

Laurel Street Works Yard Redevelopment

Burnaby, BC, Canada (2023)

PRODUCTS USED:

Hard-Cem[®] Krystol Internal Membrane[™] (KIM[®])

OWNER:

City of Burnaby

ARCHITECT/ENGINEER:

Omicron

CONTRACTOR:

Turner Construction Co.

READY-MIX SUPPLIER:

BURNCO Rock Products Ltd.

BACKGROUND

After over six decades of service for the City of Burnaby since 1954, the Laurel Street Works Yard needed an upgrade. While reliable, its facility could no longer keep up with the city's growing maintenance and equipment needs. With that in mind, the city funded a \$76-million redevelopment project for the works yard, which was divided into two phases. The first phase involved the construction of a yard building. The process for that went smoothly, so it was time for the second phase, which would involve the construction of the main building. That meant developing a space for engineering operations with an expanded fleet repair garage, a crew muster station, a facilities management shop, central stores, a new fueling station, and data and emergency operations centers.

It would all be expected to last for a long time to help the operations for the City of Burnaby run smoothly. To make that a reality, the construction team needed to ensure that the main building's concrete could withstand the abrasive force of equipment maintenance and remain free from water ingress to maintain optimal structural integrity.

SOLUTION

For reliable concrete abrasion resistance and waterproofing protection, the construction team turned to Kryton's award-winning Hard-Cem and KIM admixtures due to their decades of field-proven success. With Hard-Cem, they gave the maintenance facilities' concrete a more resilient cement paste. That made the concrete highly resistant to abrasive and erosive forces, which would more than double the works yard's life span. Meanwhile, the team's use of KIM ensured that the substructure of the works yard would remain permanently dry and free from leakages, protecting its structural integrity.

It was an application process that didn't require complex, time-consuming steps and significantly reduced the chances that the works yard would need concrete repair or replacement sessions in the future. As a result, the Laurel Street Works Yard would have a longer life span and require less additional costly carbon-intensive cement throughout its years in operation. That in turn would decrease its overall lifetime carbon footprint, making the project more sustainable and resilient while keeping construction and operational costs low.

