

Parking structure helps make suburbs feel like Main Street

Crocker Park, one of the largest mixed-use property developments in the United States, is located on 75 acres (30.4 ha) in Westlake, Ohio. The theme of the development is new urbanism, with the idea of creating a new city that has a Main Street orientation, but in the suburban Westlake community.

The development's 12 city blocks include retail stores and fine dining establishments on ground level and Class A office buildings and luxury apartments on the upper levels. The community also features private homes and a new 110-room Hyatt Hotel.

Designed as a live-work-play community, Crocker Park utilizes vernacular forms in its architecture, human-scale pedestrian movements, and well-planned parking. It hosts about 16 million visitors each year.

Phase 1 was built in 2004, phase 2 in 2007 and 2008, and phase 3 (which involved a \$400 million expansion) from 2014 through 2016. During phase 1, Sidley Precast Group of Thompson, Ohio, was selected to build four parking structures for the development.

In 2016, Sidley was asked to build a fifth parking structure that has 384 spaces. The five-level parking structure is 122 ft (37.2 m) wide, 252 ft (76.8 m) long, and 48 ft (15 m) high and features two stair towers and one elevator tower.

Although the first four projects emphasized architectural aesthetics, this newest parking structure focused even more on looks. "The first four garages did have some thin-brick inlay, but other finishes were a standard gray with some rustifications," says Larry McCune, sales and quality control manager for Sidley.

"The exterior of this newest parking garage consists of three architectural colors: field stone, cafe, and wheat stone," he says. These were created with white cement and pigment and feature a light architectural sandblasted finish.

"Columns received horizontal reveals and a stone formliner finish at the base," he says. "Spandrels received both vertical and horizontal reveals." The colors and features were selected specifically to blend in with the surrounding construction.

The project consisted of 340 precast concrete components and 95,100 ft² (8840 m²) of elevated deck. "This is a pretopped double-tee system," he says.

The project went smoothly for the most part but there was one challenge, and that related to budget. "Working with the



In 2016, Sidley Precast Group added this fifth parking structure to Crocker Park mixed-use development in suburban Westlake, Ohio. The first phase of Crocker Park was built in 2004. Courtesy of Bill Golden.

architect and general contractor, using value engineering, we were able to reduce the number of pieces by producing larger columns and exterior panels, incorporating the architectural features that were desired, and eliminating separate column covers and architectural feature panels," he says. "We also eliminated a jump ramp, which reduced the number of panels required."

—William Atkinson

Stamford medical building integrate offices and parking with precast concrete systems

The eight-level Stamford Integrated Care Pavilion/Medical Office Building, a physicians' center located in Stamford, Conn., consists of 247,046 ft² (22,951 m²) of office and parking space on a 120 × 360 ft (37 × 110 m) footprint.



The Stamford Integrated Care Pavilion/Medical Office Building in Stamford, Conn., uses precast concrete to combine open medical office areas with a shear-wall system for parking. Photo courtesy of Blakeslee Prestress Inc.

The planners opted to combine the office and parking needs by placing three levels of medical offices above five levels of parking using an integrated plan that features a precast concrete structural framing system. Planners liked the idea of using precast concrete because it could offer a consistent and uniform structure and appearance throughout all eight levels, as well as the fact that precast concrete could be erected quickly, helping the project to remain on schedule.

Blakeslee Prestress Inc. of Branford, Conn., was selected to fabricate the 912 structural precast concrete elements, which included 366 double tees, 207 spandrels, 96 wall panels, 58 slabs, 54 girders, 52 columns, 28 stairs, and 21 shear walls.

Utilizing a design-assist strategy, Blakeslee's engineers provided input during the design phase to ensure the most efficient sizes and panelization options. The design-assist strategy also helped to ensure fast erection, which took place over four months. Blakeslee provided all aspects of the precast concrete design, manufacture, and field operations.

The structure features a long-span, prestressed concrete double-tee framing system. "The most interesting visual feature is the 60 ft (18 m) long, concave, curved, thin-brick-clad precast concrete insulated sandwich spandrel panels located at the northwest corner of the structure," says Chris Zarba, director of sales and project development for Blakeslee's Massachusetts sales office. "Long-span construction, along with inherent durability and fire resistance, are key common advantages for both parking and office uses."

Blakeslee worked with the owner's design team to develop a unique and cost-effective lateral bracing system that addressed the functional and operational needs of both areas of the building. "The framing for this mixed-use structure needed to be able to accommodate large open spaces, free from columns and shear walls at the medical office levels, combined with an efficient shear wall system for the parking levels," Zarba says.

To address these requirements, the lateral design utilized precast concrete litewalls at the parking levels, which integrat-



The lateral design of the Stamford Integrated Care Pavilion/Medical Office Building used precast concrete litewalls for the parking levels and a precast concrete moment-frame system for the office levels to provide large open-floor plates with minimal columns and no shear walls. Photo courtesy of Blakeslee Prestress Inc.

ed with the sloping, ramped floors necessary for vehicle circulation. Because the litewalls would have been a hindrance in the office space, Blakeslee suggested a precast concrete moment-frame system on those levels to provide large open-floor plates with minimal columns and no shear walls.

The parking levels feature tall spandrels that reflect the design of the ribbon windows that are used above on the office levels. Another feature on the office levels is embedded thin brick in the panels, as well as a curtain wall at the entrance to create a welcoming design.

"We are very proud of the teamwork and attention to quality and detail exhibited by all of the Blakeslee departments, including engineering, drafting, production, and field operations/erection, working together with Suffolk Construction and the owners' design team to produce an excellent project, on time and on budget," Zarba says.

—William Atkinson 