



CERTIFIED GREEN BUILDING



HR JOHNSON
HOMES

Green Building is the practice of producing a more energy efficient, high performance home in order to advance environmental preservation.

At HR Johnson Homes, the **Whole House Approach** is used as a Green Building guiding principle to construct the high-performance home by balancing the application of systems and materials relative to heat transfer, moisture movement, airflow and pressure, structural durability, and over all home sustainability to provide the complete blend of superior construction, healthy indoor air quality, environmental preservation, and luxurious living in an architectural masterpiece.

The GreenBuild New Mexico Certification Process is based on achievement of one of three ratings of **Bronze, Silver, Gold, or Emerald** for the custom home. The Bronze rating is the lowest level of certification with the least criteria and the Emerald rating has the highest level of certification with the most criteria. As an essential aspect of the ratings, the GreenBuild New Mexico Certification Process requires an independent Third-Party verification to test the

required precise balance of the application of systems and materials relative to heat transfer, moisture movement, airflow, and pressure of the home in order to provide optimal indoor air quality and energy efficiency.

In essence, the mission and goal of HR Johnson Homes is our prevalent focus on building the highest quality custom dream homes with the option of selecting all or a few of the Green Building products and standards available on the market today. This goal of providing high-performance homes to our clients through innovative thinking, the application of building science and cutting edge technology, and the transparent Green Building certification process, coupled with a team approach to design, preparation, construction, and environmental preservation demonstrates that HR Johnson Homes is striving to be New Mexico's premier Custom Home Green Builder.

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WHAT IS GREEN BUILDING?

Green Building is a sustainable design and construction practice that promotes the economic health and well-being of your family, the community, and the environment, and Green Building provides an opportunity to use our resources efficiently while creating healthier homes and buildings. Green Building provides cost savings through improved health and productivity, lower cost building operations, and resource efficiency, and at the same time Green Building moves us closer to a sustainable future and a more peaceful state of mind.

In the United States, the Environmental Protection Agency estimates buildings account for:

- 72% of electricity consumption
- 39% of energy use
- 38% of all carbon dioxide (CO₂) emissions
- 40% of raw materials use
- 0% of waste output (136 million tons annually)
- 14% of potable water consumption.

PROGRAMS AND GUIDELINES

The National Association of Home Builder's Model Green Home Building Guidelines and the GreenBuild New Mexico program of the Home Builder's Association of Central New Mexico are designed to move environmentally-friendly home building concepts further into the mainstream marketplace. The Build Green New Mexico program and the National Association of Home Builder's Model Green Home Building Guidelines are voluntary programs with a purpose to encourage homebuilders to use technologies, products and practices that will:

- Provide greater energy efficiency and reduce pollution
- Provide healthier indoor air

- 38% of all carbon dioxide CO₂ emissions
- Reduce water usage
- Preserve natural resources
- Improve durability and reduce maintenance

The process of Green Building is to incorporate environmental considerations into every phase of the home building process. That means during the design, construction, and operation of a home, energy and water efficiency, lot development, resource efficient building design and materials, indoor environmental quality, homeowner maintenance, and the home's overall impact on the environment are all taken into account. The Build Green New Mexico program

and the National Association of Home Builder's Model Green Home Building Guidelines contain six primary sections:

URBAN DEVELOPMENT HAS A PROFOUND
IMPACT ON OUR NATURAL ENVIRONMENT, ECONOMY,
HEALTH, AND PRODUCTIVITY.

LOT PREPARATION AND DESIGN.

The guidelines can be used to certify an individual home or an entire subdivision. Through planning and design, damage to natural features can be minimized and the home's long-term performance enhanced.

RESOURCE EFFICIENCY.

Efficient design, material selection, and advanced framing techniques optimize the resources used. Less material is wasted, and materials that are used are selected and installed for durability.

ENERGY EFFICIENCY.

Using a third-party testing system. The testing is used to ensure a well-sealed building envelope and optimized mechanical systems, and also accounts for energy-efficient appliances and lighting.

WATER EFFICIENCY AND CONSERVATION.

The climate of New Mexico calls for special measures to conserve water. Green homes reduce water use with low-flow fixtures, water-saving appliances, recycled rain water and grey water, and smart landscaping.

• continued on pg. 4 •



ENERGY INNOVATION

How Homes Become GREEN

More durable roof coverings such as steel and fiber cement reduce the frequency of roof replacement. Lighter colors absorb less heat, reducing cooling costs in warm climates. Now, solar roofing products integrate asphalt shingles, standing-seam metal roofing, and slate or concrete tiles.

Oriented strand board (OSB) is an engineered wood product that does not require large trees for its manufacture. It is resource efficient and enhances durability and is used to sheathe roofs and walls in 75 percent of new homes.

Tree preservation reduces landscaping and future energy costs and helps provide winter wind breaks or summer shade. Additional landscaping improves the environment even more: One tree can filter 60 lbs. of pollutants from the air each year.

New toilets have redesigned bowls and tanks that use less water, but function more efficiently than first-generation low-flow models. Some use pumps for supplementary water pressure. Advanced shower and sink faucet aerators provide the same flow regardless of pressure to reduce water use and the energy required to heat it.

Energy-efficient windows incorporating advanced technologies like low-emittance (low-E) glass coatings, gas filler between layers, and composite framing materials keep heat inside in the winter and outside in the summer.

Recycled plastic lumber and wood composite materials reduce reliance on chemically treated lumber and durable hardwood for decks, porches, trim and fencing.

Vinyl siding on exterior walls saves money on installation and maintenance; fiber-cement siding is termite- and water-resistant and warranted to last 50 years.

Increasing the amount and R-value of insulation is a cost-effective way to save energy and help reduce heating and cooling bills, which account for at least half of energy use in the home. Sprayed insulation made of foam, cellulose or wool is an alternative to traditional glass fiber batting.

The energy efficiency of refrigerators and freezers has tripled over the last three decades because they have more insulation, advanced compressors, better door seals and more accurate temperature controls. Front-loading washers use about 40% less water and half the energy of conventional models. Energy Star®-rated appliances save an average of 30 percent over standard models.

Incorporating passive solar design features like large, south-facing windows helps heat the home in the winter and allows for increased natural daylighting.

Factory-built components including trusses and pre-hung doors allow more efficient use of raw materials, making the most out of every piece of lumber. These products eliminate the need to cut wood at the jobsite, further reducing waste.

Xeriscaping, or using native plants, significantly reduces the need for watering, fertilizers and herbicides.

Covered entries at exterior doors help to prevent water intrusion, reducing maintenance and enhancing durability.

Selecting more efficient, correctly sized heating, cooling and water-heating equipment saves money. Tankless water heaters provide hot water on demand at a preset temperature rather than storing it, which reduces or eliminates standby losses. Geothermal heat pumps work with the Earth's renewable energy and can also heat water.

Foundations should be as well insulated as the living space walls for efficient home energy use and enhanced comfort, particularly if the basement is used as a family room or bedroom.

In addition to natural wood, flooring choices include low-VOC (volatile organic compounds) carpets for better indoor air quality, laminates that successfully mimic scarce hardwood, and linoleum, a natural product making a design comeback.

• continued from pg. 2 •

INDOOR ENVIRONMENTAL QUALITY

Green Builders reduce indoor pollutants by choosing materials that have a low or no volatile organic compound (VOC) content. Additionally, green homes use appliances, equipment and building techniques that guarantee fresh, filtered air in the home.

OPERATION, MAINTENANCE, AND HOMEOWNER EDUCATION

Educating the homeowner is essential for a high-performance home to operate properly.

GLOBAL IMPACT

Building with the global environment in mind minimizes adverse affects of development.

THE BENEFITS OF GREEN BUILDING

ENVIRONMENTAL BENEFITS	ECONOMIC BENEFITS	HEALTH & COMMUNITY BENEFITS
<p>Improve air and water quality</p> <p>Conserve natural resources</p> <p>Enhance knowledge of Natural Resource Conservation</p> <p>Reduce Construction</p> <p>Waste through recycling of materials</p>	<p>Reduce maintenance and operation costs</p> <p>Enhance asset value and profits</p> <p>Improve durability and sustainability</p> <p>Optimize life-cycle economic performance</p> <p>Increase long-term value of structure</p> <p>Increase long-term value of structure</p> <p>Green Building is becoming a popular living option</p> <p>Federal and State Tax incentives and rebates</p> <p>Utility incentives and rebates</p>	<p>Improve air, thermal, and acoustic environments</p> <p>Enhance occupant comfort and health</p> <p>Minimize strain on local infrastructure</p> <p>Contribute to overall quality of life and well-being</p>



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As a proud member of the **National Association of Home Builders**, the **BuildGreen New Mexico Program** and **Build Green Council**, and the **National Association of Realtors**, as well as bearing the earned **Designation of Certified Green Professional (CGP)** and **Certified Aging-in-Place Specialist (CAPS)**, HR Johnson Homes is dedicated to the inherent principles of designing and building sustainable, energy efficient, and healthy indoor air quality homes to support environmental preservation, and to promote public awareness of the importance of Green Building.

In order to accomplish the inherent principles of Green Building, HR Johnson Homes obtains a transparent level of certification issued by BuildGreen New Mexico, based on a strict adherence to Green Building guidelines, which indicates the home is designed and constructed to a high degree of energy, resource, and water efficiency with minimal environmental impact. At the same time, the use of Green Building principles and guidelines to build a handcrafted custom dream home does not hinder or prevent the use of magnificent architectural styles and luxurious interior designs.



FOR MORE INFORMATION ABOUT CERTIFIED GREEN BUILDING, PLEASE CONTACT

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