Project Profile

Project Name:	Kwantlen Polytechnic University Langley South Building
Location:	Langley Campus, 20901 Langley Bypass, Langley, British Columbia
Completion Date:	September 2012
Construction Budget:	$5.7 million
Area:	14,500 m²
Architectural:	Stantec Architecture Ltd.
Structural Engineer:	Bush Bohlman & Partners
Mechanical Engineer:	Stantec Consulting Ltd.
Electrical Engineer:	Acumen Engineering
LEED Consultant:	Stantec Consulting Ltd.
Contractor:	N. Wallace & Company Ltd.
Commissioning:	MDT Systems Ltd.

Project Description

The previously vacant trades building at Kwantlen Polytechnic University's (KPU) Langley campus has a new second floor, a new moniker, and a new purpose-driven life. The building now accommodates classrooms, nursing labs, and critical care labs as the home of KPU's Faculty of Health. A new atrium space serves as the student commons, creating a "home away from home" for the students. With environmental stewardship as a driving priority for KPU, the primary sustainability strategy was to re-use the existing building. The revitalized space has improved energy performance due to a new building envelope and added windows for increased daylighting and natural ventilation. The project achieved LEED Silver Certification in July 2015.

Sustainability Initiatives

Sustainable Sites

- Existing underground storage tank and oil/water separator were removed with the supervision of an environmental consultant.
- Campus is connected to a local transit route with easy access to transit hubs.
- Intercampus shuttle bus, a joint initiative of KPU and the student union, provides regular shuttle service between KPU campuses.
- 15 bicycle storage slots as well as 2 showering and changing facilities on the site.

Water Efficiency

- By employing strategies such as water saving water closets, and low-flow lavatories and urinals, the site is able to boast a more than 44% reduction in water use.

Energy and Atmosphere

- 16% reduction in lighting power density, below ASHRAE 90.1-2004 requirements, achieved with high efficiency lighting and zoned controls.
- HVAC and lighting energy efficiency measures into the design.
- Sub-metering equipment has been installed within the tenant space to measure and record energy uses.
- Best practice commissioning procedures, utilizing an independent commissioning authority, have been implemented for the building.
- There are no HCFC's or CFC-based refrigerants in the HVAC&R systems for the building.

Materials and Resources

- 84% of construction waste was diverted from landfill and recycled.
- 38% of construction materials are from recycled content.
- 38% of all new construction materials are locally manufactured.

Indoor Environmental Quality

- Outdoor air ventilation rates at the breathing zone of all occupied spaces are at least 30% above the minimum rates required by ASHRAE 62.1-2004.
- Indoor air quality management plan implemented during construction, completed with building flush-out prior to occupancy.
- Low emitting adhesives, sealants, paints and coatings used.
- Carpet and adhesive used is Green Label Plus certified.
- Composite wood products and laminate adhesives used in all millwork contain no added urea formaldehyde.
- All new systems furniture and seating are GreenGuard Certified.
- The project space is in compliance with ASHRAE Standard 55-2004, Thermal Comfort Conditions for Human Occupancy.

Innovation and Design Process

- The project achieved exemplary performance in water use reduction and recycled content.
- Carpet used on the project is Platinum certified as per NSF Standard 140-2007 - Sustainable Carpet Assessment Standard.
- Campus wide Green Housekeeping Program reduces exposure to hazardous chemical contaminates that adversely impact air quality, occupant well-being and the environment generally.