Marine life

Kat Friedrich

Catrina Walter has worked on West Coast waterfront projects for more than 16 years, but her career path kicked off many years prior on the East Coast as a student at Central Piedmont Community College in Charlotte, N.C. "I had some amazing experiences there," she says. She credits CPCC with starting her down her future career path.

After taking a strong interest in the STEM classes offered at CPCC, she transferred to North Carolina State University in Raleigh, where she completed her bachelor's degree in civil engineering before earning a master's degree in civil engineering with a focus on structural engineering and mechanics.

Walter began making an impression in the precast concrete industry during her graduate studies, which were in a master's program funded by PCI's Research & Development Council. Walter's thesis work on the behavior of precast, prestressed concrete slender L-shaped spandrel beams, such as those found in parking structures, led to two *PCI Journal* papers that earned her the PCI Charles C. Zollman Award in 2012 and the American Society of Civil Engineers' T. Y. Lin Award in 2013. "Producers [of these beams] felt like they were being handicapped by the code," she says. The results of the overal research project allowed engineers to optimize the reinforcement design of these members, saving on materials and labor.

BergerABAM actively recruited Walter during the 2007 PCI Convention, which she attended as a guest of Georgia/Carolinas PCI. At the convention, she was introduced to Mike LaNier outside of a committee meeting by her professor, Sami Rizkalla. The company, which was acquired by WSP in 2020, flew her to Seattle, Wash., for an interview. She got the job, moved to Tacoma, Wash., a few months later, and has worked there ever since.

Four years into her career, Walter participated in the Leadership PCI (LCPI) program. "LPCI really shifted my focus, both at work and at PCI," Walter says. "During that yearlong process, I made real connections with people from all over the industry, both professional and personal relationships, that have positively influenced my life." Walter credits LPCI with giving her a broader range of tools to navigate a career in engineering.

LPCI also provided her with industry networking opportunities and introduced her to new ways to become engaged in PCI. "LPCI helped me make the connections to eventually take over as chair of the Prestressed Concrete Piling Committee," she says.

As chair of that committee, Walter was a key participant in the development and recent publication of the updated *Specification for Precast, Prestressed Concrete Piles* (ANSI/PCI 142-24). "Being a part of the final push to get out standard 142 was a really unique experience I wouldn't have otherwise had," she says. "Taking an active leadership role in PCI committee work also led to my decision to get more involved in the PCI Foundation and supporting a precast studio at University of Washington."

At PCI, Walter recently championed for the formation of a PCI Ports and Marine Structures Committee and was named the committee's first chair. As an engineer with WSP, she learned how to design and detail large-scale concrete floating berths, as well as pile-supported pier/wharf structures.

"I'm a float designer," she says. "It's kind of unique. Most folks don't ever do ports and marine engineering in this industry." Located near Concrete Technology Corp., she has a close working relationship with the PCI producer member and enjoys watching the fabrication of the various structural precast concrete components used in her designs.

Along with pursuing her passion for the design of floating concrete structures, her roles at WSP have led to managing large, multidiscipliary projects, including acting as the owner's engineer for a greenfield container terminal project outside of Lagos, Nigeria. "I got to go to Nigeria to the project site," she says. "It was a fascinating soup-to-nuts experience. I mean, these guys had to build a water treatment plant, and they had to build fabrication plants. They had to build a camp for the workers." All that work had to be completed before work on the actual terminal facility began.

Walter recently received the 2024 Irwin J. Speyer Young Professional Engineer Award. She is also a voting member of the LPCI Committee and the Transportation Activities Council, and she is a member of ASCE.