

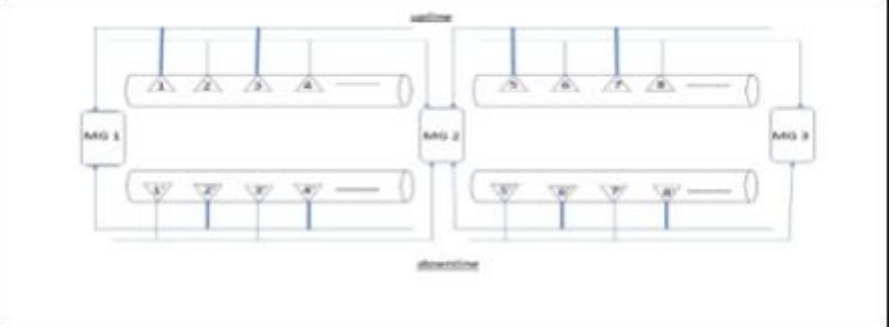
**Addendum-01**  
**CMRL/PHASE-II/SYS/ C3&5 ASA08/2023**  
**03-07-2023**

SN	Part	Section	Clause	Original Bidcondition	Revised bidcondition
1.	Part-2	Section-VIB	1.4.1.2	Contractor shall consider all telecom facilities in MHQ Nandanam for the following: rooms: 1. BCC 2. CER 3. SER 4. Security Control Room 5. Traction Equipment Room 6. AFC Equipment Room 7. SCADA Equipment Room 8. Three more Equipment Room reserved for future.	Contractor shall provide all telecom facilities in Madhavaram Depot except for the Centralised telecom facilities as mentioned in clause 1.4.1.0 for OCC Building at Madhavaram Depot
2.	Part-2	Section-VIB	1.4.11	The proposed Manufacturer/OEMs for Telecom system shall have implemented end to end solutions in metro/rail/Airport (Tier-1 Metro Cities) environment. The System shall be currently functional and proof of satisfactory working for a year shall be in the form of a certificate, including details of system in form of supporting documents consisting of LOA, BOQ, Scope of work etc., from the Customer / End User who is presently using the network / for whom the network was set up shall be submitted to the Engineer for Notice of No Objection (NONO).The Manufacturer/OEMs shall be registered in India with service centre to provide after sales service support in India.	The proposed Manufacturer/OEMs for Telecom system shall have implemented end to end solutions in metro/Airport (Tier-1 Metro Cities) environment. The System shall be currently functional and proof of satisfactory working for a year shall be in the form of a certificate, including details of system in form of supporting documents consisting of LOA, BOQ, Scope of work etc., from the Customer / End User who is presently using the network / for whom the network was set up shall be submitted to the Engineer for Notice of No Objection (NONO).The Manufacturer/OEMs shall be registered in India with service centre to provide after sales service support in India.
3.	Part-2	Section-VIB	11.1.1.2	All the cables (power cables, data cables, fiber cables and pigtails,etc should be LSZH (low smoke zero halogen) type cable at all underground stations.	All the cables (power cables, data cables, optical fiber cables and pigtails etc. should be LSZH (low smoke zero halogen) type cable at all underground stations/elevated stations/tunnels.
4.	Part-2	Section-VIB	11.1.2.1.3	The cables for installation in elevated/at-grade section shall be manufactured as per Indian Railways RDSO/TEC specifications, wherever available in TEC/RDSO specifications for a particular cable type. Wherein the RDSO/TEC specifications are not available then the specifications as laid down herein shall be complied with	The cables for installation in elevated/at-grade section shall be manufactured as per Indian Railways RDSO/IEC specifications, wherever available in IEC/RDSO specifications for a particular cable type. Wherein the RDSO/IEC specifications are not available then the specifications as laid down herein shall be complied with.
5.	Part-2	Section-VIB	11.1.2.3	Fire Resistance Unless otherwise specified for the fire-resistant requirements, all cables shall comply with reduced fire and flame propagation requirements of IEC 60332-1 & 60332-3 Cat C for single and bunched cables respectively. Loudspeaker cables in addition shall be of fire survival type to ensure circuit integrity for three hours during fire as per IEC60331.	Fire Resistance Unless otherwise specified for the fire-resistant requirements, all cables shall comply with reduced fire and flame propagation requirements of IEC 60332-1 for single cables. All Power cables shall comply with reduced fire and flame propagation requirements of IEC 60332-3 Cat C for bunched cables. Loudspeaker cables in addition shall be of fire survival type to ensure circuit integrity for three hours during fire as per IEC 60331.
6.	Part-2	Section-VIB	11.2.1.1	In addition to the requirements specified in FOTS chapter of this PS, following specifications shall be complied with by Optical Fiber Cables for Underground Section used inside the tunnel, if any. The Contractor shall get these cables inspected from Employer representative and all cost of inspection shall be borne by the Contractor.	In addition to the requirements specified in FOTS chapter of this PS, the following specifications shall be complied with by Optical Fiber Cables for Underground/Elevated/At-grad Section used inside the tunnel, if any. The Contractor shall get these cables inspected from Employer representative and all cost of inspection shall be borne by the Contractor.
7.	Part-2	Section-VIB	2.6.6.1.4	Each Platform shall be provided with one Platform Announcement Device and a microphone. The PAS control panel shall have the facilities to make live broadcast to Pre-Defined Platform Zone.	Each Platform shall be provided with one Platform Announcement Device and a microphone. The PAS control panel shall have the facilities to make live broadcast to designated Zone only.
8.	Part-2	Section-VIB	4.1.2.23(c)	Additional Clause	(C) The cameras shall support end to end encryption.

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9.	Part-2	Section-VIB	4.1.2.7	Video Recording system provision shall not be in scope of this RFP and shall be provided by other designated OCC/BCC contractor.	Video management software provision shall not be in scope of this RFP and shall be provided by ASA-06 contractor.
10.	Part-2	Section-VIB	4.1.3.2.1(17)	Video Management software and Video Recording system provision shall not be in scope of this RFP and shall be provided by other designated OCC/BCC contractor.	Video management software provision shall not be in scope of this RFP and shall be provided by ASA-06 contractor.
11.	Part-2	Section-VIB	4.1.5.1.3	Video Management software and Video Recording system provision shall not be in scope of this RFP and shall be provided by other designated OCC/BCC contractor.	Video management software provision shall not be in scope of this RFP and shall be provided by ASA-06 contractor.
12.	Part-2	Section-VIB	4.2.2.1.4	Unless specified otherwise elsewhere in the TS, cameras, field switches, and other equipment meant for outdoor installation, shall be suitable to work from 0 to +50- degree C with RH up to 97% non-condensing	Unless specified otherwise elsewhere in the TS, cameras, field switches, and other equipment meant for outdoor installation, shall be suitable to work from 0 to +50-degree C with RH up to 95% non-condensing
13.	Part-2	Section VIB	4.2.6	Table 4.4 (D) Compression technology Two independently configurable H.264 streams: Stream 1: H.265/H.264 Maximum supported resolution @ 25 FPS Stream 2: H.265/H.264/MJPEG Standard Definition Configurable FPS Stream 3: H.265/H.264/MJPEG	Table 4.4 (D) Compression technology Three independently configurable streams: Stream 1: H.265/H.264 Maximum supported resolution @ 25 FPS Stream 2: H.265/H.264/MJPEG Standard Definition Configurable FPS Stream 3: H.265/H.264/MJPEG
14.	Part-2	Section-VIB	4.2.6.3	High Speed, High Definition IP PTZ Dome Camera (IR Camera) I. Supported protocols:- Telnet, FTP, TCP/IP, UDP/IP(Unicast, Multicast IGMP), IPv4/IPv6, SNMP, Sntp, RTSP, ONVIF etc. or as required to fulfil the functional requirement of project.	High Speed, High-Definition IP PTZ Dome Camera (IR Camera) I. Supported Protocols:- FTP, TCP/IP, UDP/IP (Unicast, Multicast IGMP), IPv4/v6, SNMP, Sntp, RTSP, ONVIF etc. or as required to fulfil the functional requirement of project.
15.	Part-2	Section-VIB	7.2.1.11	The FOTS network shall be designed and implemented in a modular structure to enable it to be further upgraded to a higher capacity system and to be capable of accommodating new technologies	The FOTS network shall be designed and implemented in a modular structure to enable it to be further upgraded to a higher capacity system.
16.	Part-2	Section-VIB	7.2.9.1.11	The Layer 3 switch in OCC & BCC shall be modular chassis based switch with swappable cards/power supply /Fan etc while WAN switch at stations, depots ,and Headquarters shall be modular based with hot swappable minimum PSU&SFP's. Bidders shall provide FCAPS certified NMS Solution which can support & manage multiple vendor devices.	The Layer 3 switch in OCC & BCC shall be modular switch or chassis-based switch with swappable cards/power supply /Fan etc. while WAN switch at stations, depots ,and Headquarters shall be modular based with hot swappable minimum PSU&SFP's.
17.	Part-2	Section-VIB	7.9.3.2	The Redundant Core Switches shall be provided in each OCC and BCC. These Core switches at OCC & BCC shall be chassis based and shall have redundant critical modules like supervisor/control/management card & power supply card etc.	Redundant Core Switches shall be provided in each OCC and BCC. These Core switches at OCC & BCC shall be chassis based and shall have redundant critical modules like supervisor/control/management card & power supply card etc. In case modular switches are proposed for core switches, the equivalent redundancy arrangement as envisaged in chassis-based core switch shall be provided.
18.	Part-2	Section-VIB	8.3.1.8	Each Phone should support minimum 02 SIP User Accounts	Deleted
19.	Part-2	Section-VIB	8.3.2.5	Emergency Phone with Blue Light (as per NFPA 130-2007) a) Analog phone connected to SCR and OCC  Call originated from Emergency Telephones from tunnel area shall be landed in nearest station's SCR phone, incase phone in SCR gets unattended in defined and configurable time duration then same call will be re-routed to controller's phone in OCC /BCC. These phones shall be able to auto-attend incoming call in speaker mode without any manual intervention.	Emergency Phone with Blue Light (as per NFPA 130-2007) a) Analog phone connected to SCR and OCC  Analogue Emergency Telephones with external speakers in tunnels shall be provided by Telecom Contractor. The distance between two emergency phones shall not exceed 250meters. ASA-06 contractor shall provide Media gateways with long line cards to interface with emergency phones in tunnels to support the architecture shown below for reference.

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**CMRL/PHASE-II/SYS/ C3&5 ASA08/2023**  
**03-07-2023**

SN	Part	Section	Clause	Original Bidcondition	Revised bidcondition
				The distance between two Emergency phones should not exceed 250 meters. Contractor shall provide Analogue Emergency Telephones inside tunnels for which Media Gate way with long line cards shall be provided by other designated ASA 06 Contractor.	 <p>Call originated from Emergency Telephones from tunnel area shall be landed in nearest station's SCR phone, incase phone in SCR gets unattended in defined and configurable time duration then same call will be re-routed to controller's phone in OCC /BCC. These phones shall be able to auto-attend incoming call in speaker mode (external Speakers) without any manual intervention.</p>
20.	Part-2	Section VIB	Appendix-I	Redundancy Configuration	Refer Annexure-A
21.	Part-2	Section VIC	Part-2 Section VIC Employer Drawings	LIST OF DRAWINGS FOR CONTRACT ASA-08 -TELECOMMUNICATION SYSTEM	LIST OF DRAWINGS FOR CONTRACT ASA-08 -TELECOMMUNICATION SYSTEM Please click the link to download: <a href="https://cmrlindia-my.sharepoint.com/:u:/g/personal/ajish_cl_cmrl_in/EW07WR3vcRFDp1KcdJqch_8BekFfyiLCjXGQJVODxZiblg">https://cmrlindia-my.sharepoint.com/:u:/g/personal/ajish_cl_cmrl_in/EW07WR3vcRFDp1KcdJqch_8BekFfyiLCjXGQJVODxZiblg</a>

**Enclosed:**

1. Annexure-A: Redundancy Configuration
2. Annexure-B: Parking Area

**Annexure - A**

1.7.1 The Redundancy Architecture mentioned below will be followed by ASA-06 Contractor. ASA-08 shall integrate as per the below requirement.

<b>Location</b>	<b>Subsystem</b>	<b>Redundancy Configuration</b>
<b>OCC</b>	CPIS (PIDS and PAS part of CPIS )	1+1
	ISMS (CCTV and ACID part of ISMS )	1+1
	MCS	1
	FOTS	1 (for Chassis Based) 1+1 (for Modular Switch)
	Telephone	1
	OAIT	1 (for Chassis Based) 1+1 (for Modular Switch)
	CDRS	1
	T-SCADA	1
<b>BCC</b>	CPIS (PIDS and PAS part of CPIS )	1+1
	ISMS (CCTV and ACID part of ISMS )	1+1
	MCS	1
	FOTS	1 (for Chassis Based) 1+1 (for Modular Switch)
	Telephone	1
	OAIT	1 (for Chassis Based) 1+1 (for Modular Switch)
	CDRS	1
	T-SCADA	1

Note:

1. The requirement mentioned in this table supersedes redundant architectures mentioned in remaining all other chapters in Technical Specifications.

**ANNEXURE - B**

S.no	Station names	Type	Civil Contract Package	Parking Area (in Sqm)	Multimodal Availability
1	VENUGOPAL NAGAR	Underground Station	CP10 - EV03	1630	-
2	ASSISI NAGAR	Elevated Station		1022	-
3	MANJAMBAKKAM	Elevated Station		495	-
4	VELMURUGAN NAGAR	Elevated Station		300	-
5	MMBT	Elevated Station		36	Yes (Interchange with Interstate Bus Terminal)
6	SHASTRI NAGAR	Elevated Station		36	-
7	RETTERRI JN	Elevated Station		550	-
8	KOLATHUR	Underground Station	CP06 - UG06 - RT01	0	-
9	SRINIVASA NAGAR	Underground Station		1080	-
10	VILLIVAKKAM METRO	Underground Station		1550	Yes (Interchange with Suburban Railway Station)
11	VILLIVAKKAM BUS TERMINUS	Underground Station		0	Yes (Interchange with Bus Terminal)
12	NATHAMUNI	Underground Station		0	-
13	ANNA NAGAR BUS DEPOT	Elevated Station	CP10 - EV03	1710	-
14	THIRUMANGALAM	Elevated Station		0	-
15	KENDRIYA VIDYALAYA	Elevated Station		480	-
16	KOYAMBEDU	Elevated Station		3000	Yes (Interchange with Corridor 2 Metro Station)
17	Greenways Road Metro	Underground Station	UG04	Refer drawings	