm & Mob. No. written on back side of DD)
- b) **DD/ Bankers cheque in original against payment of tender fee** in favour of RailTel Corporation of India, Payable at Delhi. (with Tender No., Due date of Opening of Tender, Name and contact No. of Firm written on back side of DD)
- c) **Power of attorney** to be submitted in accordance with Tender Conditions.
- d) **In case bidder happens to be a NSIC/MSME bidder**, the documentary evidence for same shall be submitted.
- e) Hard signed copies of tender documents including corrigendums, addendums etc.

NOTE: The Bidder has to upload the Scanned copy of all above original documents as Bid-Annexures during Online Bid-Submission.

7. Submission of Eligibility Criteria related documents

Eligibility criteria related documents as applicable shall also be scanned and submitted ONLINE. Copy of these documents shall also be submitted before Tender opening date. Bids without these off line submissions will be summarily rejected.

8. Special Note on Security of Bids

Security related functionality has been rigorously implemented in ETS in a multi-dimensional manner. Starting with 'Acceptance of Registration by the Service Provider', provision for security has been made at various stages in Electronic Tender's software. Security related aspects as regards Bid Submission are outlined below:

As part of the Electronic Encrypter™ functionality, the contents of both the ‘Electronic Forms’ and the ‘Main-Bid’ are securely encrypted using a Pass-Phrase created by the Bidder himself. Unlike a ‘password’, a Pass-Phrase can be a multi-word sentence with spaces between words e.g. (I love this World). A Pass-Phrase is easier to

remember and more difficult to break. It is recommended that a separate Pass-Phrase be created for each Bid-Part. This method of bid-encryption does not have the security and data-integrity related vulnerabilities which are inherent in e-tendering systems which use Public-Key of the specified officer of a Buyer organization for bid-encryption. Bid-encryption in ETS is such that the Bids cannot be decrypted before the Public Online Tender Opening Event (TOE), even if there is connivance between the concerned tender-opening officers of the Buyer organization and the personnel of e-tendering service provider.

Typically, 'Pass-Phrase' of the Bid-Part to be opened during a particular Public Online Tender Opening Event (TOE) is furnished online by each bidder during the TOE itself, when demanded by the concerned Tender Opening Officers who will open the bid. Else Tender Opening Officer may authorize the bidder to open his bid himself. There is an additional protection with SSL Encryption during transit from the client-end computer of a Supplier organization to the e-tendering server/ portal.

(Mandatory Additional Methods of passphrase submission):

Additionally, the bidder shall make sure that the Pass-Phrase to decrypt the relevant Bid-Part is submitted to RailTel in a sealed envelope before the start date and time of the Tender Opening Event (TOE) along with other offline submissions.

9. Public Online Tender Opening Event (TOE)

ETS offers a unique facility for 'Public Online Tender Opening Event (TOE)'. Tender Opening Officers as well as authorized representatives of bidders can attend the Public Online Tender Opening Event (TOE) from the comfort of their offices. For this purpose, representatives of bidders (i.e. Supplier organizations) duly authorized are requested to carry a Laptop and Wireless Connectivity to Internet.

Every legal requirement for a transparent and secure 'Public Online Tender Opening Event (TOE)' has been implemented on ETS. As soon as a Bid is decrypted with the corresponding 'Pass-Phrase' as submitted online by the bidder himself (during the TOE itself), salient points of the Bids are simultaneously made available for downloading by all participating bidders.

ETS has a unique facility of 'Online Comparison Chart' which is dynamically updated as each online bid is opened. The format of the chart is based on inputs provided by the Buyer for each Tender. The information in the Comparison Chart is based on the data submitted by the Bidders in electronic forms. A detailed Technical and/ or Financial Comparison Chart enhance Transparency. Detailed instructions are given on relevant screens.

ETS has a unique facility of a detailed report titled 'Minutes of Online Tender Opening Event (TOE)' covering all important activities of 'Online Tender Opening Event (TOE)'. This is available to all participating bidders for 'Viewing/ Downloading'.

There are many more facilities and features on ETS. For a particular tender, the screens viewed by a Supplier will depend upon the options selected by the concerned Buyer.

NOTE: In case of internet related problem at a bidder's end, especially during 'critical events' such as - a short period before bid-submission deadline, during

online public tender opening event, during e-auction, it is the bidder's responsibility to have backup internet connections.

In case there is a problem at the e-procurement/ e-auction service-provider's end (in the server, leased line, etc) due to which all the bidders face a problem during critical events, and this is brought to the notice of RailTel by the bidders in time, then RailTel will promptly re-schedule the affected event(s).

10. Other Instructions

For further instructions, the vendor should visit the home-page of the portal (<https://www.tcil-india-electronictender.com>), and go to the User-Guidance Center. The help information provided through 'ETS User-Guidance Centre' is available in three categories - Users intending to Register / First-Time Users, Logged-in users of Buyer organizations, and Logged-in users of Supplier organizations. Various links are provided under each of the three categories.

Note: It is strongly recommended that all authorized users of Supplier organizations should thoroughly peruse the information provided under the relevant links, and take appropriate action. This will prevent hiccups, and minimize teething problems during the use of ETS.

11. The following KEY INSTRUCTIONS for BIDDERS' must be assiduously adhered to:

1. Obtain individual Digital Signing Certificate (DSC or DC) well in advance of your first tender submission deadline on ETS.
2. Register your organization on ETS well in advance of your first tender submission deadline on ETS.
3. While registering your organization on ETS Portal of TCIL, pl. make sure that the email id of Super user provided for registration and email-id on which Digital Signature Certificate of the Super user is issued are exactly the same.
4. Get your organization's concerned executives trained on ETS well in advance of your first tender submission deadline on ETS.
5. Bidder should ensure that **official copy of tender document** has been downloaded by clicking the radio button for confirmation else e-Procurement system will not permit the bidder to participate in the tendering process.
6. Submit your bids well in advance of tender submission deadline on ETS as there could be last minute problems due to internet timeout, breakdown, etc.

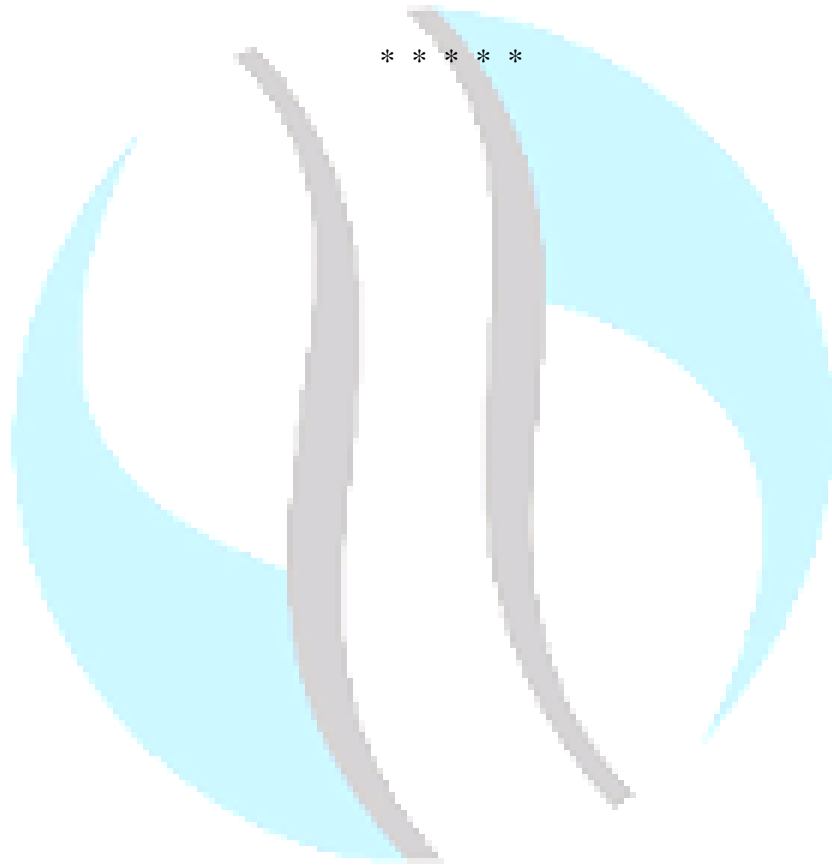
12. Minimum Requirements at Bidders end

- Computer System with good configuration (Min P-IV, 1 GB RAM, Windows XP)
- Broadband connectivity with a good speed.
- Microsoft Internet Explorer 6.0 or above
- Digital Certificate (s) for users.

Venue

RailTel Corporation of India Limited,

6th Floor, Block-III, Delhi I.T. Park,
Shastri Park, Delhi-110053



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SCHEDULE OF REQUIREMENTS (SOR)



Tender No. : RailTel/Tender/OT/NR/2017-18/NDRB LAN Up-Gradation/26

SOR: For various items of Requirement (as per technical specifications given in Section-1, Chapter-I)

SOR for the work of "Supply ,Installation & Commissioning of switch ,core switch & NMS with associated accessories for Railnet services at Railway Board"							
S N	Description	Unit	Qty.	Unit Price		Amount (In INR)	
				In figures	In words	In figures	In words
A. NETWORKING COMPONENTS							
1	<p>Supply of Chasis based Layer-3 core switch with full redundancy for 230V AC power supply. It shall be capable of minimum 1.76 TBPS switching Capacity. It shall be equipped with minimum 2GB RAM and 2GB Flash. It shall be IPv6 capable supporting IPv6 host, Dual stack (IPv4/IPv6) from Day-1.</p> <p>Configuration: Shall support up to 4 Nos. of 100G, 48 Nos. of 1G/10G SFP+ Ports (Multimode OM3/OM4 operation minimum up to 300m), Equipped with 30 Nos. of 10 Gbps -SR Transceiver (SFP+s) for connectivity and 1 No. of 100 Gbps DAC (3m minimum) to connect between core chasis.</p> <p>Warranty: With 5 year OEM Warranty.</p>	Nos.	2				
2	<p>Supply of Layer-2 PoE Switch. It shall be capable of minimum 136 GBPS switching Capacity. It shall be equipped with minimum 2GB RAM and 2GB Flash. It shall be IPv6 capable supporting IPv6 host, Dual stack (IPv4/IPv6) from Day-1. It should support 802.3 at POE+ standard on all base T port with 720 W POE power budget.</p> <p>Configuration: It should have 48Nos. of 10/100/1000 Base-T ports & 2 Nos. of 10G ports with 2 stacking ports of 10Gbps. All ports to be equipped with Multimode OM3/OM4 SFPs minimum range up to 300m.</p> <p>Warranty: with 5 year OEM warranty.</p>	Nos.	45				
3	<p>Supply of Layer-2 PoE Switch. It shall be capable of minimum 136 GBPS switching</p>	Nos.	21				

	Capacity. It shall be equipped with minimum 2GB RAM and 2GB Flash. It shall be IPv6 capable supporting IPv6 host, Dual stack (IPv4/IPv6) from Day-1. It should support 802.3 at POE+ standard on all base T port with 720 W POE power budget. Configuration: It should have 48Nos. of 10/100/1000 Base-T ports & 2 Nos. of 1 G ports with 2 stacking ports of 10Gbps. All ports to be equipped with Multimode OM3/OM4 SFPs minimum range up to 300m. Warranty: with 5 year OEM warranty.					
4	Supply of server farm aggregator Layer-2 switch (Multimode OM3/OM4 operation up to 300m) with stacking cable & Module . It shall be capable of minimum 280 GBPS switching Capacity. It shall be equipped with minimum 2GB RAM and 2GB Flash. It shall be IPv6 capable supporting IPv6 host, Dual stack (IPv4/IPv6) from Day-1 Configuration: With minimum 16x 1G/10G base -SFP + ports. Warranty: With 5 year OEM warranty.	Nos.	4			
5	Supply of Rack Server (Hardware and software) as per specification with 5 year OEM warranty	Nos.	5			
6	NMS server (Hardware & Software) with license , With 5 year OEM warranty	Nos.	1			
7	SFP+ 10 G (Multi Mode OM-3/4) Enterprise-Class with 5 year OEM warranty	Nos.	140			
8	SFP-1G (Copper) for Fiber Switch with 5 year OEM warranty	Nos.	40			
9	Stacking/DAC Cable for 10Gbps (1m)	Nos.	11			
10	Stacking/DAC Cable 10Gbps (3m)	Nos.	8			
B. RACKS AND UPS						
1	Supply of 42 U rack as per technical Specifications.	Nos.	13			
2	Supply of Rack mountable UPS-2 KVA as per technical specifications with 5 years warranty.	Nos.	15			
3	Supply of Rack mountable UPS-3 KVA as per technical specifications with 5 years warranty.	Nos.	2			
4	Supply of Rack mountable UPS-5 KVA as per technical specifications with 5 years warranty.	Nos.	2			
C. OFC COMPONENT						
1	Supply of OFC Cable (6 core multimode	Mtr.	2700			

	OM-3/4)						
2	Supply of OFC Cable (12 core multimode OM-3/4)	Mtr.	600				
3	Supply of 12 port rack mountable MM mode (OM-3/4) fiber patch panel , with duplex SC/APC adapter plates and splice tray	Nos	18				
4	6 port rack mountable multi mode (OM-3/4) fiber patch panel , with duplex SC adapter plates and splice tray	Nos	2				
5	24 port rack mountable multi mode (OM-3/4) fiber patch panel , with duplex SC adapter plates and splice tray	Nos	12				
6	Fiber Patch Chord ,multi mode OM-3/4 SC/APC Type , 03 mtrs	Nos.	100				
D. UTP COMPONENT							
1	Cat 6a cable	Box	40				
2	Cat 6a Patch Chord (2 mtrs.)	Nos.	500				
3	Cat 6a Patch Chord (1 feet)	Nos.	3800				
4	Single Port I/O box , Wall Mounted for Cat 6A cable loaded with modular jack.	Nos.	500				
5	Single port Cat 6A ,Face Plate	Nos.	500				
6	24 port, Cat 6a Jack Panel fully loaded with modular jacks.	Nos.	20				
E. CONDUITS							
1	PVC casing capping (25mm x 16 mm) for UTP cabling	Mtr	1500				
2	PVC conduit (16 mm dia) for UTP cabling	Mtr	1500				
3	PVC conduit (25mm dia) for fibre cabling	Mtr	800				
4	PVC conduit (50 mm dia) for fibre cabling	Mtr	200				
5	PVC flexible pipe (25mm dia)	Mtr	200				
F. OTHER COMPONENTS							
1	Remote Network Manager	Nos.	2				
G. TESTING EQUIPMENT							
1	LAN Cable Tester meter (Make Fluke network Microscanner2 or better)	Nos.	5				
2	Vacuum Cleaner with blower (make Boch or better)	Nos.	1				
3	Digital AC/DC Clamp meter (make Fluke or better)	Nos.	2				
4	Fiber fault Locator tester meter (Fluke Networks FQM-100-M Fiber Quick Map Kit, Multimode Fault Finder or better)	Nos.	2				
5	Crimping Tool with cable cutter (Fluke-Modular crimper or better)	Nos.	15				
6	Krone Tool/Impact Tool for I/O Punching (Fluke-D814 Impact tool with eversharp 110 blade or better)	Nos.	15				

H	Complete Installation & commissioning including wiring, termination, casing, capping etc	Nos.	1				
I	Any other item required to meet the performance objective (Please specify with full description, justification Qty and rate).						
	TOTAL						

Total (in words) :

Note:- Above quoted rates are including all type of applicable taxes. The bifurcation of rates with taxes shall be enclosed separately along with HSN codes of various items.

The requisite EMD for an amount of Rs. _____ submitted vide DD No.

_____ dated _____ drawn on _____ bank.

Signature of Authorised Signatory with Seal



Section II

(General Instructions to Tenderers)

1. Submission of Tenders:

The tenders shall be uploaded on line and submitted as per prescribed format of RAILTEL before or on **16.04.2018 up to 15:00 hrs** as per details given in Section-1 Chapter-2A.

2. The hardcopies of the tender shall be addressed to: The Executive Director (NORTHERN REGION) inviting tenders as indicated in the tender notice. The cover must mention the 'name of the work & Tender' and due date of opening'.

3. Submission of tenders as detailed in section-1 chapter 2A..

4. The tenderers shall closely peruse all the clauses, specifications and drawings indicated in the Tender Documents before quoting. Should the tenderer have any doubt about the meaning of any portion of the Tender specifications or find discrepancies / omission in the Drawings or the tender documents issued are incomplete or shall require clarification on any of the technical aspect, Scope of Work etc., he shall at once contact the authority inviting the tender for clarification before the submission of the bid.

The LAN plan/maps provided in tender document are indicative. Successful tenderer has to prepare a plan/map and drawing before the execution of the project, submitted for the approval of the competent authority of RAILTEL before execution. After completion of the execution Final as built drawing is to be submitted for claiming Final Acceptance Certificate.

5. Before tendering, the tenderers are advised to inspect the site of work and the environments and be acquainted with the actual working and other prevalent conditions, facilities available, position of material and labour. No claim will be entertained later on grounds of lack of knowledge.
6. Tenderer must fill up the SOR and furnish all the required information as per the instructions given in Annexure of the specifications. Each and every page of the tender document, corrigendum and associated documents etc. must be SIGNED, STAMPED & SUBMITTED ALONGWITH THE OFFER by the tenderer in token of complete acceptance thereof. The information furnished shall be complete in itself.
7. All entries in the tender shall be written in ink. Erasers and over writing are not permitted and may render such tenders liable to summary rejection. All cancellations and insertions shall be duly attested by the tenderer.

8. Not Used

9. Not Used

10. Earnest Money deposit:

- a. The tenderer shall furnish requisite EMD in prescribed form in favour of RailTel Corporation of India Limited, payable at Delhi.
- b. The tenderer shall hold the offer open till such date as specified in Clause 12 of this chapter. It being understood that the tender documents have been sold/issued to the tenderer and the tenderer has been permitted to participate tender in consideration of the stipulation on his part that after submitting his tender he

will not resile from his offer or modify the terms and conditions thereof in a manner not acceptable to Railtel. If the tenderer fails to observe or comply with the foregoing stipulation, the aforesaid amount deposited as Earnest Money shall be liable to be forfeited by Railtel.

- c. The Earnest Money receipt shall be incorporated in the original copy of the tender document. The Earnest Money should be furnished in any of the following forms:
 - i. Demand Drafts of the State Bank of India or any of the Nationalized Bank. No confirmatory advice from the Reserve Bank of India will be necessary.
 - ii. Demand Drafts should be drawn in favour of the RailTel Corporation of India Limited, and endorsed "Account Payee".

These instruments should be valid at least for the period covering thirty days beyond the validity of the offer.

- d. The bid guarantee / earnest money may be forfeited:
 - i. If a tenderer withdraws its tender during the period of tenders validity specified in clause 12.
 - ii. In the case of successful tenderer, if the tenderer fails to:
 - 1. Sign the contract in accordance with clause 13.
 - 2. To furnish performance guarantee in accordance with clause 14.
- e. The earnest money of unsuccessful tenderer will save as herein before provided, be returned within reasonable time to the unsuccessful tenderer but the RailTel shall not be responsible for any loss or depreciation that may happen to the security for the due performance of the above stipulation to keep offer open for the period specified in the tender documents or to the Earnest Money while in their possession nor be liable to pay interest thereon.
- f. If the tender is accepted, the amount of Earnest Money will be held as security deposit for due and faithful fulfillment of contract. The Earnest Money of successful tenderer will be returned after the Contract Performance Guarantee (Security Deposit) as required and formal contract duly signed is received by the purchaser.

11. Authorizations and Attestation

Tenders shall be signed by the person duly authorized / empowered to do so. Certified copies of such authority and relevant documents shall be submitted along with the tenders.

12. Validity of Offer:

The offer shall be kept open for acceptance for a minimum period of **90 days** from the date of opening of tenders. In case RAILTEL calls for negotiations, such negotiations shall not amount to cancellation or withdrawal of the Original offer which shall be binding on the tenderers.

13. Execution of the Contract:

The successful tenderers responsibility under this contract commences from the date of issue of the LOI/ LOA by RAILTEL. The successful tenderer shall be required to execute an agreement in the prescribed Performa enclosed herewith with the RAILTEL within Fifteen days after the acceptance of this tender.

14. Security Deposit & Performance Bank Guarantee:

- a. On receipt of the Letter of Acceptance of Tender from the RailTel the successful Tenderer shall within a period of **15 days** deposit with the RailTel an amount equal to **10%** of the value of contract rounded off the nearest whole number in terms of thousands of rupees towards payment of performance guarantee in the form of DD/Performance Bank Guarantee for due fulfillment of the contract. **valid for a period of 4 months beyond warranty period towards satisfactory performance of tender clauses.** The PBG shall be returned after successful completion of contractual obligation. The Performa for PBG is given in Chapter IV. The PBG will be forfeited if the order is terminated by the Purchaser on account of Contractor.
- b. The Earnest Money already paid by the successful Tenderer may at the discretion of the successful Tenderer be adjusted towards payment of this Performance Guarantee and the additional amount shall be paid in any one of the following forms:
 - i. Bank draft OR
 - ii. Irrevocable Bank Guarantee issued by SBI or Nationalized Banks or scheduled commercial bank confirmed by SBI / Nationalized Bank acceptable to purchaser.
- c. The Instruments for security deposit should be valid for four months beyond issue of last FAC. On expiry of this period the Performance Bank Guarantee will be refunded or Bank guarantee released to the tenderer after adjustment of any dues payable by the tenderer.
- d. If the value of the work done at any time exceeds the accepted agreement value, the Security Deposit shall be correspondingly enhanced and the extra Security Deposit shall be immediately deposited by the Tenderer or recovered from payments due to him.
- e. Failure to deposit the Security Deposit within the stipulated time, may lead to forfeiture of Earnest Money Deposit and cancellation of the award of work.
- f. RAILTEL reserves the right of forfeiture of Security Deposit in addition to other claims and penalties in the event of the Tenderer's failure to fulfill any of the contractual obligations or in the event of termination of contract as per terms and conditions of the contract. RAILTEL reserves the right to set off the Security Deposit, against any claims of any other contracts with RAILTEL.
- g. **RETURN OF SECURITY DEPOSIT:** If the Tenderer fully performs and completes the work in all respects to the entire satisfaction of RAILTEL and presents an absolute "No Claim Certificate" and returns properties belonging to RAILTEL taken, borrowed or hired by him for carrying out the said works, and has completed FOUR MONTHS beyond last FAC issued as certified by the authorized representative of RAILTEL, the total amount of Security Deposit will

be released to the Tenderer after deducting all costs, expenses and other amounts that are to be paid to RAILTEL under this or other contracts entered into with the Tenderer.

15. No interest shall be payable by RAILTEL on Earnest Money Deposit, Security Deposit or on any moneys due to the Tenderer.

16. Rejection of tender and other conditions:

- 16.1 The acceptance of Tender will rest with RAILTEL which does not bind itself to accept the lowest tender or any tender.
- 16.2 Conditional and un-witnessed tenders, tenders containing absurd or unworkable rates and amounts, tenders which are incomplete or otherwise considered defective and tenders not in accordance with the tender conditions, specifications etc. are liable to be rejected.
- 16.3 If the tenderer expires after the submission of his tender or after the acceptance of his tender, RAILTEL may at its discretion, cancel such tender. If a partner of a firm expires after the submission of the tender or after the acceptance of the tender, RAILTEL may cancel such tender at its discretion unless the firm retains its character.
- 16.4 RAILTEL will not be bound by any Power of Attorney granted by the tenderer or by changes in the composition of the firm made subsequent to the execution of the contract. RAILTEL may, however, recognize such Power of Attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the Tenderer concerned.
- 16.5 If the tenderer deliberately gives wrong information in his tender, RAILTEL reserves the right to reject such tender at any stage or to cancel the contract, if awarded and forfeit the Earnest Money / Security Deposit / any other moneys due.
- 16.6 Canvassing in any form in connection with the tender is strictly prohibited and the tenders submitted by the Tenderer who resorts to canvassing are liable to be rejected.
- 16.7 Should a tenderer or Tenderer or in the case of a firm or Company of Tenderers / one or more of its Partners / Share holders / Directors have a relation or relations employed in RAILTEL, the authority inviting the tender shall be informed to the fact along with the offer, failing this RAILTEL may at its sole discretion reject the tender or cancel the contract and forfeit the Earnest Money / Security Deposit.
- 16.8 NO DEVIATIONS TO THE TENDER CONDITIONS SHALL BE ACCEPTED WHATSOEVER.
- 16.9 The proposed Work shall be planned in such a way to avoid inconvenience to the normal working of trains in the section. Proper measure shall be taken to ensure safety of the workers.
- 16.10 All completion drawings, as built Drawings shall be submitted by the Tenderer on completion of works along with the Final Bill.

Section III

(General Terms and Conditions)

The following terms and expressions shall have the meaning hereby assigned to them except where the context otherwise requires:

RAILTEL shall mean Office of Executive Director/Northern Region of RAILTEL CORPORATION OF INDIA LIMITED, (a Company with its Registered and Regional Office at 6th Floor, Block-III, Delhi IT Park, Shastri Park, Delhi – 110 053) or its authorized Officers or other Employees authorized to deal with any matters with which these persons are concerned, on its behalf.

- 1.0 **‘Executive Director’** shall mean the Officer in Administrative In-charge of the contracting unit of RAILTEL.
- 2.0 **‘SITE’** shall mean the place or places at which the plants / equipments are to be erected and services are to be performed as per the specifications of this tender.
- 3.0 **‘TENDERER’** shall mean the individual, firm or company who enters into contract with RAILTEL and shall include their executors, administrators, successors and permitted assigns.
- 4.0 **‘CONTRACT’ or ‘CONTRACT DOCUMENT’** shall mean and include the agreement, the work order, the accepted appendices of rates, Schedules of Quantities, if any, General Conditions of Contract, Special Conditions of contract, instructions to Tenderers, the drawings, the technical specifications, the special specifications, if any, the tender documents and the Letter of Intent / Work Order / Acceptance letter issued by RAILTEL. Any conditions or terms stipulated by the tenderer in the tender documents or subsequent letters shall not form part of the Contract unless specifically accepted in writing by RAILTEL in the Letter of Intent / Work Order and incorporated in the Agreement.
- 5.0 **‘GENERAL CONDITIONS OF CONTRACT’** shall mean the ‘Instructions to Tenderers’ and ‘General Conditions of Contract’ pertaining to the work detailed.
- 6.0 **‘TENDER SPECIFICATIONS’** shall mean the Special Conditions, Technical Specifications, appendices, Site information and drawings pertaining to the work for which the tenderers are required to submit their offer.
- 7.0 **‘TENDER DOCUMENTS’** shall mean the General Conditions of Contract and Tender Specifications.
- 8.0 **‘LETTER OF INTENT / WORK ORDER’** shall mean the intimation by a letter / telegram / telex / fax to the tenderer that the tender has been accepted in accordance with provisions contained in the letter. The responsibility of the Tenderer commences from the date of issue of this letter and all the terms and conditions of contract are applicable from this date.
- 9.0 **‘COMPLETION TIME’** shall mean the period by date specified in the Letter of Intent / Work Order. The time allowed for completion of the work will be 120 days including Sundays & holidays from the date of issue of Letter of Intent / Work Order.

10.0 **‘PLANT’** shall mean and connote the entire assembly of the plant and equipment covered by the Contract.

11.0 **‘EQUIPMENT’** shall mean all equipment, machinery’s, materials, structures, electrical and other components of the plant covered by the Contract.

12.0 **‘TEST’** shall mean and include such test or tests to be carried out by the Tenderer as are prescribed in the Contract or considered necessary by RAILTEL in order to ascertain the Quality, Workmanship, Performance and Efficiency of the contracted work or part thereof.

‘APPROVED’, **‘DIRECTED’** or **‘INSTRUCTED’** shall mean approved, directed or instructed by RAILTEL.

13.0 **‘WORK’ or ‘CONTRACT WORK’** shall mean and include supply of all categories of labour, specified consumables, tools and tackles required for complete and satisfactory site transportation, handling, stacking, and storing.

14.0 **‘SINGULAR’ and ‘PLURAL’** ETC. words carrying singular number shall also include plural and vice versa where the context so requires. Words importing masculine gender shall be taken to include the feminine gender and words importing persons shall include any Company or Association or Body of Individuals, whether incorporated or not.

15.0 **‘HEADINGS’** the heading in these General Conditions are solely for the purpose of facilitating reference and shall not be deemed to be part thereof or be taken into consideration in the interpretation or construction thereof or the contract.

16.0 **‘MONTH’** shall mean any consecutive period of 30 days.

17.0 **‘WRITING’** shall include any manuscript, type written or printed statement under the signature or seal as the case may be.

“The authorized representative of RAILTEL” shall mean the representative duly authorized by RailTel and can be the architect, or an official appointed by RailTel.

18.0 **Law governing the contract and court jurisdiction:**

The contract shall be governed by the Law for the time being in force in the Republic of India. The Civil Court at Delhi / New Delhi having ordinary Original Civil Jurisdiction shall alone have exclusive jurisdiction in regard to all claims in respect of this Contract.

19.0 **Issue of Notice:**

The Tenderer shall furnish to the RAILTEL, the Name, Designation and Address of his authorized agent and all complaints, notices, communication and references shall be deemed to have been duly given to the Tenderer, if delivered to the Tenderer or his authorized agent or left at or posted to the address either of the Tenderer or his authorized agent and shall be deemed to have been so given in the case of posting on the day on which they would have reached such address in the ordinary course of post or at which they were so delivered or left.

20.0 **Use of Land:**

No land belonging to RAILTEL or its customers under temporary possession of RAILTEL shall be occupied by the Tenderer without the written permission of RAILTEL. Whenever such land is occupied by the Tenderer for execution of works on permission of RAILTEL, the same shall be vacated by the Tenderer within 2 days of instructions from RAILTEL and no request for extension shall be entertained by RAILTEL.

21.0 Commencement and Completion of Work:

The Tenderer shall commence and executed as per para 13 of Section II.

- 21.1 If the successful tenderer fails to commence the work within the stipulated time, RAILTEL, at its sole discretion, will have the right to cancel the contract. His Earnest Money and / or Security Deposit will stand forfeited without any further reference to him without prejudice to any and all of RAILTEL's other rights and remedies in this regard.
- 21.2 All the works shall be carried out under the direction and to the satisfaction of authorized representative of RAILTEL. The transported equipment erected / constructed plant or work performed under the Contract, as the case may be, shall be taken over when it has been completed in all respects and / or satisfactorily put into operation at site.
- 21.3 On the completion of work, authorized representative of RAILTEL shall issue a Provisional Acceptance Certificate for successful completion of work to his satisfaction jointly with the tenderer.
- 21.4 The period of warranty shall start from the date of issue of such Provisional Acceptance Certificate, as above, for a period of one year unless asked for more in SOR description or technical specs or other sections of tender. After completion of **warranty period**, a Final Acceptance Certificate shall be issued by the authorized representative of RAILTEL. The final acceptance shall take effect from the date of expiry of warranty period. AMC liabilities as per the SOR shall be applicable from the date of issue of PAC

22.0 Measurement of work and Mode of payment:

All payments due to the Tenderer shall be made by "Account Payee" through NEFT/RTGS.

- 22.1 Payments for the works shall be made in accordance with approved designs & drawings and measured in relevant units except where provided or otherwise. The measurements will be made generally in accordance with standard engineering practices. The abstract of quantities arrived shall be entered in the Measurement Book and signed by the Tenderer & the authorized representative of RAILTEL.
- 22.2 75% (Seventy five percent) of the value of the supply items on receipt of materials at site duly inspected and accompanied with the following documents:
- ☐ Invoice
 - ☐ Delivery Challan duly accepted by Consignee.
 - ☐ Excise Gate pass/Excise Invoice or Custom Duty Receipt, etc as applicable.
 - ☐ Inspection certificate
 - ☐ Warranty certificate of OEM/Supplier
 - ☐ Insurance Certificate
 - ☐ Certificate for Fall Back clause
 - ☐ CENVAT certificate
- 22.3 (a). Payment of 15% (Fifteen percent) value of the works/services completed shall be made on completion of installation and commissioning of the work.

(b). Payment of 5% (Five percent) value of the works/services completed shall be made after the issue of Provisional Acceptance Certificate and supply of Documentation as per Para 16.10 of Section II.

- 22.4 Remaining payment of 5% (Five percent) value of the works/services completed shall be made after successful completion of a period of one year and issue of "Final Acceptance Certificate". The final bill for the balance 5% payment for each item of work shall be submitted by the Tenderer along with a clear '**No Claim Certificate**'. The Final Acceptance Certificate shall be issued by the RAILTEL only when he has accepted the work wholly after conducting the acceptance tests the issue of Provisional Acceptance Certificate and supply of Documentation as per Para 16.10 of Section II.
- 22.5 Release of Performance Bank Guarantee shall be made after four months of completion of warranty period of five years (for only the items where five year warranty is asked for) after adjustment of any dues payable by the tenderer.
- 22.6 Tax component charged in the invoice raised by the tenderer shall be paid only after the same is reflected against GSTIN of RailTel.
- 22.7 All recoveries due from the tenderer shall be affected in full from corresponding running bills unless specific approval from Competent Authority is obtained to the contrary.
- 22.8 Measurement shall be restricted to that quantity for which it is required to ascertain the financial liability of RAILTEL under this contract.
The tenderer shall bear the expenditure involved, if any, in making the measurements and testing of materials to be used / used in the work. The tenderer shall, without extra cost to RAILTEL, provide all the assistance with appliances and other things necessary for measurement.
- 22.9 If, at any time due to any reason whatsoever, it becomes necessary to re-measure the work done, in full or in part, the expenses towards such re-measurement shall be born by the tenderer only.
- 22.10 Passing of bills covered by such measurements does not amount to acceptance of RAILTEL of the completion of the work measured. Any left out work has to be completed by the tenderer, as directed.
- 22.11 All measurement, method of measurement, meaning an intent of specifications and interpretation of Special Conditions of Contract, given and made by the authorized representative of RailTel shall be final and binding.
- 22.12 Subject to any deductions or recovery which the Railtel may be entitled to make under contract, the tenderer will be entitled to be paid from time to time by way of 'on account payment' for supply of goods and 'progress payment' for works as in the opinion of the Engineer he has executed in terms of Contract.

23.0 Rights of RailTel:

- 23.1 To withdraw any portion of work and / or to restrict / alter quantum of work as indicated in the contract during the progress of work and get it done through the tenderer of the adjacent section and / or by the departmental labour to suit RAILTEL's requirements or in case RAILTEL decides to advance the compensation due to other emergent reasons.

- 23.2 To terminate the contract after due notice and forfeit the Security Deposit and get the balance work done through other agencies in addition to liquidated damages in the event of:
- tenderer's continued poor progress.
 - Withdrawal from or abandonment of the work before completion of the work.
 - Corrupt act of the tenderer
 - Insolvency of the tenderer
 - Persistent disregard of the instructions of RAILTEL.
 - Non-fulfillment of any contractual obligations.
- 23.3 To recover any moneys due from the tenderer from out of any moneys due to the tenderer under this or any other Contract or from the Security Deposit.
- 23.4 To determine the Contract or to restrict the quantum of work and pay for the portion of work done as per the satisfaction of RAILTEL.
- 23.5 To effect recoveries from any amounts due to the Tenderer under this or any other contract or in any other form the moneys which RAILTEL is forced to pay to anybody due to Tenderer's failure to fulfill any of his obligations.
- 23.6 To restrict or increase the quantity and nature of work to suit site requirements, since the tender specifications are based on preliminary documents and quantities furnished therein are indicative and approximate and the rates quoted shall not be subject to revision in any manner whatsoever.
- 23.7 While every endeavour will be made by RAILTEL to this end, RAILTEL cannot guarantee uninterrupted work due to conditions beyond its control. The Tenderer will not be entitled to any compensation / extra payment on this account.

In the event of any dispute of technical nature, the decision of RAILTEL shall be final and binding to the Tenderer.

24.0 Responsibilities of Tenderer in respect of local taxing rules, local laws, employment for workers etc.:

The following are the responsibilities of the Tenderer in respect of observance of local laws, employment of personnel, payment of taxes etc.

- 24.1 Not Used.
- 24.2 As far as possible, unskilled workers shall be engaged from the local areas in which the work is being executed.
- 24.3 The Tenderer at all times during the continuance of this contract, shall in all his dealings with the local labour for the time being employed on or in connection with the work, has due regard to all local festivals, religious and other customs.
- 24.4 The Tenderer shall comply with all State and Central Laws, Statutory Rules, Regulations etc., such as The Payment of Wages Act, The Minimum Wages Act, The Workmen's Compensation Act, The Employer's Liability Act, The Industrial Disputes Act, The Employee's Provident Fund Act, Employee's State Insurance Scheme, The Contract Labour (Regulations and Abolitions Act, 1970) and other Acts, Rules and Regulations for labour as may be enacted by the Government during the tenure of the Contract and having force or jurisdiction at site. The Tenderer shall give to the local Governing Body, Police and other concerned authorities all such notice as may be required under law.

- 24.5 The Tenderer will obtain independent licence under the Contract Labour (Regulations and Abolition Act, 1970) from the concerned authorities based on the certificate (Form -V) issued by the principal employer / customer, if such license is required under the law.
- 24.6 The Tenderer shall pay all taxes, fees, licence charges, deposits, duties, tolls, royalty, commissions or other charges which may be leviable on account of any of his operations connected with this contract. In case, RAILTEL is forced to make any such payment, RAILTEL shall recover the same from the Tenderer either from moneys due to him or otherwise as deemed fit.
- 24.7 The Tenderer shall be responsible for the provision of health and sanitary arrangements more particularly described in the Contract Labour (Regulations and Abolition Act, 1970) and safety precautions as may be required for safe and satisfactory execution of the contract.
- 24.8 The Tenderer shall be responsible for proper accommodation including adequate medical facilities for the personnel employed by him.
- 24.9 The Tenderer shall be responsible for the proper behaviour and observance of all regulations by the staff employed by him.
- 24.10 The Tenderer shall ensure that no damage is caused to any person / property of other parties working at site. If any such damage is caused, it shall be the responsibility of the Tenderer to make good the losses and compensate them.
- 24.11 All the properties/equipment/components of RAILTEL loaned with or without deposit, to the Tenderer shall remain the properties of RAILTEL. The Tenderer shall use such properties for the purpose of execution of this contract. All such properties/ equipment / component shall be taken to be in good condition unless notified to the contrary by the Tenderer within 48 hours. The Tenderer shall return them in good condition as and when required by RAILTEL. In case of non-return, loss, damage, repairs etc., the cost thereof, as may be fixed by the Engineer, will be recovered from the Tenderer.
- 24.12 It shall not be obligatory on the part of RAILTEL to supply any tools and tackles or materials other than those specifically agreed to be given by RAILTEL.
- 24.13 The Tenderer shall fully indemnify and keep indemnified RAILTEL against all claims of whatever nature arising during the course of execution of this contract.
- 24.14 In case the Tenderer is required to undertake any work outside the scope of this contract, the amount payable shall be as may be mutually agreed upon.
- 24.15 Any delay in completion of works or non-achievement of periodical targets, due to reasons attributable to the Tenderer, will have to be compensated by the Tenderer either by increased manpower and resources or by working extra hours or more than one shift at no extra cost to RAILTEL.
- 24.16 The Tenderer will be directly responsible for payment of wages to his workmen. A payroll sheet giving details of all payments made to the workmen duly signed by the Tenderer's representative should be furnished to RAILTEL, if called for.
- 24.17 In case of any class of work for which there is no specification laid down in the contract, such work shall be carried out in accordance with the instructions and requirements of the Engineer.

- 24.18 No levy, payment or charges made or imposed shall be impeached by reason of any clerical error or by reason of any mistake in the amount levied, demanded or charged.
- 24.19 No idle labour charges will be admissible in the event of any stoppage of work resulting in the Tenderer's workmen being rendered idle due to any reason at any time.
- 24.20 The Tenderer shall take all reasonable care to protect the materials and the work till such time it has been taken over by RAILTEL.
- 24.21 Tenderer shall not stop work or abandon the site for whatsoever reason or dispute, excepting for force majeure conditions. All problems / disputes shall be separately discussed and settled without effecting the progress of work. Stoppage or abandonment of work other than under force majeure conditions shall be treated as breach of work of contract and dealt with accordingly.
- 24.22 The Tenderer shall keep the area of work clean and shall remove the debris etc. outside of RailTel's premises, while executing day-to-day work. Upon completion of work, the Tenderer shall remove from the vicinity of work, all scrap, packing materials, rubbish, unused and other materials and deposit them in places specified by the Engineer. The Tenderer will also demolish all the hutments, sheds, offices, etc., constructed and used by him and shall clean the debris. In the event of his failure to do so, the same will be arranged to be done by the RAILTEL and the expenses recovered from the Tenderer.
- 24.23 The Tenderer shall execute the work in the most substantial and workmen like manner in the stipulated time. Accuracy of work and timely execution shall be the essence of this contract. The Tenderer shall be responsible to ensure that the quality, assembly and workmanship conform to the dimensions and clearance given in the drawings and/or as per the instructions of the Engineer.
- 24.24 The Tenderer shall furnish fortnightly labour deployment report indicating the classification and number of workmen engaged, date wise and category wise. Besides, the Tenderer shall also furnish progress reports on work at regular intervals as required by the Engineer.

25.0 Responsibility of tenderer in respect of safety of men, equipment, material and environment:

All safety rules and codes applied by RAILTEL at site shall be observed by the Tenderer and his workmen without exception. The Tenderer shall be responsible for the safety of the equipment / material and work to be performed by him.

- 25.1 Tenderer shall also take such additional precautions as may be indicated from time to time by the Engineer, with a view to prevent pilferage, accidents, fire hazards etc. Suitable number of Clerical Staff, watch and ward, Storekeepers to take care of equipment, material, construction tools and tackles shall be posted at site by the Tenderer till the completion of work under this contract. The Tenderer shall arrange for such safety devices as are necessary for this type of work and carry out the requisite site tests of handling equipment, lifting tools, tackles etc. as per usual standards and practices.

- 25.2 The Tenderer shall provide to its work force and ensure the use of the following personal protective equipment as found necessary:

Safety Helmets conforming to IS – 2925.

Safety Belts conforming to IS – 3521.

Safety Shoes conforming to IS – 1989.

Eye & Face Protection devices conforming to IS – 8520 & IS – 8940.

Hand & Body Protection devices conforming to IS – 2573, IS – 6994, IS – 8807 & IS 8519.

- 25.3 All tools, tackles, lifting appliances, material handling equipment, scaffolds, cradles, safety nets, ladders, equipment etc. used by the Tenderer shall be of safe design and construction. These shall be tested and certificate of fitness obtained before putting them to use and from time to time as instructed by authorized RAILTEL official who shall have the right to ban the use of any item.
- 25.4 All electrical equipment, connections and wiring for construction power, its distribution and use shall conform to the requirements of Indian Electricity Act and Rules. Only electricians licensed by the appropriate statutory authority shall be employed by the Tenderer to carry out all types of electrical works. All electrical appliances including portable electric tools used by Tenderer shall have safe plugging system to source of Power and be appropriately earthed.

Where it becomes necessary to provide and / or store petroleum products, explosives, chemicals and liquid or gaseous fuel or any other substance that may cause fire or explosion, the Tenderer shall be responsible for carrying out such provision and / or storage in accordance with the rules and regulations laid down in the relevant Government Acts, such as Petroleum Act, Explosive Act, Petroleum and Carbide of Calcium Manual of the Chief Controller of Explosives, Government of India etc. Prior approval of the authorized RAILTEL official at the site shall also be taken by the Tenderer in all such matters.

- 25.5 The Tenderer shall arrange at his cost (wherever not specified) appropriate illumination at all work spots for safe working, when natural daylight may not be adequate for clear visibility.
- 25.6 In case of a fatal or disabling injury/accident to any person at construction sites due to lapses by the Tenderer, the victim and/or his/her dependants shall be compensated by the Tenderer as per statutory requirements. However, if considered necessary, RAILTEL shall have the right to impose appropriate financial penalty on the Tenderer and recover the same from payments due to the Tenderer for suitably compensating the victim and/or his/her dependents. Before imposing any such penalty, appropriate enquiry shall be held by RAILTEL giving opportunity to the Tenderer to present his case.
- 25.7 In case of any damage to property due to lapses by the Tenderer, RAILTEL shall have the right to recover the cost of such damages from the payments due to the Tenderer after holding an appropriate enquiry.
- 25.8 In case of any delay in the completion of a jobs due to mishaps attributable to lapses by the Tenderer, RAILTEL shall have the right to recover cost of such delay from the payments due to the Tenderer, after notifying the Tenderer suitably and giving him opportunity to present his case.
- 25.9 If the Tenderer fails to improve the standards of safety in its operation to the satisfaction of RAILTEL, after being given reasonable opportunity to do so and / or if the Tenderer fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instructions regarding safety issued by the authorised RAILTEL official, RAILTEL shall have the right to take the corrective steps at the risk and cost of the Tenderer after giving a notice of not less than seven days indicating the steps that would be taken by RAILTEL.

- 25.10 The Tenderer shall submit report of all accidents, fires, Property damage and dangerous occurrences to the authorized RAILTEL official immediately after such occurrence, but in any case not later than 12 hours of the occurrence. Such reports shall be furnished in the manner prescribed by RAILTEL. In addition, periodic reports on safety shall also be submitted by Tenderer to the authorized RAILTEL official from time to time as prescribed.
- 25.11 During the course of construction, alteration or repair scrap lumbars with protruding nails, sharp edges etc., and all other debris including combustible scrap shall be kept cleared from working areas, passage ways and stair in and around site. Cylinders shall be moved by tilting and rolling them on their bottom edges. They shall not be intentionally dropped, struck or permitted to strike each other violently. When cylinders are transported by powered vehicles, they shall be secured in a vertical position.
- 25.12 Not Used.
- 25.13 Tenderer shall provide enough fire protecting equipment of the types and numbers at his office, stores, erection site, other temporary structures, labour colony area etc. Access to such fire protection equipment shall be easy and kept open at all times. Compliance of the above requirement under fire protection shall in no way relieve the Tenderer of any of his responsibility and liabilities to fire accident occurring. In the event fire safety measures are not to RAILTEL's satisfaction, RAILTEL shall have option to provide the same and recover the cost plus incidentals from Tenderer's bills and / or impose penalty as deemed fit by the authorised representative of RAILTEL.

26.0 Not Used.

27.0 Insurance:

- 27.1 Tenderer shall arrange for insuring all the materials covering the risks during transit, storage, erection and commissioning. It shall be the sole responsibility of the Tenderer to insure his workmen against risks of accidents and injury while at work as required by the relevant Rules and to pay compensation, if any, to them as per Workmen's Compensation Act. The Tenderer shall also insure his staff against accidents. The work will be carried out in a protected area and all the Rules and Regulations of RAILTEL/its Client in the Project Area which is in force from time to time will be followed by the Tenderer.

If due to negligence and/or non-observance of safety and other precautions, any accident/injury occurs to any other persons/public, the Tenderer shall pay necessary compensation and other expenses, if so decided by the appropriate authority.

- 27.2 The Tenderer will take necessary precautions and due to protect the material, while in his custody from any damage/loss till the same is taken over by RAILTEL or customer. For lodging/processing of insurance claim the Tenderer will submit necessary documents. RAILTEL will reserve the right to recover the loss from the Tenderer, in case the damage/loss is due to carelessness/negligence on the part of the Tenderer. In case of any theft of material under Tenderer's custody, matter shall be reported to police by the Tenderer immediately and copy of FIR and subsequently police investigation report shall be submitted to RAILTEL for taking up with insurance.

28.0 Strikes and lockouts:

The Tenderer will be solely responsible for all disputes and other issues connected with his workmen. In the event of Tenderer's workmen resorting to strike or the Tenderer resorting to lockout and if the strike or lockout so declared is not settled within a period

of one month, RAILTEL shall have the right to get the work executed by employing its own men or through other agencies or both. The cost incurred by RAILTEL in this regard shall be recovered from the Tenderer.

For any purpose whatsoever, the employees of the Tenderer shall not be deemed to be in the employment of RAILTEL.

29.0 Force Majeure:

The following shall amount to force majeure conditions. Acts of God, Acts of any Government, War, Sabotage, Riots, Civil Commotion, Police Action, Revolution, Flood, Fire, Cyclone, Earthquake and Epidemic and other similar causes over which the Tenderer has not control.

- 29.1 If the Tenderer suffers delay in the due execution of the contract, due to delays caused by force majeure conditions, as defined above, the agreed time of completion of the work covered by this contract shall be extended by a period of time equal to the period of delay, provided that on the occurrence of any such contingency, the Tenderer immediately reports to RAILTEL in writing the cause for the delay but the Tenderer shall not be eligible for any compensation on this account.

30.0 Guarantee:

Even though the work will be carried out under the supervision of the authorized representative of RAILTEL, the Tenderer will be responsible for the quality of the workmanship and shall guarantee the work done for a period of **one year (5 years for specified items) from the date of completion of work** as certified by the authorized representative of RAILTEL and shall rectify free of cost to RAILTEL all defects arising out of faulty erection during the guarantee period starting from the date of completion of rectification. In the event of the Tenderer failing to repair the defective works within the time specified by the authorized representative of RAILTEL may proceed to undertake the repairs of such defective works at the Tenderer's risk and cost, without prejudice to any other rights and recover the same from out of any moneys payable to the Tenderer or by other legal means. Certain items as specified in tender document (SOR and technical specifications) shall be under warranty for five years from the date of issue of PAC.

31.0 Arbitration:

31.1 With Private Parties

All disputes between the parties to the contract arising out of or in relation to the contract, other than those for which the decision of the Engineer or any other person is by the contract expressed to be final and conclusive, shall after written notice by either party to the contract to the other party, be referred to sole arbitration of the Executive Director/Northern Region or his nominee. The arbitration shall be conducted in accordance with the provisions of the Arbitration and Reconciliation Act, 1996. The parties to the contract understand and agree that it will be no objection that the Executive Director /Northern Region or the person nominated as Arbitrator had earlier in his official capacity to deal directly or indirectly with the matters to which the contract relates or that in the course of his Official duties had expressed views on all or any of the matters in dispute or difference. The award of the Arbitrator shall be final and binding on the parties to this contract. In the event of the Arbitrator dying, neglecting or refusing to act or resigning or being unable to act for any reason or his award being set aside by the Court for any reason, it shall be lawful for the Executive Director/Northern Region or his successor, as the case may be, either to act himself as the Arbitrator or to appoint another Arbitrator in place of

the outgoing Arbitrator in the manner aforesaid. The Arbitrator may, from time to time, with the consent of both the parties to the contract, enlarge the time for making the award. Work under the contract shall be continued during the arbitration proceedings. The venue of the Arbitration shall be Delhi only.

- 31.1.1 The Tenderers has to enter in the register all the material / tools and plants brought to the site for working in the premises available with the Security Staff / Site Incharge / Site Register.
- 31.1.2 The Tenderers should get all the materials inspected and approved from the authorized representative of RAILTEL before use. In case of non-approval, if authorized representative of RAILTEL wish to check the material, cost of breakages and redoing the same Work will be the sole responsibility of the Tenderer own.
- 31.1.3 The rates should be quoted in the same units as mentioned in the tender schedule. The Bill of Quantities enclosed are very indicative and can vary as per the Site conditions, requirements of RAILTEL or Design of authorized representative of RAILTEL and the rates quoted shall not be subject to revision.
- 31.1.4 The rates quoted in the tender shall include all charges of material, labour, lifts, scaffoldings, any tools & plants, freight, labour conditions, fluctuations in the rates, GST & other taxes and shall be firm for the duration of the contract and any extended period of the contract. No escalation in the rates shall be allowed under any circumstances even in case of extension of time period.
- 31.1.5 The successful Tenderer is bound to carry out all the items of work necessary for the completion of the job even though the same may not have been included in the schedule of quantities.

31.2 With CPSE/ Govt. Department/ Govt. Organisation

- 31.2.1 In the event of any dispute or difference relating to the interpretation and application of the provisions of the contracts, such dispute or difference shall be referred by either party for Arbitration to the sole Arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitration under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary/Additional Secretary when so authorized by the Law Secretary, whose decision shall bind the Parties finally and conclusively. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.

32. QUANTUM OF WORK AND VARIATION IN QUANTITIES

- 32.1 The quantities indicated in Schedule of Requirements are approximate and purport to convey the tenderer an idea of the magnitude of the work. The Contract value may vary within +/-25% of the grand total of schedule of requirements in case of variation in quantities the tenderer shall be bound to carry out the work at the rates agreed in the schedule up to the limit of +/-25% variation in the value of contract and shall not be entitled to any claim or any compensation whatsoever.

- 32.2 The quantities quoted in the Schedule are not firm and may be varied during currency of the Contract.
- 32.3 RailTel reserves the rights to vary the quantity by 50% above or below the SOR. For variation in quantities beyond +25%, a rebate of 2% shall be applicable up to variation of +40%. For variation in quantities beyond +40% & up to +50%, an additional rebate of 2% shall be applicable. For variation in quantities beyond +50%, rates shall be fixed after holding negotiations with the tenderer.
- 32.4 All the work executed should be got approved by the authorized representative of RAILTEL and in case of any bad workmanship pointed out shall be either rectified or be taken away from the site if it is not rectifiable and shall be replaced without any extra cost by the Tenderer.
- 32.5 All Government taxes, levies etc. like GST, TDS shall be deducted from all the running bills of the Tenderers.
- 32.6 All the works executed or under execution finished or semi-finished including all materials lying at site shall become the property of RAILTEL immediately on receipt of bills of the Tenderers for the same.
- 32.7 The procurement of Cement, Steel etc., as required for completion of work shall be the responsibility of the Tenderer.
All Fittings / Fixtures, Materials shall confirm to the relevant ISI specifications and approval of Authorised representative of RAILTEL.

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Section IV
(Special Conditions of Contract)

1. The Tenderer should study all the Tender documents carefully and understand the conditions, drawing, specifications, design etc. before quoting. In case of non availability of any information or documents in the Tender Document or if there are any doubts, the Tenderer shall obtain clarification either from authorized representative of RAILTEL in writing before submission of Tender and authorized representative of RAILTEL shall not be responsible for the same in any manner whatsoever.
2. The Tenderer shall take work permit from the concerned authorities, if required, before starting the Work.
3. The Tenderer has to obtain the required security permissions from the concerned authority if applicable prior to the commencement of the Work and should furnish the list of workers/staff for issue of temporary passes, if required.
4. All entries in the Tender document should be in ink/typed. Corrections, if any should be attested by full signature of the Tenderer.
5. The Tenderer or his authorized representative shall sign every page of the Tender documents. (Power of Attorney to be submitted)
6. All erasures and alterations made while filling the tender must be attested by initials of Tenderers. Over writing of figures is not permitted.
7. No page of this Tender shall be removed and the set must be submitted as it is. EACH PAGE OF THE TENDER FORM IS TO BE SIGNED ALONG WITH THE STAMP OF THE COMPANY/FIRM.
8. RAILTEL do not bind them to accept the lowest Tender and reserves the right to reject any or all the Tenders.
9. Joint Tenders shall not be accepted / considered.
10. The Tenderers shall remove all debris/wastes etc. wash and clean the floors and hand over the site quite clean on completion of the work.
11. Not Used.
12. **Penalty for delay in completion:**
 - 12.1. If the tenderer fails to execute and complete the work within the time specified in the Agreement/ Work Order or within the period of extension granted, the tenderer shall accept reduction in the total amount payable to him by the purchaser at the rate of 0.5% per week or part thereof (rounded off to the nearest whole number) of the total value of the work order for the actual delay occasioned beyond the appointed time by which the work shall have been completed under the contract, for the reasons beyond his control.
 - 12.2. The total value of penalty on account of above shall be limited to maximum of 10% (Ten percent) of the total work order value.

- 12.3. Such reduction shall be accepted by the purchaser in full satisfaction of the tenderer's liability arising from delay only. This penalty for delay in completion will be applicable separately for each stage of completion of work when two or more stage of completion is specified in the contract. The purchaser's engineer shall at his sole discretion specify a time limit within which the unfinished portion of the work shall be completed after serving on the tenderer a notice of Purchaser's intention to recover the said penalty in format.

NOTE: For purpose of this para, the value of work shall be calculated on the basis of unit prices included in schedule of requirements

13. Adherence of time schedule

- 13.1. Timely completion of the work is the essence of the contract. While delay in execution will attract penalty.
- 13.2. If any delay have arisen from any cause which the RAILTEL may agree as being a reasonable ground for extension of time, the authorized representative of RAILTEL may allow such additional time as he may in his absolute discretion consider to be reasonably justified by the circumstances of the case. Such extensions shall be granted, on request from tenderer, **with or without** liquidated damages.
14. The work as detailed in this Tender shall be executed and completed in all respects in accordance with the Tender document, instruction to Tenderers, Bill of Quantities, Conditions of the Contract, technical specification, schedules and Drawings to the satisfaction of authorized representative of RAILTEL.

15. Warranty and Maintenance

The work shall be under warranty for a period of one year (specified items for 5 years). The following things must be covered in this maintenance:

- 15.1. Any defect arising out of bad workman ship must be rectified.
- 15.2. Manufacturing defects as may be detected during this period must be repaired or replaced as the case may be.
- 15.3. Any defective material that may be noticed must be replaced.
- 15.4. For this maintenance, work must be completed within 24 hours from the time it is notified. In case the same is not complied with requisite penalty will be imposed and amount recovered from your security deposit.

16. Introduction To GST

- 16.1 The price quoted in the offer should be firm, fixed indicated 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.

- 16.2 Bidder shall issue valid tax invoice to RailTel for availing proper credit of CGST/SGST/IGST/UTGST incase of award of contract. GST will not be reimbursed in the absence of valid tax invoice.
- 16.3 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.
- 16.4 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.
- 16.5 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.
- 16.6 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 along with respective HSN/SAC Code under GST Law (including tax under reverse charges payable by the recipient).
- 16.7 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.
- 16.8 In regards to works contract, the tenderer should have registration no. for GST in respective state where work is to be executed and shall furnish GST registration certificate along with Tender.
- 16.9 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.
- 16.10 Incase of imported equipment:-**
Anti-Dumping duty if applicable on the equipment proposed to be supplied by OEM/Tenderer as per extant instructions of Ministry of Commerce/Finance Government of India, has to be borne by the tenderer and shall be deducted from the amount payable to the bidder at the time of making payment to the firm, if this duty amount is paid to Custom Authority by RailTel.
- 16.11 Evaluation Criteria:-**
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.

- 16.12 In case the successful tenderer is not liable to be registered under CGST/IGST/UTGST/SGST Act, the RailTel shall deduct the applicable GST from his/their bills under reverse charge mechanism (RCM) and deposit the same to the concerned Tax Authority on reverse charge by RailTel, wherever applicable.

SIGNATURE OF AUTHORISED SIGNATORY WITH SEAL



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Forms Of Tender



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Offer Letter

1. I/We hereby declare that I/We _____ have read the various conditions to tender attached here to and hereby agree to ABIDE BY THE SAID CONDITIONS. I/We also agree to keep this tender open for acceptance for a period of 90 days from the date fixed for opening the same and in default thereof, I/We will be liable for forfeiture of my/our Earnest Money. I/We offer to do the work of “ _____ Name of the work _____ ” at the rates quoted in the attached schedule and hereby bind myself/ourselves to complete the work within ----- days from the date of issue of Letter of Acceptance of the tender. I/We also hereby agree to abide by the Various Conditions of Contract and to carry out the work according to the Specifications for materials and works laid down by the RailTel for the present contract.
2. I/We understand that our tender will not be considered, if the offered rates are not written unambiguously.
3. I/We hereby confirm that only the relevant entries asked for have been made within the tender documents issued to us. I/We also confirm that in the event of any entry in this document, other than the relevant entry, shall make this tender invalid.
4. I/We hereby agree to obtain the registration number under the Contract Labour Act by registering with the Labour Commissioner and furnish the registration details to RailTel Corporation of India Limited.
5. I/We hereby also agree to get my/our firm registered with the Sales Tax Department of Government of relevant states for Works Contract Tax as per the current law, as applicable.
6. I/We hereby agree to obtain Employer's number from the Employee's State Insurance Corporation and the Provident Fund Commissioner. In the event of our not being able to provide the above said number, I/We agree to RailTel Corporation of India Limited retaining appropriate amounts at the stipulated percentage rates towards ESIC and PF covering employees and employers contribution from our interim and final bills and refunding the same to us on our providing the proof of having complied with the requirements of the relevant Acts regarding payment. We also agree that in case, I/We are unable to obtain these numbers for ESIC and PF, RailTel Corporation of India Limited may remit such amounts to the appropriate authorities.
7. I/We agree to submit to RailTel Corporation of India Limited necessary reports and returns as required for compliance of ESIC & PF regulations.
8. A sum of **Rs. 5,00,000/- (Rupees Five Lakhs Only)** is herewith forwarded as “Earnest Money”. The full value of Earnest Money shall stand forfeited without prejudice to any other rights or remedies if,

I/We do not execute the contract agreement within 15 days from the date of issue of LOA issued by the RailTel or, I/We do not commence the work within -----days after receipt of orders to that effect.

9. Until a formal agreement is prepared and executed the acceptance of this tender 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.
10. I have enclosed a list of document as per the list in Annexure to this declaration.

Date: _____

Place: _____

**SIGNATURE OF AUTHORISED SIGNATORY
WITH
SEAL**



FORM – 2

Contract Agreement Form

An AGREEMENT made this _____ day of _____ Two thousand and Fourteen, between RailTel Corporation of India Limited, Delhi-110053 , acting in the premises through Executive Director or his representative _____ of RAILTEL CORPORATION OF INDIA LIMITED, (a Company with its Registered and Regional Office at 6th Floor, Block-III, Delhi IT Park, Shastri Park, Delhi – 110 053) (hereinafter referred to as ‘RailTel ’) of one part and M/s _____ (Hereinafter referred to as ‘tenderer’) of the other part.

Whereas in response to a call for Tender for _____, Delhi –110 053 as per Tender papers at Annexure ‘A’ hereto the Tenderer has submitted a Tender as per Annexure ‘B’ hereto and whereas the said Tender of the Tenderer has been accepted for 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 and at an estimated contract value of Rs. _____ (Rupees _____ only).

Now this agreement witnesses that in consideration of the premises and the payment to be made by the Purchaser to the Tenderer provided for herein below the Tenderer shall supply all equipment and materials and execute and perform all works for which the said Tender of the Tenderer 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 and the purchaser shall pay to the Tenderer at the rates accepted as per the said Annexure ‘C’ and in terms of the provisions therein.

In the witness where of the parties have hereunto set and subscribed their respective hands and/or seals day and year respectively mentioned against their respective signatures.

Signed and delivered at _____ by Shri _____ for and on behalf of M/s. _____, the tenderer within named in the presence of _____

1. Signatures

Date

Name in Block Capitals

Address

2. Signatures

Date

Name in Block Capitals

Address

Signed and delivered at _____ for and on behalf of RailTel by Shri _____ (Executive Director/Northern Region or his successor) in the presence of:-

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1. Signatures

Date
Name in Block Capitals
Address

2. Signatures

Date
Name in Block Capitals
Address

Annexure 'A': Tender Paper _____

Annexure 'B': Firm's offer . _____

Annexure 'C': Letter of Acceptance . _____



Guarantee Bond for Security Deposit

(On Stamp Paper of requisite value)
(To be used by approved Scheduled Banks)

1. In consideration of the office of the Executive Director, RAILTEL CORPORATION OF INDIA LIMITED, (a Company with its Registered and Regional Office at 6th Floor, Block-III, Delhi IT Park, Shastri Park, Delhi – 110 053) (Herein after called RailTel) having agreed to exempt _____ (Hereinafter called “ the said Tenderer(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 Tenderer (s) of the terms and conditions contained in the said Agreement, or 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 _____ Tenderer(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 Tenderer(s) of any of the terms or conditions contained in the said Agreement.
2. We _____ bank 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 Tenderer(s) of any of terms or conditions contained in the said Agreement or by reason of the Tenderer(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. _____ only.
3. We, _____ bank undertake to pay to the RailTel any money so demanded notwithstanding any dispute or disputes raised by the Tenderer(s) / Supplier(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 thereunder and the Tenderer(s) / Supplier(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 Tenderer(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.

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 tenderer(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 Tenderer(s) or for any forbearance, act or omission on the part of RailTel or any indulgence by the RailTel to the said Tenderer(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 Tenderer(s) Supplier(s).

We _____ (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 _____ 2018

for _____

(indicate the name of the Bank)

Witness

1. Signature
Name

2. Signature
Name

NOTE: The Guarantee shall be valid for a period of four months after the expiry of the warranty period of the equipment as per clause 14.c.

Extension of period of completion of Work on Tenderer's account

No.

Date:

To,

.....

.....

Sub: (Name of Work)

1. Acceptance Letter No.

2. Agreement No.

Ref:(Quote specific application of the Tenderer for extension to date, if received).

Dear Sir,

The stipulated date for completion of the work mentioned above is..... From the progress made so far and the present rate of progress, it is unlikely that the work will be completed by the above date (or However, the work was not completed on this date).

Expecting that you may be able to complete the work if some time is given the Executive Director (Northern Region) RailTel Corporation of India Limited, Delhi although not bound to do so, hereby extends the time for completion from _____ to _____.

Please note that an amount equal to 0.5% of the total value of the contract per week or part thereof (rounded off to the nearest whole number) subject to a maximum of 10% of the total contract value of the works as a recovery for delay in the completion of the work after the expiry of (1) will be recovered from you as mentioned in para 12 chapter II, section II of the special conditions of contract for the extended period notwithstanding the grant of this extension. You may proceed with the work accordingly. **(applicable when the extension has been granted with liquidated damages).**

The above extension of the completion date will also be subject to the further condition that no increase in rates on any account will be payable to you.

Please intimate within a week of the receipt of this letter your acceptance of the extension on the conditions stated above.

Please note that in the event of declining to accept the extension on the above said conditions or, in the event of your failure after accepting or acting up to this extension to complete the work by (2)_____ (mention the extended

date here), further action will be taken in terms of relevant para of special conditions of contract.

Yours faithfully,
for & on behalf of RailTel Corporation of India Limited

Note:

1. [Give here the stipulated date for completion without any penalty fixed earlier.]
2. [Here mention the extended date.]



Statement of Deviations**PROFORMA FOR STATEMENT OF DEVIATIONS**

1. The following are the particulars of deviations from requirement of the Instructions to Tenderers and Conditions of Tendering , Preamble and Special conditions of Contract.

1.1 Instructions to Tenderers and Conditions of Tendering

Clause	Deviation	Remarks (Including Justification)
--------	-----------	--------------------------------------

1.2 Preamble

Clause	Deviation	Remarks (Including Justification)
--------	-----------	--------------------------------------

1.3 Special conditions of Contract.

Clause	Deviation	Remarks (Including Justification)
--------	-----------	--------------------------------------

2. The following are the particulars of deviations from requirement of the technical specifications.

Annexure	Clause	Deviation	Remarks (Including Justification)
----------	--------	-----------	--------------------------------------

Notes:

Where there is no deviation, the statement should be returned duly signed with an endorsement indicated no deviations.

**SIGNATURE AND SEAL OF THE
MANUFACTURER / TENDERER**

FORM - 6

STANDING INDEMNITY BOND

(For on Account Payments and Stores supplied by RailTel)

(On Stamp paper of Requisite Value)

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 Executive Director (Northern 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 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 Executive Director (Northern 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 his 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.

Dated this _____ day of _____ 2018

for and on behalf of

M/s _____

(Tenderer)

Signature of witness

Name and witness in Block letters

Address

Progress Report

Name of the section												
Weeks	Laying of conduit	Laying of Casing Capping	Rack & UPS Instl.	OFC Laying	Termination of OFC	Testing of OFC	Laying of UTP	Termination of UTP at I/O's	Installation of switches & Servers	Installation of NMS		Final Testing & Commissioning
										H/W	S/W	
Week 1												
Week 2												
Week 3												
Week 17												
Week 18												
Week 19												
Total												

QUALIFICATION EXPERIENCE

Details of works executed and under execution during the last 3 years (including the current Year) should be furnished in the following format.

S.No.	Name of Project and Description of work.	Party's Address of whom the work was done	Total value of contract (in Indian Rupees)	Schedule period of Completion (Mention Period)	Actual period of Completion (Mention Period)	Reference Page for Satisfactory Performance of Work From the Authorised User	Remarks
<hr/>							

Note: A certificate from the organization, for which the work was executed, should preferably be executed to indicate that the contract was satisfactorily performed.

Form No.9

USER's CERTIFICATE

(To be given by Authorised Person on the Organisation Letter Head)

Name of the Firm

Contract No. & date

Contract Amount (in Indian Rupees)

Completion Period as per contract

Data of Commencement

Actual date of Successful Completion

Tenderer's Performance

Dated:

Name:

Designation:

Signature of the User

with Company Seal

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Form No.10

SYSTEM PERFORMANCE GUARANTEE

PROFORMA FOR THE SYSTEM PERFORMANCE GUARANTEE

To

The Executive Director / Northern Region,

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 born by us. We further guarantee that these additional inputs will be provided by us to make the system workable within 1 months 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.

FORM-11

Format for instruction to be provided by Vendor/Lessor/Employee for NEFT/RTGS payment to be made to them by RailTel.

Date:

To
RGM/NR,
M/s RailTel Corporation of India of India Ltd.
6th floor, Block-III, Delhi IT Park,
Shastri Park, Delhi-110 053

Dear Sir,

Sub: Bank details for payment through NEFT/RTGS for payments below/above Rs.1,00,000/- for Vendors, Employees/Lessors.

We authorize you to make payment of dues/bills to us in NEFT mode against the particulars mentioned below:

1. Name of the Agency/Employee/Lessor as given in Bank account:
2. Name of the Bank:
3. Bank Branch & address:
4. Bank account no.:
5. Bank account type(Savings/Current):
6. IFSC code:
7. Agency's/Employees/Lessor Address:
8. Agency's/Employees/Lessor telephone & mobile no:
9. Cancelled cheque

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

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

Encl: As above.

(Sign & Seal of the Vendor/Signature of Employee/Lessor)

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

Signature of Authorised
Official from the Bank.



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