



STEELCARE INC. PLANT 19

Hamilton, Ontario

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Dofasco Steel Design, 2005)

Design and Construction Team

Owner: Steelcare

Architect & Construction

Manager: Chamberlain Architect
Services Ltd
(905) 631-7777

Steel Building Erector:

Abcott Construction Ltd
(519) 756-4350

Steel Building Supplier:

Butler Buildings (Canada) Ltd
(905) 332-7786

Cladding Supplier:

Agway Metals Inc.
1-800-663-7538

Photos:

1. The steel building system not only contributed to LEED certification through the recycled content aspect, but also offered economy and availability, plus flexibility for future expansion.

A Steel Building System Meets a Tight Schedule in a Tough Winter



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The winter of 2003/04 was ugly in Ontario. Not what would normally be considered conducive to trouble-free construction. But the pressures of business need not bow to the weather. Steelcare Inc. of Hamilton required a new Transfer Facility at Pier 25 for steel coil storage. The 7827m² (83,270 sq. ft) Plant 19 facility comprised a steel building system (SBS) manufactured by Butler Buildings (Canada) and erected by Abcott Construction with the entire project completed between December '03 and May '04.

The coil storage warehouse with overall dimensions of roughly 165' x 500' x 40' high includes a 165' x 60' long shipping/receiving bay, two storage bays, and a 24' x 49' 2-storey attached office. It sees year-round use with a temperature and humidity controlled environment serviced by leading edge technologies including two fully automated 45-ton cranes and a 45-ton shipping/receiving crane.

The facility has received LEED Gold certification. The LEED Canada New Construction Rating System recognizes leading edge buildings that incorporate

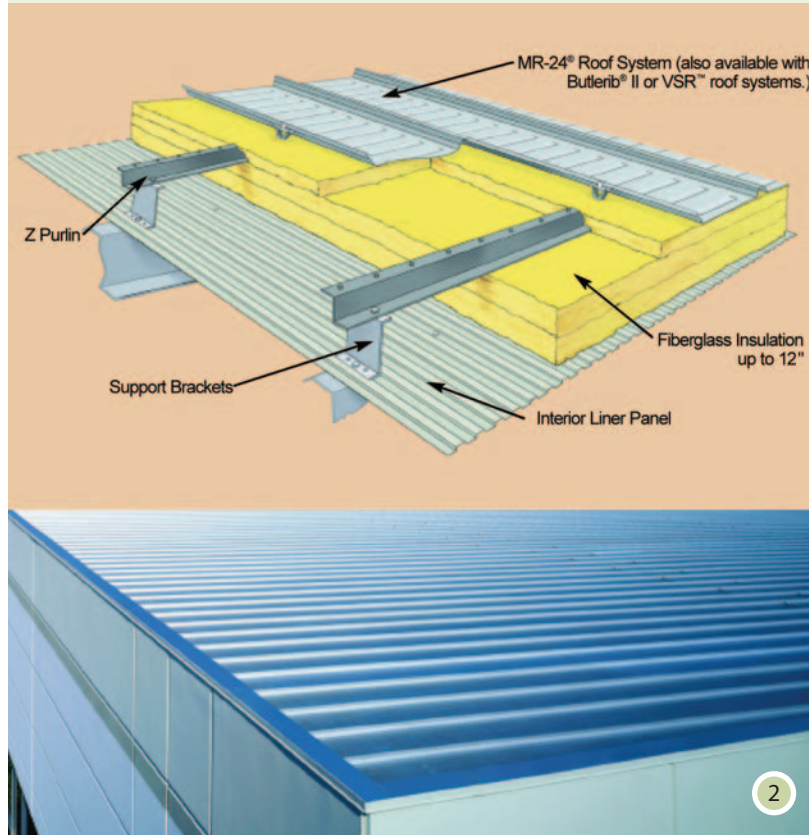
design, construction and operational practices that combine healthy, high-quality and high-performance advantages with reduced environmental impacts. Besides the five key sections relating to sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality, 'Innovation' points may be awarded for achievements such as lifecycle analysis, community development, education of occupants, or exceeding one of the earlier credits. Such a point was awarded to this project for building adaptability where the SBS allows the existing structure to be unbolted to facilitate future additions.

The Butler building used for this project is a Widespan™ Modular Structural System incorporating a High-Speed High-Use Overhead Crane System. The roof is also part of the SBS, comprising an MR-24 TLS Roof – a Thermaliner® field-assembled sandwich system (see illustration) with MR-24™ standing seam roof.

Demetrius Tsafaridis, Steelcare President adds, “ the end result is an attractive, well functioning facility, delivered on time and under budget”.

Photos:

- 2. ThermoLiner Insulation System
- 3. The coil storage warehouse with overall dimensions of roughly 165' x 500' x 40' high includes a 165' x 60' long shipping/receiving bay, two storage bays, and a 24' x 49' 2-storey attached office. It sees year-round use with a temperature and humidity controlled environment serviced by leading edge technologies.
- 4. South elevation of warehouse showing Solarwall®. The porous surface of the panels have tiny openings to allow air to pass through, picking up virtually all the solar heat reaching the steel panels, thus preheating the air entering the buildings facade and mechanical system.



The roof system incorporates .61mm (.0239”) Galvalume Plus™ with 228mm (9”) fiberglass insulation providing an R30 value, and a liner panel of .39mm (.0149”) preprinted galvanized.

The wall system is not part of the Butler building and incorporates .61mm (.0239”) 24 ga. preprinted galvanized panels of Agway 6-150 F, 8000 Series White-White with 152mm (6”) insulation providing R20.

SBS construction offered fast easy erection. Due to ground conditions on Pier 25 the foundations were all piles, to depths of 50 to 60 feet. The extraordinary time line was possible in the tough winter conditions thanks to the ability to work with a SBS in 30-below temperatures without the challenges and tenting-in involved with other types of construction.



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