

## 2024 TEAM ACHIEVEMENT AWARD

### *St. Andrews Lock and Dam Bridge Deck Replacement Project*



Officially opened in 1910, the St. Andrews Lock and Dam is the only surviving Caméré moveable dam in the world and was officially declared a Canadian National Historic Site in 1990. Public Services and Procurement Canada retained Associated Engineering to provide full engineering services for the planning, development, and implementation of the deck replacement and rehabilitation measures for this historic Lockport facility.

Following a comprehensive detailed inspection by Associated Engineering, it was determined that the existing bridge deck on the main truss spans was past its useful life span and needed replacement. Work included functional upgrades to the bridge deck by incorporating standard driving lane widths as well as a separated sidewalk, strengthening the structure to increase the load capacity of the bridge to meet full highway load requirements, rehabilitating the structure to extend its useful life span, and accessibility upgrades to the facility.

Strengthening and modifying a 100-year-old steel structure called for thorough research and planning regarding materials and technologies. Meticulous planning and execution eventually resulted in preserving the original historical aesthetics of the structure and integrating engineering expertise ensured that the improvements to the existing structure would not just preserve its heritage, but also enhance its aesthetic appeal and functionality. The project required the right blending of a broad range of engineering disciplines including structural, civil, transportation planning, electrical, geotechnical, and hydrotechnical engineering. Other professionals and experts that were crucial to assisting the ingenuity of the project were environmental experts, archaeologists, heritage architects, metallurgical specialists, and professional cost consultants.

This project is notable for the number and diversity of critical stakeholders involved, including heritage experts, federal, provincial, and municipal government agencies, First Nations, the local community, and other representatives. A collaborative spirit made the project a positive experience for all stakeholders. The collaboration between all parties on the bridge deck replacement project has deepened the understanding to those involved of the historical significance of the St. Andrews Lock and Dam area, and is an example for collaboration and partnering on projects between Public Services and Procurement Canada and the Indigenous Rights Holders.

In recognition of the engineering excellence demonstrated in integrating ingenuity in the engineering process for the St. Andrews Lock and Dam Bridge Deck Replacement Project, Engineers Geoscientists Manitoba is pleased to present the 2024 Team Achievement Award to Associated Engineering.