

GENISYS PoE Lighting provides advanced lighting for Behavioral Therapy

Inside one of its classrooms, Royal Oak, MI-based Judson Center - a non-profit human services agency that provides compassionate, comprehensive services to children and families throughout southeast Michigan - provides therapy and autism treatment for clients ages two through seven. Spending 30 hours or more inside the all-purpose room each week, children use the space to eat, nap, work toward therapy goals, and learn.

At any given time, between 10 and 12 people use the small room. These tight quarters – combined with bright, buzzing fluorescent lights – made it difficult for clients to nap and concentrate on activities.

“With our outdated lighting system, we were stuck with the lights either on or off,” says Jennifer Radowick, board certified behavioral analyst at Judson Center. “We didn’t have the ability to dim them or make them less harsh for clients who are toddler age and fell asleep while other were trying to work. No one wants bright lights when they take a nap.”



To temporarily address the issue, Judson Center staff found blue tablecloths and tissue they had on hand to drape under lighting fixtures for a calming effect. More than any other color, blue light exposure suppresses melatonin production, which typically leads to a soothing effect.

“For children with autism, lighting is typically an issue,” says Frankie Groce, director of autism services at Judson Center. “Oftentimes, fluorescent lights give off noise that other people may not hear, but kids with autism do. That can also be a trigger for anxiety or behavior issues. Having to be in the room for nine hours a day can be quite taxing on the ears. What we had wasn’t working.”

Discovery

When Innovative Lighting heard about Judson Center’s situation, the team visited the site along with JMC Electrical, a local NECA/IBEW partner. During a walk-through, they noticed the blue tissue paper covering the fluorescent fixtures and knew there was a more effective way to achieve the result staff members were after.



To give the Judson Center a retrofit solution that provides flexibility and customization - along with the ability to attain any light color they wanted - Innovative Lighting partnered with The Siemon Company, Wayne State University's NECA Student Chapter, Graybar, and JMC Electrical Contractor to design and install a new PoE LED lighting system. All time, materials, and software were donated to the nonprofit.

"Working with the Judson Center was very personally and professionally rewarding," says Bob Allan, The Siemon Company's global business development manager for intelligent buildings. "Being able to partner with Innovative Lighting, Wayne State University, Graybar, and JMC Electrical to deploy a lighting solution over a best-in-class structured cabling infrastructure for an 'outside-the-box' project that results in a better educational experience for autistic children is the highlight of my career."

Solution

Judson Center’s new classroom lighting system is completely customizable, with white light color-tuning fixtures that adjust from warm to cool white to alter color temperature. They also feature full RGB lights that can be set to any color. Any teacher using the space has full control over the color, brightness, and lighting level from a computer inside the room.



CASE STUDY

A wall switch also lets staff create up to four different preset scenes that can be changed at any time. This makes it possible to quickly switch back and forth between colors and brightness levels based on what is happening in the room: napping, hands-on sensory work, games, or reading, for example.

“All colors are labeled with a number,” says Radowick. “There’s a number that correlates with each color and lighting level percentage. That makes it easy for us to quickly select the settings we like, whether we do it manually or use a preset option.”

Because the all-purpose classroom is surrounded by large windows, staff members also alter the lighting based on the weather: cloudy, sunny, rainy, etc. “We definitely change the lights every day,” says Radowick. “We tend to favor cooler colors, but depends on our mood, how we’re feeling, what the kids are working on, and what it’s like outside.”

Results

Radowick and Groce both agree that the new lighting system is a welcome change from fluorescent lights. “The elimination of the buzzing in general was a huge change,” says Radowick. “Being able to customize colors is a big bonus. Teachers all report being happier in the room.”

Staff headaches from the fluorescent lights – a problem that’s very common for office workers as well – have also been reduced. Although the existing fluorescent lights are still in the room, staff members say they haven’t used them since the new lighting system was installed.

For the children who use the space every day, Radowick says the lighting system creates a calmer, more comfortable environment. “The young ones actually fall asleep when they’re tired from a long day because we’re able to dim the lights and make them blue – or another color that’s more relaxing. We have the full rainbow spectrum to choose from, with cool and warm tones.”

As something fun for clients to look forward to, staff members change room lighting based on upcoming holidays (red, green, and white at Christmastime, for example, or orange for Halloween). During free time, children are also able to complete certain activities or tasks for a reward: experimenting with different lighting combinations and selecting the color and brightness settings they like best.

“The ability to change colors is spectacular and awesome for our kids,” says Radowick. “They love to look up and see different color choices. The interface is pretty simple and didn’t take long to figure out how to use. Everything is controlled from a computer and very user friendly.”

She says the ability to alter the lighting as needed also helps children focus on therapy goals and the activities required to meet them – instead of fixating on buzzing or bright lights that interfere with their work.

“We appreciate Innovative Lighting coming in to help with this,” says Radowick. “They were able to give us that permanent change we really needed.”



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