

College of the Holy Cross leads the way

O'Callahan Science Library
Worcester, MA



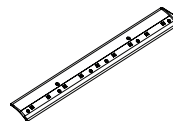
Founded in 1843, the College of the Holy Cross is the oldest Catholic college in New England – and one that is leading the charge in the fight against climate change by embracing the latest in new LED solid-state lighting and energy-efficient fluorescent lighting technologies.

The college broke ground on the first phase of their new energy-efficient Integrated Science Building Complex in April of 2007 and recognized an opportunity to renovate the adjacent lighting in O'Callahan Science Library to reduce their carbon footprint.

Michael C. McFarland S. J., the president at Holy Cross, is the driving force behind these green initiatives and he is also one of the charter signatories of the American College and University Presidents Climate Commitment (ACUPCC), a mandate acknowledging the unprecedented scale and speed of global warming and calling for action.

The commitment, made by presidents and chancellors in the

PROJECT SNAPSHOT



9-watt PLS
Undercabinet



Series X1-R,
2 lamp T8

“...they will see a one year payback for this project and an additional savings of \$30,000 every year.”

- Mike Thompson, National Grid



ACUPCC, is to achieve climate neutrality on campuses across the nation. Since the initiative was signed by schools in all 50 states last year, many universities and colleges are contacting their local utilities to see what measures they can take that will help them reach their ambitious goals.

According to Mike Thompson, Account Executive at National Grid, “Using state-of-the-art energy-efficient lighting is a very cost-effective way for universities to substantially reduce their carbon footprint – and the payback incentives from utilities are substantial.

“In O’Callahan Science Library, T12 direct lighting pendants were replaced with Indirect/Direct T8s resulting in significant energy savings – and there was even more substantial savings from replacing the T12 task lighting with Finelite’s 9-watt LED undercabinet fixtures in the study area. In total, the annual savings was 189,937 kilowatt-hours, \$23,742 savings every year for just the library.

“We have taken a more comprehensive look at the design approach for the whole science complex and believe they will be eligible for \$130,000 in incentives for lighting, lighting controls, and HVAC upgrades. With an incremental initial cost of \$160,000 they will see a one year payback for this complex as a whole and an additional savings of \$30,000 every year.”

Before the library was renovated, it was lit by 8 foot direct lighting fixtures producing a “cave effect” with many dark areas. According to the staff in the library, the new lighting is “like night and day.” Finelite’s SX1 Indirect/Direct lighting was used throughout the library creating a more evenly lit space with more visibility in the stacks and using half the amount of fixtures. PLS LED 9-watt undercabinet task lighting with individual occupancy sensors provides optimum visual comfort in the study area, allowing for the ambient

lighting levels to be reduced.

Although the original intent was to reduce carbon emissions, the new design transformed the hall and surrounding atrium. The space is open and light and encourages interaction between students and faculty.

The lighting is better, energy is saved and maintenance costs are significantly reduced; moving to LED and energy-efficient fluorescent lighting solutions is definitely a win-win decision.

According to John Lapomardo, Assistant Director of Engineering and Utilities at the college, “The project was successful in reducing total carbon dioxide equivalent emissions by 48 metric tons per year.” The College of the Holy Cross met its objective of reducing its carbon footprint and is setting the standard for other universities with a green agenda.



PROJECT DETAILS

Project:

College of the Holy Cross
O’Callahan Science Library
Renovation

Location:

Worcester, MA

Engineering:

College of the Holy Cross

John B. Lapomardo
Assistant Director of
Engineering & Utilities
College of the Holy Cross

Utility:

National Grid

Mike Thompson, C.E.M.
Account Executive