



Crystal Window & Door Systems provides products for NJ restoration

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Jersey City, NJ Crystal Window & Door Systems products played a major role in the restoration and repurposing of a NJ landmark building. The 10-story building located at 150 Bay St. utilized 515 custom modified Crystal windows on all four façades to retain the appearance and character of the 113-year old historic structure.

Designed by Howard Chapin and built in 1908, 150 Bay St. originally served as a warehouse facility for the Great Atlantic & Pacific Tea Co. and was know as the A&P Building. The building has been designated a landmark and is listed with the Federal Register of Historic Places.

The 150 Bay Street Building rehabilitation which included the restoration of the brick and masonry façade, ornate roof cornice, and cantilevered cable-supported loading dock shed roofs, was quite an undertaking. Replacing the antiquated wood windows with a modern window system that retained the historic characteristics of the building added to the challenge.

Rising to the task of providing just such a window system, Crystal tapped into its broad array of corporate capabilities. Working closely with an outstanding fenestration installer Bluesky Windows and the project architect and general contractor, Crystal fast-tracked the concept of, design, and fabrication of a custom window system solution which met and exceeded the project's historic restoration requirements.

The Crystal custom modified window system replicates the original tall double-hung wood windows with a unique modern energy-efficient vertically-stacked twin project-out awning aluminum window. To truly deliver the project's historic look, Crystal's engineers utilized the resources of the company's aluminum supply partners and its extrusion subsidiary to custom produce a special-frame variant of a standard projected window product, fabricate a 3-piece simulated divided light system, and replicate an historic-look sash with 1" putty line look glazing bead as well as historic panning.

The 150 Bay Street project used Crystal's Series 8620 Project-Out Awning windows. The Series 8620 windows were ordered in 2-lite vertically-stacked configurations and custom modified to suit the historic appearance requirements of the renovation project. With the building's 14-ft. high loft ceiling heights, the windows are all very tall, and some are rather wide, with the largest being 58-½" wide by 81" tall.

The Crystal Series 8620 is a top-of-the-line 3-¼" thermal-broken frame awning window with an

AW-PG80 rating. The energy-efficient window features 1" dual-pane insulated glass with warm edge spacer and argon filling, as well as two rows of bulb weatherstripping around the sash perimeter. The Crystal Series 8620 offers cam lock handles and four-bar HS/SS friction hinges to hold the sash in open positions. Optional sash opening limit devices were also specified.

To meet the project's historic specifications, Crystal made several custom modifications to the Series 8620. To emulate the building's original wood windows, Crystal designed, and its supply partners fabricated, custom sash and frame extrusions. While the 2-lite stacked awning windows replicate the horizontal meeting rail of the original double-hung windows, each sash used special custom vertical simulated divided light (SDL) components to improve the historic aesthetics. The SDL components consisted of a standard colonial "between-the-glass" grid with aligned 1- $\frac{3}{4}$ " raised trapezoidal profile colonial tape-on aluminum grids affixed to the interior and exterior glass.

Also, the project required Crystal's production of several custom aluminum historic panning extrusions for the head, jamb, and sill of the window openings. All the Crystal windows, panning, grid components, and visible installation accessories were finished in a two-tone special Arroyo Red exterior and white interior to enhance the historic appearance of the building.

Key players for the Bay Street renovation project included fenestration installer Bluesky Windows of New York, NY, and architect Fifield-Piaker-Elman Architects, also of New York, NY.

The repurposed 10-story 203,000-ft² building at 150 Bay Street now features ground floor retail, art studio workspaces on the second floor, and business offices on the third floor. The upper floors are residential loft apartments, with three floors used by Nyack College as student residences, and luxury penthouses on the top floor.

Besides its historic, retro exterior, the building has many new features such as a roof patio, lounge areas, and a fitness center. The building is located in the Powerhouse Arts District, a lively artisan and business enclave in Jersey City, NJ. Part of the resurgence of the state's second largest city of over 250,000 residents, the Powerhouse Arts District has cobblestone streets, rehabbed former industrial buildings, shops, coffee houses, restaurants, bars, outdoor streetscape spaces, and art galleries.