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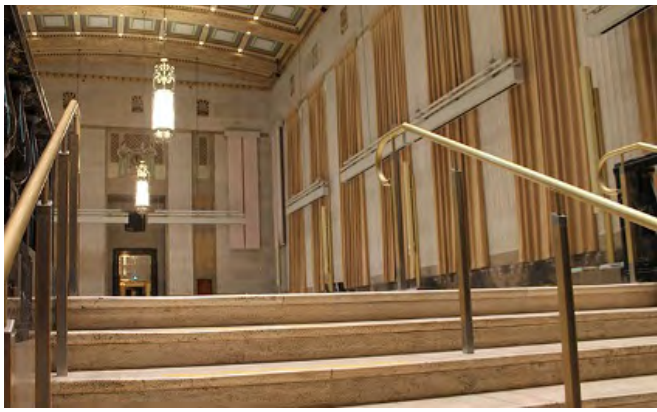
Heritage and Climate Action

SIR JOHN A. MACDONALD BUILDING



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Completed in 2015, The Sir John A. Macdonald (SJAM) building restoration in downtown Ottawa is an example of the potential of heritage buildings to be adapted to meet the realities of the climate crisis. The SJAM building was restored to address the changing climate but also to meet the present needs of the federal government including as the potential temporary House of Commons.

Originally built in 1930, The building's architecture is a noteworthy example of modern classicism. Its architect, Ernest Barott, won the Royal Architectural Institute of Canada's Gold Medal for the building's design. As time passed, however, the SJAM building needed significant repair. The restoration was undertaken to not only assure the buildings' longevity but also to, in part, help to green the operations of the federal government.

Designated in 1986, by the Federal Heritage Review Office, the Sir John A. Macdonald building was recognized for its outstanding architecture and contribution to Wellington and Sparks street in downtown Ottawa. 30 years later, the Federal Heritage Review Office as well as the National Capital Review Panel reviewed the restoration to confirm that the project was consistent with its heritage values while integrating green technology, increasing occupancy by ten times, and creating new meeting and celebratory spaces.

"The SJAM is an example of how to leverage character-defining elements to bring new use to grand halls in the 21st century, all while creating ingenious discrete and multivalent solutions for modern building systems."

With new uses planned for the former bank building, integrating new technology including AV systems and security into the existing building was a considerable challenge. TRACE Architectures, the conservation architects on the project, expressed that these types of integrations will be a familiar but necessary challenge in addressing the adaptive reuse of heritage buildings.

"While unique in its challenges, the design considerations in the SJAM building are all too common for heritage buildings faced with the requirements of new technologies change in programming. The SJAM is an example of how to leverage character-defining elements to bring new use to grand halls in the 21st century, all while creating ingenious discrete and multivalent solutions for modern building systems." (Designing for Past & Future: Flexible Interiors at the SJAM Building – TRACE Architectures)

Along with a full heritage restoration of the building, significant environmental and sustainable elements were integrated into the restoration. These measures included automated control of heating and cooling systems, new lighting and water-conserving fixtures, a water-absorbing green roof and the reuse of natural materials throughout the building including limestone and marble. In recognition of the environmental sustainability of the project, the SJAM building restoration received Green Globe certification and the highest possible rating of five Green Globes.

By restoring the stone structure of the SJAM building, many tonnes of carbon from material production were saved in addition to considerable reduction in waste material when compared to new construction. By utilizing the embodied carbon of the existing building and the integration of green technology, the SJAM building demonstrates the enormous potential of heritage and existing buildings to be adapted to be environmentally sustainable both in their restoration and in their ongoing operations.

SOURCES

Designing for Past & Future: Flexible Interiors at the SJAM Building - TRACE Architectures

Sir John A. Macdonald Building Achieves Highest Possible Eco-Rating - TRACE Architectures

Rehabilitating the Sir John A. Macdonald Building - Canada.ca