NOVÆ RES URBIS
TORONTO

FRIDAY, AUGUST 21, 2020

Vol. 24
No. 33

PILOTING NEW HOUSING DESIGN

FASTER, CHEAPER, SIMPLER

Rob Jowett

A housing infill project under construction in a Queen Street East community is meant to demonstrate a development method that permits faster, cheaper and more environmentally sustainable construction than most housing projects.

R-Hauz is building a six-storey residential building at 1598-1604 Queen Street East. The product is considered to be a six-storey townhouse—the first of four that the site will eventually include. In total, the completed structures will contain 18 residential units and 322-square metres of retail space at-grade. Currently, the buildings at 1602-1604 Queen Street East are under construction.

The building is a pilot for a new product R-Hauz is offering that is meant to reduce development approval and construction timelines and costs, while offering an environmentally-friendly housing alternatives to clients that allow for customizable interiors. The building is made of mass timber and is the first all-wood residential building being constructed in Toronto. Concrete is only used in the foundation.

"It is a long-awaited pilot," R-Hauz principal and co-founder **Leith Moore** told *NRU*. "It's taken us forever [to get] entitlements and building permits, but now that we have them, the construction is delivering what we thought it would, which is fast and a little better quality and accuracy in assembly."

Construction on the foundation began during the spring, and the above-ground work started in early August. Currently, the first two floors of the building have been completed. Moore says he expects the exterior construction to be complete by early September, and the entire building to be ready for occupancy by the end of October. Typically, mid-rise buildings take 18 to 36 months to build.

The wood construction, which uses pre-fabricated panels that are assembled on-site, means that no traffic lanes around the site need to be closed to allow heavy vehicles to operate. In addition, R-Hauz is bringing all construction materials to the site from the laneway behind it rather than the street. Mass timber allows for a cleaner and quieter job site than construction with metal and concrete, which reduces concerns from neighbours about the impacts of pollution and noise from construction on their properties. Wood construction is one of the cleanest forms of construction, while concrete is among the most polluting.

"Everything we thought we'd see in terms of speed of

CONTINUED PAGE 5

Further revised proposal by Fortress Carlyle Peter Street Inc. for 357 Richmond St. W. and 122-128 Peter St. See LPAT News, page 9.

ARCHITECT/SOURCE: ARCHITECTSALLIANCE

FASTER, CHEAPER, SIMPLER

CONTINUED FROM PAGE 1

the prefabricated panels, we are seeing," says Moore. "We were doing the foundations during [the] COVID[-19 pandemic], so that slowed us down quite a bit. That particular site had a little bit of environmental remediation to do… so the slab-on-grade took a little longer than we would have planned."

Moore says that while he will look to make tweaks to the design, such as simpler foundation designs and using different lumber types for the floors, he says the pilot building at 1602 Queen East largely represents the final form of the product.

Moore says one of the major advantages of the design is that it minimizes the development approvals needed to build the project. The buildings do not have basements, and due to their moderate, mid-rise size, they avoid the need for underground parking. The buildings can be built on sites that only need one standard lot on Toronto's main streets, as opposed to the need to assemble larger sites that are typically necessary for large condominiums developments, meaning this form of housing can added in almost anywhere. The moderate heights and densities of the structures also typically correspond with what existing planning policies allow, meaning that site plan and minor variance approvals are all that is needed to get final approval to build. Additionally, the repeatability of the design means that site plan approval will likely become faster in the future as the planning department becomes more familiar with the form of the building.

"This project is an example of building up mid-rise on the city's avenues in a manner that

CONTINUED PAGE 6

Renderings of R-Hauz's mass timber building, which it advertises as being faster and cheaper to build than most infill construction projects. The first is under construction at 1602 Queen Street East.

SOURCE: R-HAUZ

FASTER, CHEAPER, SIMPLER

CONTINUED FROM PAGE 5

helps achieve the city's growth management strategy objectives along the avenues as described in the city's official plan, through the implementation of the city's mid-rise built form guidelines," **City of Toronto** planner **Jason Tsang** told *NRU*. "Additionally, this project and its use of mass timber product, help the city achieve its ambitious climate action strategy through TransformTO [the City's climate action strategy]."

Tsang says the city is "encouraged" to see the use of mass timber and other energy-efficient features, such as units that allow natural light in from both ends of a unit.

Moore says there are external factors that he expects will make the product even cheaper to build in the future. He says one of the most important ways to further reduce timelines and costs for housing construction is to allow for more wood construction in the building code. Cross-laminated timber, the material being used for the building, is not yet allowed in Ontario, meaning that R-Hauz has to go through a process to demonstrate how its building achieves the main goals of the code.

The other major change Moore anticipates is in the mass timber supply chain. Canada does not yet have the capacity to build many of the prefabricated panels yet, and most timber, including the kind used in this project, is imported from Austria. Companies have begun investing in mass timber production facilities in Canada, and once they are operational, Moore says he expects the cost of the project to decrease even more.

"[It's] real game changer for Toronto on the avenues where we just haven't seen enough rental housing going up where we want it," says Moore. "And a lot of it has been because by the time you acquire an assembly, you spend so much money, you need 10 storeys, not six [to make a development profitable] and then you've got to dig underground for all the parking, and then the costs go up. And we don't have any of that."

Moore says he hopes announce more projects with this design in the near future.

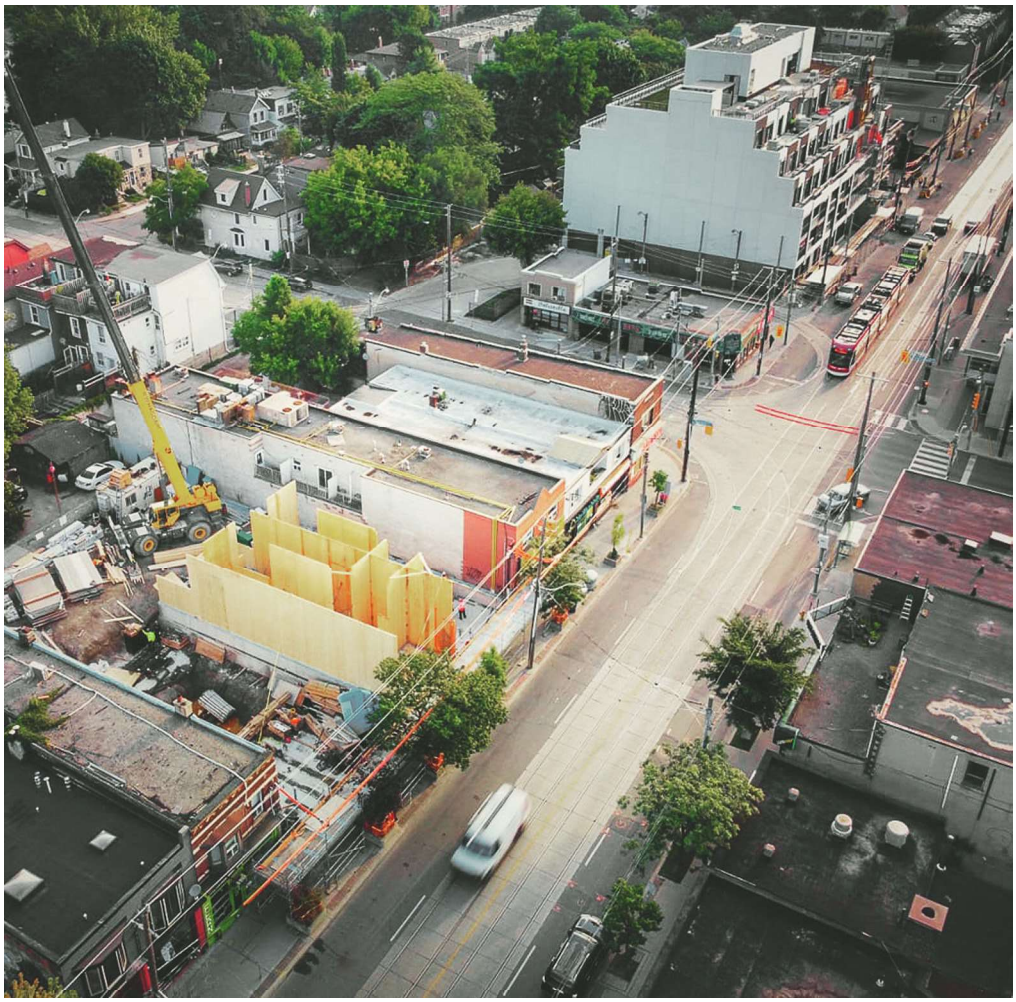

Photo of the construction site at 1602-1604 Queen Street East, where R-Hauz's building pilot project is being constructed. Above-ground work on the building began in early August. The building is expected to be completed by the end of October. R-Hauz is accessing the site with materials via the laneway behind the building, therefore no traffic lanes have needed to be closed to allow for the construction.

SOURCE: R-HAUZ