



# Sure Bet for Schools



## Gymnasium Lighting Retrofit Project

### Douglas County School District, Carson Valley Middle School

#### Project Description:

Douglas County School District converted 32 High Bay 400 Watt Metal Halide fixtures to 4 foot, 4-lamp, T5 High Output fluorescent fixtures with Electronic Ballasts in the school gymnasium.

*Contractor: United Electric Services, Inc.*

**Results/Benefits:** These new T5 fixtures with Electronic Ballasts are approximately 30% more efficient than the standard Metal Halide lamps they replaced. T5's equipped with Electronic Ballasts increase light output to 5,000 Lumens and also consume less energy than fixtures equipped with Magnetic Ballasts. Additionally, fluorescent lights do not degrade over time as much as Metal Halides. These new energy saving lighting fixtures with their increased light output have improved the quality of the gymnasium environment for the students. Unlike the original Metal Halide lights, the T5 fixtures do not have a "warm up" time and therefore can be turned off when leaving the gym. This allows convenient energy saving shut-down during periods of non-occupancy. Maintenance costs for lamp replacements are also expected to be reduced due to the longer life of fluorescent lamps.

This project's excellent lighting results will also help the district to provide clear guidelines for specifying gymnasium lighting standards in new and retrofit situations and may assist administrators in determining if and when lighting system efficiency upgrades should be implemented.

#### Project Details:

	<b>Total</b>
Peak Demand Savings	1.99 kW
Annual Energy Savings	24,676 kWh
Total project cost	\$18,000
Annual energy cost savings*	\$2,714.36

\* Assumes that the electricity rate is \$0.11/per kWh

**Note:** Savings are based on 10 hours a day, 310 days a year, converting 36 Metal Halide fixtures to T-5 fixtures with 4 lamps and Electronic Ballasts