When it was time for Chicago’s big redevelopment project at Navy Pier, the experts turned to Unilock.

PERMEATING

GO

DESIGN

UNILOCK PERMEABLE PAVERS GO WITH THE FLOW OF NATURE BY LETTING STORM WATER IN AND KEEPING HEAT OUT

BY BRIAN BARTH
very time it rains, Elaine willis Smiles. As the director of commercial strategy for unilock, North America’s premier manufacturer of concrete pavers, she takes satisfaction knowing she’s helping to make the planet a little more permeable each day.

The company was a pioneer in designing paved surfaces that allow storm water to infiltrate back into the subsurface, unlike impervious concrete and asphalt surfaces that channel runoff into rivers and streams, creating a host of environmental issues and contributing to downstream flooding.

It happens to pouring when I reach Willis at the Toronto headquarters for Unilock. Again. For several years in a row, the city has seen above average rainfall, not unlike many other regions of the world in the age of climate change. Huge tracts of waterfront property on Lake Ontario have been submerged for over a month. “If we had more permeable surfaces we could greatly reduce some of the issues we’re having with storm water,” Willis says. “A lot of people don’t realize that permeable pavers don’t cost any more than traditional pavers.” She adds that permeable pavers don’t hold a candle to the beauty, aesthetics, asphalt and concrete are often just vacuum out the clogged joint material and that takes care of it. At worst, you may have to pull up some of the pavers and replace the aggregate, but you are able to reuse the same paving stones. With pervious asphalt, you have to replace it entirely if it becomes clogged.”

Of course when it comes to aesthetics, asphalt and concrete don’t hold a candle to the beauty and grace of pavers. Brad McCauley, a managing principal at the Chicago-based landscape architecture firm Site Design Group, has been specifying Unilock permeable pavers on his projects for more than a decade. The firm has more than 100 LEED-certified projects under its belt, and he says almost all of those have a permeable paver component, including the China-town Branch of the Chicago Public Library, which won the Library Building Award from the American Institute of Architects and the American Library Association in 2016.

Rather than looking at paving as just a piece of infrastructure, why not put in something that is both more functional, and beautiful, than ordinary paving?” McCauley says. “In the early days of permeable pavers, they were very utilitarian, not something that would complement a landscape architect’s design. But Unilock has been ahead of the game in pushing permeable surface applications, making it cost to maintain the pavers, asphalt were nearly double what it costs to maintain the pavers. The large permeable surface factored heavily in achieving SITES certification for the project. Porous pavement, which refers to paving asphalt in a way that allows the surface full of holes when it hardens (like igneous rock), is also an option for infiltrating storm water runoff. However, these products have a tendency to quickly become clogged and cannot be readily cleaned out, defeating the purpose. Should permeable pavers become clogged and begin to lose their perviousness, the problem is easy to fix. Willis says, “You can often just vacuum out the clogged joint material and that takes care of it. At worst, you may have to pull up some of the pavers and replace the aggregate, but you are able to reuse the same paving stones. With pervious asphalt, you have to replace it entirely if it becomes clogged.”

If you’re working with that.”

Recycling, reducing the heat island effect, and recharging local aquifers, all with a product that is infinitely more appealing than black asphalt—what’s not to like about that?” McCauley asks. “We’re always working to be good stewards of the land, and permeable pavers are a big help with that.”

Permeable Paver 0
Pavers with a larger gap size that allows water to infiltrate. Unilock Eco-Promenade™ permeable pavers have a 7mm gap size.

Solar Reflectance Index (SRI)
A measure of a surface’s ability to reflect heat from the sun. LEED standards require a minimum SRI of 29.

Supplementary Cementitious Materials (SCM)
Waste products or natural materials used as an admixture in concrete. SCMs such as fly ash, blast furnace slag, and ground glass are options to increase the recycled content of pavers.

Institute of Architects and the American Library Association in 2016.

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