King High Line
Toronto, CA

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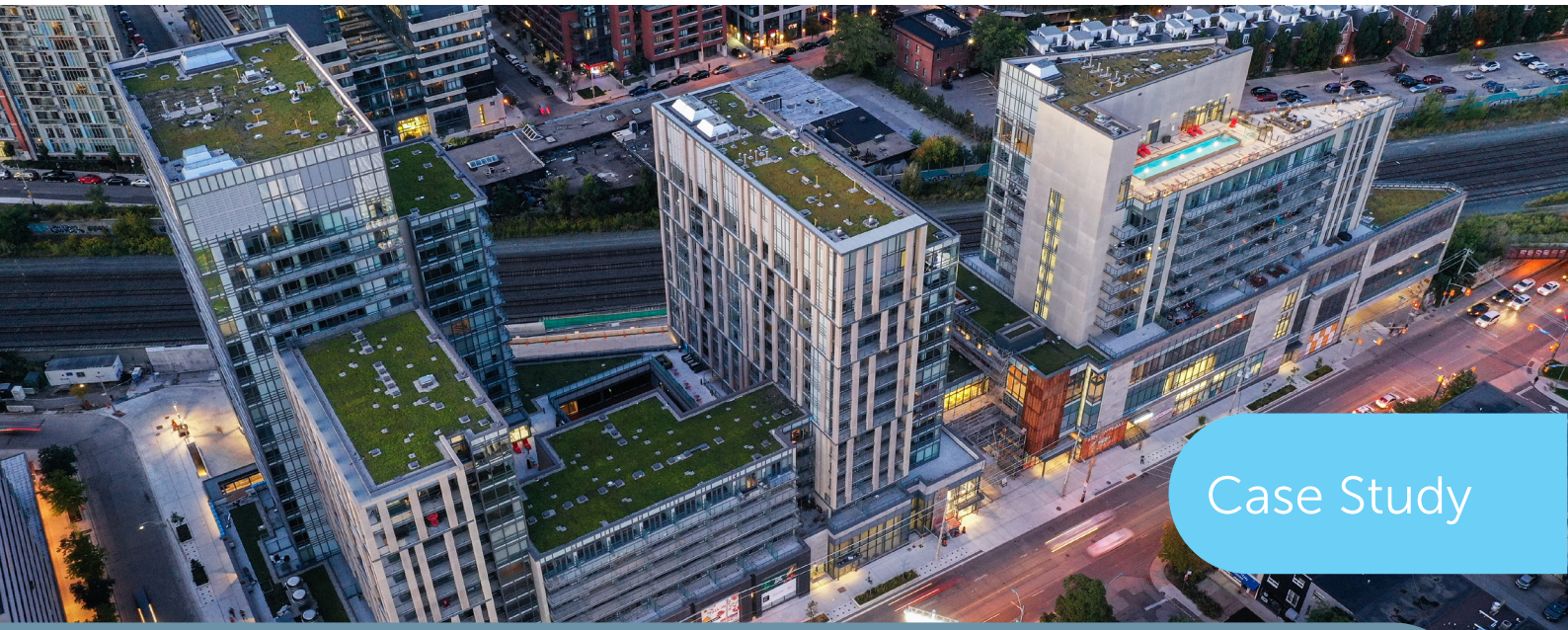
Making your world a quieter place



Case Study

Property Owner
First Capital Realty

Main Contractor
Urbancorp

Architect
Tact Architecture

Acoustic Consultant
Valcoustics Canada Ltd

Structural Engineer
Peter Sheffield & Associates Ltd. & Sigmund Soudack & Associates

OVERVIEW

Situated meters from the Lakeshore GO railway line, 1m wide crash wall connected to the King High Line building structure at the parking level slabs, 5-levels below ground. Originally proposed as a 75 Durometer continuous neoprene 50mm thick strip, installed with a number of steel elements, 860 linear metres of isolation joint was needed, to separate the crash wall and parking level slabs.

Stravibase SEB

- A bespoke structural elastomeric bearing for the structural isolation of buildings and other structures
- Series of elastomer pads laminated to formwork

SOLUTION

The acoustician conducted on site measurements and recommended 95% isolation efficiency for a 40Hz train excitation frequency. It was determined the original 75 Durometer continuous neoprene strip would not provide the acoustical isolation requirements.

Stravibase SEB vertical "mechanically fastenless" solution was created to meet the acoustical and structural requirements, while offering a faster and more inexpensive installation plan, by omitting metal fixations.

A total of (1 738) Stravibase SEB were used, with a multitude of pad spacing configurations to cope with the variation of structural loads, providing a 98.5% isolation efficiency solution.

AT A GLANCE

CHALLENGES

- Variation of structural loads
- Building located near railroad
- Budget restrictions

BENEFITS

- Quick & easy installation
- Designed to meet natural frequencies between 6 Hz and 20 Hz
- High lateral stiffness providing greater lateral stability

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MN

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