



Romanstone AquaBric permeable pavers provide an aesthetically pleasing solution for pavements at the North County Transit Center.

Permeable Concrete Pavers Offer Clear Advantages

WHEN ST. LOUIS COUNTY MISSOURI NEEDED A NEW TRANSIT CENTER TO SERVE THE NORTH PART OF THE COUNTY, ROMANSTONE AQUABRIC PERMEABLE PAVERS PROVIDED AN AESTHETICALLY PLEASING SOLUTION..

The product also allowed affordable stormwater management and quick, efficient wintertime construction. The pavement could also be opened up to traffic right away, since the pavers don't require any additional curing time after being installed.

The North County Transit Center, which uses some 22,000 square feet of AquaBric pavers, is a key transit hub for North St. Louis County -- one of the fastest growing public transit markets in the region.

Environmentally Friendly, Durable, Economical

In today's construction environment, low-impact, green development is a top-of-mind concern. And

with large paved surfaces like those of the North County Transit Facility, stormwater management plays a huge role. "Stormwater runoff has to go somewhere," says David R. Smith, Technical Director of the Chantilly, VA-based Interlocking Concrete Pavement Institute.

"Traditional impervious pavements increase the need for detention ponds. These can elevate costs by taking up valuable real estate and also can negatively impact the aesthetics of a project. Permeable interlocking concrete pavements combine detention, infiltration, and pavement functions into a single area. Given the high costs of urban real estate, this can make permeable pavement less expensive than conventional pavement plus the cost of separate detention ponds."

Permeable pavement systems -- which allow stormwater runoff to pass into and through the pave-

ment -- reduce or eliminate the need for detention ponds, swales, and piping systems. When it comes to permeable pavements for parking lots, alleys and streets, there are three typical choices: porous asphalt, pervious (poured) concrete, or permeable interlocking concrete pavers. Permeable interlocking concrete pavers have clear advantages over pervious concrete or porous asphalt. These advantages make permeable pavers one of the fastest growing segments in the interlocking concrete paver business. "The market for permeable pavers has been growing in double digits for the past several years," Smith says.

"Pervious concrete and porous asphalt are very sensitive materials on the job site because their mix and placement must be exactly right to function as designed. There's little room for supplier and contractor error. Cold weather installation and repair are difficult, and at freezing temperatures, impossible," Smith notes.

Permeable interlocking concrete pavements work by using solid concrete pavers that allow water to pass through the joints. The pavers are installed on top of a permeable bedding layer over a compacted, open-graded base and subbase that allows water to move through and be stored in the open space around the aggregate.

Wintertime Construction Goes On

The construction timeline of the North County Metro Transit Center meant that the pavement needed to be installed during the winter months. "It would have been next to impossible to install porous asphalt or pervious concrete pavement during that sort of weather," notes David Mudd of Midwest Block and Brick. "With the Romanstone AquaBric pavers we supplied for the project, construction could go on through the winter months without delay."

Mechanical Installation Speeds Process

Permeable interlocking concrete pavers can be installed mechanically, as was the case at the North County Metro Transit Center, dramatically speeding



construction and helping reduce costs -- another big advantage. The mechanical installation of both the aggregate setting bed and the interlocking pavers was provided by Aqua-Paving Construction.

Instead of placing pavers by hand, one at a time, specialized equipment was used to place multiple pavers at once. The units were delivered to the site arranged in the final laying pattern, stacked in layers of over 40 individual pavers. Mechanical installation equipment lifted and placed a layer of pavers approximately every 30 seconds. With this rate of installation, construction time was decreased, enabling faster opening of and use of the transit center.

"The project was able to utilize mechanical installation even though the pavers had to be installed around dividers in the parking lot, requiring precise work to make the connection between separated areas of pavement. The contractor did a great job," according to Mudd.

The prime contractor for the first phase of construction at the North County Metro Transit Center was C. Rallo Contracting. The design contract for both phases of the project was awarded to a joint venture between STV Inc. and St. Louis' KAI Design & Build.

Take a Look at Pavers for Your Next Project

To find out more about how permeable interlocking concrete pavement can help solve your design and construction challenges, contact Midwest Block and Brick today (www.midwestblock.com).