



PechaKucha

Simplicity of the Build TM

Jay Epstein
President

Health E Community Enterprise of
Virginia Inc.



The Statement

The majority of builders in America today build a home based on the 2012 IECC building code. As you know this is 2017.

My Question

Would you really want to buy a new home with concepts approved in 2012?

The Answer

I leave to you the builder and the consumer to decide.

My Solution, The Simplicity of the Build TM

A guide based on a building design that has been around for years and incorporating a few new building products that make the home achieve ultra-energy efficiency with a HERS score in the 40's to low 50's before incorporating the Photovoltaic (PV) System to achieve a HERS score as low as ZERO.



Terminology may change but we build them the same way!

Certified by Topbuild, Energy Star, Indoor Air Plus & ZERH



The Buyer is Assured:

- An integrated systems approach – **Advanced Technology/ Comfort Plus/ Durability**
- Environmentally conscious design and construction applications – **Healthful Environment**
- Efficient use of natural resources: water, energy and building materials- **Quality Built**
- Utility cost savings – **Ultra Efficient**
- Improved indoor air quality and a comfortable living environment- **Healthful Environment**
- Tighter building envelope and ductwork (confirmed by on-site inspections & performance testing)- **Quality Built**

Why Make It Difficult?

Know the Tools Available to You:

Energy Star Certification



Indoor Air Plus Certification



Zero Energy Ready Certification



The Simplicity of the Build™

Advanced Framing Techniques:



A. Blocking



B. California Corners



C. Ladder T-Walls



D. Stacking Effect



The Simplicity of the Build TM

Air Sealing:

Air Sealing (air changes per hour at 50 Pa):

Blower Door at 2.08 at ACH 50

Mechanical Supply Duct: The duct work is between the floors. As the registers are installed, ceiling caulk bead is used to seal the register to the ceiling before the register cover is attached.

Once the rater has tested the home with the blower door test, asks the rater to increase the Pascals then walk through your home and feel for leaks. You will find leakage around the electrical, cable boxes, etc. Check the windows and mechanical room.



The Simplicity of the Build™

Allows for the: builder, subcontractors, superintendents, sales staff and the homebuyer to understand the building concept of a Zero Energy Ready Home.



The Simplicity of the Build TM

Array Orientation - (North, East, South, West) or intermediate direction a PV array faces. Because the sun traces a path through the southern sky as the day progresses in the northern hemisphere, the optimal orientation for a solar energy system is typically due south. In some cases, optimizing system orientation means placing the array on the front, side or rear roof slope of a residence. **Due to the Lot location the array orientation of the PV Panels are located on the Front of Newport Model facing South.**



The Simplicity of the Build TM

Array Tilt- All solar modules will be mounted flush with the roof and will have a fixed tilt angle. The Latitude for Richmond is 37.5 degrees whereby the best fixed roof pitch would be 31.6 degrees. To achieve the most energy over the whole year we utilize a 7:12 roof pitch with a roof angel of 30 degrees to lessen the impact on system production. **Due to the lot location the array tilt of 30 degrees for the PV Panels are located on the side of the Newport Model facing the South.**



The Simplicity of the Build TM

System Shading- Shading can also negatively impact solar production and can come from a variety of sources. Villas at Rocketts Landing realizes the biggest shading threats are vegetation and structures. **House location is based on whether you choose to buy a one or two story home. Due to the Lot location the PV Panels are located on the rear of the Newport Model facing the South clear of shading by structures and vegetation.**



The Villas at Rockett's Landing



- ❖ Our First Solar Home Community of 45 Single Family Homes
- ❖ Located in Richmond, Virginia
- ❖ 2016 DOE Housing Innovation Award Winner in Spec
- ❖ 2017 DOE Housing Innovation Award Winner in Production



What's Next?

Zero Energy Ready Home Community

Opens the market place to 100% of buyers – buyers have the choice to upgrade now or later!

- Option 1: Purchasing an ultra-energy efficient home with enhanced indoor air quality that qualifies for energy star, indoor air plus and Zero Energy Ready certification today with solar panels.
- Option 2: Installing solar panels at a later date since the home has been prewired with a dedicated area on the roof.

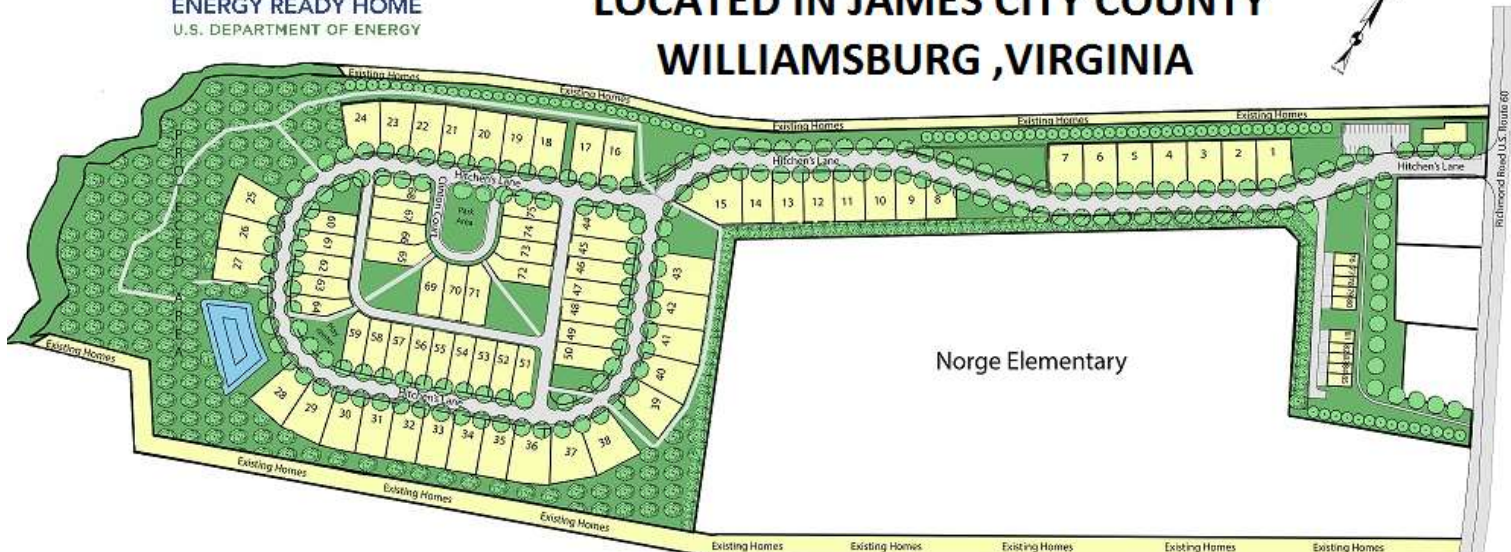


Walnut Farm

- ❖ Opening our new ZERH Community Walnut Farm in Williamsburg, Virginia!
- ❖ 75 Single Family Homes
- ❖ Prices Starting in the 340's
- ❖ Homes will be built Zero Energy Ready, the buyer now has the choice to purchase solar panels now... or later!
- ❖ Pre-Sales start October 15, 2017 with delivery in late spring early summer 2018



WALNUT FARM ZERO ENERGY READY COMMUNITY OF 75 SINGLE FAMILY HOMES LOCATED IN JAMES CITY COUNTY WILLIAMSBURG, VIRGINIA



Achieving Value for your ZERH- When Comps Aren't Available

When working with the appraiser and comps are not available, be prepared to justify the cost of the ultra- energy efficient home and the cost of solar at the time of sale.

Descriptions of Materials must reflect **upgrades**

For example:

- upgrade Conditioned Crawl
- upgrade 2 by 6 Walls
- upgrade ERV
- upgrade Heat Pump Hot Water Heater
- upgrade Insulation Values
- upgrade Design Costs for Rater
- upgrade PV System



The Simplicity of the Build™

Request an Informed Appraiser!



Utilizes a High Performance Home appraisal addendum whereby both buyer and seller request a Green Appraiser that is knowledgeable.

HEALTH E COMMUNITY

264 Mclaws Circle • Suite H • Williamsburg, VA 23185
(757)928-3434 • Fax (757) 928-0233

High Performance Home Appraisal Addendum

This High Performance Home Appraisal Addendum ("AA") to the Health E Community LLC Purchase Agreement to which this AA is made part, dated _____, 20____ between Health E Community LLC ("Seller") and _____ and _____ (Collectively or individually, "Purchaser"), makes it known to all parties that the Home to be purchased by purchaser is built to standards above prevailing codes and to accurately assess its true market value, requires an appraisal be performed by an appraiser educated, knowledgeable and certified in this type of valuation.

Purchaser agrees, therefore:

Due to the unique features and materials, high energy efficiency standards and equipment, and complexity of building techniques and design used in the construction of this "high performance home," the appraiser must be certified to appraise such a home. Purchaser agrees to inform lender that appraiser must be qualified to appraise a "high performance," "certified green," or home with other similar distinction, and this qualification must come from an independent 3rd party institution, e.g. The Appraisal Institute. If appraiser does not possess the necessary credentials, knowledge and experience to appraise such a home in this market, Purchaser understands that appraiser will not be permitted to conduct the appraisal and Purchaser will remain obligated to work with their lender to identify a qualified appraiser who is. All other terms and conditions of contract remain in full effect.

By signing below, Seller and Purchaser agree that the above terms shall be made a part of Purchase Agreement dated _____

Purchaser Date

Purchaser Date

Seller Date
Health E Community LLC

The Simplicity of the Build TM Market to the Buyer !



June 13, 2017

My husband Jason and I built a home at The Villas at Rockett's Landing in late November, 2016. After living there for six months, I will say that I have been extremely pleased in the air system. I have terrible allergies and have been breathing better recently than I can remember in years! Also, I have been so happy having the solar panels. It has done wonders for our electric bill! The last couple of months it has been less than \$10. It truly is unbelievable. We can run our air conditioning on a hot day without worry of rising energy costs. We moved from a much smaller house, where our electric bill was often \$150 - \$250 during hot summer months. It has been a significant improvement for us. Overall, we are thrilled with these results since moving to The Villas at Rockett's Landing.

Sincerely,

Christiane Reeder

703 Admiral Gravelly Blvd.

The Simplicity of the Build™

My Answer

Build The Homes of the Future Today!

