

**GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS  
(RAILWAY BOARD)**

2021/Proj/KanpurMetroE2/30/53

New Delhi, dated 25.11.2021

**Managing Director,**  
Uttar Pradesh Metro Rail Corporation Limited,  
(UPMRCL), Administrative Building,  
Near Dr. Bhimrao Ambedkar Samajik Parivartan Sthal,  
Vipin Khand Gomti Nagar,  
Lucknow -226010 (UP)

**Sub:- 'Provisional In-Principle Approval' for adopting CBTC Technology for Signaling & Train Control System for Agra Metro Rail Project of Uttar Pradesh Metro Rail Corporation Limited (UPMRCL).**

**Ref:-** RDSO's Recommendation letter No. UTHS/UPMRC/KMRC/P01/012021 dated 14.10.2021, for the 'Provisional In-Principle Approval' for adopting CBTC Technology for Signalling & Train Control System for Agra Metro Rail Project, based on the Annexure E1 & Annexure E2 Submitted by UPMRCL through Online Portal on 11.10.2021.

Uttar Pradesh Metro Rail Corporation Limited (UPMRCL)'s request for approval of adopting CBTC Technology for Signaling & Train Control System for Agra Metro Rail Project has been examined in Board's office in consultation with RDSO and 'Provisional In-Principle Approval' of the competent authority is hereby conveyed for the same with the following conditions/stipulations before opening the line for passenger operations/revenue service:-

1. Before opening of the line for passenger operation/revenueservice, complete safety assessment report and certification by ISA for achievement of required levels of safety as per latest CENLEC standards wherever applicable for train operation in UPMRC for Agra Metro Rail Project for complete Signaling & Train Control System including all sub systems shall be ensured and a copy of same shall be submitted to RDSO.
2. The Final system hazard analysis and acceptance of its mitigation by MRA shall be submitted to RDSO as well as to CMRS and any hazards which require manual intervention/special instruction shall be suitably framed, incorporated and implemented by Metro authorities.
3. Documents as per Annexure E1 of "Procedure for Safety Certification and Technical Clearance of Metro Systems" including EMC/EMI report related to rolling stock shall be submitted to RDSO considering all mission-critical frequencies.
4. UPMRCL/MRA shall carry out rigorous testing of all mode of interference (both out of band and in band interferences) to prove non-susceptibility of 5.7 GHz band used for CBTC application to any kind of interference and shall align the access points for better reliability & test report shall be submitted to RDSO.
5. The details of authorities responsible for maintenance of Signaling System to the required level of safety during train operation shall be submitted to RDSO.
6. UPMRCL/MRA has submitted that the development process of ATS is SIL 2, and all potentially unsafe effects of safety related functions performed by ATS and ATO shall be mitigated by mandatory interaction with SIL 4 sub systems (ATP and CBI) however dependency of operating authorities on VDU display units to run the trains during failure situations shall require a minimum level of SIL2 for VDU. If the same level of certification is not achieved, manual running of trains during signal failure condition shall not be done relying only upon the indication by ATS & suitable instructions regarding this shall be framed and strictly implemented.

7. Since the Third Rail Traction of 750 V DC is being used, the signaling installations, point machines and other installations, which are imperatively connected to the running rails, must be insulated against the structure earth and earth to avoid stray currents as per respective standards. Also, proper earthing & bonding should be ensured as per respective standards.

25/11/21  
(D.K. Mishra)  
Director/MTP  
Railway Board  
☎ 011-47845480

Copy to:

1. **Executive Director/UTHS (CO)**, RDSO, Manak Nagar, Lucknow-226011.
2. **OSD/UT & Ex-Officio Joint Secretary**, Ministry of Housing & Urban Affairs (MoHUA), Nirman, Bhavan, New Delhi-110001.
3. **ED/Signal Project**, Railway Board.