

LIVING LUX WITH STEEL

Lightweight steel framing provides elegance in Oakville condo

Story: Julia Preston Photography: Dan Banko

Oakville, Ontario is known for its high-end real estate. Close to Toronto, but removed from the bustle of the city, Oakville is a desirable community with established neighbourhoods and well-appointed homes. The Coventry, a condominium in downtown Oakville, caters to those looking for luxury.

Suites are spacious—the four storey building houses just 12 units. Inside, the units feature high-end finishes like radiant floor heat, premium appliances, walk-in wine cellars and custom cabinetry. Other amenities include semi-private elevator access and a rooftop garden with putting green. The building's location within walking distance of Lake Ontario solidifies its tony address.

The commitment to luxury at Coventry started early in the design phase. Developer, Legend Homes, elected to use lightweight steel framing (LSF) with a composite slab floor.

"You could have built that building out of wood, but they really didn't want to do that," says Raymond Van Groll, managing partner at Atkins + Van Groll Consulting Engineers. "They really wanted to have a much more robust floor system. [ComSlab] doesn't have any bounce like a wood floor would."

LSF also increases stability, which eliminates cosmetic issues like nail pops or plaster cracks—critically important for the high-end custom plasterwork used in some units. "When you have beautiful plaster... you want to use light gauge steel framing," says Van Groll.

Lightweight steel framing refers to steel studs, joists, beams, trusses, and other members made from cold-formed sheet steel (CFS). Walls, floors and roofs are made from prefabricated panels. The components can be manufactured to a very high level of precision and assembled quickly onsite.

In an LSF building, the steel deck serves as formwork for the concrete floor. The concrete bonds with the metal deck structurally, making a composite slab.

Lightweight steel framing increases stability, which eliminates cosmetic issues like nail pops or plaster cracks.





The ComSlab system from Bailey Metal Products Ltd. was used for Coventry. The form of the deck creates beams on top of the load bearing wall. These beams support the weight of the slab. Unlike in conventional construction where the beams are installed first and then the floor is done separately after, in ComSlab the slab and beams are completed in a single concrete pour.

LSF's efficiency was an asset given Coventry's downtown location. The condo is located on Trafalgar Road just one block from Lakeshore Road, both main arteries which could not be blocked. Panels were delivered early in the morning to minimize disruptions to the surrounding community. "The logistics of the site lends itself to doing a panelled system," says Van Groll.

The LSF and ComSlab systems also offer high fire and sound transmission ratings, adding a layer of safety, comfort and privacy to Coventry.

Van Groll used concrete cores for lateral stability. Stairwells carry most of the load, allowing for long clear spans and open concept designs within the suites.

BUILDING OWNER/PROJECT COMMISSIONER/DEVELOPER

Legend Homes

ARCHITECTS

Hicks Design Studio // hicksdesignstudio.ca

ENGINEERS

Atkins + Van Groll Inc. // atkinsvangroll.com
(joined MTE Consultants)

CONSTRUCTION PROJECT MANAGER/GENERAL CONTRACTOR

Legend Homes // 905-849-1234

PRODUCT SUPPLIERS

Bailey Metal Products Ltd. // bmp-group.com

PRODUCT SPECS

ComSlab floors from Bailey Metal Products,
Bailey CFS framing for load bearing walls

"It's a beautiful building structurally because it's simple doing cores," says Van Groll.

From the outside, there are no hints of the advanced technology that forms the underlying structure of Coventry. In fact, the building looks historic.

Wrought iron balconies, intricate trim around the windows and a decorative cornice all give the building a luxurious European aesthetic.

But what appears to be cut stone on the façade is actually pre-cast concrete panels.

LSF integrates well with other systems—like pre-cast—to achieve the desired architecture.

Van Groll recounts that the pre-cast contractor had never worked with LSF before and had some hesitations. The precast panels had to be bolted to the steel studs. The LSF wall assemblies needed to be engineered with a space wherever a fastener was required.

"The guy was a little leery that we'd ever be able to do it," says Van Groll. "I said, 'You tell us where you want to put your anchors and we'll look after that.' After the building was finished he actually came back to my office and he said, 'That went so well! Everywhere I wanted that space you left me a space. It was great!'"

Van Groll jokes, "I have to get the windows in the right spot. Leaving him a space was easy."

From its historic exterior to its luxurious interior, Coventry epitomizes elegant living. Achieving that elegance started with the lightweight steel frame structure. The high level of precision, flexibility and reliability provided by LSF make it an ideal choice for a wide variety of construction projects, including luxury residential units like Coventry. ■

