

MJM ACOUSTICAL CONSULTANTS INC.

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Résumé

MJM CONSEILLERS EN ACOUSTIQUE INC. est un bureau de consultation fondé au printemps 1984 par son actuel président, l'architecte Michel Morin, qui possède 36 ans d'expérience en acoustique et en contrôle du bruit. MJM, dont l'équipe est constituée de 3 à 5 conseillers, s'est fait connaître par le nombre et la variété des **projets** auxquels il a participé, par les projets de **recherche** en acoustique et en contrôle du bruit qu'il a menés à terme et dont les comptes-rendus ont été distribués à travers le monde, ainsi que par le **support technique** qu'il procure aux industries désireuses d'améliorer la performance acoustique des biens qu'elles produisent. MJM fournit des **recommandations claires** qui peuvent être mises en place facilement à l'aide de **matériaux courants** le plus souvent **disponibles chez plusieurs fournisseurs de matériaux**.

Mots clefs : conseil, acoustique, Montréal, contrôle, bruit

Abstract

MJM ACOUSTICAL CONSULTANTS INC. is a consulting firm practicing in Montreal since 1984. Its founder, architect Michel Morin brings over 36 years of experience in acoustical consulting in the private sector. MJM, whose team is composed of 3 to 5 consultants, is known for the number and variety of **projects** in which it has participated, for the **research** projects in acoustics and noise control which it has undertaken and whose reports have been distributed worldwide, as well as for the **technical support** it delivers to industries wishing to improve the acoustical performance of their products. MJM provides **clear recommendations** which in most instances can be easily put into place using **commonly available materials** distributed by **a large number of suppliers**.

Keywords: consulting, acoustics, Montreal, noise, control

1 Introduction

In 1979, a few months after graduating from the School of Architecture of University of Montreal, Michel Morin starts his career at Barron and Associates, which was at the time the largest acoustic consulting firm in Canada. While at the employment of Barron and Associates in Vancouver B.C., Mr. Morin has been responsible for the acoustics and noise control of the Edmonton and the Calgary Convention Centre, the acoustical site survey of Expo 86, the impact study of the B.C. Place amphitheater on the neighbouring residential development, and many other projects. In April 1984, Mr Morin returns to Montreal, becomes a registered member of the Ordre des Architectes du Québec and founds MJM ACOUSTICAL CONSULTANTS.

2 Services & projects

MJM Acoustical Consultants provides measurement and consulting services that cover all aspects of acoustics and noise control related to buildings and environment, and most aspects related to industrial noise control.

Since its foundation more than 30 years ago, MJM has participated in construction projects varied in nature and in

size whose value ranges from 20,000.00 \$ to 480M\$. Among some projects of importance are:

- The **Bell Center** (originally the Molson Center): acoustics and noise control for this complex containing a 21,500 seats amphitheater, the television studios and a 7 storeys office tower; la Place Bell in Laval (10,000 seats amphitheater, 2,500 seats Olympic rink and a community rink).
- Several **auditoriums and theaters** among which the Baie-Comeau auditorium (900 seats), the Theater des Deux Rives (800 seats), the Dell'Arte complex, Saydie Bronfman theater and the auditorium of the FACE Music School.
- **Teaching facilities** such as the College G rald-Godin, the Formation Center of the Government of Canada, l' cole Nationale d'A rotechnique, Pavillon Lassonde de l' cole Polytechnique de Montr al, l'Aile "Z" de l'Universit  de Montr al.
- The LEED certified Phi Center dedicated to the **production and diffusion of audio-visual arts**, located in Old Montreal; the renovation of the Mus e des Beaux-Arts de Montr al (Pavillon Jean-No l Desmarais), the Concordia University library, and the

libraries of the Cities of Outremont and Dollard des Ormeaux.

- Environmental noise studies for several residential, institutional and commercial sites among which l'îlot Balmoral, le Centre de Recherche du CHUM (tours St-Antoine et Viger), Tour des Canadiens, Place L'Acadie, 1800 René-Levesque Ouest.
- **Speech privacy and acoustic comfort in the offices** of Hydro-Quebec (four buildings totaling 1M ft²), Canadian National Railways (500,000 ft²), Provigo, executive offices of the Federal Bank of Development, Bombardier, IBM.
- Acoustics and noise control for **institutional and commercial projects** such as the Research Center of the Centre Hospitalier de l'Université de Montréal (480 M\$); the New Bell Campus at Nun's Island (250 M\$, 840,000 ft²), the Cité du Commerce Électronique (two office towers 150 M\$), Place Montreal Trust (200 M\$), 1250 René-Lévesque Ouest (200 M\$), Air Canada Head Office building in Dorval.
- Control of the noise produced by human activity, plumbing and mechanical systems in condominium buildings totalling more than 30,000 dwelling units, among which: the Séville, Lowney (all phases), Sommets sur le Fleuve, the Vistal and the Evolo towers, Tour des Canadiens (50 storeys), Icône, District Griffin, the Solano, the 1800 René Lévesque, Bassins du Havre, District Griffin, Symphonia, Crystal de la Montagne, Roc Fleuri, the 333 Sherbrooke East, Lofts Imperial phases I to VII, to name a few.

3 Acoustic software

MJM has developed numerous **software applications** for acoustics and noise control evaluations and simulations, among which REFLEX, a software application for room acoustics analysis. REFLEX is a powerful design tool which uses the 3D capabilities of AutoCAD (release 10 and following) to identify sound reflections of first and multiple order on the boundaries of a room, and to reorient surfaces or panels inside this room in order to provide early reflections where they are most needed.

4 Research

Several research reports produced by MJM [1-15] are available to the public and can be downloaded on our internet site at www.mjm.qc.ca.

The insertion loss measurement method developed during the research project on the noise isolation provided by access doors in multi-dwelling buildings [6] has become the ASTM Standard E 2964-14 entitled *Standard Test Method for Measurement of the Normalized Insertion Loss of Doors* [16].

5 Integrity

MJM dedicates 100% of its resources to acoustical consulting and noise control and is totally **independent of**

any supplier or manufacturer of acoustical materials and vibration isolators.

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