

Extraordinary Stories

Happen Every Day

The tri-state design and construction industry is extraordinary every day. Every day, the industry produces tiny miracles and amazing feats that change people's lives for the better. Some are jaw-dropping in their complexity, some are simple and small, But seldom do the owners, architects,

engineers, contractors, manufacturers, suppliers take time to sit back and admire what they do. They just do it.

This section was developed to celebrate some of the industry's extraordinary stories. It's meant to inspire and remind that even the little things the industry does every day are extraordinary.

Contractor Heads Off Project Difficulties Before They Start

Even before Schiavone/Picone won the \$212 million bid to build water tunnels connecting the Croton Water Treatment Plant to and from the existing aqueduct, the joint venture's leadership anticipated trouble.

The New York City Department of Environmental Protection put the bid out using the drill and blast method. The contract called for two 60-90-ft deep tunnels. One 863-ft-long tunnel accommodates the 12-ft-dia. concrete pipe needed to pull the raw water into the plant, and another, 4,000 ft long for two 9-ft-diameter pipes to send the clean water back into the system.

"Before the job was given the notice to proceed, we saw a lot of difficulties with using the drill and blast methodology," says Pat Rooney, Schiavone's second vice president, field operations. "We saw an impact on almost every level – schedule, safety, community, adjacent contracts that depended on this one being complete on time, and most importantly, federal consent decrees that mandated having water treated by a certain date."

The schedule was very tight, with only a short six-month window of opportunity set aside to make connections to the existing aqueduct. In addition, the community was concerned about blasting taking place from 11 p.m. to 7 a.m.. There were areas of shallow rock and even a fault line to tunnel through, which are difficult conditions for drill and blast methods.

Four major contracts depended on the tunnel job finishing on time, including a new pump station, and repairs to the 100-year-old aqueduct. In addition, the federal government issued consent decrees mandating that the plant be operational by October 31, 2011. Every project in the pipeline leading up to that date also has consent decrees attached, with heavy fines to



The team changed tunnel construction from a single drill and blast, double-high horseshoe tunnel for treated water pipes to excavation of two parallel single pipe TBM tunnels. CREDIT: Photo Courtesy of Schiavone/Picone

the City of New York as the penalty.

Schiavone/Picone had a solution. The company had a Tunnel Boring Machine that could bore similar rock in a similar diameter, just finishing up on Water Tunnel #3 about five to six miles away. "I can't say we pulled it out and dropped it in," Rooney says. "There was a period of rehabilitation on the machine, but it made the procurement of a machine feasible and the economics viable."

The joint venture convinced DEP to change from drill and blast to TBM, which required some redesign work. Dawn Underground Engineering and Associates worked with Schiavone/Picone on the redesign. Their revision changed tunnel construction from a single drill and blast, double-high horseshoe tunnel for treated water pipes to excavation of two

parallel single pipe TBM tunnels, says Jozef F. Zurawski, P.E., vice president Dawn Engineering. Dawn prepared new tunnel alignment, designed rock supports for tunnels and the starter chamber, designed pipe alignments; and designed pipe and pipe fittings for service, handling, transportation and backfilling with concrete loads.

"The major challenge was the design of the pipe support system for concrete backfilling of the pipes with concrete," Zurawski says. "The challenge was to design a pipe support system that would allow backfilling of the 40 ft pipe sections for the full depth of the tunnel (13'-6" dia.) without pipe buckling, steel and cement lining overstressing."

With the TBM, no blasting at night was required, soothing one of the community's major concerns. In addition, the TBM was safer for the workers. At one point in the 4,000-ft tunnel, there is a fault line. The team used United State Geological Survey information to identify within a small area a fault line. They were able to reinforce the area with grout before the TBM reached the area, so no cave-ins occurred.

"By using TBM to make the excavation, we were able to complete about six months early, and save the taxpayers \$6 million," Rooney says. The contract will finish up at just \$206 million. In addition, the TBM allowed other adjacent projects to proceed without delay. "It could have been a bad chain reaction of projects, but it ended up going in a much more favorable way."

Out of Grief and Necessity a New Business Leader Emerges

Ten years ago, Christine Donaldson Boccia had no medical insurance. Newly divorced and caring for twins, she had no choice but to go to work for her father's company, Donaldson Traditional Interiors, Huntington Station, N.Y.

She started at the bottom – filing, learning the payroll system, and doing general office work for the subcontracting firm that specializes in drywall, acoustic and plastering. Working part time at first, and eventually full time, she assisted the office manager, learning the inside workings of the construction business.

"Little did I know that the knowledge I was gaining would be the start of a new life-changing career for me," Boccia says.

In April of 2007, her father, the CEO of Donaldson Tradi-

Christine Donaldson Boccia has more than doubled annual revenue since her father's untimely death three years ago. CREDIT: Photo courtesy Donaldson Traditional Interiors



tional Interiors, stood up from his desk and collapsed on the floor. He died instantly leaving the business in a precarious state.

"Seeing the need to continue the family business, finish the ongoing contracts and carry out my father's legacy, I had no choice but to step up," Boccia says. Step up she did. She took on the role of Executive Manager and together with her father's trusted friend and associate of 50 years, Stan Abramski, she went to work proving to the banks, bonding companies and insurance backers that the firm would not only survive, but thrive.

She applied for Women's Business Enterprise certifications with all the major agencies in New York and set a new course for the business that was left in her care.

Donaldson Traditional Interiors became a certified WBE and continued to grow. Since 2007, annual revenue has more than doubled. Donaldson Traditional Interiors recently received a Building the Future award from Anchin Block & Anchin and *New York Construction* magazine as New York's Fastest Growing MWBE in the category of large subcontractor grossing over \$10 million.

"If anyone would have asked me 10 years ago, as a stay-at-home mother, would I have ever considered going into the business world to head up a construction company, I would have thought they were crazy," Boccia says. "Funny how life hands you opportunities you least expect. I have come to learn that construction is in my blood."

St. Cabrini's Makeover Emphasizes Comfort and Care

A 306-bed nursing home in Dobbs Ferry, N.Y. was showing its age. The original St. Cabrini Nursing Home was built in 1960s with a wing added on in 1980, the facility wasn't keeping up with the needs of the residents anymore. Most were wheelchair bound, and the rooms were not big enough to move around in or accommodate visitors. Plus the dining facilities were all on the lower level, so shuttling residents down and up for mealtimes took hours.

The original facility was built at a time when nursing homes were institutions with set schedules and meal times, now, resident independence and flexible schedules are more the norm.

"Care has changed so much over the years," says the home's President and CEO Patricia Krasnausk. "When the facility was first built, people were younger and more well when they arrived. Now our residents are coming to us very frail, and a majority of them are already in wheelchairs."

When St. Cabrini got the green light from the New York State Department of Health, it had to put every dollar of its tight budget of just under \$40 million in construction costs to work. Led by architect Landow & Landow, Lake Success, N.Y. the team added 82,000 sq ft to the facility. The program goal was not to add beds, but to add space for the 306 residents to