

ESPACE 400E

QUEBEC CITY, QC, CANADA

RECREATIONAL

L'ORDRE DU BON-TEMPS

A refurbished cement factory built in 1954, Espace 400e served as the center of the festivities marking the 400th anniversary of Quebec. The structure is currently home to a Parks Canada discovery center and serves as an exposition center.

PROJECT DETAILS

The cement factory had already been converted in 1984 to host public events, but the recent refurb and expansion was a sustainable makeover that included building massing conceived for passive heating and cooling using cross ventilation and large roof overhangs, highly energy-efficient water tanks for providing radiant floor heating, and double glass skin to trap air for use as ventilation or insulation, depending on the conditions.

Reliable Controls[®] Authorized Dealer, Les Contrôles A.C. was tasked with controlling the refurbished building and a new addition. Because time was tight to make the structure functional for Quebec's 400th Anniversary celebrations, Les Contrôles A.C installed a Reliable Controls[®] MACH-System that was easy to install and offered robust capabilities. The installation included a MACH-Global™ to control the two main AHUs on the roof, and another MACH-Global™ to control the geothermal/heatpump equipment in the basement. MACH-Zone™ controllers were used for controlling the lighting, various fan coils, and radiant floor heating. The MACH-Zone™ controllers also interfaced with the geothermal system that included heat pumps to absorb the charge created by the fan coils as well as provide hot water for the radiant floor heating and hot or cold water for the AHU coils.

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PROJECT TYPE:

Retrofit & New Construction

INSTALLATION TYPE:

Boiler, Fan Coil Unit, Geothermal, Heatpump, HVAC, Lighting

TOTAL AREA:

5,698 m² (61,333 ft²)

EQUIPMENT INSTALLED:

**1 MACH1™
2 MACH-Global™
4 MACH-Global™ Output Expansion Card
7 MACH-Global™ Input Expansion Card
27 MACH-Zone™**

NETWORK:

EIA-485, Ethernet, LAN

TOTAL SYSTEM POINTS:

300 points

ENGINEERING CONSULTANT:

CIMA, Denis Fortin ing.

RELIABLE CONTROLS[®] DEALER:

Les Service Technologiques A.C.