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Kwantlen Polytechnic University Achieves Environmental Gold

Cloverdale Campus is the Largest LEED® Gold Trade School in North America

Vancouver, B.C.

Kwantlen Polytechnic University Cloverdale Campus has achieved LEED® Gold certification in the New Construction category from the United States Green Building Council. LEED® is the globally recognised standard for measuring building sustainability. Designed by the leading sustainable architectural practice of Bunting Coady Architects, the new 17,200 sq.m. (185,139 sq.ft.) campus includes 21 shops and 27 classrooms and accommodates up to 900 full-time students. With a project value of \$42.3 million, this building is Canada's newest high-tech facility for trades, technology and applied training programs.

Officially opened in April 2007, this eye-catching building was intentionally designed to look more like a university than an industrial facility with direct connectivity and views to the outdoors. An indoor 'covered street' provides visual and physical access to every floor and ensures optimum natural light and ventilation. Roofs have skylights, allowing natural daylight to illuminate the space. Multi-coloured glazing and 'Y' shaped interior glulam beams in the atrium also add to the vibrancy of the design. Dramatic wood 'trees' that line the concourse were sourced within a 500 mile radius of the campus. The craftsmanship of the professional trades is celebrated throughout the facility to further enhance the learning experience for new students.

A key focus of the project team was the creation of a passive design to ensure effective use of the campus microclimate and optimise building orientation. The north and south building façades are substantially larger than the east and west faces, thereby maximising control of sunlight (glare) and heat gain/loss. Initiatives such as this reduce the need for mechanical systems within the facility

and significantly reduce energy consumption. The anticipated 31% savings in energy usage is sufficient to power 19 typical Vancouver homes. Green power purchases for the project supply enough renewable energy to replace 100% of the facility's regulated electrical usage, contributing directly to the developing renewable energy infrastructure, as well as to the project's annual reduction of GHG (Greenhouse Gas) emissions by 59 tons.

Additional features that contributed to Kwantlen's LEED® Gold certification include:

- An erosion and sedimentation control plan, implemented prior to the start of construction. Over 87% of construction waste was diverted from landfill.
- A water use reduction of 45% over baseline conditions, in keeping with the Energy Policy Act of 1992. Water conservation strategies include low-flow toilets, waterless urinals and sensor-controlled faucets. In addition, low-flow drains are installed on the roof and the landscaping requires no ongoing irrigation.
- A large south-facing photovoltaic array generates 5 kilowatts of renewable energy.
- Innovative use of coloured concrete in the tilt-ups makes the building envelope virtually maintenance free. The colour of the pigmented walls deepens when wet and changes with the light.
- The welding area exhaust system is adjusted automatically based on the number of booths in use. Individual lighting controls in each of the 42 welding booths are linked to a centralised control system, adjusting the variable speed drive fan, which then controls the rate of exhaust.
- The facility benefits from the use of locally produced materials and from non or low VOC (volatile organic compound) emitting products.
- The site is served by three public transit links and is well equipped for wheelchair access.

Karen Hearn is Director of Facilities for Kwantlen Polytechnic University: *"Kwantlen is a leader in sustainability in our operations and construction, and those values needed to be embraced in this project. The team that worked together on this project did an excellent job at creating a great place to learn and work while minimising the building's impact on the environment."*

From the outset, the design team incorporated sustainable design principles and identified the potential of LEED® Gold certification without incurring additional costs. The design team utilised the Integrated Design Process, as pioneered by Bunting Coady Architects in 1994, to incorporate the mechanical, electrical, civil and architectural requirements for the project. This process also enabled the team to overlap the programming phase of the project with the conceptual/schematic design phase, thereby saving valuable time and money during a period of escalating costs.

Teresa Coady, Chief Executive Officer for Bunting Coady Architects and Principal In Charge of Design, feels that the building exceeds everyone's expectations: "The Kwantlen Polytechnic University Cloverdale Campus is probably the most beautiful facility of its kind in North America. Its LEED® Gold certification is a triumph for the entire design team."

About Bunting Coady Architects:

Bunting Coady Architects (www.buntingcoady.com) is an innovative, full service, architectural practice based in Vancouver, BC, Canada. With a reputation for designing high performance buildings and sustainable architecture, 'We create Living Breathing Buildings®'. We have won over 50 awards for design quality and building performance and have been internationally recognized as the only practice to have won the BOMA Earth Award four times. We have more square footage of LEED® NC Gold certified institutional and commercial projects than any other firm in North America.