10 Jay Street Restoration

Brooklyn, NY, USA (2016)

PRODUCTS USED:

Krystol Internal Membrane™ (KIM®) Krystol Mortar Admixture™ (KMA)

ARCHITECT:
ODA

DISTRIBUTOR:
Dry Concrete L.L.C.

BACKGROUND

The 10 Jay Street building was originally built in 1898 and housed the Arbuckle Brothers sugar refinery until 1945. Subsequently, the building was used as a warehouse until recently when redevelopment plans were initiated.

As part of those plans, the prestigious architecture firm ODA came up with an adaptive reuse design for the 21,368-square meter (230,000-square foot) building. This design enabled them to preserve the history of the building and transform the property into a space that would be functional for the present and future. As a result, the redeveloped 10 Jay Street building now contains office and retail space inside one redesigned façade and three restored original façades. The former façade in particular holds a visual appeal that attracts many nearby onlookers with its combination of glass, steel, brick, and spandrels, making it a notable landmark around New York's East River shore.

When first considering the construction, however, the construction team faced the challenge of rehabilitating the old structure of the 10 Jay Street building near such a high-hydrostatic pressure area.

SOLUTION

To start, the 10 Jay Street construction team made use of the services of Dry Concrete L.L.C., a Kryton-authorized and -exclusive distributor for the United States of America in the northeast. That allowed them to benefit from the distributor's specialized construction expertise and consultations and their local round-the-clock technical and site support.

Before going ahead with the use of the distributor's solutions, the team looked to a design consultant for a detailed review. The consultant recommended that the construction team use Kryton for their concrete waterproofing needs.

To that end, the team added Kryton's KIM admixture to the concrete mix for the structure's deep foundation infills, which needed the protection of KIM as the foundation faces very high hydrostatic water pressure. Doing so enabled the team to seamlessly waterproof the new below grade sections, fill in the gaps of the existing foundation, and waterproof the elevator pits.

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Then, for the east-facing façade, the team needed to conduct an intensive restoration using Kryton's KMA solution, a crystalline admixture for mortar and plaster. With the help of some hands-on training from Dry Concrete L.L.C., the team applied KMA to repoint the brick wall and waterproof it.

Both KMA and KIM contain Krystol® technology, which chemically reacts with water and unhydrated cement particles to form insoluble needle-shaped crystals. These crystals then fill capillary pores and micro-cracks in the concrete to block potential pathways for water and waterborne contaminants, which protects the concrete's structural integrity.

That can be seen simply by looking for the 10 Jay Street building now as the structure is still standing dry and impermeable to this day.

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