



## WIRELESS MOBILITY FOR WEST BASIN CONTAINER TERMINAL IN LOS ANGELES

**OBJECTIVE** The 272-acre West Basin Container Terminal facility with 4,500 feet of berth space for vessel docking and 13 ship-to-shore cranes needed to replace an end-of-life, decade-old 802.11 wireless network. The wireless network was no longer able to provide reliable performance and network availability to effectively serve the operational needs of the container terminal. The Terminal's Position Detection System was also operating on the unreliable wireless network that led to a high incident of container location misreads and costly manual work-arounds.

**SOLUTION** Leveraging enterprise class 802.11n carrier grade technology, VectorUSA engineers designed a high-performing, reliable wireless network to support the availability and bandwidth requirements of the Terminal's operational needs. VectorUSA built the network on a Cisco platform that included Cisco 1552 802.11n wireless access points, Cisco 5508 controllers with high availability, Cisco IE3000 managed switches, and Cisco 3850X fiber aggregation switches. To maintain a high level of connectivity and optimize coverage, VectorUSA used Terrawave and L-Com antennas with location-specific antenna patterns, Valmont access point mounts, CAT6 cables and Hoffman NEMA 4X enclosures. The West Basin Container Terminal uses 20 RTG cranes. Each RTG crane is equipped with a Now Solutions IVP client device located inside the vehicle cab which sits 60 feet above the terminal.

The result was a seamless wireless network that allowed the terminal to efficiently track cargo movement. The reliability and availability of critical yard automation applications also ensured accurate container placement and increased safety for terminal workers. Real-time location services enhanced security and operational awareness, and protected the terminal against false insurance claims and liquidated damages.

