



BREAKOUT SESSION

Case Study Session: Green Building Certifications

Green Building Certifications

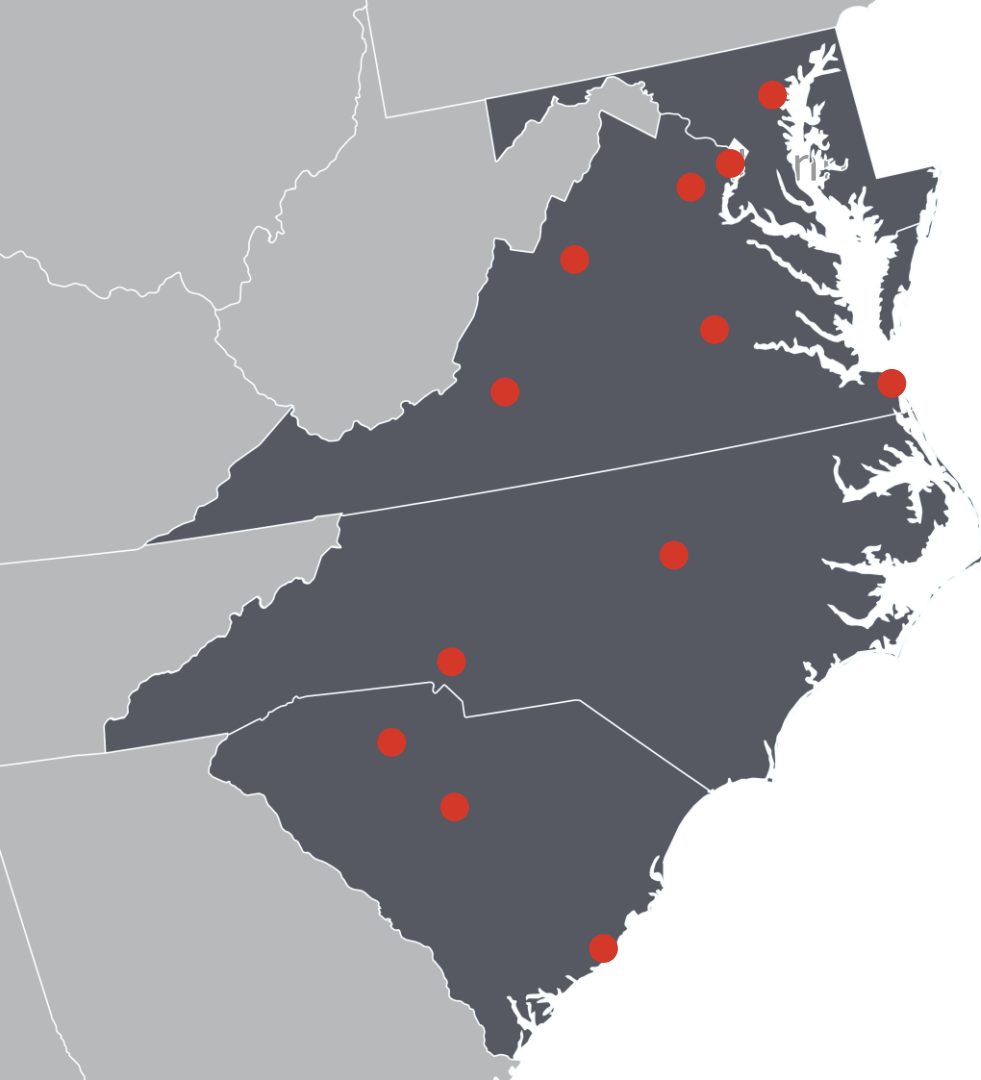
Speakers

Jay Epstein, Healthy Communities

Stephen Dareing, Viridiant

Casey Murphy, Pearl Certification

Bryna Dunn, Moseley Architects (moderator)



MOSELEYARCHITECTS

Designing solutions. Building trust. Enriching lives.

12 Offices

315 Full-time Staff

158 LEED Certifications

48 ENERGY STAR Designs

10 Net Zero Ready Buildings

4.55MW Installed PV

OUR MARKETS

EDUCATION



K12



HIGHER ED

GOVERNMENT



CIVIC



JUSTICE

RESIDENTIAL



SENIOR
LIVING



MULTI-FAMILY
HOUSING

SUSTAINABLE DESIGN

2018 USGBC COMMUNITY CHANGE AGENT AWARD

2019 DUKE ENERGY SMART SAVER AWARD

2021 & 2018 ENERGY STAR PARTNER OF THE YEAR

2021 AIA 2030 COMMITMENT 10-YEAR REPORTING BADGE



TRUE SUSTAINABILITY

WE DESIGN
EFFICIENT, HEALTHY,
RELIABLE BUILDINGS.



FOR THOUGHT



If it degrades human or environmental health, it's not sustainable



If it depletes energy stores or releases carbon, it's not sustainable



If it can't withstand shocks or stresses, it's not sustainable

DOE Zero Energy Ready Home

U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy



Zero Energy Ready Homes

Pathways to Decarbonization for Residential Homes

VAEEC – Green Building Case Study

Virginia's First Zero Energy Ready Home Community

Jay Epstein

Chairman

Healthy Communities



The IRA Bill Confirms it!
Zero Energy Ready
Homes are the Pathway
to Decarbonization

The IRA bill that passed last year was based on the components of a Zero Energy Ready Home. The Zero Energy Ready Home qualifies for a Federal tax credit of \$5000 dollars per home.

The following components exemplifies how we can reduce our Carbon Footprint:

Heat Pump Water heater

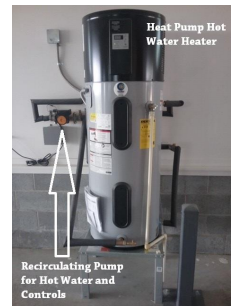
Multistage heat pump compressor

Induction cooktop

Electric fireplace

Programable thermostat that has Wi-Fi connectivity.

A typical home built to code releases 20,000 Lbs. of carbon in the operational phase. A ZERH is over 50% more energy efficient and cuts the carbon release to less than 10,000 LBS. Adding solar reduces this to less than 5000 LBS.



Easy to use... Everything is just a touch away



I created an acronym called DARST.

It stands for Dreams and Reality Sometimes Touch.

Rest assured at Walnut Farm Dreams and Reality Do Touch

FEEL

Have you ever experienced a July day that your home would never cool down? Or that cold February evening you could not get warm?

Epstein says “the temperature throughout Zero Energy Ready Homes does not change. Even on the hottest days we stay cool and on the coldest winter nights we stay warm. The system runs longer and more energy efficient without the startups and stops of a typical unit.”

Trane TruComfort™ Variable Speed Heat Pump provide a consistent temperature with maximum efficiency by automatically making precise, continuous adjustments in output. Just like going up or down a hill in an automobile with the cruise control on, they conserve energy while keeping your desired comfort level just right. Trane Communicating Controls work with a network of sensors to monitor and optimize humidity and temperature in your home, adjusting compressor and fan speeds in real time to give you the most comfortable air operating efficiency possible.

Trane’s exclusive Comfort-R™ technology automatically adjusts your indoor unit fan speed at startup to draw more moisture from the air. With lower moisture levels, you may actually keep your home at a more energy efficient temperature without sacrificing your indoor comfort.

Epstein says “you just feel cooler without lowering the temperature. This Trane TruComfort™ system makes the difference in building a Zero Energy Ready Home that meets the homeowner

Sight

Clarity of the Air - Have you ever noticed the haze of light thru your window created from the particles in the air on a bright and sunny day?

Epstein says “as you walk through The Zero Energy Ready home you will notice the brightness of the room. No lights are on, but only the sunlight entering the room. The room is crisp and clear as the system has filtered the particles from the air”.

Trane CleanEffects™ creates an incredibly clean and fresh indoor environment with patented technology that removes up to 99.98% airborne allergens from the air. The Asthma and Allergy Foundation of America (AAFA) and Allergy Standards Limited (ASL) has announced that the CleanEffects™ whole home air cleaner from Trane, has earned the asthma & allergy friendly® Certification. The system traps particles as small as .1 micron in size. Up to 100 times more effective than a standard 1” filter, and can reduce your need to dust by up to 50%.

Epstein says “Once you are inside the home take a moment and just breathe. The air is crisp and clean. Truly a breath of fresh air. You may notice after a while your sneezing and allergies were left outside.”



Hear

Did you every wish that your loud compressor was not in your backyard?

Epstein says “the Zero Energy Ready Home truly is quiet as the air moves throughout the home. The air handler is located in a conditioned part of the home, in a closet by design in our Zero Energy Ready Home. Once the door is closed the air handler cannot be heard. The compressor outside is quiet too. As we carry on a conversation by the air compressor, I noticed that it does not impair our conversation. Seeing is believing.”

Touch

Have you ever wanted to control the environment inside your home?

Epstein says “By a touch of the ComfortLink™ XL 1050 and XL850 touchscreen control, you control the temperature, humidity, and can even have Nexia regulate other features such as security, lights and other future needs.”

Trane TruComfort systems work seamlessly with the Nexia™ smart home system and Trane’s Nexia-enabled controls, allowing you to manage your home’s heating and cooling remotely via any web enabled smartphone, tablet or computer. In addition to climate control, Nexia can be expanded to include Nexia diagnostics, remote management of locks, video surveillance, lights, shades, garage doors, energy usage, and more, from wherever life takes you.

ComfortLink™ II XL1050 and XL850 touchscreen controls let you monitor and control your home’s climate from anywhere when connected with Nexia smart home systems. The Trane ComfortLink™ II system harnesses the power of digital communication to go far beyond heating and cooling your home. All components of the system are integrated by automatically configuring themselves, while optimizing the overall performance of the entire system.



The U.S. Department of Energy is pleased to announce that the submission from **Healthy Communities** has been selected as a 2023 Housing Innovation Award Winner! This national award represents a significant achievement, recognizing the most impressive and advanced homes among leading DOE Zero Energy Ready Home builders.



06/12/2023

Testimonial

We take great pleasure in the advantages offered by our Zero Energy Ready Home for a variety of reasons.

Mona and I particularly appreciate the numerous benefits of the 2x6 insulated walls, which include:

1. Sound:
 - The interior of our home is incredibly quiet, allowing us to fully relax and unwind.
 - Moreover, the exterior noises are significantly minimized. Occasionally, we may hear the occasional loud car passing by on the main road but it is not bothersome.
 - Surprisingly, the evenings remain tranquil... until we open the back door. We had no idea how "loud" nature can be!
2. Energy efficiency:
 - Thanks to the insulation, our house retains its temperature for a longer duration, resulting in reduced power consumption. As a result, we don't have to adjust our A/C or heating settings as frequently, saving energy and money.
3. Air quality:
 - The filtered air within our home creates a comfortable and healthy environment.
 - This aspect is particularly crucial for us as we have developed increased allergies to pollen and dust outside.

v/r

Pedro and Mona Conol



Rating Date: 2022-09-15
Registry ID: 194814020
Ekotrope ID: M289AqZL

Annual Savings
\$2,645
*Relative to an average U.S. home

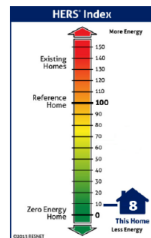
Home:
1055 HITCHENS LN
WILLIAMSBURG, VA 23188
Builder:
HEALTHY COMMUNITIES

HERS® Index Score:

8 Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	8.0	\$270
Cooling	2.7	\$90
Hot Water	3.0	\$103
Lights/Appliances	17.8	\$601
Service Charges		\$129
Generation (e.g. Solar)	25.9	-\$873
Total:	31.5	\$320



Home Feature Summary:

Home Type:	Single family detached
Model:	SHERVANDON II CONCRIL BD3 SOL 9PL R
Community:	WALNUT FARMS
Conditioned Floor Area:	1,847 ft²
Number of Bedrooms:	3
Primary Heating System:	Air Source Heat Pump • Electric • 9.6 HSPF
Primary Cooling System:	Air Source Heat Pump • Electric • 18 SEER
Primary Water Heating:	Residential Water Heater • Electric • 3.35 Energy Factor
House Tightness:	839 CFM50 (1.04 ACH50)
Ventilation:	96 CFM • 46 Wats
Duct Leakage to Outside:	27 CFM @ 25Pa (1.46 / 100 ft²)
Above Grade Walls:	R-24
Ceiling:	Attic R-49
Window Type:	U-Value: 0.28, SHGC: 0.22
Foundation Walls:	R-10
Framed Floor:	N/A

This home meets or exceeds the criteria of the following:

ENERGY STAR v3
ENERGY STAR v3.1
2018 International Energy Conservation Code
2015 International Energy Conservation Code
2012 International Energy Conservation Code
2009 International Energy Conservation Code
2006 International Energy Conservation Code

Rating Completed by:

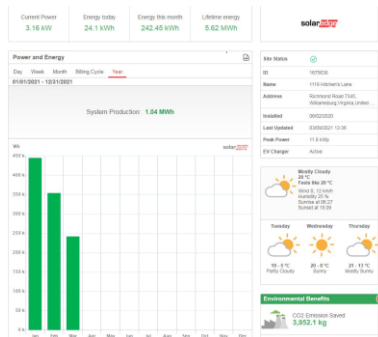
Energy Rater: Sandy Gallo
RESNET ID: 9357370
Rating Company: TopBuild Home Services, Inc.
475 N Williamson Blvd., Daytona Beach, FL 32114
8669127233
Rating Provider: TopBuild Home Services, Inc.
475 N Williamson Blvd., Daytona Beach, FL 32114
8669127233

Sandy Gallo, Certified Energy Rater
Date: 9/23/22 at 3:52 PM



Ekotrope RATER - Version:4.0.0.2995

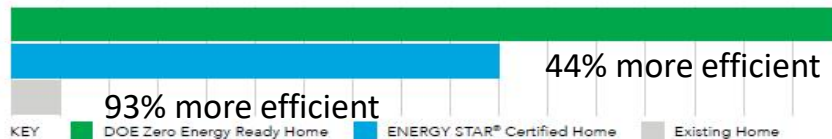
The Energy Rating Disclosure for this home is available from the Approved Rating Provider. This report does not constitute any warranty or guarantee.



Take Advantage of Innovative Technology

The largest investment of a lifetime should stand the test of time. Put aside fears of obsolescence with Zero Energy Ready Home. That's because advanced technology innovations and building systems meet and exceed forthcoming energy codes. As a result, you're investing in a home of the future and not the past.

Compare the Difference



"The Zero Energy Ready Home takes advantage of new technologies and materials...to have a more efficiently operating home with less maintenance."

— Homeowner

"We didn't want to think back in 10, 20, or 30 years and be kicking ourselves for not taking advantage of the technological advances in home building."

— Homeowner



Zero Energy Ready Home Technology Package

Advanced Enclosure

Extra insulation expertly installed ensures an effective thermal blanket around your home. High-performance windows with advanced technology coatings block out unwanted summer heat gain and minimize winter heat loss. Lastly, comprehensive air sealing technology helps eliminate drafts that can compromise comfort and durability.

Advanced Equipment

High-efficiency heating and cooling equipment are commonly used that feature the latest technology for performance and efficiency. In addition, the full comfort system is installed to industry best practices including ducts located for optimized performance. Latest technology high-efficiency water heaters are also included in many homes.

Advanced Components

Key components are ENERGY STAR® certified including appliances (e.g., refrigerators, dishwashers), fans (e.g., bath exhaust and ceiling fans), and LED Lighting. In addition, efficient plumbing solutions help save thousands of gallons of water going down the drain. Where a solar system is not included and significant annual sunlight is accessible, critical details ensure one can be added in the future with no disruption or cost penalty.

Easy to use... Everything is just a touch away



"We were attracted to...a complete high-performance package, high energy efficiency, high water efficiency, and air filtration for indoor air quality."

— Homeowner





Live in Tomorrow's Home, Today

Every Zero Energy Ready Home meets the federal government's most rigorous guidelines for high-performance. As a result, you can look forward to a wide array of durability benefits such as low maintenance, no window condensation, no ice damming, ease of cleaning, and just a better protected home.

Compare the Difference



"I love this home. I never thought home ownership could be this easy. No condensation on windows, less dust, very little maintenance, affordable utilities, and it's good for the environment. It has improved our quality of life."

— Homeowner



Zero Energy Ready Home Durability Package

Dry-by-Design Construction

Comprehensive water protection details are included from roof to foundation to safeguard your home from moisture damage and mold problems. You may not think about this protection when buying a home, but you will sleep better every night knowing it's there.

Advanced Moisture Control

High-efficiency, heating and cooling systems are designed and properly installed along with proper pressure balancing to control humidity and minimize moisture problems. In addition, whole-house fresh air systems and exhaust fans work in tandem with the comfort system work to dilute moisture generated indoors.

Higher-Grade Components

Energy efficient components provided commonly feature higher quality construction and last longer. This includes ENERGY STAR® appliances (e.g., refrigerators, dishwashers), ENERGY STAR fans (e.g., bath exhaust and ceiling fans), and ENERGY STAR LED Lighting.

"We have lived in the home for two years now and couldn't be happier with the quality of construction, and the ease of living in, cleaning and maintaining the home."

— Homeowner

"The Zero Energy Ready Home takes advantage of new technologies and materials...to have a more efficiently operating home with less maintenance."

— Homeowner



"We have always suffered from allergies... I can come back home and my odorless, fresh space speaks for itself. No mold, no breathing problems, no fumes and no itchy eyes. We are definitely happy."

— Homeowner

"Our lives are healthier because of the great effort from the builders to eliminate or minimize harmful materials during construction."

— Homeowner

"It is great peace of mind to know that the air quality is good and I don't have to worry about my children's health."

— Homeowner



Compare the Difference



Live Better with a Healthier Home

The average person spends over 60% of their time inside their home each day. That's why every Zero Energy Ready Home meets the federal government's most rigorous guidelines for indoor air quality. You can look forward to a wide array of health benefits such as less allergies, odors, mold, reliance on inhalers, and doctor visits. You deserve to breathe better!



Zero Energy Ready Home Health Package

Contaminant Source Control

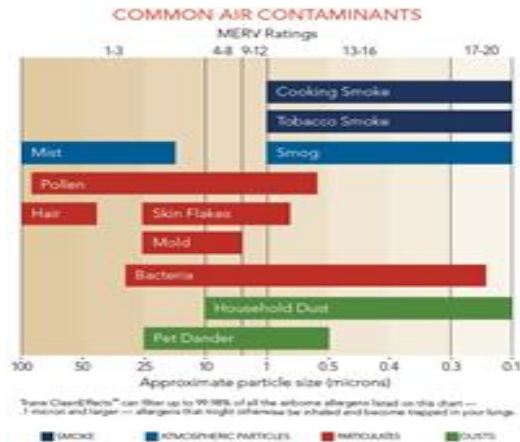
Air sealing and screening block outdoor dust, pollen, and pests from getting in. Materials are specified with no or low chemical content. Water protection from roof to foundation minimizes moisture related problems. Furnaces and water heaters cannot back-draft exhaust fumes. Radon resistant construction provided in high risk zones vents dangerous soil gases. It's like an organic home that keeps the bad stuff out.

Fresh Air System

Since homes are built much more air-tight today, a fresh air system is provided to eliminate residual contaminants and moisture by replacing all the air in your home over three times each day. In addition, kitchen and bathrooms exhaust fans remove moisture, odors, and contaminants from cooking and bathing. A home just lives better with fresh air.

High-Capture Filtration

All homes with ducted heating and cooling also include advanced technology filtration that exceeds minimum industry standards for removing air-borne particles associated with common respiratory problems. If you notice a lot less dust and breathe better, this can be a big reason why.

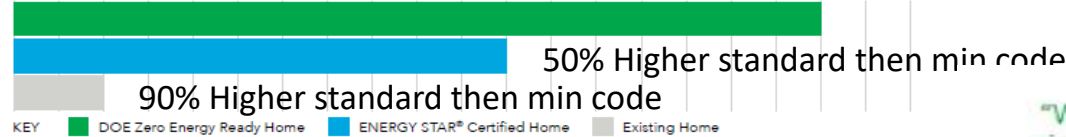




Live More, Worry Less

Homebuyers are typically untrained to discern complex details, technologies, and practices not visible in a finished home. With a Zero Energy Ready Home, you can enjoy peace-of-mind knowing your home is held to a higher standard beyond minimum code. This means you can look forward to living with ease of maintenance, minimal heating and cooling bills, enhanced comfort, and the great feeling waking up each day in a quality built home.

Compare the Difference



"There is not a single thing we dislike about this home and we love the quality of construction."

— Homeowner

"We have lived in the home for two years now and couldn't be happier with the quality of construction, and the ease of living in, cleaning and maintaining the home."

— Homeowner



Zero Energy Ready Home Quality Built Package

Quality Construction

All Zero Energy Ready Homes are constructed to meet the federal government's most rigorous guidelines for high-performance homes. This includes industry leading best practices for wall, roof, and foundation assemblies along with windows that meet or exceed ENERGY STAR® certification.

Quality Components

All lighting, appliances, and fans provided are ENERGY STAR® certified for both high-efficiency and performance that meets or exceeds consumer quality expectations. In addition, high-efficient heating, cooling, and hot water equipment commonly provided include higher grade components and are quality installed to industry best practices.

Certified Performance

Each home includes three certifications: ENERGY STAR® for above code energy efficiency; EPA Indoor airPLUS for comprehensive indoor air quality measures; and Zero Energy Ready Home for optimized efficiency plus performance. This independent verification requires performance simulations, field inspections, diagnostic testing, and detailed checklists. As a result, each home is held to a substantially higher standard than a typical new home.

"We looked for a long time and were finding the choice between bad and worse. This house is so preferable, to be in a home that is so well built. It's double checked. We like the fact that standards are in place."

— Homeowner



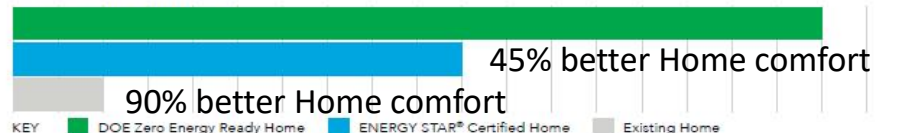
Flash and Batt



Three Stud Corner Ladder T wall



Compare the Difference



"As soon as you walk into this house you can tell its sound, it's airtight. You feel like you're wrapped in 100 wool blankets."

— Homeowner

"What I love most about this home is just how comfortable it is. The temperature is always perfect... regardless of where I am in the house."

— Homeowner

"While our power bill is lower, our comfort, our well-being, and our quality of life are all much, much higher."

— Homeowner

Experience Comfort at a Whole New Level

Every Zero Energy Ready Home includes a comprehensive package of features that deliver total comfort. That's because they go way beyond just controlling air temperature to also ensure proper air mixing, humidity levels, surface temperatures, and quiet. You can look forward to even temperatures year-round, warm floors in winter, cool and dry summers, no drafts, no window condensation, no outdoor noises, quiet equipment, and low energy bills.



Zero Energy Ready Home Comfort Package

Thermal Blanket Construction

Attic, wall, and foundation insulation meets or exceeds local code requirements and is quality installed to leading expert best practices. This is complemented with comprehensive air sealing to block drafts and advanced window technology to trap heat indoors during winter and block heat from getting in during summer. The result is minimal unwanted heat loss and gain, controlled surface temperatures, and minimal drafts that provide superior thermal comfort.

Quality Installed Comfort System

High-efficiency heating and cooling equipment is quality installed to industry best practices including ducts located for optimized performance. This will result in efficient operation, even distribution of comfort throughout the home, and effective humidity control.

Quiet Living

Advanced insulation, air sealing, and quiet window technology effectively block unwanted outdoor noises. Advanced equipment and components including ENERGY STAR® certified fans, appliances and lighting feature ultra-quiet operation. In addition, high-efficiency heating and cooling equipment are rated for very low noise operation. This is a whole new level of quiet.

"As soon as you walk into this house you can tell its sound, it's airtight. You feel like you're wrapped in 100 wool blankets."

— Homeowner



"While our power bill is lower, our comfort, our well-being, and our quality of life are all much, much higher."

— Homeowner

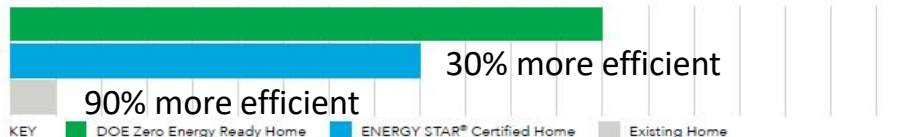
"What I love most about this home is just how comfortable it is. The temperature is always perfect... regardless of where I am in the house."

— Homeowner

Viridian helps you to design and verify that the system works



Compare the Difference



Structured Plumbing



Take Control of Your Utility Bills

Each Zero Energy Ready Home optimizes energy efficiency. As a result, monthly utility bill savings can easily exceed the incremental increase in the monthly mortgage. As a result, you can look forward to lower ownership cost the day you move in with utility savings adding up to \$10,000s and often over \$100,000 over a 30-year mortgage. What a great investment!



Zero Energy Ready Home Energy Efficiency Package

Efficient Enclosure

Extra insulation meets or exceeds forthcoming energy codes and is quality-installed to ensure an effective thermal blanket around each home. High-performance windows use advanced coatings to block unwanted summer heat gain and minimize winter heat loss. Comprehensive air sealing is applied to over a half-mile of cracks and seams in a typical home along with holes and penetrations to help eliminate drafts.

Efficient Comfort System

Heating and cooling systems commonly utilize the latest high-efficiency equipment and are quality installed to industry best practices including duct locations optimized for performance. This will ensure energy efficient operation along with even distribution of comfort and humidity control throughout the home.

Efficient Components

Key components are ENERGY STAR® certified including appliances (e.g., refrigerators, dishwashers), fans (e.g., bath exhaust and ceiling fans), and LED Lighting. In addition, efficient plumbing solutions help save thousands of gallons of water going down the drain. Many Zero Energy Ready Homes also feature the latest high-efficiency water heaters.

Pearl Certification tells the story while adding value to your home



"Our energy bills are lower than ever but our quality of life is higher."

— Homeowner

"Our energy bills are less than half of our previous home with 20% more square footage."

— Homeowner

Technical Strategies

- *Simplicity of the Build Tips*

Work Closely with your Rater!!!

Duck Blaster Test



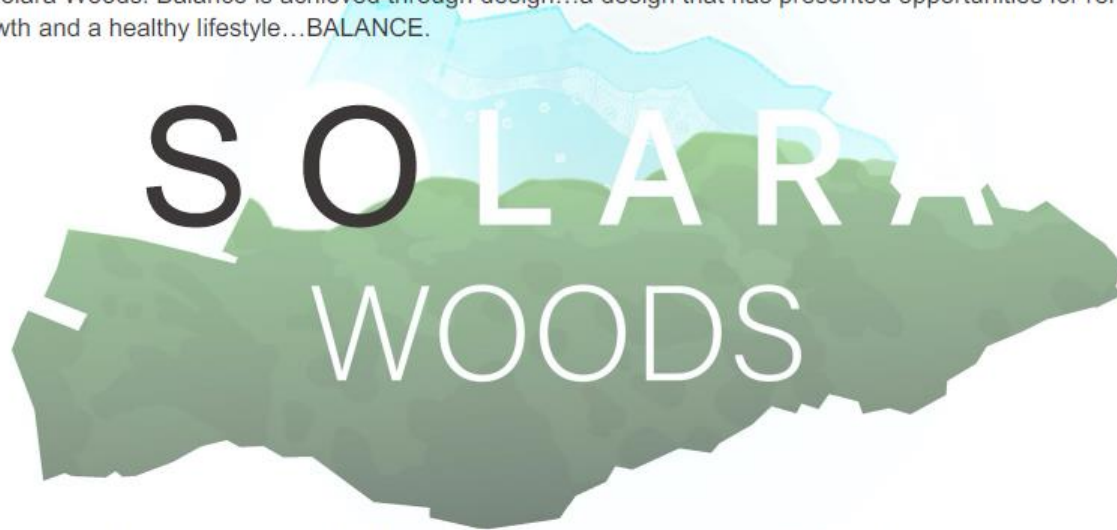
- Walls: 2 by 6 walls which increases insulation values, improves air-tightness, increases R-Value, improves moisture management, and reduces lumber use without reducing strength or structural integrity. Allows for additional to meet the 2021 IECC code.
- HVAC: Due to the ultra-energy efficient design the HVAC system is a basic variable speed system with a multistage compressor that has been downsized due to the high efficiency design. We always tell the HVAC duct installer we want a nickel finish on the mastic seal. Have your rater design the Manual J not the contractor for proper sizing. **Viridiant did the design for Rocketts Landing and the Manuel J for Walnut Farm**
- Ventilation: Make sure the fresh air intake is well insulated to and from the ERV to the mixing box before the coils (in line with air handler). This will help to control humidity in the home, as well as condensation in the line. Also, separate the exhaust intake near the returns will help the ERV operate more efficiently, independent from the return side of the air handler. Your rater will test the ERV to assure it is running properly
- Foundation: Always add a damper to the 4" line from the air handler to adjust the airflow into the crawl. The crawl space is now conditioned and dry for winter and summer. Increase foundation wall insulation from R10 to R15 to help meet ZERH requirements
- Mechanical Room: The importance of a mechanical room in the conditioned area for the air handler and ERV to be designed into all house plans. Otherwise think conditioned attic !!
- Land Developments: Allows you to review your site by compass and design your community around the ability to optimize your homes solar production. Just remember to have multiple roof designs without changing the footprint of the home. One Story verses Two Story design –do not block the solar array- Community Solar was the answer but a min bill approved by the SCC of \$55 made it impractical compared to net metering.

Blower Door Test



SECTION 1: LIFE | BALANCE

SOLARA WOORDS is about balance. Just as there exists balance in nature, there is life balance for residents at Solara Woods. Balance is achieved through design...a design that has presented opportunities for renewal, growth and a healthy lifestyle...BALANCE.



Each home is designed to exceed building efficiency energy standards and high performance metrics resulting in a zero energy ready home. Cost savings on energy consumption is one clear and monetary benefit of this type of design and construction. But Solara Woods' homes are designed beyond the numbers. They are designed and built using a comprehensive approach to ensure that the home supports a healthy and balanced lifestyle. This is accomplished through the following three things.

1. Alternate Water Source for septic and well to enhance the growth of surrounding trees and wetlands
2. Ability to go off grid - Solar rooftop with plug and play inverter for subpanel-battery and EV with bidirectional capability
3. Designed to reduce the operational carbon footprint for the homeowner

Welcome to Your Zero Energy Ready Home

THIS IS YOUR STORY.

The Story of your Zero Energy Ready Home and how it leverages advanced technology for a better homeowner experience

What is a Zero Energy Ready Home?

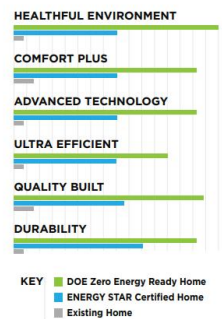
It is a high-performance home so energy efficient, all or most annual energy consumption can be offset with renewable energy. In other words, it is the home of the future

What is the DOE Zero Energy Ready Home Label?

It is a Symbol of excellence for energy savings, comfort, health, quality and durability met by a select group of leading builders meeting U.S. Department of energy Guidelines.



A Symbol of Excellence



KEY:
 ■ DOE Zero Energy Ready Home
 ■ ENERGY STAR Certified Home
 ■ Existing Home
 This label indicates relative performance of this DOE Zero Energy Ready Home to existing homes (built between 1990 and 2010) and ENERGY STAR Certified Homes. Actual performance may vary.

Enhanced Quality Assurance



Every Zero Energy Ready Home comes with added peace-of-mind that your largest investment of a lifetime was held to industry-leading quality standards.



Independent Verification

means a home energy rating professional evaluated your plans, inspected construction practices, completed detailed checklists, and performed diagnostic testing to ensure performance.



Certified Performance

means your home is fully certified to meet three prominent high-performance home programs:

- ☑ DOE Zero Energy Ready Home
- ☑ ENERGY STAR Certified Home
- ☑ EPA Indoor airPLUS



Make sure to keep your Home Energy Rating System (HERS) and Zero Energy Ready Home documentation in a safe place because they can help enhance your home's value when it's time to sell.



viridiant

non-profit organization committed to supporting sustainable building processes through education, consultation, and certification



family of programs serving as a blueprint for energy and resource-efficient structures including single family, multifamily, renovation, light commercial, and communities

Pearl Certification is the next step



Welcome!

Your home is your haven and your nest egg. Designed to protect both, Green Door is your virtual entryway to manage, maintain and improve your home's energy efficient performance. Get started.



V Villas at Rocketts Landing 2015- 2019



Simplicity of the Design

Walnut Farm – 2020 -2024



Virginia's First Zero Energy
Ready Community

Solara Woods- Opening 2025

Going Off Grid
Solar-Battery-Bidirectional EV
Battery

Contact Information

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Cell: 757-592-4855
Fax: 757-928-0233
Email: Jay@HEC-VA.COM

Resources:

www.buildings.energy.gov/zero/

- Take the Tour of Zero
- Become a Partner
- Review ZERH Specs
- Access Tech Training Webinars
- Use the Marketing Toolkit



non-profit organization committed to
supporting sustainable building processes
through education, consultation, and
certification



family of programs serving as a blueprint
for energy and resource-efficient
structures including single family,
multifamily, renovation, light commercial,
and communities

Viridiant Programs & Services

- ENERGY STAR
- HERS Ratings
- EarthCraft
- NGBS
- Enterprise
- LEED for Homes
- Zero Energy Ready Home
- Passive House
- Viridiant Net-Zero
- Mechanical Design
- HUD MAP: SEDI & SEP
- Energy Audits
- Utility Allowances
- Benchmarking
- Performance Testing
- Code Compliance (blower door, duct blaster)

2021 ENERGY SAVINGS

In 2021, Viridiant verified **5,123** homes



154
TOTAL HOMES IN 2021

+

4,969
TOTAL UNITS IN 2021

EQUATES TO ELIMINATION OF

6.7
GIGAWATT HOURS OF ENERGY

OR

2,806
TONS OF CARBON DIOXIDE

OR



3,101,425
POUNDS OF COAL
BURNED



106,350
INCANDESCENT
LAMPS
SWITCHED
TO LEDS



46,398
TREE
SEEDLINGS
GROWN FOR
10 YEARS



6,496
BARRELS
OF OIL
CONSUMED



610
PASSENGER
VEHICLES
DRIVEN FOR
ONE YEAR



510
HOMES'
ELECTRICITY
USE FOR
ONE YEAR

Families Served in 2021

SINGLE FAMILY

MULTIFAMILY



5,123

FAMILIES SERVED
IN 2021

35,626

FAMILIES SERVED
THROUGH 12/31/2021

What is EarthCraft?

EarthCraft homes & buildings are designed to suit the unique climate conditions of the Southeast. EarthCraft projects are energy, water, & resource efficient.

EarthCraft projects have a number of benefits, including:

- Lower utility costs
- Enhanced indoor air quality
- Greater durability
- Increased comfort
- Higher resale value



LIHTC: Optional (10 points, chose 1)

New Construction



Renovation



EarthCraft Applies to All Building Types



Stony Point Design/Build – Riverside Village



Shelter Alternatives – Net Zero Home



SCG – Residences at Government Center



NNRHA - Jefferson Brookville Rehab

EarthCraft Worksheet Categories

- Site Planning (SP)
- Construction Waste Management (CW)
- Resource Efficient Design (RE)
- Durability & Moisture Management (DU)
- Indoor Air Quality (IAQ)
- High Performance Building Envelope (BE)
- Energy Efficient Systems (ES)
- Water Efficiency (WE)
- Education & Operations (EO)
- Innovation (IN)



ECMF Process

Pre-Review

- Online project registration
- Viridiant Spec Sheet
- Drawings
- Review fee

Pre-Construction

- Online Scheduling
- Submit ECMF workbook, plans, HVAC load calcs
- Contract
- Design Review Meeting with PM

Construction

- Kick-Off Meeting with TA
- TA makes regular site visits to verify program items & test units
- Team coordinates documentation with TA

Project Closeout

- Work with TA to ensure units pass final diagnostic testing
- TA submits documentation to Viridiant
- PM & QAD review
- Certification
- VH notified*

Pre-Review

Pre-Construction

Construction

Project Closeout

Multifamily Certification Levels – V6.5

Levels	New Construction	Renovation
Certified	100 points HERS \leq 75	75 points Energy improvement \geq 20%
Gold	150 points HERS \leq ENERGY STAR Reference	100 points Energy improvement \geq 30%
Platinum	200 points HERS \leq ENERGY STAR Reference	125 points Energy improvement \geq 40%

ECMF Worksheet

EarthCraft Multifamily New Construction Worksheet

		Points	Planned	Status	Documentation
SITE PLANNING (SP)					
SP1: SITE SELECTION					
OPTIONAL AT ALL LEVELS					
SP 1.0 Type of site: 1. Brownfield site 2. Previously developed site 3. Infill site A. >50% B. >75%	Select all that apply:			Site Plan	
	3				
	1				
	Select one:				
	1				
2					
SP 1.1 Dwelling units per acre: 1 ≥ 15 dwelling units per acre 2 ≥ 20 dwelling units per acre 3 ≥ 25 dwelling units per acre	Select one:			Site Plan	
	1				
	2				
	3				
SP 2: SITE DESIGN					
OPTIONAL AT ALL LEVELS					
SP 2.0 Connectivity to existing: 1. Walking distance to bus line (≤1/4 mile) A. Existing B. Planned	Select One:			Site Plan, Location	
	2				
	1				
2. Walking distance to rail/rapid transit (≤1/2 mile) A. Existing B. Planned	Select One:				
	3				
	1				
3. Biking distance to bike path (≤1/2 mile) A. Existing B. Planned	Select One:				
	2				
	1				

Pre-Review

Pre-Construction

Construction

Project Closeout

Certification

ECMF Workbook

EarthCraft Multifamily New Construction Workbook

Project Name:	Pleasantville Estates		
Architect:	John Doe	Building Address:	1234 Pleasant Ave.
Superintendent:		City, State, Zip:	Richmond, VA 23220
Phone:	(804) 225-9843	Technical Advisor:	
E&S Control Contact:		TA Phone #:	
EC Project Manager:		TA Email:	
Permit Date:		Pre-Drywall Inspection Date:	
Design Review Date:		Final Inspection Date:	
ECMF Kick Off Date:			

EarthCraft Program Levels: Point Thresholds:

Certified	Gold	Platinum
100	150	200

***Choose Level Below

Project Points

	Project Score	
	Planned	Actual
SITE PLANNING (SP)	0	0
CONSTRUCTION WASTE MANAGEMENT (CW)	0	0
RESOURCE EFFICIENCY (RE)	0	0
DURABILITY AND MOISTURE MANAGEMENT (DU)	0	0
INDOOR AIR QUALITY (IAQ)	0	0
HIGH PERFORMANCE BUILDING ENVELOPE (BE)	0	0
ENERGY EFFICIENT SYSTEMS (ES)	0	0
WATER EFFICIENCY (WE)	0	0
EDUCATION AND OPERATIONS (EO)	0	0
INNOVATION (IN)	0	0
Totals	0	0

EarthCraft Multifamily Level: Certified

***CHOOSE DESIRED LEVEL FROM DROP DOWN**

EarthCraft Multifamily (ECMF) is a builder led certification program that utilizes third-party program verification. In consideration of EarthCraft Multifamily certification, each project will be evaluated based on full compliance with the following:

I. Submission of a field verified worksheet with 100 points (Certified), 150 points (Gold), or 200 points (Platinum) depending on

< > Cover Sheet Workbook Instructions Architect Checklist Worksheet Spec Sheet Final Inspection Diagnostics +

Pre-Review

Pre-Construction

Construction

Project Closeout

Certification

Specifications Sheet

Envelope		R-Value	Insulation Thickness (inches)	Material (Unfaced Fiberglass Batts, Cellulose, Open-cell foam, Closed-cell foam, etc.)	Cavity and/or continuous?	EarthCraft Gold Requirements*
Slab	Slab Edge Insulation					≥ R-10
	Under Slab Insulation					No Minimum
Framed Floor	Floor over Bsmt/Crawl/Garage					≥ R-19
	Adiabatic Ceilings/Floors					No Minimum
	Cantilevered Floors					≥ R-19
Foundation Wall	Framed Bsmt/crawl/garage Walls					≥ R-10 continuous or ≥ R-13 cavity (Crawlspace must be enclosed)
	Poured Bsmt or Crawl Walls Specify whether int. or ext.					≥ R-10 continuous
Above Grade Walls	Exterior Wall Insulation					≥ R-15 (Grade I install or Grade II with insulated sheathing ≥ R-3)
	Adiabatic Wall Insulation (between units)					≥ R-13
	Stairwell Wall Insulation (between unit & stairwell)					≥ R-13
	Attic Kneewalls					Insulation and attic-side air barrier ≥ R-19
Rim Joist	Exterior Rim & Band Insulation					≥ R-15 "Exterior band areas have interior air barrier"
	Adiabatic Rim & Band Insulation (between units)					≥ R-13
	Stairwell Rim & Band Insulation (between unit & stairwell)					≥ R-13
Roof	Flat Ceilings/Roof Deck					Vented Flat: ≥ R-38 Continuous Roof Deck: ≥ R-20
	Vaulted or Sloped Ceilings					Sloped: ≥ R-38

*If project is pursuing EarthCraft Gold or Platinum certification:

New Construction projects must achieve a confirmed HERS Index ≤ 75. Blower door tests must meet ≤ 5 ACH₅₀. Duct leakage to outside must be ≤ 5%. Total duct leakage must be ≤ 8%.

Renovation projects meet EarthCraft requirements if applicable areas are exposed or accessible with project scope. Projects must achieve 30% improvement over existing conditions. Blower door tests must meet ≤ 9 ACH₅₀. Duct leakage to outside must be ≤ 8%. Total duct leakage must be ≤ 12%.

Refer to the EarthCraft Multifamily Workbook V5 for all program requirements and available point items.



Pre-Review

Pre-Construction

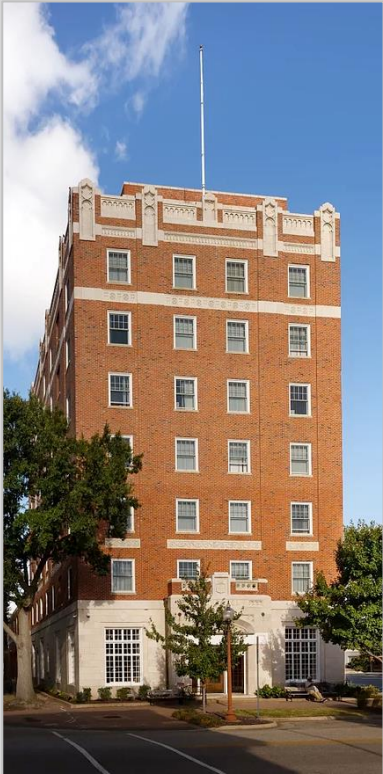
Construction

Project Closeout

Certification

WARWICK SRO

The Warwick is an historic, four-story brick façade structure originally constructed in 1883. Fire destroyed most of the original structure in 1960. The first renovation, an adaptive re-use, was performed in 1995. CHP transformed the remaining structure into permanent supportive housing units for formerly homeless individuals using the **EarthCraft Multifamily** program. The Warwick single-room occupancy (SRO) facility contains 88 units. Shared spaces include the lobby, offices for staff, group therapy space, two community resident lounges, computer lab, and laundry facilities.

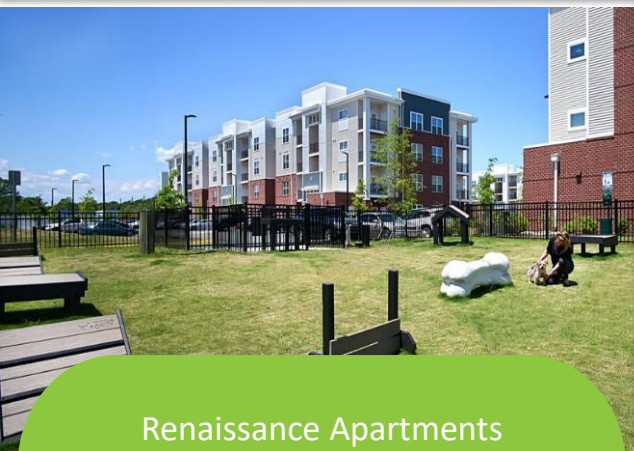


Warwick SRO Newport News, Virginia
Photo credit: Community Housing Partners

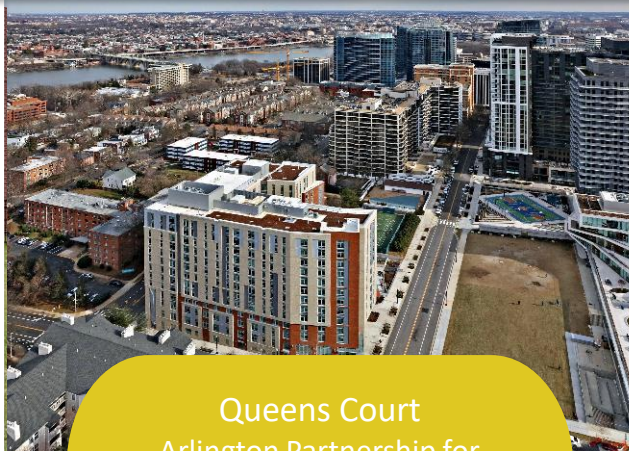
Financial Overview: \$9.06M



Project or Development – Multifamily New Construction



Renaissance Apartments
Franklin-Johnston Group
VA Beach



Queens Court
Arlington Partnership for
Affordable Housing
Arlington



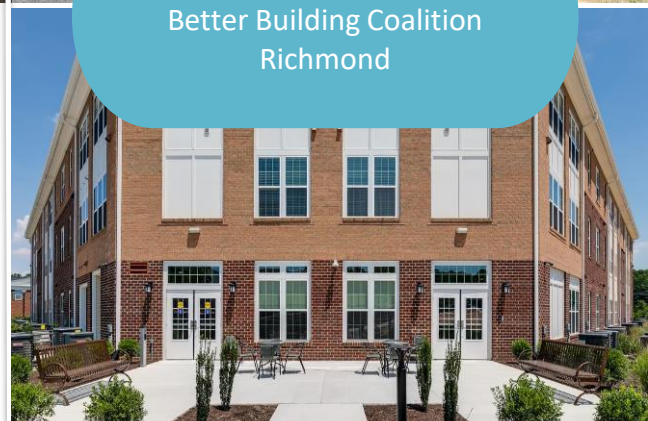
Market Square IV
Better Building Coalition
Richmond



96 units, EarthCraft Certified, HERS 63



210 units, EarthCraft Gold, HERS 60



60 units, EarthCraft Gold, HERS 62

Arlington Partnership for Affordable Housing

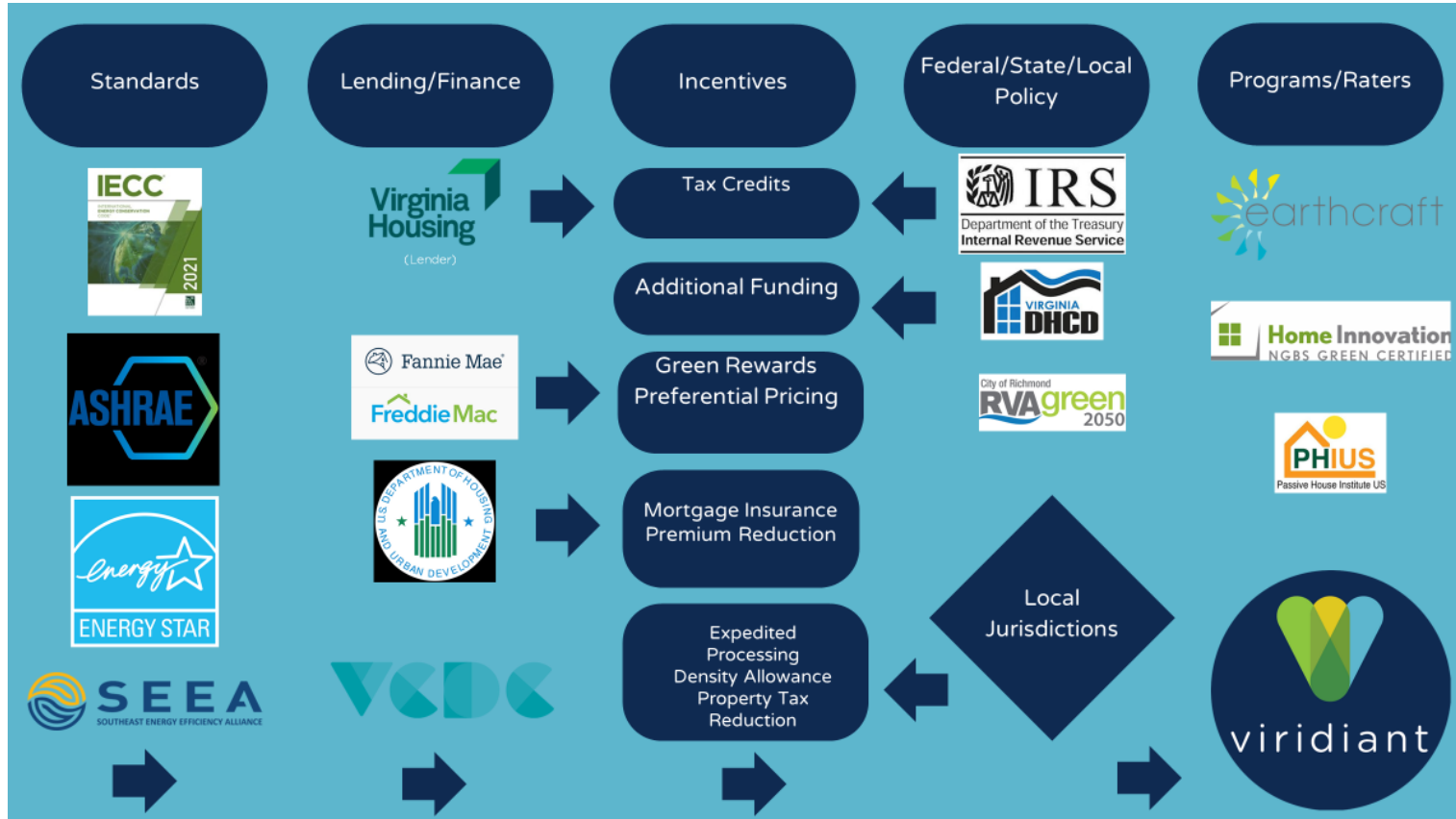


HERS: 60

TA: Chris Conway

EarthCraft Gold

Green Financing Ecosystem



Incentives

Inflation Reduction Act of 2022 - 45L

Tax Credit for Meeting Energy Star

May be sold or transferred

Credited to year individual homes/units are sold/leased

Across multiple years or back dated up to three years*

	Energy Star	Energy Star + prevailing wages	Zero Energy Ready	Zero Energy Ready + prevailing wages
Multifamily	\$500	\$2,500	\$1,000	\$5,000
Single Family	\$2,500	\$2,500	\$5,000	\$5,000

*2022 and prior use different standard, 50% reduction energy usage in comparable dwelling



we make *home* value visible™

Transforming the Market for High-Performing Homes

Insights from the field:

The Good
The Bad
The Ugly

VAECC
Oct, 2023





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About Pearl Certification.

Pearl Certification makes high-performance home value visible to benefit homeowners and the contractors, builders, raters, real estate professionals, and public entities who serve them.



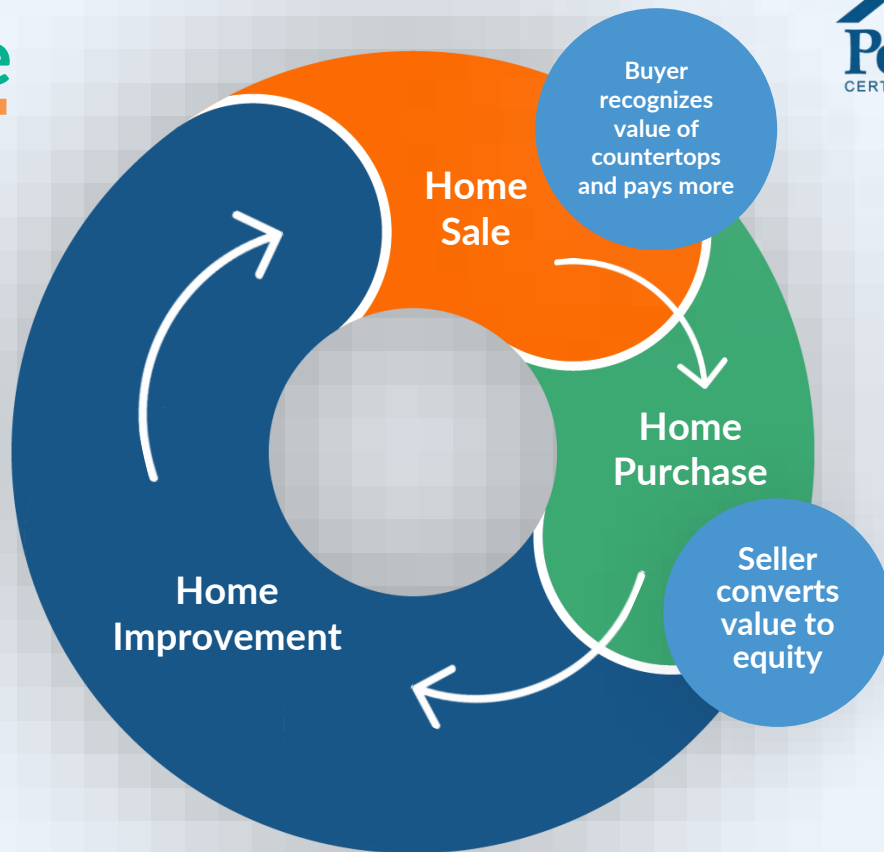
We make home value visible™



The Home Value Cycle



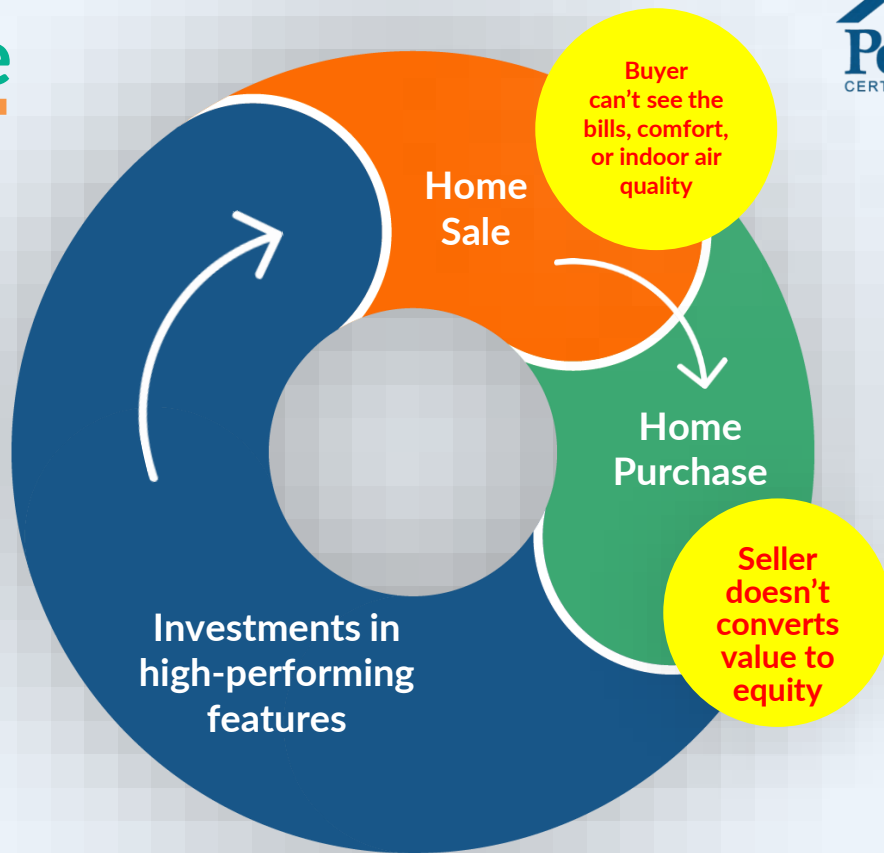
- ✓ Home **BUYER** “sees” high-performing features in Pearl’s Certification Report and marketing materials.
- ✓ Home **SELLER** captures the value of the investment in the sale price.
- ✓ **DEMAND** for High-Performing Homes drives more improvements, completing the cycle.



The Home Value Cycle



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Making Value Visible Through Data

Servicing All Sectors of the Industry



Pearl Certification exists in a complex ecosystem with existing standards, certifications, labels, codes, and regulations that impact the development, construction, maintenance, valuation, marketing, financing, and insuring of high-performing homes.

- Built from the ground up to apply to both new and existing homes
- A “living” certification to guide homeowners on their journey based on budget, needs, and opportunities
- Complements - not competes - with existing green programs and scores.

Market Dysfunction: Does Value Persist?

When I bought a house in 2016, the agent who listed it didn't know that it was a passive house. Neither did the seller, who had never lived in the home; they used it as a vacation rental before selling it to us. That's why the price was reduced twice before I snapped it up for \$55,000 less than the original list price.





If a Green Home is built and nobody remembers,
is it still green?

- Pearl reviewed 1,316 homes that were NGBS certified from 2009-2021
- Searched the home's history to see if they had been resold. If resold, evaluate the "listing quality" where 0 = completely ignored and "4" = best in class.
 - 226 homes (17%) resold
 - 74% had a listing quality of "0" – the lowest on the scale. No mention of the home's EE features
 - 26% had a listing quality of "1" or "2"
 - Of these 226 homes, Pearl's estimated that there is \$3 million in lost / ignored equity because there weren't properly marketed.

Example of a Listing Quality “1”

- Built 2015. Sold in 2019.
- NGBS Gold
- HERS of 48
- No visual representation of the home’s green features
- No mention that the home may be more comfortable, having better indoor air quality, or lower utility bills
- And remember - this is a “1” - 76% of homes didn’t even do this much...



Home value Owner tools **Home details** Neighborhood

Overview

BETTER THAN NEW CONSTRUCTION! Built by award winning Urban NW. This beautiful home has a grand craftsman entry, open floor plan featuring quartz counters, built-ins, high ceilings, and high end finishes throughout. Main floor bdrm & full bathroom, 4 additional HUGE bedrooms upstairs and bonus room! Master bdrm features tile shower, huge tub, and separate vanities. 3 Car garage! Over-sized covered patio with custom stone fireplace.

No mention of any green features or associated benefits.

Facts and features

Type: Single Family Residence

Year built: 2015

Heating: Heat Pump, ENERGY STAR Qualified Equipment

Cooling: Heat Pump

Parking: 3 Attached spaces

HOA: \$76 quarterly

Lot: 7,405 sqft

At least a small mention of one feature - an ENERGY STAR heat pump. It hardly represents all the great work that the builder did or the benefits the new home buyer will experience. That's why this listing quality is a “1” and not “0”.

Interior details

Bedrooms and bathrooms

Bedrooms: 5
Bathrooms: 3
Full bathrooms: 3
Main level bathrooms: 1

Heating

Heating features: Heat Pump, ENERGY STAR Qualified Equipment

Cooling

Cooling features: Heat Pump

Market Dysfunction: Agent Guidance?

“You need to remove the solar panels on your home. They will lower your home’s value.”

Market Dysfunction: Appraiser Guidance?

“The property situated at *Street address redacted*, Ny 11950 would not benefit from having “green work” done on the home...

Many homeowners do not buy the solar panels, they lease them. This means that since they are not owned no value can be given to this feature.

Other green factors that can't be valued on the report such as spray foam insulation, LED lighting, low emittance windows, on-demand heating systems, and geothermal heating systemswould not increase the value of the home.”



"For quality monitoring to ensure that each home energy efficiency retrofit for which a rebate is provided is documented in a certificate that — (A) is provided by the contractor and certified by a third party to the homeowner; and (B) *details the work performed, the equipment and materials installed, and the projected energy savings or energy generation* **to support accurate valuation of the retrofit**" (U.S. Congress, 2022).

- measure level data can be used for cost, comparable sales, and energy impact / income
- energy savings and energy generation will be projected, based on energy models

Consumer Awareness, Consideration, Purchase



HOME CERTIFICATION 101

FEATURING:



Jul 13 2023

Home Certification 101: What Is the WaterSense Label?

[Read more](#) →

HOME CERTIFICATION 101

FEATURING:



Jun 29 2023

Home Certification 101: What Is the HERS Index?

HOME CERTIFICATION 101

FEATURING:



Jun 19 2023

Home Certification 101: Understanding ENERGY STAR® Certification

HOME CERTIFICATION 101

FEATURING:



Jun 15 2023

Home Certification 101: What's a Home Energy Score?



Mar 21 2023

The Green Door Guide to Home Electrification Rebates and Tax Credits

REBATES	TAX CREDITS
HIGH EFFICIENCY ELECTRIFIED HOMES Single Family and Multifamily rebates available for homes at or better than 100,000 kWh (Market Scored). MAX REBATE \$14,000	25D Clean Energy Tax Credit 2022 2023 + 30% 2024 + 20% 2025 + 10%
HOUSES PROGRAM Homeowner Managing Energy Savings (The new electric rebates program is ongoing) Projects that achieve a minimum of 20% energy savings will qualify for rebates, with larger rebates available for energy savings over 20%.	25C Energy Efficient Home Improvement Tax Credit Up to 30% of qualifying energy efficiency projects cost (Up to \$200 million per year) \$1,200 actually
Available to All Homeowners	45L Renewable and Improved Building Tax Credit 4% tax for the next 10 years (2022) Incentives up to \$5,000 per dwelling unit (2022) for 45L(R)(2)(D) certified homes &

Sep 19 2022

The Homeowner's Guide to the Inflation Reduction Act

[Read more](#) →



Jul 11 2023

How to Create an All-Electric Home

[Read more](#) →

GREEN DOOR

POWERED BY PEARL

PRESENTS

The Homeowner's Definitive Guide to Heat Pumps



Aug 31 2023

Green Door Presents: The Homeowners' Definitive Guide to Heat Pumps

[Read more](#) →



GREEN DOOR

Pearl's consumer app to manage, maintain and improve the home's performance:

- ✓ Mobile and desktop single code base
- ✓ Integrations with **Ecorebates**, **Climate Check**, and **Radiant Labs** (energy modeling)
- ✓ Option to co-brand for your homeowners



Rebate available



The Energy-Efficient Home Plan

Take the next step in fulfilling your home's potential for energy efficiency, comfort, health, and value with customized high-impact recommendations.

Progress

0%

Agent Engagement



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The market rewards high performers

Research data proves it: **certified high-performing, energy-efficient homes sell for more, and they sell faster.**

An independent appraiser study showed **Pearl Certified homes sell for 5% more when marketed properly.**

As more and more homes are built with high-performing features, and as more cities adopt stricter energy codes, this is where the market is headed. We'll get you there first.

Pearl Certification teaches real estate agents everything they need to know about energy efficiency, sustainability, and high-performing homes.



Appraiser Engagement



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[REAL ESTATE PROS](#)

Simply. Certified.

Reducing complexity
for homes with solar
and energy-efficient
features.

Appraisers face increased compliance risks when evaluating solar and energy-efficient features. But thanks for Pearl Certification, appraisers can more accurately and efficiently assess these special property types.



- Visit <https://pearlcertification.com/real-estate-pros/appraiser-resources>

Investment Grade Documentation - to help ensure that the home investments turn into added equity

EFFICIENCY FEATURES (Water, Energy, and Environmental. See types defined in glossary).			
The following items are considered within the appraisal analysis of the subject property:			
Insulation	<input type="checkbox"/> Fiberglass Blow-In <input type="checkbox"/> Foam Insulation <input type="checkbox"/> Cellulose <input type="checkbox"/> Fiberglass Batt Insulation <input type="checkbox"/> R-Value Wall R-23 Ceiling R-46 Other R-23 Conditioned basement		
Building Envelope	Envelope Tightness 1.5 Unit <input type="checkbox"/> CMF25 <input type="checkbox"/> CMF50 <input type="checkbox"/> ACH50 <input type="checkbox"/> ACH natural Instructions: Insulate the listing as a number that could be 0.5 to 14.0 or higher. The lower the number, the more air tight the envelope. Building Codes for area show maximum Envelope Tightness allowed based on the climate zone. All areas are have adopted a building code. http://nbaac.energy.org/		
Windows	<input type="checkbox"/> ENERGY STAR® <input type="checkbox"/> Low E <input type="checkbox"/> High Impact <input type="checkbox"/> Storm <input type="checkbox"/> Triple Pane <input type="checkbox"/> Tinted <input type="checkbox"/> Solar Shades	<input type="checkbox"/> Double Pane <input type="checkbox"/> Other (Describe): % of Lighting LED: 100	
Day Lighting	<input type="checkbox"/> of Skylights: <input type="checkbox"/> of Solar Tubes: <input type="checkbox"/> Other (Describe):		
ENERGY STAR® Appliances	ENERGY STAR®: <input type="checkbox"/> Dishwasher <input type="checkbox"/> Refrigerator <input type="checkbox"/> Washer/Dryer Other: Both Washer and Dryer are ENERGY STAR® <input type="checkbox"/> Stove <input type="checkbox"/> Range <input type="checkbox"/> Electric <input type="checkbox"/> Natural Gas <input type="checkbox"/> Other (Describe): Note: ENERGY STAR® appliances do not result in an ENERGY STAR® Home.		
Water Heater	<input type="checkbox"/> ENERGY STAR® <input type="checkbox"/> High Efficiency HVAC SEER	Size: >55 gallons <input type="checkbox"/> Tankless <input type="checkbox"/> Solar (see page) <input type="checkbox"/> Heat Pump <input type="checkbox"/> Coil	
HVAC & Related Equipment Describe in comments area.	<input type="checkbox"/> High Efficiency HVAC Efficiency Rating % AFUE: 95 <input type="checkbox"/> Manual Fuel Utilization Efficiency <input type="checkbox"/> Heat Pump Heating Rating: COP: 10.5 HSPF: 10.5 SEER: 15 EER:	<input type="checkbox"/> Thermostat/Controllers? <input type="checkbox"/> Auxiliary Heat Source? <input type="checkbox"/> Radiant Floor Heating? <input type="checkbox"/> Geothermal? <input type="checkbox"/> Electric Vehicle Ready? (car charger)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
Indoor Environmental Quality	<input type="checkbox"/> Energy (EER) for Heat Recovery Ventilation (HRV) <input type="checkbox"/> Other Measured Whole-House Ventilation Device (See glossary) <input type="checkbox"/> Humidity Monitoring Device installed <input type="checkbox"/> Recirculated Water System (Desired) <input type="checkbox"/> Greywater reuse system <input type="checkbox"/> Water Saving Fixtures		
Water Efficiency	<input type="checkbox"/> Low 100% Low Control <input type="checkbox"/> Radon System <input type="checkbox"/> Active <input type="checkbox"/> Passive <input type="checkbox"/> Rain Barrels Used in Irrigation <input type="checkbox"/> Cistern size: gallons <input type="checkbox"/> Location of system:		
Utility Costs	Annual Utility Cost: \$/year, based on (to full year) includes (check all that apply) <input type="checkbox"/> Electric <input type="checkbox"/> Heating <input type="checkbox"/> Water <input type="checkbox"/> Other:		
Comments	# of Occupants:		
<p>The following property has a number of high-performing features as detailed in the Pearl Certification report. According to a 2017 study by Remodeling magazine, air sealing and attic insulation has the highest value-to-cost ratio of any home improvement and was the only improvement to have a ratio higher than 1.0 (i.e., the added home value was more than the cost to perform the work).</p> <p>With the cooperation and approval of the Appraisal Institute, Pearl Certification has an all REPORTS® made available. The Appraisal Institute makes no representations, warranties or guarantees as to, and assumes no responsibility for, the data, analysis or work product provided by the individual appraiser(s) or any other individual in the specific contexts of the AI Reports®</p>			
Completed by: W. Casey Murphy Title: Vice-President of Quality Systems Date: 01/12/2023			
<p>The objective of this Addendum is to standardize the communication of the high performing features of residential properties. Identifying these features not found on the appraisal form provides a basis for comparable selection and analysis of the features. Appraisers, contractors, homeowners, and third party verifiers are encouraged to complete this Addendum and present to appraisers, agents, lenders, and homeowners. Complete the pages that apply to the property appraised and provide to appraiser prior to the completion of an appraisal. Provide the Addendum to the lender at the time of loan appraisal to assist them in understanding the property to an appraiser with specialized knowledge of this property type will be engaged to provide an appraisal to meet secondary mortgage market guidelines.</p>			

The High-Performing Home Value Cycle

The market rewards high performers

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As more and more homes are built with high-performing features, and as more cities adopt stricter energy codes, this is where the market is headed. We'll get you there first.

High-Performing Home

1775 Gersum Rd, Naperville, IL 60563-4225

HOME ASSET DETAILS

Heating and Cooling

Heat Pump

Type	Mini-split Heat Pump
HSPF	8.9
SEER	18
Outdoor Unit Manufacturer	Great Heat Pump Mfg
Outdoor Unit Model Number	2500P18ADL
Indoor Unit Manufacturer	Great Heat Pump Mfg
Indoor Unit Model Number	CCC2500P18AAX
Compressor	Variable-speed

ENERGY STAR

ENERGY STAR Home Upgrade

U.S. DEPARTMENT OF ENERGY

Home Energy Score™ Partner

SEPTEMBER 2022

THE HOMEOWNER'S GUIDE TO THE INFLATION REDUCTION ACT

Read more

APRIL 2023

How to Create an All-Electric Home

Read more

EARTH CRAFT

ZERO ENERGY READY HOME

U.S. DEPARTMENT OF ENERGY

RESNET

RESIDENTIAL ENERGY SERVICES NETWORK



Zillow

3 bd · 2 ba · 2,064 sqft

83 Cherry St, Taunton, MA 02780

Sale: \$165,000 Sold on 04/12/23 Zestimate®: \$163,700

Est. sell payment: \$1,401/mo Refinance your loan

Home value: Owner tools: Home details: Neighborhood details

Overview

Welcome to Pearl Certified in Taunton! Not only is this truly turn-key home move-in ready, but it is certified for energy efficiency & includes a whole house generator! Prepare for energy savings as energy prices soar. Pull into the oversized detached garage with work area and enter the kitchen complete with granite counters and soft close cabinetry. Hardwood floors throughout most of the main floor. Second bedroom currently utilized as an office where you will find the security system monitor. Deck directly off the main floor complete with awning for sun protection. The ground floor boasts a 2nd full bathroom with laundry, wood plank laminate on ground floor in all but the workshop. Don't

Appraisal Institute®

Pearl Home Certification Report

Home Registry

Appraisal Addendum

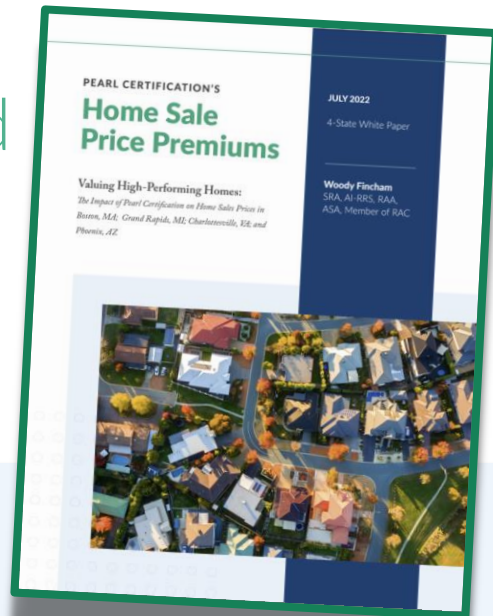
Online Resource Center

Pearl Helps Homeowners Increase Their Home's Equity



Pearl Certified
homes sell on
average for
5% more

Verified by
independent appraiser
studies in four markets



<https://pearlcertification.com/real-estate-pros/appraisal-study-4state>

<https://pearlcertification.com/files/reports/Valuation-Study-of-Pearl-Certified-Homes-final.pdf>

Green Building Certifications

Audience Q&A

Stephen Daring, Viridiant

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Casey Murphy, Pearl Certification

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Bryna Dunn, Moseley Architects (moderator)

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VIRGINIA ENERGY EFFICIENCY COUNCIL

2023 ENERGY EFFICIENCY FORUM

October 4th & 5th

