

Going for Gold!

Sustainable Building Design at Work

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The Ohiopyle State Park Office - Laurel Highlands Falls Area Visitors Center is more than it appears. It is considered a “green building” because it was designed and constructed to United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) guidelines for new construction. Such buildings incorporate environmentally-responsible design strategies and technologies to maximize resource efficiency throughout the life of the structure.

Why Build Sustainably?

Buildings designed in accordance with LEED Gold guidelines:

- Consume 25% less energy.
- Produce 34% less CO₂ emissions.
- Consume 11% less water.
- Reduce on-site, construction-generated waste and debris by 50%.
- Provide cleaner, indoor air quality for occupant health.

More Information

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What Does LEED Mean?

The LEED rating system is organized into five environmental categories with specific requirements and/or performance criteria. A credit is earned for each requirement that has been satisfactorily met. The building received 41 credits, to earn Gold certification.

Look around. Ask questions. Many of the methods used throughout the building can be replicated in residential settings. Consider what you can do at home or at work to increase efficiency, reduce costs, and improve your environment.

Green Features



1. Previously Developed Site: Instead of impacting undisturbed park land, the new visitor center was built on the footprint of preexisting park structures. Their demolition included extensive salvage and recycling of materials and products.



2. Building Orientation: The building's orientation maximizes natural light while controlling solar heat gain during occupied hours. The majority of the floor space was intentionally located on the lower level; helping the building blend in with the surroundings.



3. Stormwater Management: To protect water resources; bioswales, a rain garden,

and pervious pavers allow stormwater to seep into the ground rather than run off into the river. The two green roofs and a cistern also collect rain water for reuse, decreasing runoff from the building.



4. Native Plant Species: Landscaping with native plants requires less maintenance, uses less water, and provides wildlife habitat. Former lawn areas have been reverted to meadows that attract insects and birds while reducing greenhouse gas emissions from mowers.



5. Green Roofs: Two green roofs reduce stormwater runoff, reduce heat absorption, enhance the insulating value for the interior space, and help the building blend in with surroundings.



6. Fiber Cement Rainscreen Installation:

The grey panels on the building exterior shield the building from the elements like traditional siding, but were installed as a rainscreen. An intentional space between the siding and the weather-resistant barrier improves ventilation, minimizing the risk of rot, and reducing direct solar heat gain.



7. Color Choices: Light exterior colors help reflect heat which minimizes impacts on the microclimate, wildlife, and human habitat.



8. Dark Skies: All exterior light fixtures are dark sky friendly. Such fixtures direct light downward only, reducing light pollution and protecting your view of the stars.



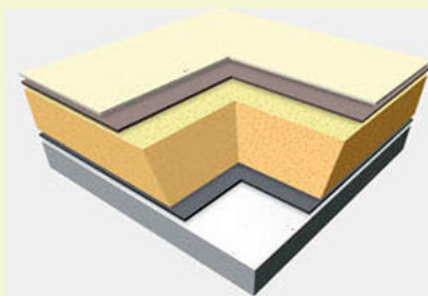
9. Biological Wastewater Treatment: A series of indoor and outdoor treatment tanks and constructed wetlands remove waste and clean the water. Treated water is reused for flushing toilets: reducing domestic water use, chemical use, and the amount of wastewater entering Ohiopyle Borough's treatment system.



10. Low Flow Fixtures: To enhance water conservation, all urinals are waterless and all toilet fixtures, faucets, etc. are of low flow, high performance design.



11. Geothermal: The building is heated and cooled using earth's stored, thermal underground energy. In winter, the system moves stored heat from the ground into the building. In summer, the system does the reverse. The building's exhaust heat is also recaptured and used to heat incoming air. These processes reduce energy use and dependence on fossil fuels.



12. Insulation: The roofs and walls were constructed with structural, insulated panels, which sandwich a foam-insulation core between two facings. These panels create an extremely well-insulated and airtight container. Energy-efficient interior walls, windows, and doors were also incorporated. These strategies help minimize heat gain and loss throughout the year.



13. Environmentally Conscious Materials: Building material choices also support environmental sustainability. Finishing trim and doors use Forest Stewardship Council certified lumber. The reception counter, bathroom floor, and wall tile incorporate recycled glass. Other countertops, like in the Multi-purpose Room, are made from 100% post-consumer waste paper. Lastly, 79% of the office furniture is fabricated from recycled content.



14. Indoor Air Quality: An indoor, air quality control plan minimized the introduction of chemicals and particles during construction. A 28-day building flush out reduced contamination dust prior to opening. Selection of products with low or no volatile organic compounds (VOCs) and installation of operable window systems also maintain better indoor air quality.



15. Automated Control Systems: Automated system controls, like motion sensors and timers, further enhance energy savings and efficiency. Various lighting and heating, ventilation, and air conditioning (HVAC) controls were incorporated to allow for programmable setting adjustments based on levels of activity and occupancy.