Cold formed steel (CFS) offers many benefits and savings

The design objectives for Granite Ridge Retirement Residence in Gravenhurst, Ontario was to “provide high level care for seniors who require assistance and a stately, attractive, functional building for the residents,” says Bob Dyck, President, Robert J Dyck Architect & Engineer Inc. To meet the goals, steel - with its many benefits: cost effective, design flexibility, non-combustible and speed of erection - was the obvious choice for the project.

Granite Ridge Retirement Residence, consisting of 100 retirement home units on four floors, was completed in September 2009. Steel was used extensively in the 6,455m$^2$ (69,480 sq. ft.) building. Light steel framing was used for non-load bearing interior walls as a requirement for non-combustible institutional construction. In addition, cold formed steel (CFS) was used for roof trusses.

Robert Dyck, who has worked with various products across numerous builds, continues to assert his appeal for the use of steel framing. “Light steel framing is cost effective, produces a straight wall and provides excellent sound ratings. For this project, it provided flexibility and it met our design needs.”

CFS was used extensively throughout the project for many reasons. “It was chosen because it’s a non-combustible material to be used to meet institutional standards, i.e. if evacuation of residents became an issue,” explains Alex McGillivray, Sales and Marketing Coordinator with VanderWal Homes & Commercial Group, who installed the roof.

CFS contributed to the aesthetic value of the building as well. It allowed engineers to design a pitched roof keeping it uniform to the surrounding residential community and retaining the calming familiarity associated with residential living. “VanderWal is one of only a few companies to do pitched roofs using non-combustible material,” emphasizes McGillivray.

As McGillivray summarizes, “Overall, cold-formed steel makes a lot of sense to the owner in this application, due to its non-combustibility, residential aesthetics, savings on insurance, reduction in site time - because of the prefabrication and fast install.” In addition, CFS is low maintenance as it reduces, if not eliminates, the chance of building movement, there are no nail pops and it is the highest strength-to-weight ratio of any building material - with no shrinkage, no warping and no twisting or cracking. Over the course of time CFS yields the greatest return on investment due to low maintenance and upkeep and boasts a significant savings on insurance premiums.
“Light steel framing is cost effective, produces a straight wall and provides excellent sound ratings. For this project, it provided flexibility and met our design needs.”

- Robert Dyck, President, Robert J Dyck Architect & Engineer Inc.