

Chino Valley Unified School District



Cost to School District:
\$0

Annual Energy Savings:
1.3 million kWh

Annual Cost Savings:
\$220,000

Utility Incentives Approved:
\$775,000

Summary

Willdan Energy Solutions generated energy savings across the Chino Valley Unified School District (CVUSD) by retrofitting T12 and T8 fixtures to reduced-wattage lamps, de-lamping fixtures, replacing ballasts and installing lighting fixture occupancy sensors, and retrofitting high-bay lighting fixtures. These solutions reduced electrical load demand in classrooms, offices, gymnasiums, warehouses, and other district facilities. In total, Willdan helped CVUSD save more than \$220,000 annually in energy costs and provided nearly \$775,000 in goods and services through the Southern California Edison Public Schools Energy Efficiency Program (PSEEP).

Goals and Challenges

The primary objective of this lighting retrofit project was to deliver maximum energy and cost savings while satisfying the following School District criteria:

- Maximize energy and cost savings
- Ensure post-installation lighting levels did not affect learning
- Minimize classroom schedule disruption
- Maintain student safety
- Conduct quality installations

Solutions and Outcome

Maximized Energy and Cost Savings

Willdan's expert audit staff conducted walk-through surveys at each school district facility and created a customized scope of work that made sure the measure mix selection and quality of materials would deliver optimal energy and cost savings. In addition to explaining the implementation benefits of the proposed measures, Willdan worked closely with District staff to educate teachers, students, and facilities staff about how to change their daily behavior to achieve the greatest energy savings over time from the new retrofits.

Result: The District now enjoys annual energy savings exceeding \$220,000.

Post-Installation Lighting Levels are Appropriate

Willdan addressed the District's concerns about adequate lighting levels through effective communication with CVUSD staff about pre- and post- installation lighting levels. By offering an installation test and review for the recommended program measures, we quickly demonstrated to stakeholders that significant energy saving retrofits produce marginal changes in lighting levels that are more than acceptable. In addition, Willdan verified that post-installation lighting levels were appropriate by upgrading materials to maintain industry-standard lighting levels. High light-output ballasts and reflector kits, for example, were used to increase deficient lighting levels.

Result: CVUSD deemed all post-installation lighting levels acceptable on completion of the project.





“Willdan always responded quickly to e-mails and calls regarding complications with the installed lighting equipment, and endeavored to rectify the identified problems.”

—Carla Kleinjan
Energy/Resource Conservation Technician
Maintenance, Operations & Construction
Chino Valley Unified School District



Minimized Classroom Schedule Disruption

Willdan completed all retrofit installations after school hours. Our installation crews worked directly with CVUSD facilities staff to coordinate the after-school installation times to complete productive and efficient installations without any classroom disruption.



Result: The entire project was installed without affecting classroom activities.

Maintained Safety for All

Willdan maximized student and staff safety by working in empty classrooms and facilities after hours, eliminating risk to student or school personnel safety. In addition, our installation and field crew completed rigorous workplace safety training designed to avoid workplace accidents and injuries.

Result: CVUSD's project was completed without any safety incidents.

Conducted Quality Installations

Willdan inspected 100 percent of all projects using independent inspectors to verify quality workmanship. Furthermore, Willdan provided a one-year warranty for all workmanship, with additional warranties on materials.

Result: CVUSD reported no quality issues for this project.

