

Lighting Retrofit Case Study – Distribution Center:



OVERVIEW: In 2008, this Distribution Warehouse in Lenexa, KS, established a number of green initiative priorities. As the largest franchise in the country, their 239,000 plus square foot warehouse provides inventory for more than 80 stores. As part of that effort, they wanted to reduce utility expenses and reduce maintenance time and cost.

SCOPE: The project for this Distributor involved a complete redesign of the warehouse lighting. After reviewing the existing lighting design, it was decided to redistribute fixtures to reduce fixture count by more than 25% and to include a large number of occupancy sensors, that automatically activate fixture operation when there is activity in the area, and extinguish fixtures when activity ceases. This automated control makes a considerable difference in energy consumption — often reducing utility costs by 70% or more.

BENEFITS: The new lighting plan with occupancy sensors produced a 73% reduction in greenhouse gases, along with an annual 246,315 kWh savings. The brighter, clearer light throughout the entire facility provides a greater sense of security and allows for improved productivity.

In addition to reducing utility expenses, there were additional annual savings of more than \$6,000 in reduced maintenance costs attributable to the extended life lamps rated at three times the life of their old fixtures' lamps.

GREENHOUSE EMISSION SAVINGS: Resulting from the Project:

- Tons of Carbon Dioxide: 405,494
- Tons of Sulfur Dioxide: 2220
- Tons of Nitric Oxides: 1,180
- Total Autos off the Road: 34
- Annual Energy Savings: \$28,786

Before



After

