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## QUIKRETE® AND OAK RIDGE NATIONAL LABORATORY PARTNER TO DEVELOP PRINTABLE CONCRETE

ATLANTA, GA (March 16, 2020) – The QUIKRETE® Companies and the U.S. Department of Energy's (DOE) Oak Ridge National Laboratory (ORNL) recently entered a cooperative research and development agreement to design next-generation concrete for use in the production of large-scale structures through a 3D printing process. Using additive manufacturing system developed by ORNL, the collaboration with QUIKRETE® will deliver specially-formulated concrete that establishes new construction capabilities.

In alignment with the DOE's Advanced Manufacturing Office's Multi-Year Program Plan, QUIKRETE® and ORNL are developing a concrete mix with the strength, curing time, and durability to construct buildings, energy installations, transportation infrastructures and other large-scale structures faster, more affordably and with less energy consumption. Designed as a pumpable, low- or zero-slump material that sets quickly and gains strength rapidly, this new concrete will be ideal for printable construction projects. In addition, the one-of-a-kind concrete will meet tensile strength, compressive strength, ductility and other structural performance characteristics required as a viable building material.

"Oak Ridge National Laboratory is one of the most advanced players on the global additive technology stage. QUIKRETE® is not only a leader in concrete technology, but also second-to-none in construction materials manufacturing and logistics. Working together, QUIKRETE® and ORNL can quickly develop advanced and economical "concrete inks" to supply all varieties of 3D concrete printers. We are optimistic that this technology will be a game changer for the concrete industry and revolutionize the construction practice," said Chuck Cornman, Chief Technology Officer at The OUIKRETE® Companies.

"We look forward to working with QUIKRETE®, developing a novel material for large-scale construction, and we anticipate this project will have significant industry impact," said Brian Post, R&D Scientist at ORNL. "As a leader in advanced manufacturing, DOE's Manufacturing Demonstration Facility at ORNL is uniquely suited to advance this technology."

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The partnership will leverage ORNL's scientific expertise and its unique facilities along with QUIKRETE®'s robust experience in the plastic and hardened properties of cement-based building materials. The two-phased collaboration, which is the first between QUIKRETE® and ORNL, concludes in two years.

## The QUIKRETE® Companies

Founded in 1940, The QUIKRETE® Companies serves the residential, commercial, industrial and infrastructure industries as a scalable, single-source solution for building, repair and rehabilitation projects across North America. Not only the largest manufacturer of packaged concrete and cement mixes in the U.S. and Canada, The QUIKRETE® Companies also delivers high-quality, commercial-grade products through related industry-leading organizations including Custom Building Products®, Contech® Engineered Solutions, Rinker Materials™, Keystone Hardscape®, Pavestone®, Best Block, Premier Building Solutions™, Spec Mix®, Target Technologies®, Daubois® and QPR®. The QUIKRETE® Companies operates about 250 facilities including technical centers to provide unmatched product innovation, depth, quality-control and distribution as well as full-service customer support. The QUIKRETE® Companies truly is "What America's Made Of". For more information, visit <a href="www.quikrete.com">www.quikrete.com</a> or call (800) 282-5828.

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