

Eleven

Minneapolis, Minnesota



STORIES BUILT



At 42 stories, Eleven is the tallest residential tower in downtown Minneapolis. The high-end condominium high-rise provides residents with magnificent views of the city skyline on one side and of the Mississippi River and the historic Stone Arch Bridge on the other.

Ceco Concrete provided deck and edge formwork services for the horizontal concrete slabs, using Ceco's own HV decking system and slab edge forms.

The tapered tower's concrete structural system evolves as the building rises. At the bottom is an eight-level post-tensioned (PT) beam-and-slab parking garage. Stacked on top of the garage is a PT flat-plate system for residential levels 9 through 37. The remaining top levels are PT slabs with multiple transfer beams due to a changing floor layout designed for these elite levels; concrete column locations shift multiple times as the building exterior steps in and climbs upward. The PT slab design allows the construction team to build with maximum spans between columns while minimizing the slab thickness, resulting in more design flexibility in unit build-out options.

Drawing upon years of experience using the HV forming system, the Ceco team was able to follow a tight schedule—including a four-day cycle per floor for levels 21-37—and even shave a few days from the project timeline. Ceco worked with general contractor Ryan Companies to coordinate a seamless work sequence. While working their way up the high-rise, the Ceco team would set deck and slab edge forms while the GC's team set the column forms. The team would then “down pour” the columns just before pouring the deck above.

PUSHING FORWARD DURING COVID-19

Work began January 2020. Just a few months later, the world was hit by the COVID-19 pandemic, slowing and often stalling projects everywhere. Although construction was deemed essential in Minnesota, the project team implemented several changes to keep workers safe and the project

in compliance with various health and safety mandates. With precautions in place, from face masks and social distancing to supplying extra tools to minimize contact through sharing, the project was able to push on.

The project also included measures to ensure safe construction. The GC provided a Doka barrier screen system to prevent injuries due to falls and falling objects. To avoid needing multiple deck formwork systems, Ceco employed specialized Titan HV Drop Beam Brackets. When attached to the shores supporting Ceco's HV deck system, the brackets allowed forming of beam bottoms that would have otherwise required an additional deck formwork system. Downsizing the number of systems to one meant crew members could maintain the same production rhythm without switching back and forth. Plus, changing systems often results in a learning curve for workers, during which mistakes could happen that can result in injury. The team's decision to reduce systems used had safely increased efficiency for this project.

In all, the Ceco team placed 641,100 square feet of PT slabs, 35,650 linear feet of slab edges and 11,380 linear feet of beams, some of which were 5 feet wide by 9.5 feet deep. The project successfully topped out April 2021.

FAST STATS

Project Owner: Eleven Minneapolis LLC

General Contractor: Ryan Companies

Engineer: Meyer Borgman Johnson

Ceco Scope: Deck formwork services

Ceco Project Manager: Austin Torma

Ceco Superintendent: Jeremy Grossman

Ceco Engineers: Ryan Brozek (formwork engineer), Luke Mathias (detailer)

Date Completed: April 2021