

Connecting High-Bandwidth

Wireless CCTV Surveillance
Across Bulk Cement
Corporation's Plant in
Navi Mumbai, India



CONNECTING YOUR WORLD

Introduction

Bulk Cement Corporation (India) Limited (BCCI), a leading subsidiary of ACC Limited, operates one of India's most sophisticated cement storage and distribution facilities in Kalamboli, Navi Mumbai. Strategically positioned on the Mumbai-Pune Expressway and spanning 30 acres, this landmark facility features dual 5,000-ton cement storage silos, specialized railway infrastructure, and comprehensive logistics capabilities serving Mumbai's construction industry. To enhance security oversight across this expansive operation, BCCI required a comprehensive wireless CCTV surveillance system capable of centralized monitoring while accommodating the continuous movement of heavy vehicles and maintaining minimal disruption to critical cement operations.

The Challenge

BCCI's security enhancement initiative faced several complex operational and technical challenges:

- **Expansive Coverage Requirements:** Deploying comprehensive CCTV surveillance across 30 acres of active cement manufacturing and storage facilities, including storage silos, railway sidings, and vehicle circulation areas.
- **Heavy Vehicle Operations:** Integrating surveillance infrastructure that accommodates continuous movement of specialized cement transport vehicles, railway wagons, and bulk-tanker trucks without operational interference.
- **Centralized Monitoring Needs:** Establishing unified security oversight from a single control location to monitor diverse facility zones including production areas, storage silos, laboratory facilities, and customer service areas.

The Solution

Following comprehensive site assessment including detailed path profiling and wireless network planning, Technocrat Security Systems Limited deployed Wavesight's industrial-grade wireless transmission infrastructure featuring:

- **High-Capacity Wireless Radios:** Implementation of Wavesight wireless radios engineered to handle 27 Mbps bandwidth transmission over distances up to 1 kilometer, ensuring reliable video data transmission across the facility's expansive layout.
- **Proof of Concept Validation:** On-site proof of concept (POC) testing confirmed optimal wireless performance and coverage before full deployment, minimizing installation risks and ensuring technical specifications alignment.
- **Premium Camera Integration:** Seamless integration with Bosch Security Systems' high-quality CCTV cameras, providing superior image quality and reliability for critical industrial surveillance applications.
- **Rapid Deployment Strategy:** Implementation executed with minimal disruption to daily cement operations, maintaining continuous production and logistics activities throughout the installation process.

Results & Benefits

- **Unified Security Management:** Centralized CCTV monitoring capability enables comprehensive oversight of all facility zones from a single control location, enhancing security response times and operational efficiency.
- **Operational Continuity:** Wireless infrastructure eliminated traditional cabling disruptions, allowing BCCI to maintain full cement production, storage, and distribution operations during system deployment.
- **Scalable Network Architecture:** High-bandwidth wireless transmission infrastructure supports future security system expansions and technology upgrades without additional infrastructure investments.
- **Enhanced Industrial Security:** Comprehensive video surveillance coverage across heavy vehicle circulation areas, storage facilities and production zones strengthens asset protection and safety compliance for this critical cement supply facility.

Conclusion

Wavesight's wireless transmission technology enabled BCCI to establish a robust, centralized CCTV surveillance network that seamlessly integrates with the facility's complex cement manufacturing and logistics operations. This deployment showcases Wavesight's expertise in delivering high-capacity wireless solutions for challenging industrial environments where operational continuity and comprehensive security coverage are paramount.