

Performance Contracting Project: Haverford College



An athletic facility lighting renovation project for an illustrious higher-educational institution in the Greater Philadelphia region, leveraging energy efficiency, operational efficiencies and utility rebates.

Background

A private liberal arts college located just outside Philadelphia, Haverford College serves approximately 1500 students.

The College's Alumni Field House, a 58,000 square foot building which houses tennis courts and a 200-meter oval, was struggling with inconsistent and low lighting levels, due to the metal halide bulbs which did not burn evenly. Maintenance was also problematic as the rigid pendant lights were frequently broken by balls, and changing the light bulbs was time-consuming, requiring that the fixture be taken apart.

Haverford College partnered with CM3 for assistance in assessing the lighting needs for the facility and identifying energy savings and utility rebates.

Results

CM3's assessment uncovered that foot-candle levels in the tennis court ranged from a low of 15 to a high of 25. This was substantially lower than would be appropriate in an athletic facility. Further, CM3 identified that by converting from metal halide bulbs to fluorescent ones, Haverford College would not only save energy but also qualify for a rebate from local utility company, PECO.

The T-5 fluorescent fixtures were hung with aviation wire which allows them to move if a ball makes contact. And, the tubes, which can last 30,000 hours are easily replaced by flipping open the wire cage that shields the bulbs from impact.

In addition to the energy efficiency of the bulbs themselves, each of the new fixtures has an occupancy sensor that registers both heat and motion. This enables the lights to be turned on only in areas being used and to turn off when no activity is detected.

Project Overview

Cost: \$122K

Savings: \$9,700/Year

Rebate: \$14,600 PECO utility rebate

Notes:

- » Energy savings calculated at 3,650 hours of operation for 77 fixtures.
- » Occupancy sensor savings calculated at 25%.



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**We have fewer fixtures but more light.
In fact, the new more efficient fixtures
have nearly doubled the light output.**

- William Anderko
Assistant Director of Facilities
Haverford College

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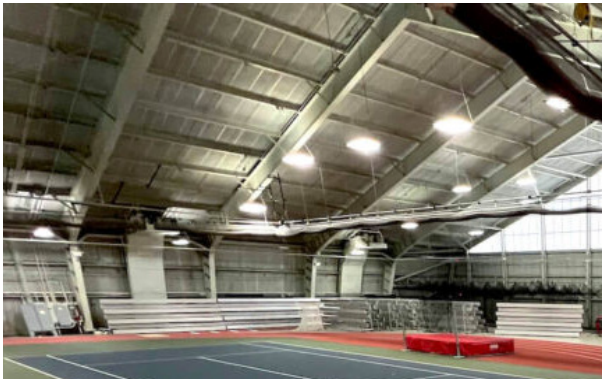
Services Provided

- » Turnkey installation services
- » Replace 120 400-watt metal halide high bay fixtures with 120 new Lux Dynamics T5 HO fluorescent high bay fixture including fixtures, lamps, occupancy sensors, wire guard, air craft support cable, and required electrical material
- » Demolition of existing control system
- » Coordinate Act 129 Rebate Documents with PECO



Products Deployed

The Lux Dynamics Tennis Court fixtures are designed to provide optimal visibility for players and structures that withstand the challenges of an indoor sports environment. The indirect light produced reduces shadows and glares for better ball tracking, and the wire cage minimizes the risk that balls will be trapped on top of the fixture.



Lighting Criteria

- » Light Levels: Appropriate for both players and spectators
- » Durability: Fixtures that stand up to anything that is literally thrown at them
- » Uniformity: Action looks the same no matter where a person is standing
- » Glare Minimization
- » Long Lasting Operation
- » Easy Installation



About PA Act 129

Pennsylvania's Act 129 offers rebates to help reduce energy consumption and peak demand.

The Pennsylvania Public Utility Commission oversees the program.

Electric distribution companies that serve more than 100,000 customers are required to develop programs that offer incentives to customers who implement energy efficiency projects.

The programs are funded through a surcharge on consumer's utility bills.

Rebates are provided for various energy efficiency initiatives including high-efficiency appliances, lighting, building retrofits, and smart meter installation.

