



Small Business Lighting Project Delivers Big Savings

Cascade School Supplies, Inc. has been an important mainstay in the business community of North Adams, Massachusetts, for nearly 90 years. The business originated by selling toilet paper, brown lunch bags and other paper goods before it morphed into a paper-converting operation that sold lined and unlined paper products. Eventually the core of the business took shape as a nationwide supplier of consumable school supplies to K-12 school districts.

Located in a 100-year-old five-floor facility, Cascade School Supplies sells everything from pens, crayons and notebooks to stickers, teaching aids and even furniture. More than 20,000 SKUs of educational materials can be ordered ranging in size from two to three pallets full of supplies for school districts to a small box full of items shipped to a teacher.

During their peak season in the spring and summer, over 100 employees play an important role in fulfilling these orders, from office staff to “pickers” who gather each school supply on the order to “packers” who stuff the boxes with the materials to “wrappers” who stack the boxes on pallets and shrink wrap them so they can be shipped.

“Our mission is to be a world-class educational materials distribution company by building loyalty with and exceeding expectations of both our customers and employees,” said Todd Shafer, vice president of Cascade School Supplies. “We conducted a survey recently with our employees, and it was clear that they were concerned about the lighting of the facility.”

“The project went really well...I barely knew what was going on until it was over. I opened my eyes and looked around and said, ‘Wow, big difference.’”

– Peter Cote, president of Cascade School Supplies



The coordination between National Grid’s energy partner, Energy Source’s Walt Pazderski, and Todd Shafer, vice president of Cascade School Supplies, played a key role in making the lighting project succeed.

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With the new lighting project, it is much easier for “pickers” like Hannah Baker to read what’s on her sheet and gather the needed school supplies on an order.

“We got to the point where the lighting was lacking a lot in areas,” said William Poirot, Jr., a warehouse manager at Cascade School Supplies. “Pickers have to read what’s on their sheet. Stock people have to match stock numbers. Packers have to print labels for the right orders. Without the proper lighting, all of these things are very difficult to do. Errors occur; time is wasted. Lighting was definitely something that we needed badly.”

To resolve the issue, Shafer reached out to National Grid, which sent its energy partner for the area, Walt Pazderski from Energy Source. The process started with an energy assessment, exploring Cascade’s gas and electric consumption, lighting fixtures and HVAC systems, and ultimately resulted in a project design based on the desired goals of Cascade School Supplies.

“When Walt first walked in, I thought he was on our payroll,” said Peter Cote, president of Cascade School Supplies. “He was here every day for weeks measuring, looking at every detail, documenting with photos and writing things up. He went to the ends of the earth to make sure the project was well documented without surprises, and laid it out to us in dollars and cents and eco-savings. It was just something I’ve never seen before. I’ve had others come in saying we’d love to save you money on your lights, but in those past cases, it didn’t happen that way. Walt demonstrated incredible follow-through. His work as the liaison between National Grid and the construction team made it so much easier for us. We didn’t have to do much of anything, really.”

The third and fourth floors are primarily used for storage and are therefore used sparingly compared to the busier first and second floors. That meant lights were on all day long unnecessarily, so sensors were installed to turn on the lights only in areas where employees were working.

\$110,887

total cost
of project

\$98,100

in incentives from
National Grid

\$30,000

annual energy
bill savings

“The real bang for the buck is in the offseason when they have 10 people instead of 100,” Pazderski said. “They can go days without anyone going up to those levels. The savings are incredible just by having sensors that automatically turn the lights off after 10 minutes of inactivity.”

In the stairway, the lights are required to be on 24 hours a day, but during periods of inactivity, sensors installed would dim the lights to 30 percent to provide further energy savings.



The new lights installed at Cascade School Supplies helped to illuminate darker areas of the facility, especially those where wrappers like Shari Perras prepare shipments on pallets and forklifts are driven.

Employees in the office space have specific requirements for how much illumination they would like in their personal workspace. Capitalizing on the natural light provided by the windows, LED smart fixtures were installed and programmed to everyone’s individualized lighting needs. A daylight harvesting app allows each fixture to provide a custom

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Todd Shafer (left) and Walt Pazderski use an app to control the desired lumen levels of a smart light in the office area.

lumen level based on individual needs. This overall level is achieved through an automatic adjustment that captures the free daylight from the windows and supplements it with electric lighting.

One strong benefit of the lighting change was that office staff reported a significant decrease of migraines triggered by improper lighting.

The total cost of the project was \$110,887 with an estimated annual energy savings of 113,872 kWh. This translates to an annual energy bill savings of over \$30,000.

Acknowledging this project removed over one megawatt of power from the grid, National Grid provided \$98,100 in incentives to offset the project cost. This brought the direct cost to Cascade School Supplies down to \$12,787. In addition, National Grid allowed Cascade to finance this amount directly on their monthly electric bill over a 36-month period at 0% interest.

“Cascade watches all of its pennies,” Cote said. “It is an older company and we do fairly well with our bidding, but as other expenses arise in Massachusetts, such as minimum wage and health insurance, we all know those are pinch points in the economy. So to see an annual savings of over \$30,000 every single year because we’ve partnered with National Grid and Energy Source is just amazing for us.”

Not only are the cost savings a major boon, the project came with other invaluable benefits.

“The productivity time that is saved because they can read the paperwork clearly right away is as big a savings as you

can get—probably the largest benefit that came from this project from my perspective,” Poirot said. “It has reduced errors significantly already. Not only that, the workplace is safer. We’re now better able to see obstructions in our way before someone gets hurt. The lighting also has an impact on how people feel when they’re working. Everyone has a sunnier attitude, and that makes the job a whole lot easier and boosts morale.”

“To have this outcome, four important groups have to come together to make it happen,” Pazderski said. “As the client, Cascade School Supplies was committed to doing the project right. National Grid had the programs in place and provided the financial incentives to help make it happen. Our lighting partner, Electrical & Lighting Resources, Inc., did a great job with the installation. And as National Grid’s representative, Energy Source helped to explain and coordinate the project and savings. Without cooperation from all four, a project like this would fall apart.”



Thanks to the new lights installed at Cascade School Supplies, packers like Ron Charron have the ability to better see the labels they print and improve productivity.

“Todd and I have been heads down running this business for a long time together, and things like this lighting initiative were second,” Cote said. “We gave them a thought when we had spare time, but we didn’t have a lot of spare time. So to have someone come in and really show us the way like Walt and his partners did, it really helped guide us. The project went really well. Everybody seamlessly communicated, and I barely knew what was going on until it was over. I opened my eyes and looked around and said, ‘Wow, big difference.’”

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