



## **WHAT A LIVING BUILDING IS MADE OF**

Something incredible happened at a college in Massachusetts recently. The largest Living Building in New England, the R.W. Kern Center, opened at Hampshire College in Amherst. For those unfamiliar with what it means to be a Living Building, here's a primary tenant: a building certified as a "Living Building" by the International Living Future Institute (ILFI) must create more resources than it needs.

"The Living Building Challenge (LBC) is inspired by this vision that buildings can give more than they take from the world," said Greg Norris, chief scientist at ILFI. "Where we are not creating a habitat at some cost to the planet. We're actually creating a building that's going to enrich the future in many ways, environmentally, socially, human health and well-being."

Take water, for instance. A Living Building is responsible for giving water to the rest of humanity in addition to meeting its own needs, rather than taking it, Norris said.

Now consider energy. "There should be more energy available on earth after this building has met all of its own needs," Norris added. "Plants and animals are contributing to the web of life that they're part of and that's the vision that buildings do the same thing."

So who better to build this high-achieving structure for a college than one of its

own? Jonathan Wright is the principal of Wright Builders, the project's contractor, and also a Hampshire College alum. He brought a distinctive understanding of the objective to the center's construction.

"The Living Building says we need to have environments and buildings and communities that are not only sustainable but regenerative," Wright said.

If you're thinking that's a tall order, you're correct.

"From a designer perspective, it seemed very large and hugely difficult," said Jason Jewhurst, senior associate at Bruner/Cott, the designer of the building.

But when the project team of this 15,000-square-foot, multi-purpose center outlined and picked apart each challenge during the initial design charrette, it made this massive project more manageable.



"The owner, the contractor and the architect were all pulling in the same direction always," said Christopher Nielson, designer at Bruner/Cott.

### Material matters

When asked about the most difficult part of constructing a Living Building, Wright always gives the same answer. "It's obvious what the hardest thing is," he said. "It's finding the stuff."

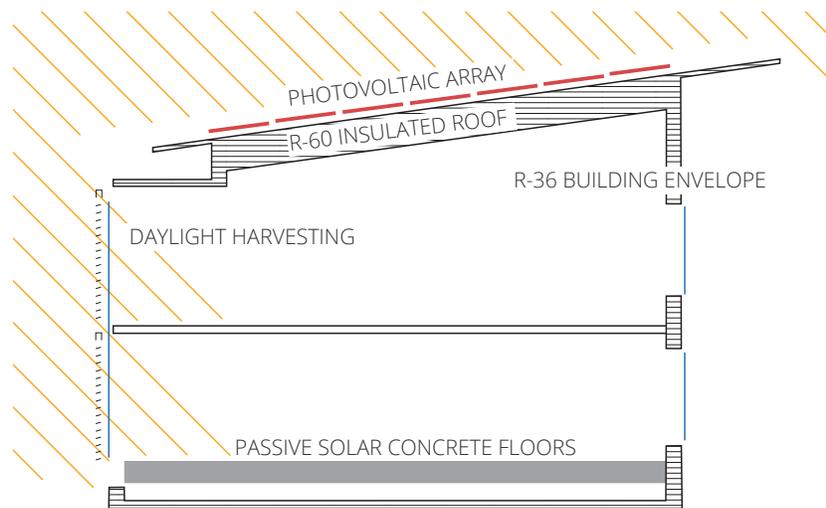
While materials present perhaps the biggest trial, it's also one of the most important elements of the LBC. Nielson of Bruner/Cott believes programs like LBC that disclose product ingredients are only going to become more prevalent.

### Borrowing from the Bullitt Center

When it came to the Kern Center's building envelope, the project team was pointed in PROSOCO's direction from the team of another high-profile Living Building.

During the charrette, the group met with the team that completed Seattle's Bullitt Center in 2013. That helped the group refine its schematic design process and learn the lessons from a team that had successfully completed a Living Building.

Borrowing a page from the Bullitt Center playbook, the Kern Center team used



PROSOCO's R-Guard FastFlash air and water barrier system on the building envelope, including Joint & Seam Filler, FastFlash, Cat 5 and AirDam, all of which hold the Declare labels needed to comply with the LBC Red List.

The vapor permeability of the R-Guard products played a crucial role in the wood-framed, 12-inch cavity, double-stud walls, Wright said.

"The properties that we get from PROSOCO Cat 5 are essential to the performance of this building," he said. "If it were just a plastic sheet, we would not have the ability to pass moisture in a way that's necessary."

Wright continued: "To have a high-performance building, where the doors are opening all the time and you have people working and all these other

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activities, you must have a phenomenally well-put-together building envelope. The architecture required some very careful assembly, but the PROSOCO products were really the core of that."

The project team also needed a sealer and protective treatment on the center's concrete floors, and a water repellent to protect the exterior masonry. Tom Lane, PROSOCO sales manager covering New England, made frequent visits to the job site, worked with the team and provided training and support for PROSOCO's Consolideck LS and Consolideck LSGuard, as well as Natural Stone Treatment WB Plus, which all meet the stringent LBC materials criteria and Red List conformance.

Wright praised PROSOCO's attitude and assistance during the meticulous product vetting process that can take up to several months.

"Having a willing partner on the manufacturing side as opposed to a recalcitrant one is more than night and day," Wright said. "There are materials processes that have taken eight, nine, 10 months, and there are some that have taken three weeks."

As a resident of New England himself, the ILFI's Norris said it's "wonderful seeing more and more... really a groundswell of Living Building projects here in New England."

Part of that continued growth could be spurred by companies like PROSOCO that take a chance on the Living Building Challenge and its ingredients disclosure requirements, Wright said.

"I really think that PROSOCO did an amazing job of leading the pack in industry... It's something that provides inspiration to the rest of us, and if they can do it, we can do it," he said. "That's sort of where it all starts."



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## R.W. Kern Center

**LOCATION** Amherst, Massachusetts

**COMPLETED** 2016

**SIZE** 17,000 square feet

**COST** \$7.1 million

**OWNER** Hampshire College

**ARCHITECT** Bruner/Cott & Associates

**GENERAL CONTRACTOR** Wright Builders

**MATERIALS CONSULTANT** Integrated EcoStrategies

**ENERGY MODELING CONSULTANT** South Mountain Company



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