PROJECT NAME

Harborview Senior Apartments
Jersey City, NJ

PROJECT OVERVIEW

Developer
Volunteers of America
Alexandria, VA

Architect
Wiencek + Associates
Washington, DC

General Contractor
Epic Management, Inc.
Piscataway, NJ

Installer
EDA Contractors, Inc.
Bensalem, PA

SPECIFICATIONS

NeaCera Terra-Cotta Rainscreen Panels

Colors
Beige, Cream Light, Toscana

Finish
Matte

Shape(s)
Flat Classic, Grooved

Dimensions
48” W (1219.2mm) x 15.75” H (400mm)

Weight
7.2 lbs./ sq. ft.

Sq. Footage
34,000+ sq. ft.

Configuration
Stacked
The Brief

Harborview Senior Apartments in Jersey City, New Jersey was an outdated residential building built in the 1960s whose exterior façade was failing. When originally built, it was constructed of brick and block infill between cast-in-place concrete floors, a common construction method at the time. This approach to wall design utilized a “Face Sealed Wall” which posed a threat to the building due to the likelihood of water penetration. After 50 years, the water damage inflicted upon the building envelope due to its “Face Sealed” design necessitated the rehabilitation of this 14-story, 100-unit elderly housing community.

“A rainscreen system does not try to eliminate moisture, but rather creates back ventilation, allowing airflow behind the exterior panels to dry any penetrative moisture before it reaches the building causing damage.”

Approaches to Wall Design

A “Face Sealed Wall” system relies on effective seals between multiple architectural elements in order to maintain a viable barrier. With a more complex façade composition, each joint is more difficult to seal with liquid sealants, gaskets, or caulk, increasing the probability of water penetration and damage.

In stark contrast, a rainscreen system eliminates the challenges associated with a “Face Sealed Wall” system. A rainscreen system does not try to eliminate moisture, but rather creates back ventilation, allowing airflow behind the exterior panels to dry any penetrative moisture before it reaches the building causing damage. Residual moisture will drain out of the bottom of the system and continually dry due to airflow behind the panel. The innovative design of the rainscreen system was an ideal solution for Harborview Senior Apartments.
The Challenges

Water penetration causing building deterioration was not the only challenge facing this rehabilitation project. Due to the fact that new construction for this project was unfeasible, the new façade needed to be installed over and supported by the existing brick masonry, requiring a lighter weight system.

Wall panels needed to be a durable, low-maintenance solution. The building’s façade would also have to come into conformance with the most up-to-date energy code revisions. Aesthetically, the apartment building was very dated, so the architect desired a system with an array of design options to achieve their vision, while coming in at an affordable price point.

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The Solution

The NeaCera Terra-cotta Cladding System was chosen to deliver a cost-effective solution which addressed all challenges associated with this project, all while the building maintained occupancy. NeaCera provided the traditional benefits of an open rainscreen principle, in addition to reducing project maintenance— no clips, gaskets, caulks, or sealants are required with this 3-component system. The NeaCera system comes with up to a 30-year warranty, and the additional benefit of baked in lifetime graffiti protection for added ease of maintenance.

“At a system weight of only 7.5 lbs. per square-foot, our extruded panels achieve strength through density at a lighter weight, making it the perfect solution for application over this failing façade.

In order to comply with the latest IBC Energy Code, the NeaCera rainscreen system allowed for the seamless application of a continuous spray weather barrier across the existing brick. Topped with an additional layer of insulation, and paired with NeaCera Terra-cotta Rainscreen Cladding overtop, the insulation effectively deterred thermal gain/loss, a key factor in optimizing energy efficiency, while protecting the building from moisture damage.

“At a system weight of only 7.5 lbs. per square-foot, our extruded panels achieve strength through density at a lighter weight...”