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HiveASMBLD, Virginia Tech, Virginia Housing and Habitat for Humanity Partner to Bring Innovative 3D-Printed Home Community to Richmond

RICHMOND, VA – An innovative 3D-printed affordable housing community, the Darbytown Road Development, is officially underway with the first home now being printed by [HiveASMBLD](#), the Houston-based automated 3D-printed construction company, in collaboration with Virginia Tech researchers and students.

The Richmond development, supported through a partnership between [Virginia Tech](#), [Virginia Housing](#) and [Richmond Metropolitan Habitat for Humanity](#), will deliver five affordable single-family homes using large-scale additive manufacturing technology, marking a significant step forward in the use of advanced construction methods to address housing affordability and durability. Virginia Housing invested \$1.1 million to support the initiative as part of its mission to increase access to affordable housing across the Commonwealth, investing in innovative solutions that can reduce construction costs, improve scalability and increase housing stock across the Commonwealth.

“The Darbytown Road project represents a major milestone in applied housing innovation,” **says Tim Lankau, Co-founder of HiveASMBLD**. “Through our partnership with Virginia Tech and Habitat for Humanity, we’re showing that 3D-printed homes can deliver high-quality, affordable housing with finishes that are more durable, sustainable and more cost effective than traditional construction.”

The use of HiveASMBLD’s large-scale additive manufacturing technology to print the concrete wall systems for each home, in conjunction with Virginia Tech researchers, positions Virginia as a national leader in applied housing innovation, pairing academic research with real-world construction to explore how 3D printing can expand access to affordable, high-quality homes.

“By investing in innovation like 3D printing, Virginia Housing, with our partners, has an opportunity to fundamentally reshape how we build homes by reducing costs, accelerating construction and expanding housing supply,” **said Virginia Housing CEO Tammy Neale**. “This is not only about utilizing new technologies, it is making homeownership more attainable and addressing affordability challenges with smarter, faster and scalable solutions that can be replicated across the Commonwealth.”

The collaboration of HiveASMBLD and Virginia Tech’s Virginia Center for Housing Research (VCHR) is part of the broader 3D4VA effort – a statewide collaboration advancing 3D printing to address housing affordability, workforce development and construction innovation.

“This project and partnership showcases a new way to think about housing in Virginia,” **said Andrew McCoy, the Interim Managing Director of the Coalition for Smart Construction at Virginia Tech**. “By combining research, industry innovation and by working with mission-driven partners, we are demonstrating how emerging construction technologies can expand access to safe, durable and

affordable homes. Our goal isn't to print walls faster; it is to create scalable solutions that strengthen communities across the Commonwealth and ensure more Virginia families have a place to call home."

The homes will serve income-qualified families in the Richmond region. Prospective homebuyers are selected and vetted through Habitat for Humanity's established application process and must meet income eligibility guidelines.

"We are thrilled to be a part of this ground-breaking innovation," **says Ryan Pacyna, Vice President of Construction at Richmond Metropolitan Habitat for Humanity.** "Virginia Tech has been focused on refining the 3D concrete printing process to make it both accessible and cost-effective for an organization like ours. I believe that this could ultimately reshape the affordable housing industry."

The Darbytown Road Development demonstrates how research, public investment and nonprofit leadership can align to address housing affordability challenges in Virginia.

About Virginia Housing

By investing in the power of home, Virginia Housing transforms where and how thousands of Virginians live and thrive, strengthening communities and the economy. Virginia Housing has worked for over 50 years in partnership with the public and private sectors to help Virginians attain quality, affordable housing. While receiving no state taxpayer dollars, Virginia Housing raises money in capital markets to provide mortgages to first-time homebuyers, financing for rental developments and neighborhood revitalization efforts. Virginia Housing invests in innovations in affordable housing and makes homes for people with disabilities and older Virginians more livable. Learn more at [VirginiaHousing.com](https://www.virginiahousing.com) and review the most recent annual report.

About HiveASMBLD

Founded in 2023, HiveASMBLD is a construction technology startup that utilizes a combination of modern building technologies including proprietary AI-driven design software, 3D construction printing technology and manufacturing to deliver more climate resistant and cost-competitive housing than traditional construction alone. The Houston-headquartered company is redefining the homebuilding process by offering sustainable, affordable, and design-forward housing solutions that are tailored for the modern homebuyer.

From custom homes to large-scale communities, it is committed to pushing the boundaries of what's possible - faster, smarter, and greener.

About Virginia Tech

With locations in Blacksburg and Roanoke, Virginia, the Washington D.C. metro area, and presence around the world, Virginia Tech offers approximately 280 [undergraduate](#) and [graduate](#) degree programs to more than 39,000 undergraduate, graduate and professional students. Virginia Tech is a designated an R1 institution, which is the highest designation for research universities, and is one of six senior military colleges in the U.S. For fiscal year 2025, Virginia Tech reported \$493.9 million in sponsored research expenditures. Virginia Tech is a vibrant community encompassing more than 4,000 faculty who conduct cutting-edge research, [eight research institutes](#), and hundreds of centers and labs, blending technology and innovation into all fields of study through its commitment to hands-on learning.

About Habitat for Humanity

Habitat for Humanity was founded in 1976 as a nonprofit organization committed to providing safe, affordable housing opportunities across the world. Habitat for Humanity is a global nonprofit housing

organization working in local communities across all 50 states in the U.S. and in approximately 70 countries. Richmond Metropolitan Habitat for Humanity joined the affordable housing effort in 1986, serving the City of Richmond, Henrico County, and Chesterfield County. Since then, Richmond Habitat has built nearly 400 homes for local families. Along with our homeowners, volunteers, and donors, we work to build homes, communities and hope in the region. To learn more, visit www.richmondhabitat.org.

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