CHRISTIAN COUNTY SCHOOL DISTRICT
Christian County, Kentucky

EDUCATIONAL FACILITY
Western Kentucky school district improves HVAC operations and learning environments in partnership with Harshaw Trane. District faced facility issues and a large gap in facility needs versus available capital revenues for 9,700 enrolled students.

CHALLENGE

• Lack of comfort – Several facility infrastructure challenges in 14 educational buildings totaling 1,225,000 square feet of space, which were affecting students’ and educators’ comfort and performance.

• Outdated equipment – Overwhelming maintenance needed for existing aged and unreliable HVAC systems.

• Scarcity of control – Facility control restricted due to rising energy costs and limited capital funds.

• Achieve energy costs savings - $100M in unmet facility needs required for upgrades with only $20M available in bonding revenues, leaving a big gap between needs and available funding.

CHRISTIAN COUNTY GUARANTEED NUMBERS

Electric Savings - 2,420,594 kWh
Demand Reduction - 4,806 KW
Natural Gas Savings - 34,398 Therms
Water Savings - 3,809 KGALS

Cost Savings
$374,656 in year 1
SOLUTION

• New HVAC systems were installed as well as new interior and exterior lighting, new ceilings and windows, and equipment for water conservation.

• Increase in HVAC operations and building automation and effective district-wide facility staff management using web access and single point responsibility.

• Harshaw Trane’s Intelligent Services installed to monitor energy and performance in real time

• As a result of the upgrades, the energy savings will pay for the project over time, closing the gap between available funds and facility needs.

RESULTS

• 20-year PACT™ agreement to ensure the project remains financially manageable, sustainable, and monitored for increased savings and achievable long-term results.

• Guaranteed annual data analysis.

• Real-time energy and performance tracking to govern optimum energy and cost-saving results.

• Ongoing verification and training program to assure continued success.

ENVIRONMENTAL IMPACT IF THESE SAVINGS ARE ACHIEVED

- 614 Passenger cars not driven for one year
- 6,592 Barrels of oil not burned for one year
- 23 Acres of forest preserved