

We Design for Sound Isolation and Audience Delight



CHALLENGE

A unique acoustical challenge was ensuring effective sound isolation for the rooftop mechanical equipment due to the lightweight steel structure.

SOLUTION

Our team was engaged as the acoustical consultant to deliver comprehensive acoustical consulting services that encompass architectural acoustics, sound isolation, and noise/vibration control from mechanical systems.

RESULT

The outcome is a cutting-edge venue certified with LEED Silver that is capable of hosting a wide variety of events and corporate functions, meeting the needs of diverse clientele.

The Niagara Falls Convention Centre, previously known as The Scotiabank Convention Centre, spans 330,000 square feet and provides a modern and adaptable environment for meetings and events, complemented by a flexible outdoor space. This recently upgraded facility boasts LEED Silver certification and features an impressive 82,000 square-foot exhibit hall, versatile meeting and breakout areas, a stunning 17,000 square-foot ballroom, and a 986-seat theatre equipped with comprehensive audio-visual capabilities. Additionally, it offers ample pre-function and service areas to enhance the event experience.

SIGNATURE SOLUTION

Valcoustics, a Trinity Consultants team, played a key role within the Design-Build team to ensure that all acoustical performance specifications were effectively achieved. Key objectives included managing background sound levels throughout the facility, providing sound isolation between various spaces, controlling environmental noise, and addressing reverberation, particularly within the theatre space.

A unique challenge arose in ensuring sufficient sound isolation for the rooftop mechanical equipment, particularly given the use of a lightweight steel structure. To overcome this, our solution involved increasing the local mass of the roof structure around the rooftop units, thereby enhancing the airborne sound isolation performance of the overall structure.

ARCHITECTS

CS&P Architects Inc. | Stanford Downey Architects Inc. | The Kirkland Partnership Architects