

60 West Cordova Street

Vancouver, BC, Canada (2012)

PRODUCTS USED:

Krytol Assurance Program™ (KAP) Krytol Internal Membrane™ (KIM®)
Krytol® Waterstop System

OWNER:

Westbank Corp.

ARCHITECT:

Henriquez Partners Architects

ENGINEER:

RDH Group

CONTRACTOR:

ICON Pacific Construction Corp.

READY-MIX SUPPLIER:

Ocean Construction Supplies Ltd.

APPLICATOR:

The Quorum Group

DISTRIBUTOR:

Kryton International Inc.

BACKGROUND

With the expense of living in Vancouver, Canada, known to be costly, Westbank Corp. wanted to create more affordable housing. As a result, they chose to collaborate on a project with Vancity, Portland Hotel Society, and Habitat for Humanity.

Known as 60 West Cordova Street, the project was a building development that focused on inclusivity principles and a conscious design decision process that was all about ensuring more was done with less. Part of that meant that the project would have to work with limited parking, additional density, and fewer marketing and selling expenses. It was all done to minimize costs while still making the project a relatively comfortable living experience.

To guarantee that such a living was available to those in need of affordable housing, the four organizations determined that the project's units would be sold for the lowest possible price and that they would only go to people who lived, worked, or volunteered around the neighborhood.

Those who were able to buy a unit would find their living space near commercial spaces all within a 10-story, 108-unit building design that would complement the aesthetics of the surrounding Gastown neighborhood. It would also still have some character of its own, with silhouettes of people supporting other people shown throughout the building's façade.

Before that vision could fully come into place, however, the construction team for it had to consider how they'd protect its structural integrity with waterproofing while working within the tight confines of Gastown.



SMART CONCRETE[®]



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SOLUTION

Due to the neighborhood's overall limited space, the construction team felt that using shotcrete would be their best method for placing concrete. After all, it would allow them to maximize their building footprint by eliminating the typical forming needed for cast-in-place construction.

Unfortunately, it would also pose a challenge for traditional waterproofing, such as external membranes. With concrete coming out of a nozzle at high velocity via the shotcrete method, there was a high risk that it would tear right through such waterproofing. On top of that, shotcrete was also a newer method in Vancouver at the time. Few concrete professionals were fully experienced in handling it, making it harder to avoid placing defective concrete and properly waterproof the concrete.

Keeping that in mind, the contractor of the construction team, ICON Pacific Construction Corp., wanted to guarantee their success with the shotcrete, and they soon found that through Kryton's KAP service. Under KAP, the construction team would be given a 10-year limited warranty that would guarantee that their Kryton waterproofing system would perform as expected. If any leaks occurred during that time, Kryton would take responsibility for covering the costs of the material and labor needed for repairing them.

To mitigate the chances of such a leak repair needing to happen, KAP also ensured that the construction team would receive support with design details and waterproofing training and inspections from Kryton.

It gave the team the risk reduction they needed to go ahead with using shotcrete and to waterproof that shotcrete with Kryton's waterproofing admixture, KIM. That way, they could work within the limited space they had and avoid using an external membrane. As a result, they saved time and money by adding KIM directly into the shotcrete mix, providing the concrete with Krytol® technology. That would enable the concrete to react to the presence of water for the rest of its life span by forming interlocking crystals that fill up any pathways in the concrete to block out any water and waterborne contaminants. The end result was permanent waterproofing that couldn't be cut, punctured, or damaged by external forces like shotcrete. To further bolster its protection, the construction team also installed Kryton's Krytol Waterstop System, which would protect the surrounding joints of the concrete from water ingress.

It all led to the creation of leak-free housing that won the 2014 City of Vancouver Urban Design Award for its innovative efforts at remaining affordable for those living in the neighborhood.



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