

PEARL CERTIFICATION'S

Home Sale Price Premiums

Valuing High-Performing Homes:

The Impact of Pearl Certification on Home Sales

Prices in Charlottesville, VA

FEBRUARY 2022

Charlottesville Market
White Paper

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DISCLAIMER

This document was prepared by real estate appraisers and supported by Pearl Certification. This work does not form or imply value of a specific property or market area. Its subject is how the market reacts to sales prices of homes certified by Pearl, compared to sales prices of homes without Pearl Certification.

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Acknowledgements

Ashley Lloyd, who works with Fincham & Associates, Inc. was an integral part of this project as a data analyst. Woody Fincham, Jr. was also an important team member, handling final data processing, review, and adding expertise as a certified appraiser. Casey Murphy, a staff member at Pearl, was helpful with technical questions regarding the Certification process and helping find documents. Last but not least is recognition to Joseph Gentile at Pearl for all his help.

PROJECT TEAM PEER REVIEWERS

A special thank you to the following appraisers that worked as peer reviews for this white paper who specialize in high-performance residential valuation.

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Executive Summary

This white paper is in many ways a continuation of the white paper done in 2017 by Sandra Adomatis, SRA, LEED GA¹. That white paper showed a 5% premium on advertised Pearl Certified homes in several areas within Virginia and Maryland. This white paper only looks at the Charlottesville market area.

This white paper started out with a large dataset of 71 Pearl Certified homes that have resold. All sales occurred within the Charlottesville metropolitan statistical area (MSA). The sales occurred from 2019 to 2021. Of the original dataset, the data was culled to 26 points. A good portion of the sales originally presented were removed after research was conducted. As explained in more detail later in this report, if any sales were not marketed as Pearl Certified homes, they were excluded, as there was no support for any premium in these situations. Additionally, if the sale had any significant complexities that would make quantifying the contributory value of certification questionable, they were excluded. Examples of questionable circumstances include homes with accessory dwelling units (ADUs), any going concern activity (agricultural business, horse boarding, etc., vineyards or fruit orchards), high-value homes that had too many features to extract single items from, and other situations.

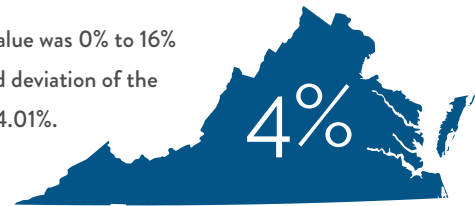
THE FOLLOWING WAS DISCOVERED:

5.15%

Review of the 26 sales indicates that buyers in the market paid a mean premium of 5.15% considering all data.

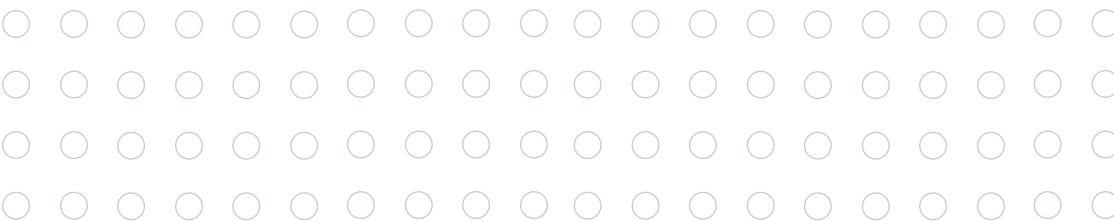
CHARLOTTESVILLE

The range of value was 0% to 16% with a standard deviation of the sales showing 4.01%.



The dataset was further truncated to 18 by eliminating the four highest and four lowest indications to investigate whether the results were being skewed by outliers. The median indication remained 5.5% with the mean lowering slightly to 4.9%.

THE RANGE OF VALUE
WAS 1% TO 8.5%.

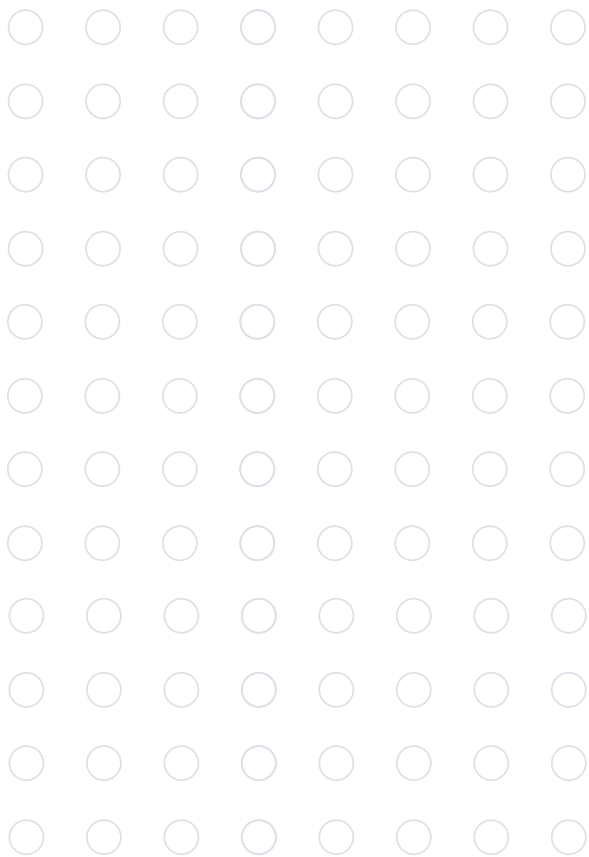


Appraisers Analysis of Pearl National Home. Sandra Adomatis, SRA LEED GA for Pearl.
<http://pearlcertification.com/files/reports/Valuation-Study-of-Pearl-Certified-Homes-final.pdf>. 2021

Introduction

The purpose of this white paper is to provide a resource for stakeholders in the high-performance home market who are interested in the impact of high-performing (“green”) home certifications on home sales prices. Pearl defines “high-performing features” as features that contribute to the health, safety, comfort, energy efficiency, and water efficiency of a home, as well as features that generate and store electricity – in other words, non-cosmetic features related to the home’s core function. In the real estate market “green” is still a more common term and is used to indicate a wide range of home features, not all of which are associated with a home’s performance. For the purposes of this paper, “green” real estate refers to homes with high-performing features.

The concepts of “green” and “high-performing” homes are still relatively new to the real estate market nationally. As Charlottesville is one of the leading-edge markets in this space, it is an important market to monitor. There are other markets across the country that are also in this early adoption evolution, and this white paper should be of particular interest to the consumers, builders, real estate brokers, and appraisers in these respective markets.



Pearl Certification is one of many organizations across the United States that offers third-party designations for high-performing homes. Most of these organizations are regional. Pearl is growing and appears to be heading into a true national proliferation. Some of the largest organizations presently are Leadership in Energy and Environmental Design (LEED), Energy Star, and Home Innovation Research Labs’ National Green Building Standard (NGBS). LEED is more widely recognized within the commercial sector, as opposed to the residential sector.

The diverse ways each third-party certifying organization approaches the metrics of a home can make it difficult to understand exactly what each organization’s system looks at and reports. It is important that the readers and users of such reports understand each respective system and what it means. When valuing real estate, appraisers must have a solid understanding of what systems are used in the region and to be very familiar with them.

Introduction

To quote the aforementioned white paper by Sandra Adomatis, SRA, LEED GA:

“Markets vary in their acceptance of (or even the existence of) high-performance homes and sales price premiums; therefore, any given study should not be applied to all market areas. Just like stocks, real estate values vary with economic conditions, changes in buyer desires, and the market’s knowledge of a given feature or certification. Prior studies had mixed results when comparing high-performance sales marketing times to non-high-performance sales. In some markets the inventory of homes is limited; therefore, houses sell quickly due to the limited supply with no differences found in those markets between high-performance houses and similar code-built houses.”



Part of the impetus of this white paper is to provide practicing real estate appraisers with a guide into the research and development of understanding how high-performance homes are performing in the Charlottesville market. While each market can and will perform differently, resulting in different indications of value, the techniques and application discussed herein are applicable to any market. The actual premium or contributory value of a high-performance certification will vary market to market, and in some markets, it would be reasonable to see no value yet due to a lack of market participants adopting high-performance homes.

The primary research questions of this white paper in 2021 are the same as the 2017 white paper:

- Does the market pay a sales premium for homes with a Pearl Certification?
- Do the homes with a Certification experience less absorption time on the market?
- Are Certified homes being marketed to maximize benefits of the brand?
- How can marketing of homes with the Certification be improved to influence the highest sales price and appraised values?

Stakeholders

Who are the intended stakeholders for this paper? Whenever any type of white paper is undertaken, it must answer questions that are relevant to a problem that needs to be solved. The initial questions that drive this paper are listed above. The answers to those questions are directed at an intended audience. The audience identified for this white paper is broken into five areas.

The initial audience is internal to the organization sponsoring the paper. In this case, Pearl Certification is that entity. Pearl was motivated to understand the impact that their Certifications were having on home sales and home values. It should be of note that the undertaking of this white paper was not contingent on any predetermined conclusions. The author required complete autonomy to author the paper without directions regarding the composition of the body of research or the publishing of a report of the analysis of the data. While compensation was made to the research team, it was not contingent on predetermined results or based on any desires from the sponsoring entity.

While this paper is not an appraisal, it is still important for the readers to understand that the standards that govern appraisal practice were adhered to protect the integrity of the white paper, the author and the users, readers of the paper, and the public trust. The Uniform Standards of Professional Appraisal Practice (USPAP) requires an appraiser to adhere to the standards therein when an individual is acting as an appraiser. In that spirit, this paper was produced in a manner that conforms to the USPAP 2020-2021 edition².

THEN THERE ARE FOUR EXTERNAL AUDIENCES FOR THIS PAPER.

1. Real estate appraisers.
2. Real estate brokers and agents.
3. Contractors and Builders of the sustainable housing profession.
4. Home buyers and sellers.

In each audience sector, competency regarding what the Pearl Certification is and what it means to each group is integral to market recognition.

² 2020-2021 Uniform Standards of Professional Practice. The Appraisal foundation 2020

Readers

Primarily, this white paper is written as an example to other residential real estate appraisers. As Pearl publishes additional studies in other markets where they are certifying homes, it is hoped that a well-supported and honest market reaction study will be available in any major market that Pearl practices. The proliferation of these kinds of homes nationally is only increasing. In many social media threads, in continuing education classrooms, and at appraisal organization meetings, it is common for appraisers to discuss the lack of support available for high-performance homes. In many cases, these conversations are based on anecdotal reasoning and not actual research.

As the author of this paper is a certified residential appraiser, it is important to clarify that the results of any research in this paper are not to be interpreted as an appraisal or attempt to offer empirical data for other appraisers to use as absolute adjustment indications in other markets. Although the data was researched, vetted, analyzed, and ultimately reported in a manner similar to how an appraiser should develop support for an adjustment, the results of this report are specific to a local market as of the date of the white paper. It is likely that the results of the white paper seen in this market will differ from other markets.

SECOND, real estate brokers and agents are identified as intended readers of the report. The previous white paper that Pearl underwrote and published reported some important conclusions. The biggest was that when a home is Pearl Certified, and marketed as such, it typically results in an increase of sales price. This report supports that conclusion. This will be detailed further within the report itself. The biggest takeaway from this white paper for this group is that a working competency of what makes a home a high-performance home is becoming more important. This group is one of the most important to understand the Certification, as they are marketing the homes. Being competent will result in the home being marketed effectively to maximize any premium that may exist in each market.

THIRD, contractors and other professionals within housing professions should pay attention to papers such as this one. The additional theory and science incorporated into developing and building new homes and retrofitting existing homes adds some cost to the process. This additional cost is for naught if it cannot be recouped in the purchase price of the home. Studies like this are exactly what is needed to support market premiums when they actually exist.

FINALLY, the consumers that buy and sell real estate are an important part of the audience intended for this paper. Consumers looking for energy efficiency in their homes are only increasing. The research that was performed in the Charlottesville market for this paper indicates that consumers are often consciously searching for homes that are high-performing. This is also anecdotally supported by several conversations the research lead of this paper had with a few different agents. The agents have shared stories of buyers actively seeking out these features and referencing Pearl, HERs, and high-performing homes by name.

POPULATION
234K

Charlottesville/Albemarle Market Area

It is important to understand the consumer base that makes up a market. The following section provides a brief overview of who makes up the consumer base in the region. Gender and race/ethnicity are not considered as any basis of analysis in this report.

The Charlottesville MSA is a small but diverse region in the Commonwealth of Virginia. The anchor of the region is the University of Virginia and the University medical system. The Virginia Labor Commission reports that the population for the region is 234,712³.

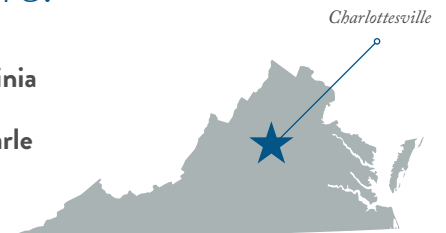
64%

64% of the workforce
has at least some college
education



The five largest employers in the region are:

- University of Virginia
- County of Albemarle
- Walmart
- Sentara Health Care
- UVA Health Services Foundation



The largest employment by industry is made up of government employees, with most being state employees. This is followed by health care and retail trades. The education level for the region shows that 64% of the workforce has at least some college education, with 37% having a bachelor's degree or higher.

V3- irginia Community Profile Thomas Jefferson PDC. https://virginiaworks.com/_docs/Local-Area-Profiles/5109000310.pdf. October 2021



Real Estate Market Overview

The Charlottesville MSA has seen a double-digit increase in sales prices year to year. The Charlottesville Area Association of Realtors® (CAAR) Multiple Listing Service (MLS) reports that the median sales price increased from June 2020 to June 2021 to be 17.6%⁴. Inventory was reported to have dropped 57.4%. This is not an uncommon circumstance nationally, and Charlottesville is performing in a similar fashion to the rest of the country. The lack of available inventory contributed to increasing prices.

Regarding property premiums like a high-performance home certification, it can be difficult to ascertain whether a premium exists in many cases. Consumers are often compelled to pay top dollar due to buyer competition from the inventory shortage. Properties that would normally be seen as inferior will often sell for a higher amount than when the market is more stable. This was considered when selecting properties that would be used in the final analysis.

At the time of preparing this report (Early October 2021) there were 315 active listings in the Charlottesville market. Of those active listings, 120 were designated as having high-performing features. Of the 120 designated properties, a word search in public remarks returned 18 properties. In agent remarks (not available to the public), there was only one listing with the word “pearl” in it.

⁴- CAAR Charlottesville Area Market Indicators Report. [https://www.caar.com/docs/default-source/market-report/caar-market-indicators-report-\(june-2021\).pdf](https://www.caar.com/docs/default-source/market-report/caar-market-indicators-report-(june-2021).pdf), June 2021

About Pearl Certification

Pearl started a pilot program in 2016 and evolved into a full-scale certification program in 2017. As of February 2022, they have certified over 69,000 homes in 40 states. Per Robin LeBaron, the President of Pearl, the count increases every week.

Part of Pearl’s mission is to educate real estate agents and real estate appraisers to understand exactly what a Pearl Certification is and what it does. This is accomplished by participating in real estate association events, partnering with education providers to have classes, and through media campaigns to increase stakeholder awareness.

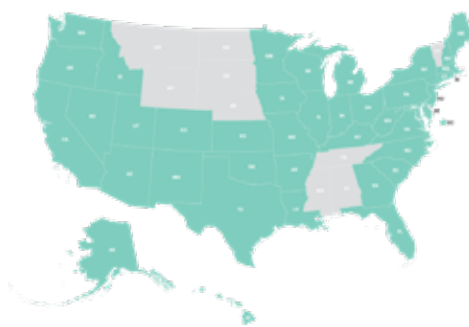
Pearl’s Certification system assigns points for individual high-performing assets in the home. Assets that receive points include (1) the building shell, (2) heating and cooling systems, (3) features such as appliances that contribute to the home’s energy “baseload,” and (4) home management technology. Pearl also certifies, but does not assign point values, to renewable energy and energy storage.

The following table shows each respective level. Each of the four categories that are assessed are assigned a point value; the sum of the categories dictates which certification level is appropriate.

69K HOMES

LOCATED ACROSS

40 STATES



LEVELS	POINT THRESHOLDS	DESCRIPTION
PEARL PLATINUM	975	A Pearl Platinum home’s energy-efficient systems are far better than those found in an average home. Pearl Platinum homes will typically have high-performing features in all four categories.
PEARL GOLD	825	A Pearl Gold home has both a building shell and a heating and cooling system that is much higher quality than those found in an average home.
PEARL SILVER	700	A Pearl Silver home typically has a building shell or a heating and cooling system that is much higher quality than those found in an average home.
PEARL ASSET	0	A home that doesn’t reach Pearl Silver can qualify for Pearl Asset Certification. This provides useful information about one or more high-performing features in the home and enabled the owner to communicate the value of these features to future buyers.

White Paper Methodology

Paired-data analysis is the selected methodology used for the analysis of the contributory value of the Pearl Certification. This technique is a quantitative technique used to identify and measure adjustments to the sale prices or rents of comparable properties. To apply this technique, sales or rental data on identical properties, or adjusted data, is compared to isolate and estimate a single characteristics effect on value or rent⁵.

The ideal case study for this methodology is to find two of the same models of homes that have only one difference. This is considered “simple paired sales analysis.” Let us take a quick look at a sample pairing.

Table 2: Paired Data Example

	SALE 1	SALE 2
PRICE	\$310,000	\$300,000
GARAGE BAYS	2	1
DIFFERENCE	\$10,000	

In this case, the only difference between the two homes is the garage size. Sale-1 has a 2-bay garage and Sale-2 has a 1-bay garage. With everything else being equal, the difference in sales price is \$10,000. This type of analysis can be difficult as there are few situations where this is possible outside of new construction developments. In most situations, the appraiser is required to analyze differences in multiple characteristics. This is often referred to as complex paired data analysis.

When dealing with multiple differences, it is important that the appraiser has developed other adjustment techniques that are reliable indications of differences. In this white paper, one of the differences that presented itself over and over was the difference in

market conditions, or date of sale. In an appreciating market (like most of the country has been in for the past few years), the difference of even three months often requires an adjustment to account for the market appreciation. For this situation, the analysis used trend analysis to account for the date differences. With the difference in gross living area, depreciated cost was used and tempered with sensitivity analysis.

Why is the adjustment \$10,000 and not say, \$5,000 or \$7,000? This type of analysis is as simple as looking at the two properties and isolating the differences between the two sales. In this example, the only difference between the two homes is that one home has a 1-bay garage, and the second home has a 2-bay garage. The difference in sales price is \$10,000, which shows market-based support for the difference, attributed to that single difference.

Paired data analysis is the preferred methodology among valuation practitioners and the secondary mortgage participants, such as Fannie Mae and Freddie Mac. It is an easy-to-understand technique, but as mentioned earlier in this report, difficult to implement well. In the case of this white paper, the application of the methodology was done carefully and with three levels of testing. The initial test was performed by a staff data analyst, then it was reviewed by a certified appraiser, and finally, the white paper lead. If at any juncture in the testing, a sale or application of the methodology was questionable or ambiguous in returning a reliable indication, it was removed from the analysis.

5- The Dictionary of Real Estate Appraisal, 6th Edition. Appraisal Institute 2017

Data



Pearl provided the research team a total of 71 home sales that were Pearl Certified at the time of the sale. This is the raw data that was vetted, reviewed, and analyzed over the course of the white paper. Of the 71 sales the process started with, 45 sales were removed for various reasons. While complex paired data analysis is possible, if the facets of complexity get excessive, then the results of the analysis will become ambiguous at best.

Excluding a sale must be well-researched and a thoughtful exercise. It is imperative that the sales used in the final analysis are free of any explicit bias or implicit bias from the research team. Obviously, the more data used, or the larger the sample size, the better supported the white paper will be. There is a fine line that an appraiser must walk to determine what is meaningful data and what is just noise within the data. Much of this comes from years of experience, but in the end, the real qualifier resides solely within the data and the analysis applied to it. Among the research team, there were several factors that played into the decision to exclude a sale for this white paper.

REASONS FOR EXCLUSION:

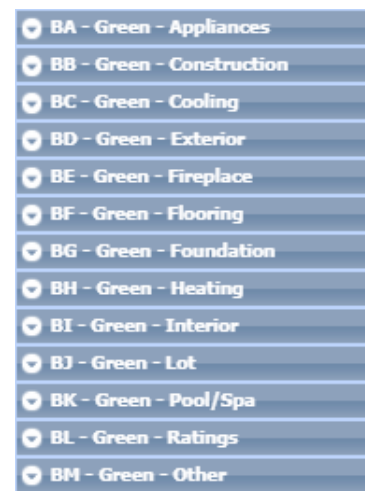
- **No mention or marketing of the Pearl Certification**
- **Complexity of extracting a contributory value indication**
 - Accessory dwelling units, unless a true pair was available
 - Agricultural-related business (Horse boarding, fruit, or crop growth)
 - Complex home with a large array of salient features
 - Sold with large acreage with development potential

The final properties that were used in the analysis were the ones that were easily adjusted and that yielded verifiable premiums.

- **Indicated premium**
 - The actual amount shown as a premium for the sale
- **Number of adjustments**
 - How many adjustments were needed to develop the contributory value?

The data was researched through the CAAR MLS. Unlike many MLS systems throughout the country, the CAAR MLS has a robust set of data fields that allow the agents to cover virtually all variations of green property characteristics. There are 13 distinct categories of green features in the CAAR MLS. There are a total of 145 specific individual characteristics.

Image 2: Capture of the available green categories



Within each category, there is an average of 11 distinct characteristics. This is certainly a comprehensive system, but such detail can also be overwhelming to the system users. CAAR should be given a pat on the back for the effort put into this and for listening to their members.

The most important category is BL-Green Ratings. This category lists the possible ratings seen in the market.

Data (continued)

BL1 - AFUE Rating
BL2 - Cool Roof Rating
BL3 - DOE Challenge Home
BL4 - Energy Star Certified
BL5 - HERS Rating
BL6 - Home Energy Score
BL7 - Home Perf w/ENERGY STAR
BL8 - Indoor airPLUS
BL9 - LEED Rating
BL10 - NAHB Rating

IMAGE 3: CAPTURE OF THE RATINGS CATEGORY

Several respective organizations are represented in this list. Pearl is among the list as are LEED, HERS, Earthcraft, and NAHB, among others. From an agent, appraiser, and consumer point of view, these rating systems are important as they provide an indication of the high-performance nature of a home based on a credible, third-party source.

The reason that green ratings is the best category for agents and appraisers to pay attention to is that when a home has a green certification, the certification is an expert third-party opinion that can be relied upon. Agents and appraisers are not normally qualified to certify a high-performance home. All the other fields in the CAAR MLS are good indicators of green features, but are ultimately noise. If a home is high performing as a result of its sustainable updates, a recognized certification helps support this.

Having an energy efficient feature, such as an Energy Star-certified stove, doesn't make a high-performance home. Kenneth Harney, a well-respected real estate reporter, in a *Washington Post* article used the term "greenwashing" to address the situation when a home with some green features is marketed as a high-performing home⁶. Care was taken to make sure greenwashing was not affecting this paper.



⁶- Buyers Should be Wary of Houses that are Marketed as Energy-Efficient. *Washington Post*. 2016 https://www.washingtonpost.com/realestate/buyers-should-be-wary-of-houses-that-are-marketed-as-energy-efficient/2016/07/05/59db0ca4-42ca-11e6-bc99-7d269f8719b1_story.html

In **Table 3**, the sales are presented without indication of exact location to protect the owner’s privacy. The table is broken down in the following manner:

- **City**
- **Subdivision**
- **Date of contract**
 - Preferred over sold date, as the contract date indicates when the buyer and seller agreed to transact
- **Pearl Certification Report (PCR)**
 - Whether the PCR was attached in the listing
- **Pearl comments**
 - Were there any comments in the narrative portion of the list where the agent identified the home as being Pearl Certified?

- **Energy efficiency (EE) comments**
 - Were there any comments at all identifying the home as an energy efficient home?
- **Owned solar PV**

As well-intentioned as the CAAR MLS has been with the green features, the actual search tools do not allow one to search by ratings. When establishing search parameters, it will only allow one to check a box looking for green features. If the home has any of the 145 characteristics in the green fields, it will populate the search. It would be a most welcome addition to allow the rating systems to be selected as a delimiting factor.

City	Subdivision	Date of Contract	Pearl Cert Report	Pearl Comments	EE Comments	Owned Solar PV	Premium	# adj
Crozet	Old Trail	9/7/2018	N	Y	Y	N	12.5%	1
C'ville	HUNTLEY	10/11/2018	N	Y	Y	N	3.5%	0
C'ville	PAYNE'S MILL	1/14/2019	Y	Y	Y	N	7.0%	0
Crozet	OLD TRAIL	1/21/2019	N	Y	Y	N	3.0%	0
Crozet	Old Trail	5/21/2019	N	Y	Y	N	5.0%	0
C'ville	REDFIELDS	6/1/2019	Y	Y	N	N	6.0%	2
Crozet	OLD TRAIL	10/18/2019	N	N	Y	N	1.0%	1
C'ville	CASCADIA	11/19/2019	N	Y	Y	N	0.0%	1
C'ville	CASCADIA	11/30/2019	N	Y	Y	N	4.0%	1
Crozet	Old Trail	12/23/2019	N	Y	Y	N	6.5%	0
Palmyra	THE VILL @ NAHOR	1/3/2020	Y	Y	Y	N	2.0%	0
C'ville	CASCADIA	1/15/2020	N	Y	Y	N	0.0%	2
C'ville	AVINITY	1/22/2020	Y	Y	N	N	2.0%	0
C'ville	BELVEDERE	1/29/2020	Y	Y	Y	N	4.5%	0
Crozet	OLD TRAIL	2/2/2020	Y	Y	Y	N	1.0%	0
Crozet	OLD TRAIL	3/3/2020	Y	Y	Y	N	7.5%	2
Crozet	OLD TRAIL	3/13/2020	Y	N	Y	N	0.0%	3
Crozet	OLD TRAIL	3/14/2020	Y	Y	Y	N	9.5%	1
C'ville	CASCADIA	5/12/2020	Y	Y	Y	N	7.0%	2
C'ville	CASCADIA	5/12/2020	Y	Y	Y	N	8.5%	1
Crozet	OLD TRAIL	5/18/2020	Y	Y	N	N	7.0%	2
C'ville	CASCADIA	6/9/2020	N	Y	Y	N	0.0%	0
Crozet	Westlake @ Fthills	12/15/2020	Y	Y	Y	N	6.0%	2
C'ville	RAINTREE	1/12/2021	Y	Y	Y	N	8.5%	2
Crozet	OLD TRAIL	1/19/2021	Y	Y	Y	N	6.0%	0
Crozet	WESTHALL	2/7/2021	Y	Y	N	N	16.0%	0

Table 3: Final Sales Used

Data (continued)

It is of note that an effort was made to interview the listing agents involved in each transaction to determine consumer motivation and to discuss feedback given from consumers related to the high-performing features of the home. When consumer motivation was not clear from the agents' interviews, buyers' agents were also spoken with to glean as much insight to the transaction as possible.

The following are some examples of narrative commentary in listings that were marketing the high-performance aspect of the home and mentioned Pearl⁷.



EXAMPLE-1

Premium Realized: 7%

“Eco-Smart energy efficiency package including 3rd party testing, Pearl Certified Gold and HERS Score 53.”

EXAMPLE-2

Premium Realized: 12.5%

“Eco-Smart energy efficiency package third party verified by HERS score. HERS 61. Pearl Certified Gold.”

EXAMPLE-3

Premium Realized: 2%

“You don’t want to miss this custom built and well-appointed residence located just 4 miles from Charlottesville’s Downtown Mall and the University of Virginia! The home features 2 Master Suites, a gourmet kitchen equipped with a commercial Viking Range, open concept living, rear covered patio, superior wall foundation, 2x6 exterior construction, spray foam insulation, attached 2-car garage, and much...much more. This PEARL Certified Gold energy-efficient home is guaranteed to impress! Take a look at the 3D Virtual Tour of the home today to begin your virtual walkthrough of this fantastic opportunity!”

Additional Papers and Studies

Table 4 shows other studies that examine house price premiums in various markets.

Study Name	Date Published & Author	Market Area	Date	Sales Price Premium
<i>"What is Green Worth? Unveiling High-Performance Home Premiums in Washington, D.C."</i>	Sandra K. Adomatis, SRA, LEED GA	Washington, D.C.	Jul-05	Range of 2% to 5%
<i>"An Early Look at Energy Efficiency and Contributory Value: Case Studies of Residential Properties in the Greater Denver Metro Area"</i>	Lisa Desmarais, SRA	Denver	2015	An overall range of 1% to 15% (Excluding outliers, the range is 2% to 5%)
<i>"The Market Valuation of Energy Efficient and Green Certified Northwest Homes"</i>	Taylor Watkins and other appraisers	Northwest US	2015	A range of -0.2% to 8%
<i>"An Empirical Assessment of the Value of Green in Residential Real Estate" The Appraisal Journal</i>	Anjelita Cadena, PhD and Thomas A. Thomson, PhD	San Antonio, TX	2015	1% increase for a green certification, 2% increase for green components, and 6% increase for energy efficient features.
<i>"The Value of LEED Homes in the Austin-Round Rock Real Estate Market,"</i>	Greg Hallman of McCombs School of Business	Austin-Round Rock, TX	2017	A house with a green designation sells for 6% more than one without, and a house with a LEED certification sells for 8% more
<i>"Green Homes Sales Prices in Northern California"</i>	Sandra K. Adomatis, SRA, LEED GA and Denis A. DeSaix	San Francisco, CA	2017	2.19% Average
<i>"Appraisers Analyze Data on Pearl Home Certified Sales"</i>	Sandra K. Adomatis, SRA, LEED Green Assoc.; Donald Boucher, SRA, and Woody Fincham, SRA, AI-RRS; Betsy Hughes, SRA; real estate appraisers	Charlottesville, VA Northern, VA	2017	5% in the market area where Pearl has established a presence and where agents are marketing the certification effectively. For Pearl-certified homes in all market areas, the
<i>"Energy Efficiency: Value Added to Properties & Loan Performance" Freddie Mac</i>	ROBERT ARGENTO, XIAN FANG BAK, LARIECE M. BROWN	National	2019	From the property value analysis, rated homes are sold for, on average, 2.7% more than comparable unrated homes

Table 4 -Additional Papers and Studies

White Paper Focus Questions Answered

1. DOES THE MARKET PAY A SALES PREMIUM FOR HOMES WITH A PEARL CERTIFICATION?

The data was looked at in two different ways to better understand the indicated premium; first, the full data set, including the outliers of 16% and 0%. Analysis of this full data set indicates that buyers in the market paid a mean premium of 5.15% considering all data. The concern with the full data set is that the indication might be affected by the outliers. Looking at the data again after truncating the outliers, which removes the most extreme indications in the dataset, returns a mean premium of 4.86%. Truncating the dataset is simply a second check of the data returns. With the whole dataset and the truncated dataset being relatively close, it is reasonable to conclude that the study supports a 5% sales price premium in the Charlottesville market.

26	Total
14	Paired Sales
12	Complex Paired Sales
16%	High
0%	Low
5.50%	Median
5.15%	Mean

The table left (Table 5) shows the total count of the array. There are 14 simple paired sales of data (MP). Simple paired sales are pairs of sales that have only one obvious difference between the two comparable sales; in this case the only difference was a Pearl Certification. Four of these sales indicated zero contributory value.

The lower part of the chart deals with the actual percentages of contributory value. The extreme indications were 16 % and 0%. The mean and median indicated 5.15% and 5.50%, respectively. The completed data indicates a standard deviation of 4.01.

Table 5 -Homes Reviewed

Truncated Data

To further test the reasonableness of the findings, the highest and lowest premiums were eliminated from the data set. This was done because extreme values, whether high or low, can have a significant impact on the average (mean). In this case, the four highest premiums (ranging up to 16% contributory value) and the four lowest premiums (all 0% contributory value) were removed from the data set. The remaining “truncated” data set of 18 paired sales was then analyzed.

8.50%	High
1.00%	Low
5.50%	Median
4.86%	Mean

Table 6 -Truncated Homes Reviewed

The mean and median indicated 4.86% and 5.50%, respectively. The truncated data indicated a standard deviation of 2.34.

White Paper Focus

Questions Answered

2. DO THE HOMES WITH A CERTIFICATION EXPERIENCE LESS ABSORPTION TIME ON THE MARKET?

Per the CAAR MLS market report through June 2021, the average days on market was reported to be 48 days⁸. The aggregated data including all 72 sales was 44 days on market. Just considering the final 28 sales, the average days on market was 69 days. This was an unexpected indication as the previous white paper indicated that Pearl homes averaged 24 less days on the market. Nothing within the data indicated why the number of days on market is longer for Pearl Certified homes. With the higher volume of sales annually and the increase in average sales prices shown nationally due to the historically low interest rates, one would expect the numbers to reflect similar or better indications of market time as the previous white paper. Even anecdotally, there seems to be no correlation in the data to support any one given reason.

3. ARE CERTIFIED HOMES BEING MARKETED TO MAXIMIZE BENEFITS OF THE BRAND?

The MLS listings are showing better participation in advertising Pearl Certified homes when they exist. Some listings lead the narrative sections with the information or somehow draw attention to it using all caps or spaces within the narrative. With that stated, there are still several listings that could have mentioned the Pearl Certified homes and did not.

4. HOW CAN MARKETING OF HOMES WITH THE CERTIFICATION BE IMPROVED TO INFLUENCE THE HIGHEST SALES PRICE AND APPRAISED VALUES?

Some listings mentioned that the home was energy efficient but did not offer any insight as to what that meant exactly. Some listings also included attachments that had the Appraisal Institute Green Addendum or a copy of the Pearl Certification report, or both. Several did not have the attachments.

Since the white paper is indicating a sales price premium, it would be a best practice for agents to advertise the homes with the certifications conspicuously mentioned. Since the MLS allows for multiple attachments, it is also a promising idea to include a copy of the certification, as well as the AI Residential Green and AI Green Addendum.

⁸- CAAR Charlottesville Area Market Indicators Report.

[https://www.caar.com/docs/default-source/market-report/caar-market-indicators-report-\(june-2021\).pdf](https://www.caar.com/docs/default-source/market-report/caar-market-indicators-report-(june-2021).pdf).

Conclusion



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This paper undertook an extensive project that researched, reviewed and analyzed a specific niche of market data in the Charlottesville MSA. The immediate takeaway from this report is that the return on having a Pearl Certification shows a premium of 5.15% considering all data. In other words, the paper supports a 5.15% market-accepted premium for a Pearl Home Certification when the certified home is marketed conspicuously as having Pearl Certification. It should be noted that the other studies listed in the introduction also show similar premiums.

This is only the surface of the white paper. The premium implies that building a high-performance home or retrofitting an existing home does add value. The results within the study are similar to the previous study done in Charlottesville, “Appraisers Analyze Data on Pearl Home Certified Sales,” which showed a 5% premium.

With the 27 pairs in the first white paper, along with the 26 in this white paper yielding similar results, we have 53 data points pointing to a similar conclusion. There is a premium when a home is consciously marketed regarding the Pearl Certification.

A huge takeaway is also the fact that there are real estate agents and appraisers that do not understand how to value these features and are therefore claiming they don’t add value.

The underlying takeaway is the need for the continued education and training within various related professions to make sure the home is being marketed and valued the best that it can be for the benefit of the consumers. Pearl is certainly on that track with their current leadership.

Periodic monitoring of these properties should continue to track the level of premium. Having a third-party certification that provides the level of detail and transparency into what a “high-performance home” actually means is an invaluable tool to stakeholders, most specifically to the agents, consumers, and appraisers involved.