

A High-Performance Car Can Kill You. A High Performance Home Can Save Your Life.

I have the best assignment on the steering committee of the Metro Denver Green Homes Tour — shooting video tours of the homes we choose to feature. Because of Covid, I'm taking that assignment more seriously than ever, because we may not have an in-person tour this year. (The tour is on October 3rd.)

I post these tours (along with the video tours of our listings) on my YouTube channel, [jimsmith145](https://www.youtube.com/channel/jimsmith145).

Please go there to check out some of the more recent tours.

Those videos, however, are limited in what they can convey in 7 to 10 minutes, so I must leave out a lot of what I learn during the lengthy orientation I get from each homeowner prior to shooting the video.

A good example was my tour last Saturday of Jen Grauer and Josh Renkin's house in Denver. They scraped a house and built from scratch the best example of a "high performance home" I have come across yet — and I've seen a lot of high performance homes.

My 7½-minute tour of the house that Jen completed three years ago that not include a lot of what makes it such a good example of sustainability, so I'll add to it here.

To be "net zero energy," a solar-powered home like Jen's has to be

super insulated and super efficient in its use of energy. When a home is that tight, indoor air quality has to be addressed to make the home safe. That job is performed by an Energy Recovery Ventilator (ERV).

The ERV's job is to bring in fresh air from the outside and to expel bad air while maintaining a healthy indoor humidity level. In the typical home, exhaust fans in bathrooms, kitchens and laundry rooms exhaust air to the outside, thereby drawing fresh air into the house only through whatever leaks exist around doors, windows and other penetrations of the home's "envelope." An ERV has one dedicated duct to exhaust air and another to bring in fresh, filtered air. This air is circulated through the house via multiple exhaust and fresh air vents around the home. In addition to maintaining indoor air quality, the ERV transfers some of the temperature (and humidity) of the outgoing air to the incoming air when there is a differential between the two.

Let's say your home is 70 degrees inside, but it's 100 degrees outside. The temperature of that incoming air can be reduced to, say, 75 degrees by passing it through a heat exchanger where it doesn't mix with the outgoing air but acquires

some of its temperature. Similarly if the outdoor air is below freezing, the ERV might raise that incoming air to, say, 50 degrees. (I could be way off on these numbers. I'm just trying to convey the concept.)

A **conditioning** ERV (or CERV) monitors the level of carbon dioxide and volatile organic compounds (VOCs) in the outgoing air. You can set a level that is acceptable (say, 900 ppm maximum) and the CERV will increase the flow of air when those levels are exceeded to bring them back to the acceptable range. Whereas an ERV runs 24/7, the CERV only needs to turn on to bring the levels of CO₂, VOCs and humidity down to set acceptable levels. A CERV also has an internal heat pump to add heat or cooling. (See my videos of John Avenson's and Jim Horan's homes.)

In Jen's case, in addition to an

ERV, she made sure that the home was built with low-VOC products. For example, instead of using high-VOC particle board, her cabinets are made with zero-formaldehyde birch plywood and her island is solid maple and waterproofed with a zero-VOC oil. Her home has no wall-to-wall carpeting, which typically has VOCs in it. (These items are mentioned in the video of Jen's house.)

Radon is another pollutant which seeps into every home through their concrete foundation walls and slab-on-dirt. To further improve air quality, Jen installed a radon mitigation system.

In summary, a high performance home can not only save you money in the long run (it costs more to build but nearly eliminates monthly utility bills), it can also create a home that extends your life through improved indoor air quality.

REAL ESTATE TODAY



By JIM SMITH, Realtor®

Bungalow on 0.24 Acres in East Street Historic District



This 1949 bungalow at **2038 East Street** is in Golden's East St. Historic District. It has two detached garages -- a 2-car garage rented out for \$280/month, and a 3-car garage with an extra tall garage door and a 23-foot-long workbench with 16 electrical outlets. There are mountain views from both the front and rear of the house. Safeway, the School of Mines, Downtown Golden and the 16L bus are all within walking distance, and the Light Rail station is just 2 miles away. The home has a newer impact-resistant roof (2017), a high efficiency furnace, and PEX plumbing, but the inside needs updating and it is presented as a fixer-upper. View the narrated video walk-through at www.EastStreetHome.info, then call for a showing!

Updated Sixth Ave. West Tri-Level Backs to Greenbelt

This beautifully updated home at **14591 W. Archer Ave.** is located at the apex of a circle street off Flora Way, backing to a greenbelt and within walking distance of Kyffin Elementary School. You'll like this home's open floor plan, chef's kitchen with granite counters and Viking gas range, hood and refrigerator, and hardwood floors. All the bathrooms have been remodeled with new cabinets and vanities. There's a spa bathroom featuring steam shower and jetted tub and a huge master suite. The home theater in the basement has a 120-inch diagonal screen and surround sound. See the narrated video walk-through at www.6thAveWestHome.com to fully appreciate this special home, then call to arrange a showing.



Walk or Bike to School of Mines From This Townhome

This 3-BR, 3½-bath Kinney Run townhome at **906 Homestake Drive** has been nicely updated. The location is one of this home's best selling points, being close to the Colorado School of Mines, Downtown Golden, Fossil Trace Golf Course, and multiple open space trails! To fully appreciate this home, take a video walk-through at www.GoldenTownhome.com. Note: This home is deep within the subdivision, isolated from all traffic sounds and backing to a year-round stream. It has a 1-car garage and one reserved parking space as shown above. Seller will review all offers on Saturday so everyone gets to see it. Call before submitting and we'll tell you what we have so far.



An Affordable Lakewood Condo in a Quiet Location



This 3-BR, 2-Bath, 1,000-sq.-ft. condo at **1723 Robb Street** is a bright corner unit with newer double pane windows and newer appliances. This is low maintenance living at its best! The complex (Blueberry Hill Condos) is within walking distance of King Soopers and is a commuter's dream, convenient to I-70, light rail and Colorado Mills Mall. At this price, there may be lots of offers, so act quickly. Take the narrated video tour at www.LakewoodCondo.info, then call your agent or **Jim Swanson** at 303-929-2727 for a showing.



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