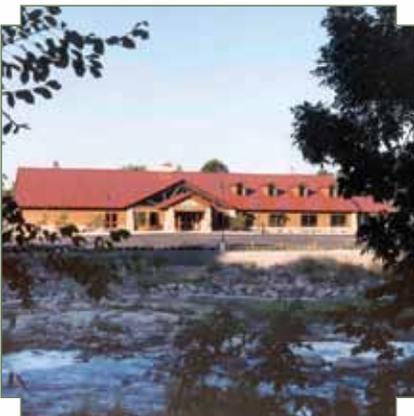




# BUILDING GREEN

## SUSTAINABLE DESIGN FEATURES AND CONSTRUCTION EXAMPLES

In today's construction environment the use of energy efficient products, sustainable design, and green building techniques are becoming critically important. At Market & Johnson, we understand these issues and have experience incorporating them into a budget friendly building project.



The DNR became involved with the new Leinie Lodge project to preserve the aquatic vegetation surrounding Duncan Creek.

### Site Selection

*Select a building site that will allow for the protection and retention of existing landscaping and natural features.*

The new UW-River Falls Student Union building's parking lot is surrounded by three storm water retention ponds that have been planted with native vegetation to add wetland space to the site.

When the Children's Museum of Eau Claire chose to remodel an existing building in downtown Eau Claire for their new home, they didn't just preserve an old building, they preserved land space as well. Additional Green Concepts incorporated into the museum were using low-emitting materials such as formaldehyde-free particleboard and paints with low volatile organic compounds—both improve indoor air quality.



Children's Museum of Eau Claire



GENERAL BUILDING CONTRACTORS  
CONSTRUCTION MANAGERS

**Eau Claire Office**  
2350 Galloway Street  
P.O. Box 630  
Eau Claire, WI 54702-0630  
Ph. (715) 834-1213

**La Crosse Office**  
1652 Lakeshore Drive  
P.O. Box 2769  
La Crosse, WI 54602-2769  
Ph. (608) 784-5000

[www.market-johnson.com](http://www.market-johnson.com)

*Metals, drywall, concrete, masonry, cardboard, and wood were all recycled throughout the UW-River Falls Student Union Project.*

### Key "Green Concepts"

- Day Lighting
- Energy Efficient Mechanical Systems
- Recycled Building Projects
- Construction Waste Management
- Low-Emitting Materials

### Energy Efficiency

*Design strategies, such as day lighting can dramatically affect building energy performance.*

The UW-River Falls Student Union Center's exterior is highlighted by a multi-story aluminum curtain wall system on the building's south face. This allows the winter sun to naturally warm several floors of the interior of the building. The building is also shielded from the summer sun by a 10' roof overhang, minimizing heat gain by the higher sun angle in the summer.



*John Flynn Elementary School, pictured left, has many windows that gather indirect light, reducing the need for electricity.*

### Geothermal Well Systems

*A geothermal well system circulates a water-based solution through a buried loop system to take advantage of the earth's relatively constant temperature.*

Many schools, government buildings, and private businesses are installing geothermal well systems for heating and cooling. During the heating cycle, fluid circulates through the loop extracting heat from the ground. The heat energy is transferred to the geothermal unit which compresses the extracted heat to a high temperature and delivers it through a normal duct system. For cooling, the process is reversed because the earth is much cooler than the air temperature on a hot day.

Market & Johnson has completed several projects that utilize geothermal well systems including Jackson Electric Cooperative, Cable Natural History Museum, Chequamegon Telephone Cooperative, Oakdale Electric Cooperative, Barron County Justice Center, and Buffalo Valley Veterinary Clinic.

### Design for Water Efficiency

*Use systems that help reduce water consumption in buildings and conserve water in landscaped areas.*

To reduce the runoff from the building footprint and reduce the water supply demand for the building, the UW-River Falls Student Union Center has four 12,000 gallon water storage tanks that collect rain water from the roof runoff and reuse this water to flush toilets after it's treated.

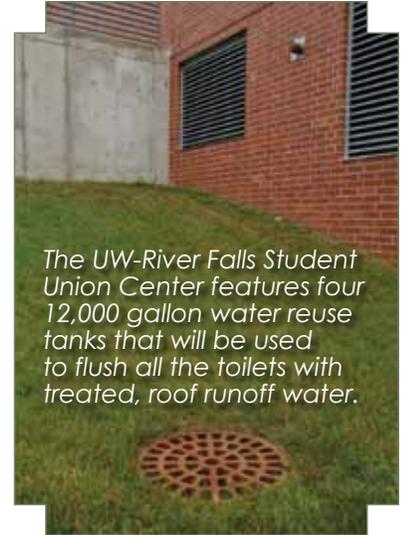
### Material Efficiency

*Select sustainable construction materials and reuse and recycle construction and demolition materials.*

Many of the materials used at John Flynn Elementary School are renewable sources, such as linoleum. Toilet stall partitions are made from recycled milk jugs and the recycled nylon carpeting can be recycled again in the future.

The UW-River Falls Student Union is constructed of structural concrete decks with partial steel frame and heavy timber frame roof systems.

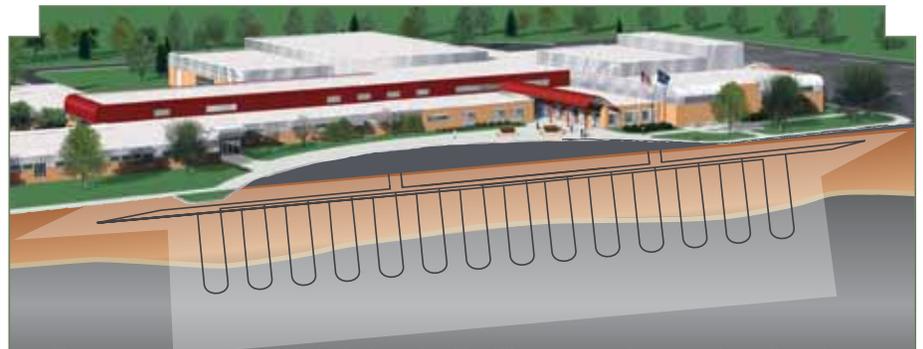
The waste concrete and masonry were returned to local pits to be broken up and reused in concrete or base course. A consistent waste recycling program was implemented for this project, reducing over 50 tons of construction waste that would have been sent to local landfills.



*The UW-River Falls Student Union Center features four 12,000 gallon water reuse tanks that will be used to flush all the toilets with treated, roof runoff water.*



*UW-River Falls Student Union*



*The new Spooner High School will utilize a geothermal well system.*