CASE STUDY

Shaw Tower Parkade

Vancouver, Canada (2004)

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BACKGROUND

The 3,000 cubic metres (3900 cubic yards) of concrete placed for the huge raft slab foundation of the Shaw Tower set the record for the largest continuous pour in the history of Vancouver. When complete the tower will stand at 149 metres (490 feet) tall. More than 38,000 cubic metres (50,000 cubic yards) of concrete will cover 49,000 square meters (527,000 square feet) of office and residential space.

Because the building sits so close to the harbour, water intrusion was a major concern in the underground parking. In fact, at high tide, the ground water rises 3 feet above the lowest parkade level. Extreme tides, storms and other conditions could push it even higher.

With existing structures abutting the tower basement, installing a membrane would have been difficult and costly. Instead, Ocean Concrete supplied Ocean WaterGuard Concrete, a mix containing Kryton's Krystol Internal Membrane (KIM) admixture in all below-grade walls.

SOLUTION

Besides offering a wide variety of mixes to help Ledcor and Micron meet specifications and stay on schedule, Ocean Concrete has suggested a number of cost-saving changes. Ocean WaterGuard Concrete with Krystol waterproofing admixture, has eliminated the need for an exterior waterproof membrane around the underground portion of the five-level parkade. Tests have shown that Krystolized concrete can hold back hydrostatic pressure with up to 140 feet of head pressure.

The result was excellent with virtually no cracks. Any minor cracks that did occur were repaired through the unique self-sealing ability of the Krystol technology.

DEVELOPERS:
Ledcor Properties Inc., Westbank Projections Corp. and Shaw Communications Inc.

ARCHITECT:
James K. M. Cheng Architects Inc.

CONTRACTOR:
Ledcor Construction

READY-MIX SUPPLIER:
Ocean Concrete

PRODUCTS & TECHNICAL SPECIFICATIONS:
Learn more at **kryton.com**
Krystol Internal Membrane (KIM)®

Kryton's concrete waterproofing system was used to protect all below grade areas.

At the time of its reveal, the Shaw Tower was the tallest building in Vancouver.

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