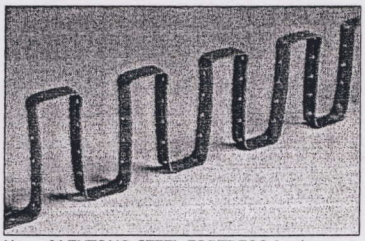
Reinforcing Saves Time and Money In Residential Construction

Novo 1 and 2 are residential buildings in the new UniverCity community on Burnaby Mountain.

Founded in 1965, Simon Fraser University's (SFU) main campus is located in Burnaby, outside of Vancouver, British Columbia. Currently, SFU is building a billion-dollar "UniverCity" retail and residential development on Burnaby Mountain. The new UniverCity community is eco-friendly. The retail space uses geothermal energy sources. The residential units have higher-value insulation, energy-efficient lights and water fixtures and heat-recovery ventilation.

LENTON® STEEL FORTRESS contributed to this eco-friendly environment by saving on raw materials. The punching shear reinforcement product from ERICO® was used in constructing Novo 2, a residential development that consisted of two 10-story towers. Because the LENTON STEEL FORTRESS system improves the shear capacity of the slab and develops its yield strength over a much smaller length, thinner concrete slabs can be used. The extended efficiency allows for taller walls, more interior space and slimmer concrete elements.



Use of LENTON® STEEL FORTRESS in the Novo 2 project saved on raw materials, labor and costs.

The two residential buildings are a combination of formwork and cast-in-place concrete construction, according to Eleni Chui, an engineer with Glotman Simpson Consulting Engineers. "Cost savings were the main reason that LENTON STEEL FORTRESS was specified," Chui says. "Compared to other methods, LENTON STEEL FORTRESS is extremely cost effective, particularly when labor costs are factored in."

LENTON® STEEL FORTRESS is a shear reinforcement system that provides a solution to brittle punching shear. It consists of a flat strip of steel with holes in the center made into a unique turret configuration. It easily anchors to the top layer of the main reinforcing bar and reduces the possibility of induced shear cracks bypassing the shear reinforcement. LENTON STEEL FORTRESS meets or exceeds ASTM A505-87 requirements with a minimum yield strength of 72,500 psi (500 MPa) and a minimum elongation of 11%.

Greg Hubbard of Lower Mainland Steel, the reinforcing steel subcontractor, says installation of LENTON STEEL FORTRESS was quick and easy. "Typically, stud rails are placed before any reinforcing steel and then we work around the stud rails to place two layers of rebar," Hubbard says. "The [ERICO] system is easier because we complete the steel then drop the LENTON STEEL FORTRESS into place. It still needs to be tied down, but this is preferable to nailing down stud rails." ■