

Energy & Green Building

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Restoration puts firm at head of the class

Seaboard Restoration has given New York's very first 'green building' a face lift.

The property at 700 Broadway, formerly known as the Schermerhorn Building, is an eight-story brick and terra cotta-trimmed, cast iron-constructed building with graceful arched windows and a sandstone base.

It was designed in the late 1800s by architect George B. Post, a civil engineer by training whose innovative buildings included the New York Stock Exchange and the Equitable Life Assurance Society building, which was the first office building designed to accommodate elevators.

Previously renovated in 1989 under the ownership of the National Audubon Society, 700 Broadway earned the distinction of being New York City's first "green" building. It continues to rank among the city's greenest properties, with its sustainable design features, natural light and advanced lighting systems, recycling chutes, incorporation of recycled materials, and natural gas-fired absorption heater/chiller.

Energy-efficient features include R-12 wall insulation, R-4 windows, and roof insulation with an R-33 value, all of which enable the building to use up to 75% fewer watts of electricity per square foot.

Architect Philip Toscano was very familiar with the historic Romanesque Revival loft building, having worked on it under three different owners.

The current owners, purchased the building for \$70 million in 2008 and prepared for miscellaneous façade renovations, including structural repairs and reconstruction of the ornate masonry work from the arched windows up to the cornice extending over four window bays on the 8th floor at 4th Street and Broadway.

When it became evident that a façade repair project was turning into an extensive deconstruction and restoration — one corner of the building's top floor had previously undiscovered

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structural damage and its decorative terra cotta gargoyle faces and terra cotta trim had deteriorated — Toscano turned to engineer Brian E. Flynn, P.E. and Seaboard Weatherproofing and Restoration Company to assist in making the building safe and restoring its past appearance.

The property had not been built to accommodate settling and constant vibrations from the nearby subway line. The vibrations had caused one of the walls at the top of the building to move, which resulted in the walls leaning several inches outward. Several large cracks were evident and, once the walls were dismantled, it was evident inner and outer walls had separated.

The walls were rebuilt along with additional tiebacks and reinforcements to better protect the integrity of the building. The team also determined that almost all of the 94 terra cotta heads — many representing political figures of the time — were crumbling or broken, had suffered internal damage, and required repair.

"One of our biggest challenges was supporting the roof during the restoration," explained Jay Fiebich, general manager of Seaboard Weatherproofing and Restoration and acting Project Manager. "The corner of the 8th floor had to be completely dismantled from the roof down, including careful removal of the terra cotta cornice, gargoyles, and decorative pieces."

Brian Flynn noted additional challenges. "The restoration took extra time because blueprints of the building were not available. We quickly learned that the building was built like a fort, with 3-foot-thick walls on the 8th floor and cast iron columns and beams.

"I had to alter the construction and restoration specs each time a wall was opened since I never knew what we would find inside the walls."

Approximately 900 pieces of terra cotta were tagged, removed, catalogued, organized, cleaned, and repaired mostly in the basement of the building. They then were reinstalled in their original locations on the building's two street-front facades.

Several hundred additional pieces were repaired in place. Terra cotta bricks were salvaged wherever possible and new glazed bricks were ordered to best match the color, shape,



and size of the old bricks.

"The restoration of this historic building required that we fully repair the façade of the 8th floor and return all stones and decorative heads to their exact location," noted Michael Y. Ahearn, president at Seaboard.

"Our crews catalogued each stone and head so that they could be properly reinstalled during the restoration process."

Added Flynn, "The close-knit team of Seaboard craftsmen along with the architect and engineer always showed great respect for the building and the difficulty of the work involved. We understood the historical significance of the building.

"A building is a reflection of the people who build it, use it, and touch it; its personality is the sum of all of them."



The Seaboard Restoration team (above) repaired almost all of the 94 terra cotta heads on the building — many representing political figures of the time — and replaced them individually.