

Wakefield Community Schools

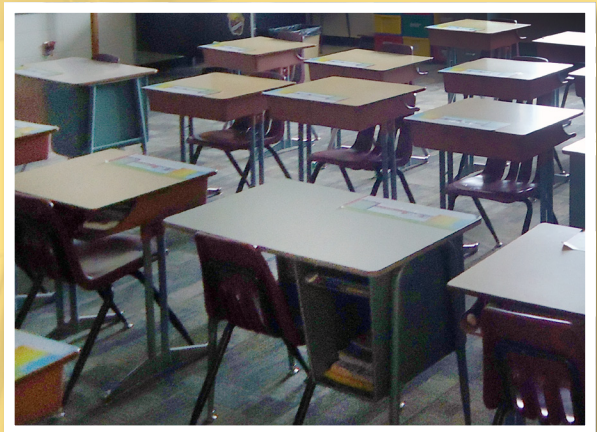
The Opportunity

Wakefield Community Schools has a high school and elementary school that are connected in one campus. The schools had been taken care of and very well maintained, but the mechanical infrastructure of the facilities had been aging and the equipment was past its useful life.

Due to their age, many of the systems did not operate in a manner that met standards and was cause for concern. The radiators in Wakefield Elementary School were old and had not been providing the appropriate ventilation for the students.

The boilers and chiller were also old and the rooftop units on Wakefield High School were not operating properly. The temperature controls system was antiquated and did not meet the needs of an efficient operational staff.

All of this resulted in an increase in instances of equipment failures and teacher/ staff complaints.



1 Building; 96,192 sq.ft.
Contract Amount: \$1,921,920



The Technical Solution

Initially Navitas assessed the technical and economic feasibility of a comprehensive list of facility improvements. These improvements included lighting, electrical, heating, cooling, ventilation, mechanical equipment, motors, technology, kitchen equipment, security and architectural features such as roofs, insulation, doors, and windows. The upgrades identified were divided into two categories, energy conservation measures and facility improvement measures. The energy conservation measures are those that were recommended to be implemented because of their ability to fully pay for themselves in a reasonable amount of time through the cost savings they create. Facility improvement measures are upgrades that may be partially funded through savings, but were planned for implementation because of education needs or because equipment is past its useful life and is at risk of failing.



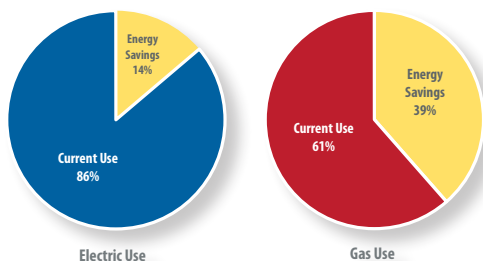
The Financial Solution

Wakefield Community Schools obtained financing as a loan and received approval from the State of Nebraska Energy Office to support an artificially low interest rate. They also received rebates from the Nebraska Public Power District. Together these funding sources paid for the entire project and it is being repaid in large part from the energy savings that are achieved.

Improvement measures implemented:

- Interior & Exterior Lighting Upgrades
- Lighting Controls Installation
- Building Automation System Installation
- Boiler Replacement
- 4-Pipe HVAC System Installation
- Multi-Zone Rooftop Units Converted to Variable Air Volume
- Windows Replacement
- Infiltration Reduction

Savings Summary



Total Savings Over 15 years = \$2,345,148

Environmental Impact:

368,661 lbs. of harmful CO₂ greenhouse gas emissions reduced annually

Equivalent to:

- Preserving 0.7 acres of forest from deforestation
- Conserving 10,657 gallons of gasoline