CASE STUDY

Johnson Street Bridge

Victoria, BC, Canada

SMART CONCRETE®

BACKGROUND

The third and current version of Johnson Street Bridge was built at its present location in Victoria, British Columbia in 1924. A 2009 assessment of the existing Johnson Street Bridge identified extensive corrosion to structural steel beams, obsolete mechanical and electrical systems and a seismic vulnerability. An important transportation connection into Victoria's central business, entertainment and tourism districts with over 30,000 crossing per day a new modern solution was required.

The City of Victoria retained MMM Group, a Canadian engineering firm with expertise in moveable bridges to provide the engineering services for design and project management for a replacement option of the existing structure.

MMM Group's solution was the largest single lift bascule bridge in Canada to replace the existing Johnson Street Bridge. The new bridges piers and foundations are designed to serve Victoria for the next 100 years. The City of Victoria approved the design and construction began in May of 2013.

OWNER:
City of Victoria

CONTRACTOR:
PCL Constructors Westcoast

ENGINEER:
MMM Group

PRODUCTS:
Learn more at **kryton.com**
Con-Fume®

SOLUTION

A key ingredient to high performance concrete required for bridge structures is silica fume. A pozzolanic material used in concrete mix designs to produce high performance concrete for increased strength, impermeability and durability.

We supplied over 12 tonnes of high quality CSA / ASTM approved silica fume for approximately 525 cubic meters of high performance concrete supplied by Ocean Concrete for the project. Manufactured in Calgary, Canada, Con-Fume Silica Fume was the perfect choice for Ocean Concrete. We provided price assurance and availability of supply for Ocean's high performance concrete in a demanding, budget conscience project like Johnson Street Bridge. Engineered for enhanced flowability in pneumatic and storage equipment Con-Fume is a superior quality solution.

Con-Fume silica fume reacts with the hydration products of Portland cement, forming calcium silicate hydrate gel, enhancing strength and durability by consuming the weaker calcium hydroxide.

Con-Fume provides enhanced bulk material flow and handling characteristics, providing efficient bulk transportation and pneumatic unloading.

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