

# 3D Printing Takes on the Job of Building Houses for the Homeless With 'Lavacrete' Walls

An Austin, Texas, technology company named **Icon** was the winner of the "general excellence" category in this year's **World Changing Ideas Awards** by Fast Company for their development of a 3D printer for building houses.

Their Vulcan II machine is already at work building a neighborhood of homes for Austin's homeless population and building homes in Mexico for that country's poor population currently living in shacks. At right is a picture of one of those Mexican homes and below is a closeup showing how Icon's 3D printer works, applying layer upon layer of a specially designed mixture called Lavacrete. That product sets quickly enough that another layer can be applied on the machine's next go-round.

**REAL ESTATE TODAY**



By **JIM SMITH, Realtor®**

All the walls of a home can be poured in 24 hours spread out over two or three days. The framing of windows and doors and construction of a wooden roof is then done using, when possible, local workers who get on-the-job training, learning skills they can apply in other jobs.

Lavacrete is a propriety adaptation of concrete which overcomes many of the shortcomings of

concrete, especially in terms of aging. Because the walls are solid (no room for ducts), the homes are heated and cooled using my favorite method — heat pump mini-splits — which are also far more economical than gas forced air furnaces.

The Mexican project is in a rural area near the southern city of Nacajuca under a partnership with **New Story**, an international non-profit whose mission is to "pioneer solutions to end global homelessness."

I remember seeing TV footage showing Icon's 3D printing machine at work. Prior to that, I attended a presentation by New Story at the Rotary Club of Golden, which, as I recall, joined Rotary International in providing financial support. I am proud to be a financial supporter myself, and you can do so too at [www.NewStoryCharity.org](http://www.NewStoryCharity.org). I will have that link plus several other useful links and additional photos on the posting of this article on our blog, [www.GoldenREblog.com](http://www.GoldenREblog.com).

3D printing of homes makes sense. I have seen how 3D printers can build various products applying layer upon layer of resin as instructed by a computer program. As with those table-top machines, all that's needed to build the interior and exterior walls of a home is a larger flat surface (a concrete slab) and a massively larger printer to

float above it. Taking the process to yet a higher level, Icon has successfully built the walls of three side-by-side homes simultaneously in Austin, which is impressive and, of course, more cost effective.



Partnering with local non-profits and using local materials and laborers, New Story delivers its fully finished homes free to the Mexicans it is serving, but I can see it being practical in our country to offer such homes with low-cost mortgages and nominal down payments to the homeless or working poor.

The homes built by Icon for the Austin non-profit Mobile Loaves & Fishes were permitted by that city. When fully built out, their Community First Village will house an estimated 480 formerly homeless individuals, representing 40% of that city's chronically homeless population.

## 'Talking Turkey' Is Now Virtual Only

I kept my promise to keep publishing my political column through the election. I'll keep writing it, but you need to send me your email address to get it. Or subscribe to [www.JimSmithBlog.com](http://www.JimSmithBlog.com).

## Just Listed: Arvada Ranch Backing to Open Space

This 4-bedroom, 3-bath ranch home with walkout basement at **19019 W. 88th Drive** in Arvada's Leyden Rock subdivision backs to open space. It was just listed by **Chuck Brown**. A former model home (Remington Homes 2017), it has over \$240,000 in upgrades. The main level features a contemporary style open floor plan with hardwood floors, a 14-ft ceiling in the living room, and floor-to-ceiling windows with stunning views of the Boulder Flatirons. The fully finished walk-out basement features a family room, custom full bath, and two bedrooms. In addition to the 2-car garage visible here, there's a 1-car garage to its right. The home adjoins open space on the north and east sides of the house, with vacant HOA land to the south. Find more pictures and a narrated video tour at [www.LeydenRockHome.info](http://www.LeydenRockHome.info). Open this **Saturday, 11-2**.



\$779,900

## Electric Cars Are Your Best Cold Weather Choice

It's that time of year when I like to remind readers about the advantages of EVs in snow and cold weather. Here's what you need to know.

1) No warming up is needed. Just put the car in Drive and go! Also, the cabin will be warm within 1/2 mile because it doesn't require an engine to warm up first. In my Tesla I can turn on the heat with my phone app a few minutes earlier so the cabin, steering wheel and seat are all warm when I get in the car. Also, when I park the car for brief periods (such as when shopping), I can leave the heater on so it's warm when I return, .

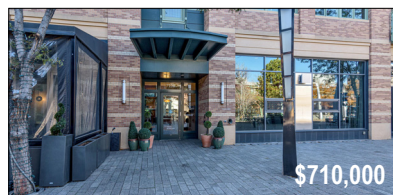
2) Your car will never break down, stranding you in a freezing car on the side of the road. The only time you see an EV on the side of the road is if there's a flat tire or an accident. Stuck in a snow drift? The heater will keep you warm as long as you need, consuming only 3-5 miles of range per hour — and no carbon monoxide!

3) Because of its low center of gravity and its typical 50/50 front/back weight distribution, an EV handles snow-covered roads really well.

4) Used EVs are your best buy. Older AWD Tesla Model S's can be bought, undamaged and running like new, starting around \$40,000. And older Tesla Models S and X come with transferable lifetime free supercharging coast-to-coast when purchased privately instead of from Tesla.

5) There are still federal and state tax credits and various rebates to be had. For a full list, visit [www.electricforall.org/rebates-incentives](http://www.electricforall.org/rebates-incentives).

## Just Listed: A 2-Bedroom Condo on Belmar Plaza



\$710,000

This beautifully finished condo at **7220 W. Bonfils Lane #201** has hardwood floors throughout. In addition to its two large bedrooms, it has a large study near the kitchen and dining room with French doors and ceiling fan with light. This unit has two reserved parking spaces in the basement secured garage, plus a 6'x8' storage cage. Units in this 5-story building are selling very well. The building faces Belmar Plaza, which is very active year-round with concerts, outdoor dining and even ice skating in the winter! And of course, it's in the heart of Belmar. Walk to Whole Foods, Dick's Sporting Goods, Target, BestBuy, Nordstrom Rack, Ted's Montana Grill and more. A Century movie theater is just across the street. You'll find more details, interior pictures and a narrated walk-through video online at [www.BelmarCondo.info](http://www.BelmarCondo.info), then call your agent or Jim Smith at **303-525-1851** for a private showing.

## Jim Smith

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