

Jervis Webb Energy Retrofit Project

CLIENT

Jervis Webb Company of
Canada Ltd.

LOCATION

1647 Burlington Street East,
Hamilton, Ontario

PROJECT DESCRIPTION

Jervis Webb designs, engineers, installs, and supports integrated material handling systems (e.g. baggage handling, conveyor, and automated storage and retrieval systems). Its three-building facility in Hamilton, ON, includes office space, warehousing and manufacturing.

There were a total of eight gas fired make-up air units on two of the buildings. These units were nearing the end of their useful service life. They were delivering too much air to the space based on current exhaust requirements. The site conditions had changed over the past 20 years, which caused a change in the facility's air balance.

An air study was conducted to determine the exhaust and make-up air requirements. New and properly sized equipment was supplied and installed. The project capitalized on local and provincial incentives for the new equipment.

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B&M SCOPE OF WORK

Black & McDonald's (B&M) scope for the project included:

- Mechanical system design engineering (electrical, controls & wiring design)
- New equipment selection
- Structural review and stamped drawings
- Structural reinforcement
- Controls and interlocks
- Sheet metal, insulation, craning and roofing
- Gas piping and power requirements
- Equipment delivery and installation
- Project management
- Start up, commissioning, measurement and verification
- Project close-out documentation/inspection and warranty certificates
- Smart Green measurement and verification of energy savings
- Smart Green coordination with technical reviewer
- Smart Green retrofit portion of paperwork/process
- Training and instruction for facility personnel

BENEFITS TO CLIENT

Jervis Webb greatly benefited from B&M's expertise, including:

- Selecting correctly sized equipment based on conditions
- Choosing newer more efficient systems
- Providing increased reliability and decreased risk of equipment failure
- Demonstrating reduced operating costs
- Employing the Canadian Manufacturers and Exporters SMART Green program, Union Gas, and Save On Energy incentives, projecting \$267,200 in savings
- Providing projected savings on resource consumption saving \$25,085
 - Natural Gas: 82,237 cu. m. /year | 156 tons of CO₂/year | \$16,450/year
 - Electricity: 57,564 kWh/year | 2.88 tons of CO₂/year | \$8,635/year

With B&M's leadership, Jervis Webb sees real benefits in energy and maintenance cost savings.

TECHNOLOGY USED

Jervis Webb now uses paint booths during the manufacturing of its products. Heat recovery ventilators (HRVs) recover heat from exhausted air while providing fresh air, improving indoor air quality and controlling condensation. B&M installed a HRV and connected it to the MUA units to recover the exhausted heat energy from the paint booths. This preheats the fresh air intake reducing the energy required to heat incoming air.