

CONTRACTOR

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Above, the front of Eden Elementary. Below, the PM with a tech.



Above, the exterior, showing the four wings of the school. Below, three Bradford White EF water heaters.



Home is designated to attain LEED Platinum, net-zero status

BY CANDACE ROULO
OF CONTRACTOR'S STAFF

CHICAGO — When Michael Yannell decided to build a new home for himself in Ravenswood, a north side neighborhood of Chicago, he wanted his home to be revered as a sustainable residential building standard, which will most likely achieve U.S. Green Building Council LEED Platinum certification and net-zero energy status, meaning the home will produce more en-

ergy than what it consumes.

When planning the house design — the house sits on a 5,413-sq-ft. lot, is 2,675-sq-ft. and has a footprint of 1,770-sq-ft. — and mechanical systems with Farr Associates, designer, and Goldberg General Contracting Inc., Chicago, AA Service Company, heating and cooling contractor, Northbrook, Ill., and dbHMS, design and building engineer, Willow Springs, Ill., Yannell focused

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The heat pump with geothermal connection.

Vrabel installs quick response DHW system with minimal piping

GIBSONIA, PA. — The Eden Hall Elementary School just north of Pittsburgh is one of six schools in the 4,500-student Pine Richland School District. With classrooms and facilities for more than its current 1,076 students, Eden Elementary was built to accommodate the influx of families drawn in by the recent real-estate boom in the rural North Hills area.

Vrabel Plumbing won the bid to install plumbing and hot water systems at the new, \$32 million, 189,000-sq-ft. elementary school, and no wonder; the company specializes almost exclusively in schools and municipal work.

"It's pretty much all we do," said Artie Maynard, who was project manager for the Eden Elementary job. "It's our niche — we do mostly new construction and some renovation, but service and repair counts for a very small percentage of our work."

Vrabel Plumbing has been in business 35 years. Headquartered here, the company's service area includes Pitts-

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Recession is good for you

BY ROBERT P. MADER
OF CONTRACTOR'S STAFF

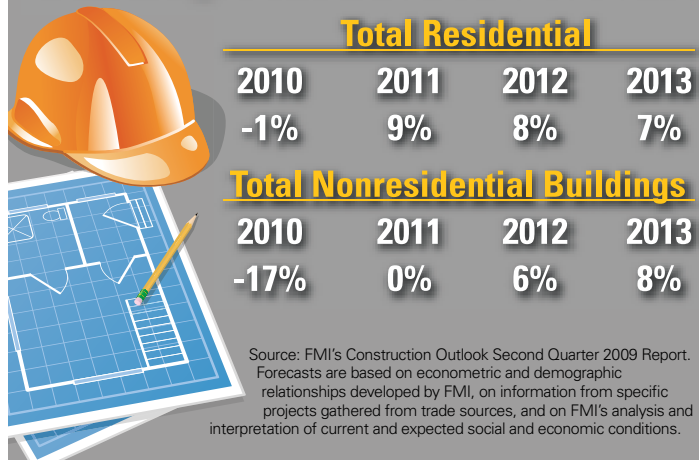
COLORADO SPRINGS, COLO. — The recession can be good for you, especially if you have decent credit and some cash in the bank, members of the Quality Service Contractors learned here.

"We're still here, maybe making less money but leaner and meaner for the experience," author and columnist Gene Marks told the contrac-

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Residential and Nonresidential Building Construction Forecast



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Vrabel installs quick response DHW system

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burgh and most of the surrounding area. Including service techs and office personnel, the company employs 22 people and does about \$7 million in business annually.

The school itself is laid out in four wings, two of which have a first and sec-

ond floor that are separated into classroom pods called "houses." The building form helps break down the scale of the building for elementary-aged students.

In addition to 48 classrooms, the facility also contains nursing, administrative and guidance offices, a 4,600-sq-ft. cafeteria, spacious kitchen, state-

of-the-art library, gymnasium, music and art rooms, and a 550-seat "Exploratorium," a multipurpose auditorium complete with retractable seating.

Rather than have a mechanical room and pump hot water throughout the school, Vrabel decided on a decentralized system, with water heaters closer to

the point-of-use.

"It really saves you on piping," Maynard explained. "Instead of running pipe down to the furthest point, you can set a heater in the location, run less pipe and have a faster response time."

Beginning in March of 2007 and working up until August of 2008, Vrabel plumbing installed four 60-gal. Bradford White eF water heaters. Three 100-gal. eF heaters serve the school's central area, which includes the food service area. From rough-ins to completion, Vrabel also installed all the fixtures, faucets, sinks, toilets and water coolers.

Systems were sized and specified by Mike Plummer, plumbing engineer with Pittsburgh-based Tower Engineering Co.

What makes the decentralized water heating system practical is a combination of efficiency and flexibility. The eF heaters deliver thermal efficiencies of up to 99.1%, which will save the school money on energy bills for the life of the facility.


The heaters also allow for power vent through-the-wall or power direct-vent options for horizontal, vertical, unbalanced venting with two-pipe or coaxial vent terminations, meaning they can be installed in spaces that normally wouldn't permit a water heater.

A final factor in designing the system was quiet operation. No one wanted students to be distracted by a constant drone or hum.

"Energy efficiency, competitive pricing and ultra-quiet operation were at the top of the list," according to Joe Starr, a principle in Conroy-Starr Associates, the Pittsburgh-based manufacturer's rep brought in to help specify plumbing products and technology.

"Several of the heaters were installed in closets next to classrooms," Starr said, "and it was stipulated that the units could not be heard, at all, by students and teachers in class."

Vrabel set the tanks' storage temperature at an uncommonly high set point — 160°F — to be sure of killing any bacteria in the system. Point-of-use tempering valves insure the water is safely reduced down to just the right temperature at all faucets.

The school has been in operation for nearly a year, with both students and staff very satisfied with the results. "This is the kind of job we most like doing," said Charlie Vrabel Jr., owner of Vrabel plumbing and son of the founder. "We've built our business around the ability to do quality commercial work. The systems we've installed make great sense. They're safe for the children and will operate with complete reliability for years and years." 

For information circle **XXX**