

October 26, 2022

FOR IMMEDIATE RELEASE

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RAINIER SQUARE EARNS ASCE'S TOP OUTSTANDING CIVIL ENGINEERING ACHIEVEMENT AWARD

SEATTLE, WA — Magnusson Klemencic Associates (MKA) is pleased to announce the American Society of Civil Engineers (ASCE) selected Rainier Square to receive the Outstanding Civil Engineering Achievement (OCEA) Award, recognizing the project as the best civil engineering project for 2022. Presented annually since 1960, the award honors the project that best illustrates superior civil engineering skills and represents a significant contribution to civil engineering progress and society. In January, ASCE named Rainier Square as one of 11 finalists to receive an Honor Award. It received the top award during ASCE's Outstanding Projects and Leaders (OPAL) Awards Gala on Oct. 25 in Anaheim, California.

"Rainier Square and the incorporation of the SpeedCore structural system represents 16 years of research and development, including contributions from research universities, colleagues, building officials, fabricators, erectors, and competitors from all aspects of our industry," said Ron Klemencic, Chairman and CEO of MKA, Rainier Square's structural engineer. "This is a testament to what can be done with collaboration."

Completed in November 2020, Rainier Square rises 58 stories and 850 feet above downtown Seattle, offering 1.4-million square feet of office, apartment, and retail space. It also represents the first high-rise ever built with SpeedCore—a non-proprietary, first-of-its-kind structural system that uses modular,



prefabricated core elements with assembly-line-like efficiency to erect high-rise towers faster, safer, and more economically.

For decades, a high-rise building's most common structural system has consisted of a central core made of reinforced concrete walls—to resist wind and earthquake forces—surrounded by structural steel floor beams and exterior steel columns. SpeedCore completely reimagines this structural system by using prefabricated, steel-plate, cross-tied, "sandwich" wall panels erected, welded, and filled with concrete onsite and without rebar, allowing workers to build the entire structure at the rapid pace of steel construction.

At Rainier Square, SpeedCore cut 10 months off what would have been a 32-month schedule if constructed with a traditional structural system. Rainier Square was erected 43% faster than usual, with four floors completed weekly, resulting in a topping-out milestone just 10 months after the first steel arrived onsite. The attendant savings in general conditions, construction financing interest, and earlier rental revenue streams were significant. The prefabrication of SpeedCore's modular panels meant less waste, fewer onsite workers, and fewer truck trips, all of which generated positive environmental benefits.

Rainier Square's success has led other developers to incorporate SpeedCore into their high-rise projects. SpeedCore is being used to build 200 Park, a 19-story office tower in San José, California. Other applications are slated for Boston and Oakland, and New York City's Department of Buildings has approved SpeedCore for new-building construction.

SpeedCore is backed by more than 16 years of MKA-initiated and -guided research and testing by the American Institute of Steel Construction (AISC), Charles Pankow Foundation, MKA Foundation, Purdue University, Steel Institute of New York, and the University at Buffalo. In addition to SpeedCore, the project's design also includes two bi-directional, 35,700-gallon water tanks, which serve as dampers at the



roof to reduce wind motion, and performance-based seismic and fire

engineering. Adding to the complexity, Rainier Square features seven levels of below-grade parking that required a 100-foot-deep excavation extending 50 feet below the mat foundation of the neighboring 40story Rainier Tower. Rainer Tower was supported by an impressive temporary earth retention system designed by Hart Crowser that allowed it to remain fully occupied during Rainier Square's excavation and construction despite both towers' snug proximities. Overall, the project transformed the site of an outdated downtown shopping center into a vibrant mixed-use destination. It successfully incorporates a vertical stack of mixed uses, an adjacent 10-story office building, and a Grand Hall lobby space that seamlessly connects to the iconic Rainier Tower, designed by the late architect Minoru Yamasaki.

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Magnusson Klemencic Associates (MKA) is an award-winning, 185-person structural and civil engineering firm founded in 1920 with offices in Seattle, Washington, and Chicago, Illinois. Serving clients worldwide, MKA has worked on projects in 48 states and 61 countries. MKA's passion is creating structural systems for buildings of all shapes, sizes, and complexities, and civil site and infrastructure designs for architectural projects.

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