The Colorado Department of Labor and Employment (CDLE) deals with tight budgets and construction deadlines, which are standard operating procedures for State construction projects. Yet their recent major addition proves that it is possible to build a top performing facility with no impact on budget and no delay in schedule. The project, which added 40,000 square feet of office space and upgrades to an existing building, incorporates design features and equipment that increase comfort and minimize environmental impacts through energy, water, and resource efficiency measures. This major addition is the first Colorado State building to receive national recognition through LEED® (Leadership in Energy and Environmental Design) certification for its conservation of materials and resources during the construction phase as well as its energy efficiency, water conservation, and healthy work environment.

High Performance Buildings are Easily Within Reach

Getting Started

"It wasn't nearly as complex or difficult as we had imagined" Project Architect with the State and design team member Lance Shepherd recalled of the building project and LEED certification. Despite having limited experience with high performance buildings, Shepherd and his team have created the most environmentally friendly State building to date with guidance and support from the Governor's Energy Office (GEO).

Shepherd was recently involved in performance contracting at the Capitol Complex with GEO's assistance, and again looked to the Office for advice on the latest approaches for efficient new building design and construction. GEO seized the opportunity to support the CDLE project by providing a grant to offset some of the additional costs associated with planning to create a more environmentally friendly building.

"It wasn't nearly as complex or difficult as we imagined to achieve our high performance goals."
Lance Shepherd, Project Architect, State of Colorado

Lance Shepherd and Angie Fyfe stand by architectural glass blocks that bring natural light into the CDLE building

The project team began by holding a "design charette," an intense brainstorming process to discuss goals for the new facility and identify solutions to sometimes complex design problems. They assembled CDLE employees to discuss in detail how their goals for the new building could be incorporated from the ground up. Better light, greater thermal comfort and control, energy efficiency, and an inviting space that allowed them to see the outdoors were high priorities. In addition, the group wanted to minimize the building's environmental impacts, making it healthier for the earth and for the people who work there. In essence, the employees identified the benefits that LEED certification would provide.

Governor's Energy Office

Getting the Team On Board

Since the LEED certification process was only recently created, the CDLE team was breaking new ground. They were worried that local building design, engineering, and construction professionals would balk at the idea and would lack the experience needed. The selection team looked to the U.S. Green Building Council for LEED accredited architects and design professionals in Colorado. "For us, it was actually quite easy. Our architect and primary contractor were supportive and willing to do the work necessary to meet our high performance building objective," says Angie Fyfe, CDLE project manager. Hyder Construction did their homework, searching for building materials and equipment that met LEED's strict environmental criteria. Shepherd notes "This is the future of construction for us at the State level, and we want to work with partners that are dedicated to environmental design."

The Payoff

Many features are readily visible during a tour of the LEED Certified building. Natural light filters throughout the building. Open spaces, rather than closed offices, line the perimeter of each floor to maximize sunlight and views. Exterior glass block walls, skylights and conference rooms with glass walls also help to infuse the building with natural, free sunlight. Making efficiency and comfort high priorities in the design and construction process pays off long-term for employees. Angie Fyfe noted that frequent comfort complaints – both too hot and too cold – in the old CDLE building are now almost non-existent; maintenance calls are reduced as well. The use of low-toxicity paints, finishes, carpets and other materials throughout the building, as well as nontoxic cleaning products used every day in the building create a significantly healthier working environment for CDLE staff. Shepherd considers this improved indoor air quality the building's top feature. "Even the day after walls were painted and carpet was put down, we didn't have fumes and that awful new building smell."

We are the Champions

Ground-breaking success stories rarely happen without a champion. In this case, a group of champions came together to make the project work. It may have been easier to follow the same old script, but this group wanted to demonstrate that buildings can be better, healthier and have lower environmental impact without a great financial burden or schedule delays. With support from GEO, dogged perseverance from the project team, and a construction company that recognized the value of this project as a stepping stone for future business, CDLE now has a new home that will pay dividends far into the future.

Colorado Department of Labor and Employment LEED Addition

Fast Facts

- Groundbreaking for 40,000 square foot addition Dec 17, 2003, Completed Dec. 3, 2004
- LEED Certified, August 2005
- LEED Innovation Design Points for green housekeeping, local resource use, and high use of recycled content materials
- Recycled 1374 tons of concrete
- Addition cost approximately $100 per square foot
- CDLE Employs 575 total, with 180 in new addition plus conference and training space
- Awarded one of the Top 2005 Projects by Colorado Construction Magazine highly reflective roofing tile, central steam heat

Building Enhancements

High efficiency HVAC
High efficiency lighting
Lighting controls
Natural daylighting
Energy management system
Reflective roof coating
Low flow faucets and toilets
High recycled content of ceiling tiles, carpet
Recycled materials from the deconstruction
Low VOC paint
Purchased local materials when possible
Daylighting and views for call center employees
Low toxicity of cleaning agents
Purchase wind power for building

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