

[RETAINING WALLS]

Reaching New Heights

Retention pond retaining walls lock in a corporate center's LEED certification

By *Jeremy Manthei*

Allstate Insurance Co. began building a new, state-of-the-art “green” data center in northwest Illinois in 2008. Due to the plans for the site and the need to store all storm water in onsite retention ponds, project leaders deemed retaining walls a necessity. These walls were to be constructed around the ponds to allow for adequate capacity without exceeding an acceptable footprint.

Typically, retention ponds are not known for their architecturally pleasing features. For this project, however, Allstate and landscape designer Robert Mueller wanted to do something different. Mueller is the owner of Landscape Artist, a company that specializes in natural and native landscape planning, design and installation. He decided to use

the ponds and their requisite walls as a feature of the site rather than an aesthetic liability.

In order to achieve this goal, Mueller needed a wall material that would meet specific criteria. Sustainability drove all aspects of design and construction for the building and site. Because the project was designed to U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) Gold certification standards, it was critical that the retaining wall materials contribute to the standards.

Other project requirements included:

- An overall cost within budget;
- Wall material allowing for structural engineering;
- Easy wall installation; and
- The final product blending in with natural surroundings.

Aesthetics

Mueller found the Rosetta wall system at a regional industry event and deemed it an ideal fit for the project. The structural wall system is created by

casting architectural wet-cast concrete into molds taken from actual weathered limestone. The product has been designed to allow the units to interlock, giving it the structural benefits of large concrete retaining wall units while maintaining the aesthetic benefits of natural stone.

“The plantings we specified there were all native from trees, shrubs and grasses to expansive wildflower areas,” Mueller said. “It just seemed like the right choice to use the [the wall system] in the ponds to give it the natural, outcropping look yet meet budget constraints. You’re also saving a lot of time because with blocks the size of Rosetta units, you’re setting fewer blocks to accomplish the same square feet of face by comparison to many smaller precast wall blocks.”

“The product not only offered the aesthetics of natural stone that Allstate and Mueller were looking to achieve but also provided a more economical option and the ability to be engineered,” said Steve Link, P.E., representing Service Konstruktion Supply, the project’s material supplier.

The wall was manufactured by Rosetta of Michigan LLC, and Damgaard Landscape, Kaneville, Ill., served as the project’s contractor.

Sustainability

On the sustainability front, Rosetta contributed to the overall goals of the project. One LEED criterion gives points to projects that use regional materials. The standard gives credit if a certain percentage of the products used are manufactured within 500 miles of the project location using raw materials extracted within 500 miles of the location. The wall product used on the data center site exceeded the standard for regional materials.

Another LEED criterion gives points to projects that use products



The data center's retaining wall system offered economic, aesthetic and engineering benefits.

with recycled content. By replacing cement with recycled fly ash, Allstate's wall system used 25% less carbon-intensive portland cement than is typical. This substitution contributed significantly to the LEED certification.

The Whole Package

Ultimately, 3,400 sq ft of natural-looking, LEED-friendly retaining wall was installed on the site. In doing so, Mueller was able to create an attractive landscape feature out of the structural walls needed for the retention ponds and contribute to the sustainability of the project as a whole.

A video tour of the new data center is available at www.youtube.com/allstate. **SWS**

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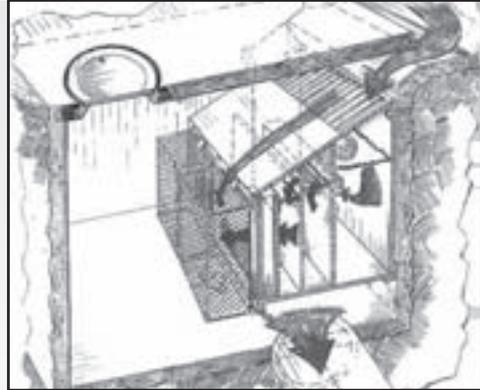
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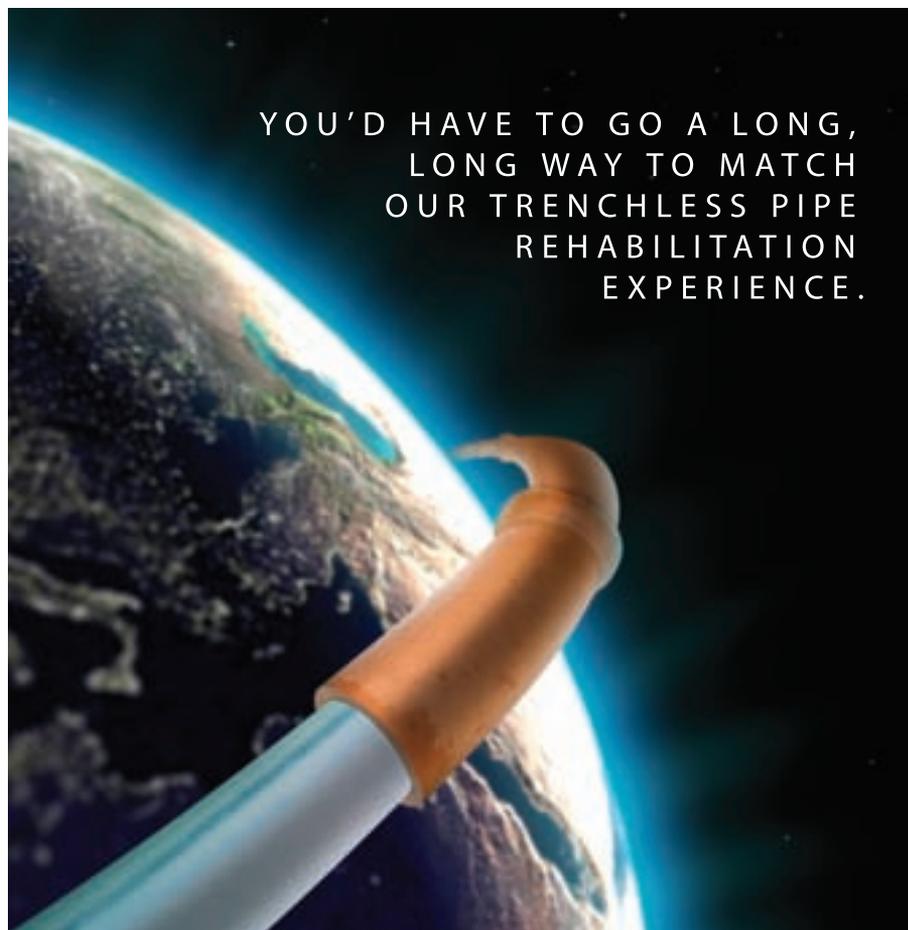
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