



Case Study



Property Owner

Fitzrovia



Main Contractor

Fitzrovia



Acoustic Consultant

HGC Noise Vibration Acoustics



Architect

IBI Group



Structural Engineer

Jablonsky, Ast and Partners

OVERVIEW

The Sloane, located at 3450 Dufferin Street in Toronto, is a major mixed-use, purpose-built rental development in the Yorkdale neighbourhood. The project includes three residential towers of 24, 28, and 30 storeys, delivering more than 750 rental units across over 46,452 m² (500,000 sqft) of residential space.

Positioned directly across from Yorkdale Shopping Centre, the development contributes to the area's growing urban density while providing residents with convenient access to retail, transit, and neighbourhood services. The building also features several recreational amenities, including a basketball court and bowling alley, designed to enhance the residential living experience.

Stravifloor Mat

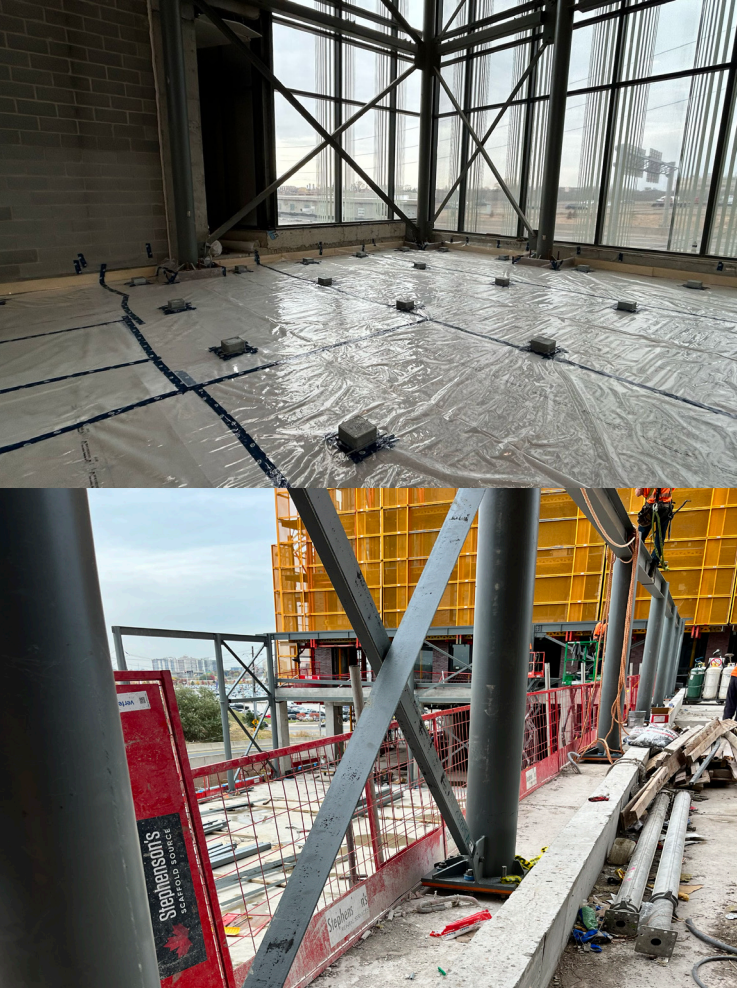
Low-profile roll-out isolation solutions made of regenerated materials, providing cost-effective structure-borne noise protection (including rolling noise).

Stravifloor Jackup-R

Jack-up floating floor system with reinforced steel boxes cast into concrete, that allows replacement or inspection of isolators.

Stravibase Fix

Structural elastic fixation, designed to isolate substructures from superstructures while resisting uplift forces.



SOLUTION

To mitigate vibration and impact noise generated by the building's amenity spaces, CDM Stravitec supplied high-performance vibration-isolated flooring solutions.

For the basketball court, a **Stravifloor Jackup-R** floating floor solution with 100 mm (4") boxes and 25 mm (1") deflection springs was installed to isolate the 141 m² (1520 sqft) court area, reducing impact noise and preventing vibration transmission to adjacent residential spaces. For the bowling alley, a Stravifloor Jackup-R solution with 200 mm (8") boxes and 50 mm (2") deflection springs was implemented across 82.50 m² (888 sqft), incorporating a deflection limiter pad to control vertical movement while maintaining the required isolation performance.

Additionally, **Stravifloor Mat** was installed in the 200 m² (2,148 sqft) surrounding areas of the bowling alley, providing supplementary vibration control and ensuring continuity of acoustic isolation. To further limit vibration transmission into the building structure, **Stravibase Fix** isolators were installed beneath the basketball court structure.

AT A GLANCE

CHALLENGES

- Integrating high-impact recreational amenities within a residential building required careful control of vibration and structure-borne noise transmission.
- Achieving the required 50 mm (2") spring deflection for the bowling alley isolation system while preventing excessive vertical movement of the supporting slab under live loads.
- Accurately predicting system behaviour through detailed finite element analysis (FEA) to refine deflection estimates and ensure reliable in-service performance.

BENEFITS

- Reduced structure-borne noise from both the basketball court and bowling alley, protecting the acoustic comfort of adjacent residential units.
- Controlled slab deflection and improved structural stability, achieved through detailed FEA modelling and the integration of an auxiliary elastomer isolator.
- Reliable long-term vibration isolation performance, enhancing occupant comfort and protecting the building structure through the combined use of Stravifloor Jackup-R floating floors and Stravibase Fix isolation solutions.



For the 3450 Sloane in Toronto, which included a basketball court and bowling alley located directly below residential suites, CDM Stravitec provided spring floating floor solutions that addressed very challenging low-frequency impact and vibration requirements. From a consulting perspective, the shop drawings were particularly strong. They included detailed loading calculations, isolator layouts, and even load distribution visuals, which made our review process straightforward. In fact, for the basketball court submission, we had no comments – which is quite rare. All the necessary information was provided clearly and aligned exactly with what we had specified. The overall experience was very positive, and to date, there have been no complaints – which ultimately is the best outcome on a project like this.

Simon Edwards
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