Case Study: Downtown San Bernardino Passenger Rail Project

Challenge: San Bernardino Associated Governments (SANBAG) needed to upgrade their historic Santa Fe Depot rail station in San Bernardino CA. The Santa Fe Depot, built in 1918, is a classic Moorish architecture style, featuring red tile roofs and four domed towers built around a large center lobby with polished tile walls and floor. The interior includes handcrafted high beams, coffered ceilings and decorative columns. As a historical landmark listed on the National Register of Historic Places, any changes or additions had to meet the strictest criteria and adhere to the iconic look and feel of the building.

HDR was chosen to lead a team of architects and engineers to add passenger capacity to the Santa Fe station, including new railway platforms, passenger overpass and a security office. HDR tapped PAC Engineering to design the Security Camera (CCTV) system, which would assure safety and protection to all areas without visual impact to the original building.

Included in the project was adding cameras to the existing parking garage, which had seen a high level of vandalism, and a new Transit Center station associated with the new Omnitrans bus terminal. In addition, cameras were located at critical railway/city street crossings connecting the 2 stations, which are used by both Amtrak and Metrolink.

Solution: Working with HDR architects, SANBAG management, security staff and IT department, PAC Engineering designed a CCTV system to cover exterior and interior areas with state-of-the-art digital cameras. The cameras are monitored full time by on-site security officers. All cameras are recorded in digital format on multiple and redundant Video Management Servers (VMS). Any event footage can be copied and given to local authorities for evaluation and legal forensic evidence that can be used for police investigation and court cases as needed.

The camera system includes 111 cameras and 4 VMS with sufficient storage for 30 days. The 2 stations are connected via fiber to each other as well as the nearby OmniTrans Transit Center and the OmniTrans Headquarters. The cameras can be controlled and monitored at any of these sites.

Design, commissioning and training was provided by PAC Engineering.

Technologies:

- Arecont 20 Megapixel 180 Panoramic IP Cameras
- Arecont 5 Megapixel IP Fixed Cameras with IRD and Varifocal Lens
- Sony HD PTZ (Pan/Tilt/Zoom) Cameras
- Cisco Fiber and PoE Network Switches
- Black Box Media Converters
- Black Box "Hardened" PoE PSE Switches
- ExacqVision IP Video Management Servers and Storage Systems
- APC Uninterrupted Power Supplies (UPS)
- Samsung and NEC monitors
- Middle Atlantic Equipment Racks and Mounting Solutions
- Middle Atlantic Pull-Out Monitor and Keyboard
- L COM Weather Proof Ventilated Enclosures
- Dell Computers
- SonicWall Secured Firewall/Threat Management Appliance