PCI's NEXT success

Sarah Fister Gale

Rita Seraderian wasn't your typical civil engineering student. In the late 1970s, she was one of just six women in the engineering program at University of Massachusetts Lowell. Fortunately, that gave her an edge over her peers.

While Seraderian was in her second year in the program, Val Roy, the wife of the owner of a local precast concrete manufacturing plant, San-Vel Concrete, asked the school for engineers to work over the summer, and she specifically requested women.

"She was an advocate for female engineers," Seraderian says. "That's how I got my foot in the door of this industry."

Seraderian worked at San-Vel for two summers and was hired full-time as a junior engineer when she graduated. She stayed with the company for eight years, and during that time the chief engineer, Ed Barwicki, taught her everything he knew about prestressed concrete design.

"He spent hours on the job teaching me," she says.

Seraderian eventually left San-Vel for a job with a local developer, but two years later her old boss called her with a unique proposition. The regional director of what was then PCI New England (now PCI Northeast) had left the job and they needed a replacement. At the time, PCI New England was still a relatively new organization, and they needed someone who was willing to knock on doors, build a network, and promote precast concrete across the region.

"I interviewed for the job, and I got it," she says. That was 25 years ago, and she's been in the role ever since.

Seraderian marvels at how much the organization has changed over the years. When she started, PCI Northeast only had five member plants; now there are 13. More important, PCI Northeast facilitated the expansion of the use of precast, prestressed concrete across the marketplace.

One of the biggest influences they've had is on bridge construction, she says. Seraderian launched the bridge committee in 1990, and since then the Northeast has become a leader in using precast, prestressed concrete designs to speed construction and lower the cost of bridge projects.

Seraderian did more than just promote the use of precast concrete. She came up with the idea for the northeast extreme tee (NEXT) beam. NEXT beams are double tees that add greater capacity and shallower depths to bridges. This efficient design can dramatically reduce construction time and costs. That is a key goal of local accelerated bridge construction efforts, making NEXT beams an innovative solution to a real-world problem. (The Sand Hill Bridge in Middlebury, Vt., which incorporates four NEXT beams, is featured on page 26.)

"NEXT was my brainchild and with the assistance of fellow PCINE Bridge Committee member Michael Culmo a new section was born. We are both very proud of that," Seraderian says.

As she looks to the future, she hopes the industry will continue to generate innovative solutions using precast concrete.

"We need to think out of the box about how to use our materials and technologies in new ways," she says. "That will be the challenge going forward."

She hopes that the industry will continue to recruit and train new engineers who may not be familiar with all that the precast concrete industry has to offer. Seraderian championed the creation of the PCI Online Academy to teach precast, prestressed concrete to designers and engineers in an effort to spread the word. The first class began on March 4 with 91 students, who will earn 1.5 professional development hours for each session. Industry leaders also need to step up and nurture young talent.

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