



It's All About the Green ...

Resting on the bluffs above the Missouri River in Jefferson City, the Lewis and Clark State Office Building overlooks the route taken 200 years ago by its famous namesakes. And as the Corps of Discovery led the way for the exploration of the American West, the Lewis and Clark State Office Building is leading the way in sustainable building practices for future

public and private office buildings. The 120,000 square-foot building was designed, is being built and will be operated to minimize its impact on the environment. From its inception, the building was intended to be compatible with the Missouri Department of Natural Resources' mission of preserving, protecting, restoring and enhancing Missouri's natural, cultural and energy resources.

The Lewis and Clark State Office Building will incorporate the following LEED™-certified green building technologies:

- ◆ Daylight to minimize electric lighting
- ◆ Recycled rainwater from roof for toilets
- ◆ Waterless urinals
- ◆ Native plant landscaping
- ◆ Construction waste recycled
- ◆ Demolition waste reused on-site
- ◆ Other recycled construction materials purchased from Missouri or region first
- ◆ Sustainable site chosen from city's existing urban core
- ◆ Heating/cooling system maximizes use of the sun
- ◆ Raised flooring minimizes heating/cooling "waste"
- ◆ Photovoltaic roof panels to minimize energy consumption



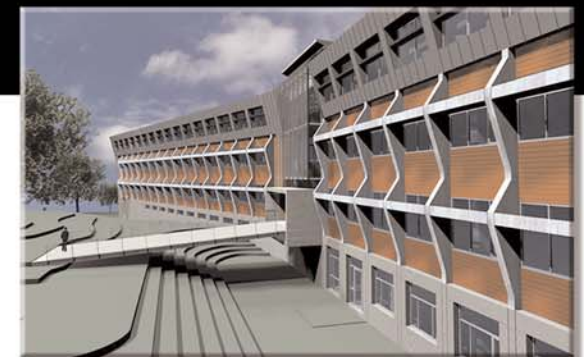
Construction Countdown

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| 11/98 - Sustainable Building conceived by department management and staff | 03/01 - Site selected |
| 07/99 - Funding appropriated | 12/02 - Architectural plans approved |
| 10/99 - Conceptual planning | 03/03 - Prime construction contractor, Professional Contractors and Engineers, selected |
| 02/00 - Design firm of Berkebile Nelson Immenschuh McDowell Architects selected | 04/03 - Groundbreaking |
| | 12/04 - Building completed |

Lewis and Clark State Office Building



Missouri Department of Natural Resources



Artist's rendering of the Lewis and Clark State Office Building. Graphic courtesy of the design firm, BNIM Architects of Kansas City.



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"Integrity and excellence in all we do"



LEWIS AND CLARK STATE OFFICE BUILDING

Construction of the new Lewis and Clark State Office Building provided us the perfect opportunity to consolidate many of our central offices while demonstrating a hand-in-hand commitment to energy efficiency and fiscal responsibility. This new facility, designed by BNIM Architects of Kansas City, will serve as a tool to promote environmental sustainability in construction and the cost savings it can provide.

The department sought Leadership in Energy & Environmental Design (LEED™) certification for this new construction. LEED™ certification, administered by the U.S. Green Building Council, rates projects based on five criteria: site sustainability, energy and atmosphere, indoor environmental quality, material and resources, and water efficiency.

To meet requirements of this certification, designers incorporated several important elements into the building's design. The building placement is oriented on an east-west "axis" to maximize daylighting of



Facility support beams near completion in the fall of 2003.

Construction of the interior atrium on the second floor of the Lewis and Clark State Office Building. The inner reaches of the facility already are utilizing available for workers – even before electric lights were available at the site.



DNR photos by Scott Myers

Photovoltaic panels on the roof maximize the sun's energy for power, 12 months of the year. The annual energy savings to Missouri taxpayers will be between \$85,000 and \$92,000. The modern cube designs employed will take full advantage of efficient floor-based heating, cooling and lighting.

employee workspaces and shading of direct sunlight during the summer. It also takes advantage of passive solar heating in the winter without direct sunlight penetrating the building. Light shelves and sun shades will protrude from the front of the building and perform two functions: reflecting sunlight deeper into the building's interior and shading external windows during the most extreme summer sun angles.

Rainwater from the roof will be captured and routed via pipes to a cistern for flushing toilets. Water-saving fixtures such as waterless urinals will be installed to improve water efficiency. The site's landscaping will feature native Missouri plants, which will require less watering during Missouri's hot summers. They also will filter and clean water as it is absorbed.

Materials with a high recycled content have been used whenever possible, from the concrete to the carpet. The old women's prison, which is located on the site, was deconstructed, with the bricks being reused in construction of the new facility.

A great deal of thought also went into selecting the building's location at the Missouri State Penitentiary Redevelopment site. Placing state

buildings and facilities in the central downtown or revitalization districts of urban cores can improve the economic health and the stability of these urban populations. While our department looked at 24 other sites in central Missouri, we chose this location because it was located in the core city, would help anchor redevelopment of the prison site and provide a linchpin between the redeveloped site and the natural area to the east. Both are priorities that are in line with our department's mission.

When the building is complete, its design will save Missouri considerable energy and water dollars. Energy software modeling of the designed electrical and mechanical systems estimates it will save between \$85,000 and \$92,000 per year in energy costs. This construction will help us save taxpayers' money by lowering our utility bills. According to the Governor's Energy Policy Council, state agencies and universities spend about \$78 million annually on energy in their facilities. By reducing this bill just ten percent, Missouri could save \$7.8 million annually.

We hope it will encourage other state agencies, as well as private businesses, to look for opportunities to make their own buildings a little greener, or to incorporate green elements when constructing new buildings. The Lewis and Clark State Office Building demonstrates that green buildings are not only good for the environment but also save money in the long run. After all, it's all about the green.



Building front as it appeared during construction in summer, 2004. Interior view of the front windows shows light shelves and sun shades already at work.