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STEWART'S BUILDING

Baltimore, Maryland

One of Baltimore's first department stores is now a cornerstone development in the regeneration of Baltimore's west side.

Constructed in 1899, Stewart's Building was used for retail purposes until it closed in 1979. After a 20-year vacancy, the building's owners decided to renovate it as part of its strategic plan for Baltimore's west side. The new structure leads Baltimore's effort to retain and attract jobs to the urban core.

The newly renovated 10-story building contains 30,000 square feet of retail space on the ground floor and 220,000 square feet of commercial office/technology spaces on the remaining nine floors. A glass curtain wall gives a distinct identity to a new seven-story addition on the east side of the structure, clearly separating office from retail space.

"This is one of the largest redevelopment efforts in the United States to combine historic preservation with sustainable design," said Tom Liebel, AIA, associate with Design Collective, Inc., the project's architect. "That sets this award-winning project apart from many others."

Stewart's Building is listed on the National Register of Historic Places. Therefore, the Secretary of Interior's guidelines for historic preservation influenced the project's historical aspects. The United States Green Building Council's Leadership in Energy and Environmental Design (LEED) certification process guided the project's sustainable design components. The team members chose regionally produced supplies and construction materials with a high percentage of recycled materials. To ensure the building remains functional throughout its lifespan, they looked for ways to provide adaptability and flexibility for future modifications.

In addition, the building connects to a district cooling system and can generate up to 1,600 tons of cooling in the building without replacing major mechanical components, An expandable plate and frame heat exchanger delivers cooling to the building, allowing tenants to modify their cooling requirements without wholesale replacement of the mechanical system.

According to Liebel, introducing new structure into and throughout the existing facility was the greatest challenge. For example, there was an adjacent property, the Annex, which pre-dated the Stewart's Building. The Annex's wood-framed floors did not align with the floors of the Stewart's Building, but had become interconnected over the years through a series of stairs and ramps. So, the team removed the existing interior framing and floor structure and constructed a new concrete and steel structure that aligned with the main building. This required temporary shoring for the five-story exterior brick wall until the new facility was finished.

Designing the new Annex structure, as well as the new entry addition to support 400-psf (pounds per square foot) live load, added more complications. The large load, combined with tight urban restrictions, necessitated an elaborate mini-pile and grade-beam foundation system to support the structure.

However, challenges were overcome with the help of an innovative design team. With its successful renovation complete, Stewart's Building is again attracting attention on Baltimore's west side. Liebel said, " This project serves as a prototype for how to pursue the intelligent renovation and adaptive reuse of our historic structures by incorporating sustainable design strategies and making use of the preexisting urban infrastructure."