

CONCRETE CASES



Operators core drilled 1,967 holes in the pier's concrete deck.



SOUTH STREET SEAPORT REDEVELOPMENT

**Contractor Revitalizes
Famous New York Pier**

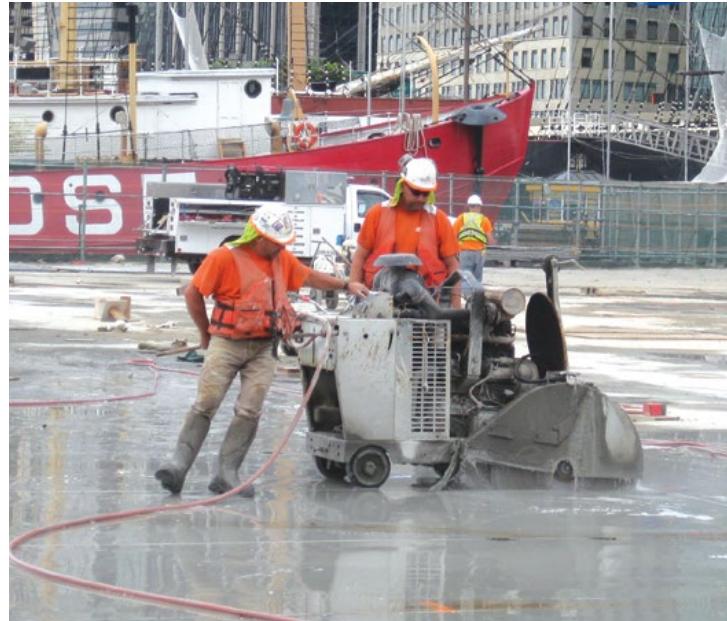
As part of a major redevelopment project on a pier in Lower Manhattan, New York, a concrete cutting contractor was given the challenge of coring 2,000 holes, flat sawing 22,000 linear feet and wire sawing 400 pier caps. The contractor's work kept the overall demolition phase of the project on schedule and has helped to revitalize a famous landmark in New York City.

The South Street Seaport is situated along the East River in Manhattan, close to the city's financial district. The Seaport had a series of 19th-century commercial buildings that were linked to New York's maritime heritage, but the cost associated with repairing and





The pier deck was cut into sections using flat saws, some cuts being as deep as 18 inches.



providing ongoing maintenance for the Seaport had begun to seriously impact the city's budget—particularly after Hurricane Sandy caused severe damage to several structures in 2012. With the redevelopment of the Seaport's main structure, Pier 17, underway, the search began to find a specialist concrete sawing and drilling contractor that could assist general contractor Trevcon Construction Co., Inc. with the demolition work.

CSDA member Atlantic Concrete Cutting, Inc. of Mount Holly, New Jersey, was selected to do sawing and drilling work and help the general contractor remove the existing pier. Specifically, the contractor was responsible for the cutting and removal of the existing concrete pier deck, the cutting of concrete pier caps and piles and the coring of pick holes so cut sections could be removed by crane.

"The South Street Seaport is part of a historic area in New York City. The local community possesses a strong sense of identity and is politically active," said Stu Fishman, project manager for Atlantic Concrete Cutting. "Diamond cutting was selected because it creates less disruption in terms of noise, vibration and debris than other demolition methods, which was important for the



surrounding environment. Our job was simple—demolish the pier with minimal noise, minimal debris and with minimal disturbance to the local community.”

Before any work was done, the contractor assessed the jobsite and identified safety measures. Because the job was close to water, it was necessary for life vests to be worn by all employees on the jobsite while access restrictions were put in place around the perimeter of the work area. Overhead picks by crane required heightened jobsite awareness, good communication, access restrictions and task coordination with other contractors on site.

Atlantic Concrete Cutting mobilized on June 5, 2014, with a specific time frame of 16 weeks for the work. Operators started by core drilling 6-inch-diameter pick holes through the concrete deck, which was as thick as 6 feet in some areas. The company had between two and four operators completing up to 100 holes per 8- to 10-hour shift—approximately three holes per operator, per hour. Over the course of the job, core drilling operators created 1,967 holes in the pier deck using Shibuya Blu-Drill units with auto-feed features.



SOUTH STREET SEAPORT REDEVELOPMENT PROJECT

In October 2013, The Howard Hughes Corporation (HHC) officially commenced the redevelopment of the South Street Seaport, located adjacent to the East River in Lower Manhattan. The new Pier 17 will have a mix of retail, dining and entertainment options. A 1.5-acre rooftop will include a restaurant, two outdoor bars and an amphitheater that will hold up to 4,000 people.

The redeveloped Pier 17 is expected to open in 2016 and provide major economic benefits for Lower Manhattan and the City of New York. During construction, the redevelopment is estimated to generate over \$260 million in total economic output and produce over 1,000 jobs. Upon completion, economic activity is estimated to be \$193 million annually. It will generate over \$10 million in tax revenues to the City and create 1,150 permanent jobs.

The pier's LEED certified building design pays homage to the maritime and world market heritage of the City's working waterfront, provides expansive views of the Brooklyn Bridge and improves pedestrian access by connecting the street grid to the pier. For more information, visit www.southstreetseaport.com.

Photos courtesy of The Howard Hughes Corporation/SHoP Architects.





The contractor made 21,850 linear feet of cut lines in the pier deck.



Cut sections were rigged and removed from the work area by crane.

Cutting of the concrete pier deck began eight days later, on June 13, with two Husqvarna 8400 flat saws. Operators made a series of latitudinal and longitudinal cuts to divide the slab into pieces that could be lifted out and removed by crane. Atlantic Concrete Cutting operators made 21,850 linear feet of cuts on the pier deck, some as deep as 18 inches. Upon completion, Trevcon Construction rigged and removed the cut deck sections by crane and exposed the pier caps and piles for the contractor's next task.

The pier had a series of caps that had to be removed before 610 piles measuring 14 inches by 14 inches could be cut to elevation. Two Hilti DSW 3018-E wire saws were set up in the work area to make the necessary cuts using 1,200 feet of diamond



Some sections weighed over 45,000 pounds.

wire, starting with the pier caps. Over 10 weeks, operators performed 429 pull cuts with the wire saws through 4-foot by 3-foot cross-sections of the pier caps, with each wire saw cut taking approximately 45 minutes to complete. The 14-inch by 14-inch pile cuts then took a further 10 minutes to complete and were cut in clusters of six or nine, so all the pier caps and piles were cut within 10 weeks. Atlantic Concrete Cutting then had an additional 1,000 square feet of wire sawing work to cut various supports left after demolition of the old pier building. Some back wall cuts were also made to separate the pier from the Fulton Street Fish Market, a historic building that was to remain in place. All work was completed on September 11—one month ahead of schedule.

"The guys from Trevcon Construction worked well with our team, resulting in the project being a huge success. We have built a reputation for providing quality service using skilled operators with the right equipment. This high-profile project is a perfect example of why our diamond sawing and drilling techniques have time- and cost-saving advantages over other methods," concluded Fishman.

Due for completion in 2016, the South Street Seaport is poised to be a popular venue for local residents and tourists alike. The use of diamond tools has helped push the demolition phase of the project ahead of schedule and the construction of the new Pier 17 building remains on track.

COMPANY PROFILE

Atlantic Concrete Cutting, Inc. has been a CSDA member for 23 years and is based in Mount Holly, New Jersey. Support operations are located in Totowa, New Jersey and Spring City, Pennsylvania. The company has been in business since 1991 and has 22 operators and 31 trucks, and offers the services of core drilling, wall sawing, wire sawing, flat sawing, curb sawing, sealing, grooving, grinding, polishing, selective demolition and ground penetrating radar. Atlantic Concrete Cutting, Inc. is a CSDA Certified Company and a CSDA Certified Operator company with DBE/WBE certifications issued by numerous state agencies and authorities.



RESOURCES

General Contractor

Trevcon Construction Co., Inc.

Sawing and Drilling Contractor:

Atlantic Concrete Cutting, Inc.

Mount Holly, New Jersey

Phone: 609-261-7200

Email: sfishman@atlanticconcretecutting.com

Website: www.atlanticconcretecutting.com

Methods Used: Core Drilling, Flat Sawing, Wire Sawing

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