

### Pioneer in 3D home printing selects Greeley for new headquarters

Alquist 3D relocation part of state push to become a hub for new construction technologies



Founder and Chairman of Alquist 3D Zack Mannheimer stands in front of a 3D printer for construction of homes during a press conference at Aims Community College on Friday Oct. 6, 2023. (Jim Rydbom/Staff Photographer)

Alquist 3D, an innovator in printing homes, will relocate its headquarters to Greeley from Iowa in a high-profile win for Colorado's push to become a hub of new construction technologies.

3D printing works by laying down layer after layer of materials to create an object, from tiny components made of plastic to large buildings made of concrete. Printed homes, in theory, can be created in less time, with less labor, and at a lower cost versus more traditional construction methods.

European firms pioneered the technology last decade and Alquist 3D, formed in 2020, printed the first owner-occupied home in the U.S. two years ago using a proprietary concrete material. Faced with some of the highest housing costs in the country and a chronic shortfall of new residential construction, [Colorado officials are keen on supporting innovations in the field.](#)

"Solving our housing crisis is all hands on deck and innovative solutions like Alquist 3D and communities like Greeley are crucial to our success in lowering construction costs for housing and infrastructure," Gov. Jared Polis said in prepared remarks on Friday in Greeley.

Alquist 3D plans to establish a showroom and production facility in Greeley where the company will robotically print 3D structures and components with a focus on creating lower-cost housing and infrastructure and serving economically distressed and underserved communities.

“As of today, Greeley, Colorado, is the epicenter of the 3D printing world,” said Zachary Mannheimer, the company’s founder and chairman. “This is like Silicon Valley in 1972. We are building from scratch.”

If the construction industry is about to undergo a technological revolution, then Greeley is in the running to become the equivalent of Palo Alto, Calif.

One of the first things the company expects to print in Colorado later this year — concrete curbs with integrated drainage for use in Greeley. The design eliminates the need for metal storm drain gates that frequently get clogged and contribute to flooding.

The company is also partnering with Greeley-Weld Habitat for Humanity, which is building an affordable community of 500 homes and apartments called Hope Springs, to test out its robotic printers on a larger scale. Not only are the homes cheaper to build, but their concrete structure makes them more storm and fire-resistant and energy-efficient.

Perhaps the most important thing that is coming to Greeley, besides the company itself, is a new training program in partnership with Aims Community College, which hosted a news conference Friday morning to announce the relocation.

Under the Aims Construction Management program, students will learn about 3D concrete printing technology and how to operate 3D printers for residential construction. Another program at the school will teach students how to design printed buildings and program robotic printers.

That partnership is intended to train future workers for Alquist in an emerging field, but over time it should help create a base of expertise in the state that should encourage additional innovation and help attract other companies.



Colorado Governor Jared Polis and Senator Micheal Bennet get a demonstration of 3D printer for construction of homes during a press conference at Aims Community College in Greeley on Friday Oct. 6, 2023.(Jim Rydborn/Staff Photographer)



Convincing young adults about the merits of making a career out of swinging a hammer to frame a wall has become a much tougher sell. But put them in charge of a cutting-edge robot, like the kind that was maneuvering behind Mannheimer as he spoke — that's a different proposition.

"Alongside the sustainable building and infrastructure technology, Alquist will bring with them the ability to provide more affordable housing in our community, job opportunities for our residents, career pathways for our students and economic prosperity over the long term," said Greeley Mayor John Gates.

As a startup, Alquist 3D won't be bringing a large number of jobs with it just yet, nor will the jobs be among the highest paying, at least compared to other companies that the Colorado Office of Economic Development and International Trade has recruited in recent years.

Alquist 3D expects to create 79 net new jobs at an average annual wage of \$73,987, which is about 124% of the average annual wage in Weld County. Project managers, executives, manufacturing workers, and business services are among the positions coming to Colorado once the relocation from Iowa City is completed this fall.

Under an [incentive package the Colorado Economic Development Commission](#) approved in August, the company is eligible to receive up to \$1.1 million in Job Growth Incentive Tax Credits over eight years and up to \$335,000 in cash incentives over five years from the state's Strategic Fund.

Those awards are performance-based or linked to the company creating the jobs it has pledged to bring to Colorado rather than Iowa or Virginia, other states it considered. Greeley also has committed to provide \$2.85 million of its incentives.

Alquist's aim is to build homes at 30% of the cost of existing methods, and two trained technicians running a robot can complete the walls on a 1,500-square-foot home in about 25 hours, Mannheimer said. In that regard, the 79 jobs Alquist is looking at creating represent a small downpayment on a bigger transformation within a construction industry that employs 10.7 million people in the U.S. and has lagged for decades when it comes to productivity improvements.