

Architects' Reflections: The Lewis and Clark Exploratory Center

Overview

The design for the Center merges the building with the hillside in Darden Towe Park. A green roof extends from the hillside and transforms from a green roof into an occupiable roof deck from which visitors can view the Rivanna River. From there, one is symbolically linked to the primary objective of the expedition; to find a water route from the Missouri River to the Pacific.

The exhibit center offers hands-on activities that engage visitors in the story of Lewis and Clark's journey as well as the culture of native American Indians, and the animals and plants collected and documented during the historic journey. A library offers books and artifacts on the subject and students can even cook the same foods eaten during the explorers' day.

Interestingly, the building has become more than originally planned for the Center. It has become a portal for access to the river, and a weekend day sees children running down the steps with fishing poles. The outdoor terraces also host informal birthday parties and picnics. Kids bring their scooters and bikes and tool around the lower terrace or call to each other from the upper deck. In short, **the site and building now serve the Charlottesville and Albemarle community as a park amenity offering safe space for sheltered activities with a view to the Rivanna river and access to nature.**

Green Design Features

The Center is a LEED qualified project and its green features tell a story about the environment and stewardship; a series of river-stone steps carry rainwater from the terrace releasing into a river stone bed. The Center has future plans to collect the rainwater in a cistern (a strategy used by Thomas Jefferson at Monticello), is one of the sustainable strategies, rendered visible. Collected water will be reused for irrigation. The **green roof** retains rainwater, releasing it back into the atmosphere without runoff into storm sewers, captures air-borne pollutants, releases oxygen, provides habitat, lowers roof temperature (heat island effect), reduces energy use by helping to moderate the building temperature and prolongs the life of the membrane roof.

To reduce electricity usage, LED lights are used throughout. **Geothermal technology** takes advantage of renewable energy in the form of the earth's stable temperatures.

Coupled with ground-sourced heat pumps, these technologies reduce grid-sourced energy usage for the project. Additionally, ducts are tightly sealed and building commissioning will be conducted.

In terms of materials usage, **Cambia wood** is used for exterior cladding. Donated by Northland Forest Products, it is thermally modified domestic poplar lumber to improve both dimensional stability and decay resistance of wood without the use of chemicals allowing the wood to perform similar to imported hardwoods. Roof decking, bar joists and steel framing employ **recycled content** (50-100%). Aluminum windows are 100% recycled content. Fly ash is produced during the combustion of coal and is used as a substitute for sand in the concrete mix.

Construction waste management was employed and post-occupation recycling stations provided. Shaw Carpet with **Green Label Plus Certification**, achieving the highest standard for indoor air quality is used in the library. Recycled content in sheetrock walls and in ceiling tiles.

The architect also paid careful attention to the indoor environment using enhanced outdoor air ventilation, moisture control and a balanced distribution of space heating and cooling. Contaminates-control was employed during construction.

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