

Martha Dixon Building

FBI Field Office

Pittsburgh, Pennsylvania

Architectural precast concrete panels and spandrels gave the façade of this four-story building elegance, stability and permanence.

The new \$15 million headquarters of the FBI Field Office in Pittsburgh, Pennsylvania, is a prestigious and timely addition to its force. Located on the south side of Pittsburgh, the project was developed by a design-build team through a competitive process, managed by the General Services Administration. The new facility provides the Federal Bureau of Investigation with an expanded task force and larger administrative space, increased efficiency for agents, and improved security for staff and visitors.

To glamorize the four-story, 160,000 sq ft (15000 m²) structure, precast concrete components were used on the façade of the building. These pieces comprised various types

of cornices, spandrels and special panels. The facility was designed and built during a fast track 16-month period. The design-construction team was led by DRS Architects, Inc.

The new FBI Building was named for Martha Dixon (born in the Pittsburgh area), an FBI agent and SWAT team member who died in the line of duty when a gunman entered the Washington, D.C., police headquarters and opened fire. Martha, then 35 years old, returned fire, but was wounded and killed by the gunman.

Awarded medals and honors posthumously, Martha would have brushed aside the pomp and circumstance surrounding the awards and the naming of a building after her. But at the building's dedication, her large and

loving family, FBI agents and community leaders all recognized that such a strong, stable building expressing a large measure of permanence is appropriately named for such a strong and brave woman, dedicated to her work and her comrades.

The design-build team considered several alternate cladding materials prior to the selection of architectural precast concrete. While brick and masonry were at first favored because of their proximity to the adjacent buildings, precast concrete was selected for several good reasons:

- Time of year – The façade was required to be constructed during the late winter months, a notoriously bad season in Pittsburgh. Tenting the building and providing tempo-



Overview of Martha Dixon Building, Pittsburgh, Pennsylvania. Photographer: Roy Engelbrecht.

rary heat for a masonry installation would have been prohibitively expensive and time consuming. Precast concrete could be installed at any time, allowing the project to proceed on schedule.

- Speed of erection – Once the structural steel was erected, the precast concrete followed and was installed during a ten-week period.
- Economy of materials – While comparable to masonry in cost, the com-

pressed design-build time schedule made precast concrete the obvious choice. Brick was simply not easily acquired during the required time frame.

- Quality of precast concrete – Because precast concrete is fabricated under controlled factory conditions, its appearance looks attractive, durable, strong and permanent. These positive attributes convinced both the design team and FBI that precast concrete was the superior material.

The precast concrete components were manufactured by the Sidley Precast Group at their plant in Thompson, Ohio, and shipped to the project site by a flat-bed truck – a distance of about 120 miles (193 km).

Because of the design-build character of the project, Sidley was able to play a major role in the development of the building. For example, during design, the precast supplier worked alongside the design team to develop a module that allowed the largest spandrels possible while considering shipment by a flat-bed truck. Panels and column covers were developed to



Front entrance view of Martha Dixon Building. Photographer: Roy Engelbrecht.

meet the design's modular requirements, with the most efficient number of pieces possible. Special cornice caps were designed to "crown" the building, emphasize the entrance, and add the right touch of elegance to this special facility. This distinguished feature was just the right place to prominently display the FBI logo.

Sunscreens, which improve the building's energy efficiency by reducing heat gain, also add an important three-dimensional effect that improves the overall appearance of the building. Also, exposing the aggregate and sandblasting portions of the concrete panels add textural and visual interest that is so important when detailing a structure of this size.

The facility required parking within the building and the development of a precast system that would provide a substantial architectural base. These grounded first-level panels were designed as multiples of the window modules and the components work together to visually connect upper and lower floors. Special security features required by the FBI were accommodated – even enhanced – within the precast panels themselves.

During construction, the precaster worked with the contractor to develop shop drawings that would provide for the fastest, most efficient installation possible. Planned connections of precast panels to the steel frame were reconsidered and adjusted to cut both time and cost during installation.

Design of the project began on June 1, 2000. Foundations were poured on October 1. Meanwhile, Sidley prepared the shop drawings. Precast installation took only ten weeks, between February 14 and April 27, 2001. The building was officially opened on October 1, 2001.

The total cost of the project was \$15,350,000, while the cost of the architectural precast concrete was \$1,200,000.

The selection, design, manufacture and installation of architectural precast concrete significantly improved the FBI Field Office through the inherent features of the material, namely installation cost, durability and appearance. Also, the team approach in the design-build process contributed to the suc-



Side view of Martha Dixon Building. Photographer: Roy Engelbrecht.

cessful completion of this facility. The Martha Dixon Building stands today as a living, working monument to Martha and the other agents who work to maintain our nation's security.

CREDITS

Owner: Oxford Development Company, Pittsburgh, Pennsylvania

Architect of Record: DRS Architects, Inc., Pittsburgh, Pennsylvania

Engineer of Record: Atlantic Engineering, Pittsburgh, Pennsylvania

General Contractor: Rycon Construction, Inc., Pittsburgh, Pennsylvania

Precast Concrete Manufacturer: Sidley Precast Group, Thompson, Ohio

Precast Specialty Engineer: Budai Engineering, Richmond Hills, Ohio



Inside view near entrance of Martha Dixon Building. Photographer: Roy Engelbrecht.