New construction methods that are more efficient and cost effective increasingly rely on lifting specialists like Modulift to hoist large prefabricated components in to place. Tilt-up is just one of those methods.

It’s a building technique where reinforced concrete panels are cast on or off-site then hoisted up and tilted into position. These panels become the load-bearing structural components and eliminate the need for perimeter columns.

That’s why when Canadian company, Tilt Wall Ontario won the contract to build a new condo apartment block on the luxury Muskoka Bay Resort, they approached Modulift’s local distributor, Equipment Corps for two new modular spreader beams.

The construction company, that specialises in the tilt-up method, had usually relied on basic spreader beams or bars provided by crane companies but on a recent job had come across Modulift’s spreader beams and was impressed by their versatility. As a modular building company, it didn’t need much persuasion to be convinced of the benefits of a modular product!

The Muskoka Bay Resort is located in Gravenhurst, just north from Toronto and is well-known for its championship 18-hole golf course. Its popularity meant that more luxury accommodation was required, hence the construction of a five storey multi-unit residential condo building with a sixth storey on the three stair towers for access to the roof. The building was constructed entirely with 381 precast tilt-up concrete panels. The panels’ width ranged from 1.5m (5ft) to over 18m (60ft) widewith weights anywhere from one tonne (3,000lb) to 58 tonnes (128,000lb).

Tilt Wall Ontario was keen to use the Modulift spreader beams again so rather than asking the crane company to provide, the project manager, Ken VanCasteren, approached Equipment Corps direct, who supplied a MOD 50 and a MOD 110. They were used to even the load distribution and to facilitate proper angles on the lifting slings and hardware.
Ken VanCasteren said: “We utilised two different sized beams and between the two, they were used for about 80 to 85 per cent of the picks. We did not adjust the lengths of the beams during the lifting process but instead used the two different beam sizes to allow for quicker rigging changes. From the MOD 110, we went down to an eight-point pick for load distribution and on the MOD 50 we were using a four-point lifting set up.”

A Leibherr LG 1750 lattice boom mobile crane was used for this project, with the added assistance of a 350T mobile crane to help move some of the concrete panels closer to the LG 1750 for final picking and setting.

The LG 1750 carefully lifted the panels horizontally to the required height and then tilted them upright into place by sliding the wire rope links through the snatch blocks attached to the spreader beam. The Modulift spreader beams are designed to be particularly stable and trusted for this manoeuvre and are compatible with snatch blocks. The Tilt Wall Ontario team then braced the panels until the permanent structural connections were completed.

Ken VanCasteren added: “It was a pleasure to work with Equipment Corps on this project. When issues or concerns came up regarding the loading and safe working loads of the rigging on some of the heavier lifts, Equipment Corps was quick to respond and review all of the loading calculations to ensure everything was rated properly. The Modulift beams were versatile and easy to get the required spreads needed. The beams assembled easily and were user friendly throughout the project duration.”

From construction and oil to mining and steel, Equipment Corps in Ontario provides equipment to many industries across North America – and over the last 30 years has established itself as the leading provider of industrial construction tools and fabrication equipment. It has been a distributor of Modulift products since 2016.

National Sales and Business Development Manager for Equipment Corps, Luke Habza said: “It’s been a pleasure working with Ken. Liaising directly with the client has meant that even after the construction started, we were able to provide additional support with the lifting calculations. We embraced the opportunity to provide our technical expertise, because while we are more than happy just to provide lifting equipment, we do know how it works as well. Modulift spreader beams really sell themselves to companies who appreciate high quality products and we were pleased to recommend them for this project.”

Harshal Kulkarni, Engineering Manager for Modulift said ‘The versatility of our products, together with them conforming to the highest level of safety standards, means that our products facilitate not only the lifting capacity required for the lift, but our Modulift range of beams also ensure a sufficient amount of standing time until the permanent construction is completed, demonstrating a prolonged period of load suspension which is paramount for projects like this’.