

# EUDORA USD 49, KANSAS

Project Value:

**\$7,196,427**

Annual Energy Savings:

**\$240,097**

## GOALS & CHALLENGES

Working with USD 491 over five years and multiple project phases, the Willdan team helped address a variety of challenges to facilities – old, new, and not-yet built.

District priorities in older buildings included replacement of outdated equipment and high utility costs. Additionally, the 2-year-old, DLR-designed high school was experiencing comfort problems and the highest utility costs in the district – a concern the district sought to avoid with the upcoming construction of a new elementary and several other building additions.

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## IMPROVEMENT DETAILS

### Phase I:

- Installed district-wide HVAC controls
- District-wide lighting retrofit
- Chiller upgrade at middle school annex

### Phase II:

- Analysis of persistent maintenance and comfort problems at new high school
- Retro-commissioning of new high school
- Correction of multiple design and installation issues of HVAC system
- New HVAC equipment at elementary school

### Phase II:

- Design HVAC systems for new elementary school (constructed in 2009), high school auditorium, middle school cafeteria, and for elementary restrooms
- Turnkey implementation of HVAC systems
- Commissioned new HVAC and controls
- Coordinated with architect and construction manager that oversaw the remainder of construction

## SOLUTIONS AND OUTCOME

Willdan's team addressed the district's initial concerns with a standard performance contract – replacing old equipment and lighting while upgrading controls and maximizing savings.

The district then set its sights on the new high school, which had been built only two years before and was experiencing problems that included poor design, poor installation, lack of training, and limited support. Willdan's team retro-commissioned the control system and immediately solved many of the problems that had persisted for two years.

Seeking to avoid a repeat of these problems – and determined to avoid the expense of fixing the buildings immediately after constructing them – USD 491 hired Willdan to take turnkey responsibility for the design and installation of HVAC and controls on their new construction projects. The highlight was the new 140,000 square foot elementary school where Willdan's team led the successful implementation of a heat pump system that worked comfortably and efficiently from Day 1.