



Riverside Pavilion Stays Warm With Radiant

Comfortable amenities
make new public
building a popular spot
for city dwellers.

by **Steve Smith**

A new 12-acre, \$15 million dollar building in Columbus, Ohio, is the latest urban renewal project as city officials continue to find ways to attract people to its downtown.

Past improvements have included new retail and fine-dining venues, and a sports arena where the Civil War-era Ohio Penitentiary once stood. Outdated turn-of-the-century manufacturing and housing structures also have been removed.

The city's new Northbank Park makes up a winding, interconnected park system along the Scioto River through downtown. It's also been a great enticement to private real estate development. Late this year, two new, eight-story condominium buildings with 98 units will be completed just north of the park.

The park's gleaming highlight is its new enclosed, glass-and-brick pavilion with skyline views of the city. Columbus-based Fox Mechanical was

Riverside Pavilion



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tapped to install a radiant heat and supplemental hydro-air system for the pavilion. The comfort amenities have helped to make it one of the area's most popular spots for wedding receptions and other social functions, year-round.

Eight 300-ft. tubing loops provide heat for the fully insulated slab. Fox used perimeter-banding for the first 10 rows of tubing on each side of the large, open room, placing the tubing at 6 inches on center for maximum heat output below the largest, windowed

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"The pavilion project stretched out over a period of about a year," explains **Joe Fox**, president of Fox Mechanical, a union shop with about 30 pipefitters. The city awarded a contract to Fox Mechanical for \$290,000 to complete the plumbing and heating installations.

The 3,000-sq.-ft. pavilion is constructed around a slab foundation. The glass-enclosed area is 1,800 sq. ft. in size, and the slab underneath is radiantly heated, supplemented by hydro-air. Fox Mechanical chose 1/2-inch RadiantPEX tubing from Watts Radiant.

walls. The rest of the tubing, throughout the center area of the slab, was placed at 12 inches on center.

"At zero-degree design temperature, we knew we would need 40 Btu per square foot in the large room surrounded by glass," explains **Tim Kaiser**, Fox's field superintendent.

They also chose to install a small HydroControl panel fabricated by Watts Radiant to handle thermostatic mixing, controls and fluid flow to the in-floor system. "We put the control panel and radiant manifolds in a small room adjacent to the public

part of the pavilion," adds Kaiser. "There simply wasn't room in the mechanical room for them."

Tight Squeeze: The attic mechanical room was truly a tight fit. So tight, in fact, that the mechanical equipment and most of the ductwork were in place before the roof trusses could be set.

"Our two key challenges on the job were space, and the ability to meet the heat load," Fox says. The attic mechanical room is pretty much a crawlspace with trusses that have an 8/12 pitch and offer only 5 1/2 ft. of clearance to the peak with no more than 12 ft. of width.

"Thanks to some preplanning, we were able to accommodate the boiler, two air handlers, the 40-inch by 20-inch supply and return ductwork, and all the necessary pumps up there," Fox adds. "The air handlers are 6300 cfm and 850 cfm in size. It's tight, but it came together nicely, all things considered."

It was also a space consideration. The architect desired to keep the maximum amount of ceiling height in the decorative lobby area. That led Dynamix Engineering, the project engineering firm, to propose contemporary, exposed ductwork.

"Planners liked the idea," Fox says. "So we ran heavy spiral ducts and painted them, the exposed trusses and ceiling in flat black. It's got a lot of class."

The glassed-in area is essentially a noninsulated, 30-ft. by 60-ft. sunroom, on a slab, with a 20-ft. ceiling and exposed on all sides. To handle the heat load, Fox installed a 500 mbh Pennant boiler by Laars. The 85 percent AFUE Pennant has a fan-assisted, sealed-combustion design. Rather than maintaining high-mass, standby energy at considerable cost, this little boiler meets the need and quickly injects incremental energy into system loops on demand.

"What's so satisfying to me about this job is that our work and attention to detail came together in a place that will be enjoyed by so many people in the community," Fox says. **PM**