

Welcome to the Centre for Interactive Research on Sustainability (CIRS), North America's most innovative high-performance building. CIRS is a hub for sustainability on UBC's Vancouver campus, an extraordinary place that demonstrates how a building can be regenerative by improving its environment and the community it serves. As a place for big ideas that make big impacts, CIRS addresses complex global environmental problems.

Use this guide to discover the many outstanding features visible on the first and second levels of this "living laboratory."



Standing Outside The Main Doors

- ① Note the landscaped area where storm water run-off flows through an open channel to an underground well and, ultimately, to the aquifer 90 metres below. A tipping bucket (under the silver grating) measures the amount of water flowing to the aquifer.
- ② The breezeway through the corner of the building preserves a path once used on the old site and offers walkers an up-close view of CIRS.
- ③ Behind the large windows in the corner lies the solar aquatics wastewater treatment facility enclosure. Inside are tanks filled with plants; their root systems harbour bacteria that biodigest waste and cleanse the water. Reclaimed water from this facility is used to flush toilets and urinals and to irrigate landscaped areas such as the green roof and the vegetated wall.

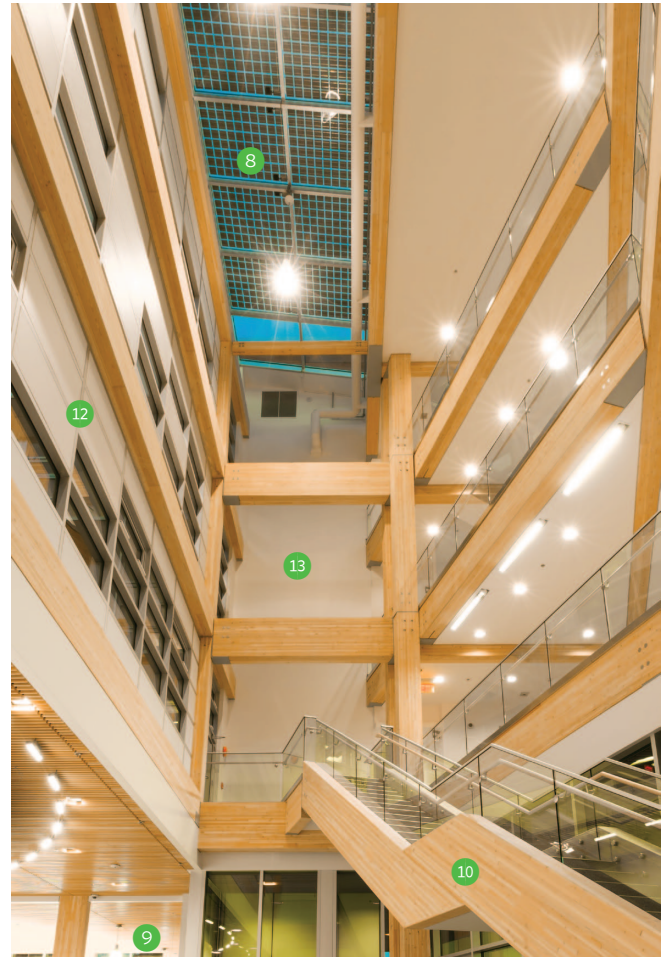
Inside The Main Doors

- ④ In front of you is a video wall that displays information about the UBC Sustainability Initiative, CIRS, energy and water use and activities going on in the building and on the UBC campus.
- ⑤ On either side of the curving wall are entrances to the *Modern Green Development Auditorium*, a 423-seat lecture hall that is mostly daylit and features a stunning pine beetle reclaimed wood ceiling. Please do not enter the lecture hall when classes are in session.
- ⑥ North of the curved wall is the *Sustainability Education Resource Centre* where students and faculty can find answers to sustainability-related academic questions.
- ⑦ Beside the Resource Centre is the *BC Hydro Theatre* that features advanced visualization and interaction technologies to engage audiences in simulations of sustainability scenarios.
- ⑧ Look up to see solar photovoltaic (PV) panels located on the skylight above that turn sunlight into electricity. PV panels on the south and west facades of the building work as shading devices but also provide electricity. Energy needs are also met through harvesting heat from the nearby Earth and Ocean Sciences Building (some of it is returned for their use), using geothermal heat from the ground, and collecting radiations to heat water.
- ⑨ To the south is *The Loop Café* where you can enjoy locally sourced sustainable, fresh food and beverages.

Take The Stairs To The Second Floor

- ⑩ CIRS is largely constructed of wood, with a significant content of pine beetle reclaimed wood. The building sequesters more carbon dioxide emissions than all the carbon that was released to build it. Using this lumber has prevented emissions from entering the atmosphere.
- ⑪ On the west side of the building is the *Living Wall* with leafy vines that help cool the atrium in summer with shade, and when the leaves fall off in winter, allow in sunlight and increased heat gains.
- ⑫ On the east side, a wall of glass and solid panels overlooks a vegetated roof (not open to the public) that provides a meadow environment of indigenous plants for birds and insects. The wall's solid panels provide shade and insulation to reduce the building's energy needs. Look for "channels" that run down each side of the office wings, moving rainwater that is captured on the upper roofs to cisterns in the basement where it is treated to meet all the building's potable water needs.

- ⑬ CIRS' site orientation optimizes its exposure to natural light, reducing the need for electricity. Its design enables natural ventilation which the building relies on for much of the year. The atrium works as a chimney or stack where air from office spaces dissipates enabling natural ventilation throughout.



OFFICES, NOT OPEN TO TOURING PUBLIC, INCLUDE SOME INTERESTING FEATURES:

- Windows can be opened, allowing inhabitants to control natural ventilation in their areas.
- Walls are easily reconfigured to quickly remove or create new spaces.
- 100 per cent of all occupants have access to natural lighting.
- Access to the building's management system allow each inhabitant to control their personal lighting levels and air flow preferences and vote on the overall building management strategies.

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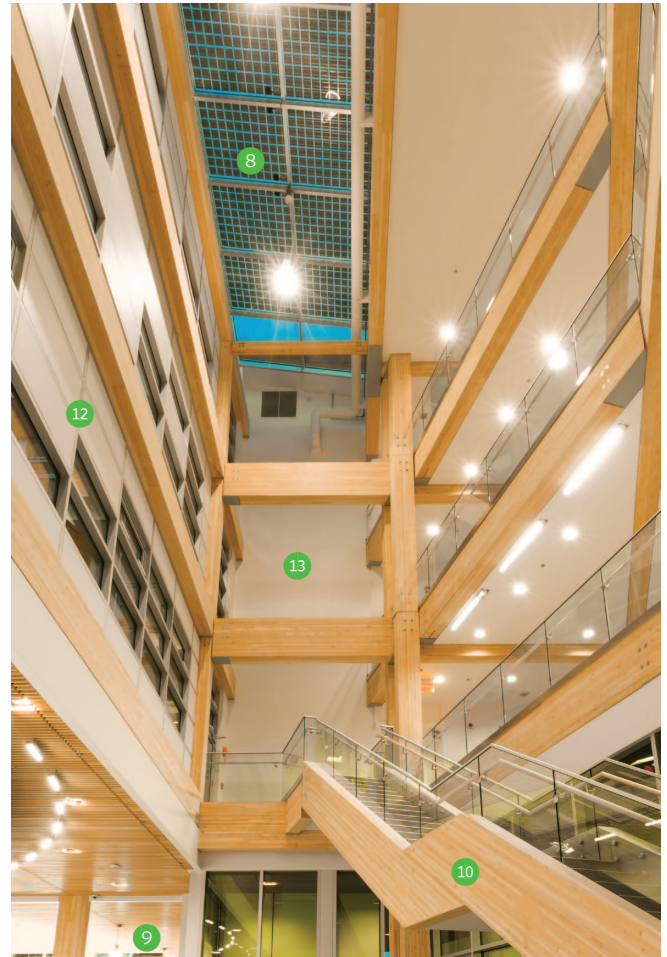
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