

# BCIT TALL TIMBER STUDENT HOUSING

Burnaby, BC | Construction Phase

**Role of the firm: Structural Engineer of Record**

**Area: 203,588 sq.ft (18,914 sq.m)**

**Budget: CAD \$94 million**

**Architect: Perkins&Will**

**Client: British Columbia Institute of Technology**

**Sustainable Features: Meets BC Energy**

**Step Code 4, Targeting LEED Gold**

The BCIT Tall Timber Student Housing project will serve BCIT's Burnaby campus, providing housing for a diverse student population. At 12 storeys above grade, the tall timber tower is configured as two rectangular wings set at 90 degrees with a below-grade basement for services and added storage. The studio and single bedroom suites are modular and stack floor-to-floor, allowing for 464 new dorms and more than doubling the institute's current housing.

To meet the sustainability and architectural demands of the project, Fast + Epp proposed a CLT point-supported structure, consisting of mass timber (CLT) floors supported on steel HSS columns. Using steel columns and wide-format panels meant that columns could be fully encapsulated within the demising walls between units and will allow for units to be unobstructed by stand-alone columns. This aligns with the architectural modularity of the layout and envelope system and reduces steel column lines throughout the building. The choice of CLT panels meant that the construction schedule was reduced as these would be prefabricated and then brought to the site. Fast + Epp also proposed a steel concentrically braced frame for the lateral resisting system at the stair and elevator cores to further shorten the construction timetable. The lateral resisting core construction can be completed before the first CLT floor is installed, limiting trade overlap on site.

The BCIT Tall Timber Student Housing tower will be a positive addition to campus life at the institute. It underlines BCIT's sustainability goals and answers the call for more affordable, cleaner and greener student housing. The project will be designed to exhibit Indigenous culture in the community and support Indigenous learners by providing community spaces on the ground floor.

