

# Case study

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## Cajon Valley Union School District Building controls improve learning environment at five schools • El Cajon, CA

Cajon Valley Union School District encompasses the greater part of the city of El Cajon, California, and a portion of the surrounding county. The district believes that a focused vision, strong accountability, and collaboration with parents and the community are keys to success—and is committed to providing quality programs for all students. It was this commitment to quality that led the district to undergo renovations at five of its school locations to upgrade aging equipment and inefficient HVAC systems, and schedule improvements at another six schools in the district.

### Challenge

The HVAC systems and controls at Cajon Valley Union School District had become outdated, inefficient and unreliable. Upgrades were needed to create a healthier, more comfortable learning environment for students and faculty, improve energy efficiency and reduce costs. With budget reductions and eleven schools targeted for renovation, it was the responsibility of administrators to use their limited resources prudently. A decision was made to complete the HVAC renovation, but postpone control upgrades. A tight time frame was set for the project, with construction to be completed during summer break.

### Solution

Pleased with the reliability of Trane equipment in the past, Cajon Valley Union School District met with the Trane team to discuss the project. Trane representatives listened to district concerns, evaluated their needs and developed a solution that would satisfy both the HVAC and control needs, while staying within budget.

#### Cost-effective efficiency and comfort

Packaged rooftop HVAC units were installed to provide cost-effective reliability, energy efficiency and comfort. The simplified installation of the units reduced initial costs and ensured that deadlines were met.



Over 15,000 students attend the nineteen elementary and six middle schools in the district.

#### Programmable, flexible control

A Trane Tracer™ SC building automation system (BAS) with web-based interface and programmable unit controllers was installed at five school locations. The BAS allows Cajon Valley Union School District to program and manage the facility climate, controlling the rooftop HVAC units, as well as lighting on exterior areas. Building operators have the flexibility to perform tasks such as scheduling, alarm management and troubleshooting from any PC with an Internet connection.

## Multiple-facility management

The BAS is supported by Trane Tracer ES™ software, allowing the district to manage multiple locations as a single enterprise from any PC on the network. The customized system enables the school district to complete daily building operation tasks and manage performance remotely.

## Results

Renovations of the HVAC and controls were completed at five Cajon Valley Union School District locations, with improvements scheduled at another six schools. The upgrades help to improve indoor air quality, creating a healthier, more comfortable learning environment for students and faculty. With more reliable equipment and improved controls, the school is enjoying reduced energy and operational costs, while upholding its financial responsibilities to the school district and area taxpayers who supported the project through a bond issue.

## Trane systems and services

- Tracer SC™ building automation system
- Tracer ES™ enterprise management system
- Tracer™ UC 400 programmable controllers
- Precedent™ and Impack™ packaged rooftop units



*Using Tracer ES™, the district manages multiple locations as a single enterprise from a network PC.*



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