

## Blakeslee returns after almost a decade for repeat parking structure in Cambridge

Cambridge Discovery Park in Cambridge, Mass., neighbors a number of world-class educational institutions, as well as several high-tech and life science companies. The plan for Cambridge Discovery Park included a hotel with conference center, restaurant, and bar, as well as a 113,900 ft<sup>2</sup> (10,500 m<sup>2</sup>), five-level parking structure large enough to hold 380 cars.

Stantec Architecture, the architect on the project, had selected Blakeslee Prestress for the precast concrete work on an earlier parking structure (Parking Garage A) at the site, which had been built in 2010. Given the success of that project and the ability of the two companies to work together cooperatively, Stantec selected Blakeslee once again for Parking Garage B in this 2019 project. Others working on the project included Simpson Gumpert & Hager, the structural engineer, and John Moriarty & Associates, the contractor.

The parking structure consists of 317 pieces of precast concrete, including 151 double tees, 10 IT beams, 14 columns, 12 shear walls, 10 vertical litewalls, 62 spandrels, four stairs, and 54 wall panels, which were delivered and installed in February 2019.

“Getting all of the stakeholders working collectively toward a common goal was not an issue with this project,” says Christopher Zarba, director of sales and project development for Blakeslee. All of the key players, including the owner, architect, engineer, construction manager, and pre-caster, had worked together on Parking Garage A almost a decade earlier.

“However, since that time, additional buildings had been erected and occupied on the site, including a hotel, leaving only two lots remaining unbuilt,” Zarba says. “To further paint the picture of tight site access, both remaining parcels were scheduled to be under construction at the same time—and during a New England winter.”

The Discovery Park Garage B was to be built on one of the remaining lots, while a large new laboratory building was sited adjacent to the parking structure on the other lot. “Since this was an active lab-office campus with daily commuters and hotel patrons, the main challenge was site and staging logistics,” Zarba says.

However, Blakeslee was able to erect the Parking Garage B precast concrete structure in less than one month. “The key to success was locating, securing, and staffing a local off-site drop



Blakeslee Prestress helped with this second parking structure at Cambridge Discovery Park in Cambridge, Mass., almost a decade after providing precast concrete for the first. The area had been built up more in the meantime, making access tighter. Courtesy of Blakeslee Prestress.

lot where 15 to 20 precast trailers were stored daily and shuttled to the crane hook at the site,” Zarba says.

—William Atkinson

## Precast concrete parking part of mixed-use high-rise in downtown Newark

One Theatre Square is a \$94 million mixed-use residential tower in Newark, N.J., right across the street from the New Jersey Performing Arts Center. Located on 1.2 acres (4900 m<sup>2</sup>), it stands 22 stories tall. In addition to 245 apartments, conference rooms, a business center, a fitness center, a lap pool, community rooms, an outdoor deck, and a substation for the Newark Police Department, the facility features 13,000 ft<sup>2</sup> (1200 m<sup>2</sup>) of ground-floor retail space and a 111,500 ft<sup>2</sup> (10,300 m<sup>2</sup>) parking structure that can accommodate 285 vehicles.





**One Theatre Square in Newark, N.J., is a mixed-use high-rise that includes a 285-vehicle parking structure. Architectural Precast Innovations of Middleburg, Pa. was the precaster for the project. Courtesy of Architectural Precast Innovations.**

It is the first upscale high-rise structure built in Newark in over 50 years.

Architectural Precast Innovations (API) of Middleburg, Pa., was selected as the precaster for the project, the architect was BLT Architects, the structural engineering firm was the Harman Group, and the project was built by Hunter Roberts Construction Group.

The project broke ground in November 2016 and was completed in September 2018.

The precast concrete portion of the parking structure contains 237 pieces, including 29,284 ft<sup>2</sup> (2720 m<sup>2</sup>) of load-bearing spandrels, infill spandrels, column covers, exterior wall panels, interior wall panels, floor/roof slabs, and stairs and landings.

The precast concrete panels for the parking structure were a combination of two different types of brick. One was Glen-Gery Duquesne with cross sets and flats, which are a red brick. The Glen-Gery brick pieces were all modular size (2¾ × 7⅞ in. [70 × 194 mm]). The other panels were Eldicott Manganese Ironspot, which is a black brick. These consisted of both a modular size (2¾ × 7⅞ in.) and a triple size (7⅞ × 7⅞ in.). These panels also have black-stained brick joints and window sills.

Both the design and installation of the precast concrete pieces were handled by PennStress.

There were some challenges with the project, according to Steve Kenepp, president of API. “The panels had a structural component, so the reinforcement was a challenge, as the panels were heavily reinforced,” he says.

Delivery was also a challenge in that it needed to be closely coordinated with two suppliers—PennStress for the nonarchitectural panels and API for the architectural/structural panels. “There was a drop lot supplied by PennStress, which helped greatly with the coordination,” he says.

In fact, one of the most important keys to success with both challenges, as well as all aspects of the precast concrete work,

Kenepp says, was API’s good relationship with PennStress from the start. “In addition, communication and teamwork with the project managers as well as with dispatch and field personnel were very important,” he says.

—William Atkinson [▶](#)

**The parking portion of the \$94 million One Theatre Square in Newark used 237 pieces of precast concrete. Courtesy Architectural Precast Innovations.**

