Green Built North Texas™
A Home Builders Association Initiative

CONSTRUCTION PROTOCOL

Site Management and Waste Reduction

1. Obtain TCEQ Storm Water Permit and follow best management practices.
2. Implement a tree protection plan or fully comply with established local ordinance regarding tree protection.
3. Establish jobsite recycling plan to include lunch trash, and require subcontractor participation to minimize construction waste, sort waste, and maximize material recycling where available.

Water Efficiency

1. Install rain and freeze sensors on sprinkler system.
2. Install hot water on demand system or locate water heater within 30 ft. of fixtures.
3. Select water efficient toilets that work with first flush (min. 250 grams).
4. Select lavatory faucets with less than 2.0 gpm, and select kitchen & utility faucets with less than 2.2 gpm.
5. Select shower heads with less than 2.5 gpm.
6. Limit landscape & turf plantings to drought-tolerant varieties or install rainwater catchment system to provide for a minimum 50% of landscape irrigation needs.
7. Install 2" deep mulch in landscape beds.

Indoor Air Quality

1. Perform Manual J calculation based on actual house design, specifications and orientation and ensure that installed equipment matches Manual J calculations. Perform refrigerant level test. Provide all documentation to the homeowner.
2. Seal ducts during construction at vent entry and exit.
3. Provide ducted mechanically controlled fresh air in-take system sufficient to meet the fresh air needs of the house.
4. Provide power venting or sealed combustion providing fresh air for gas furnaces and water heaters located in conditioned space. Or install heat pump.
5. Install continuous drainage plane on exterior walls behind cladding material.
6. No vapor barrier on inside of exterior walls.
7. Ensure proper flashing at windows and doors.
8. Install kitchen range hood and vent to outside.
9. Provide combustion air for fireplaces from outside.
10. Use no fiberglass duct board unless sealed properly with low toxic mastic.
11. Install return air ducts or jumper ducts in all bedrooms.
12. Install vapor barrier under slab.
13. Install capillary break under bottom plate.
14. Use min. 1" pleated filters for AC return.
15. One carbon monoxide (CO) detector, hardwired, shall be installed per 1,000 sq. ft. of living space (minimum one per floor).
16. Avoid an attached garage or isolate the garage from the living space with appropriate sealing techniques.

Energy Efficiency

1. ENERGY STAR Certified.
2. Minimize window exposure on east & west or shade windows facing east & west.
3. Install ENERGY STAR appliances unless prevented by customer selection.
4. Install radiant barrier, light-colored roof, or insulated roof deck.

Materials

1. Use engineered lumber products to maximum extent possible to include trusses, joists and finger-jointed dimensional lumber.
2. Use exterior cladding materials with minimum 25-year warranty.
3. Provide gutter downspout extensions and positive drainage away from house.
4. Employ advanced framing techniques to reduce waste.

Homeowner Education

1. Provide homeowner with operations and maintenance kit and perform walk-through.
2. Provide homeowner with local recycling opportunities.
3. Provide information on green energy service providers.
4. Provide basic information on ENERGY STAR program, ratings/certification.

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GUIDING PRINCIPLES

Site Management and Waste Reduction

Green Built North Texas homes incorporate efficient site management and waste recycling practices on the jobsite in order to help reduce the environmental impact of the home while under construction. For instance, site design principles such as tree preservation and protection, recycling measures, and storm water permitting procedures established by the Texas Commission on Environmental Quality (TCEQ) are processes used in the construction of all Green Built North Texas homes.

For Green Built North Texas homes, site management is also about minimizing job-site waste and fact, the average single-family home in the United States is estimated to generate more than 6,000 lbs. of construction waste. Green Built North Texas builders develop waste management plans in order to reduce the burden on increasingly scarce landfill space.

Water Efficiency

The average indoor daily water use in today's homes is estimated to be slightly over 64 gallons. Implementing water conservation measures can significantly reduce this amount and help conserve this vital resource. For this reason, Green Built North Texas homes are especially welcomed in North Central Texas, and may help extend current water resources.

The importance of water resources is becoming increasingly recognized in our area. Competing demand between sending water to growing urban areas and making water available for irrigation highlight the issues surrounding the scarcity of this valuable resource.

Green Built North Texas homes are designed to conserve water both indoors and out. More efficient water delivery systems indoors such as low-flow plumbing fixtures, combined with rainwater harvesters or native and drought-tolerant landscaping choices outdoors can help prevent unnecessary waste of our water.

Indoor Air Quality

The quality of a home's indoor air is often cited as the most important feature of a green home. This is important in North Central Texas where high levels of allergens and pollen are not uncommon.

Reported diagnosis of allergies and respiratory ailments has increased, and more people are aware of their sensitivities to chemicals that can off-gas from construction and home furnishing materials. Even though there is no authoritative definition of healthy indoor air, Green Build North Texas homes incorporate measures that can mitigate the effects of potential contaminants by controlling the source, diluting the source, and capturing the source through filtration.

Energy Efficiency

Energy consumption is of paramount concern to today's homebuyers due to financial and far-reaching environmental impacts, which range from the mining of fossil-fuel energy sources to environmental emissions from burning non-renewable energy sources. In addition, each home consumes energy year after year, meaning that the environmental impacts associated with that use accrue over time. Therefore, energy conservation is an integral part of all Green Built North Texas homes.

On average, a home built between 1990 and 2001 consumed about 12,800 kWh per year for space and water heating, cooling, and lights and appliances. In an effort to lower energy consumption and reduce the homeowner's annual utility expenses, all Green Built North Texas homes are, at a minimum, built to the EPA's ENERGY STAR® performance standard, which means that they are at least 15% more energy efficient than homes built to the latest International Energy Conservation Code (IECC) requirements.

To meet this performance standard, Green Built North Texas homes can include a variety of energy-efficient features such as effective insulation, high performance windows, tight building envelopes and duct work, efficient heating and cooling equipment, and Energy Star® qualified lighting and appliances. These features contribute to improved home quality and homeowner comfort, lower energy demand, and ultimately, reduced air pollution.

Materials

Green Built North Texas homes start with the consideration of the environment at the design phase when material selection occurs. Creating efficient designs that maximize function while optimizing the use of natural resources can conserve building materials, most notably, wood. For instance, Green Built North Texas homes using engineered lumber products are used to the maximum extent possible. These products can help optimize resources by using materials in which more than 50% more of the log is converted into structural lumber than conventional dimensional lumber.

Green Built North Texas homes are also built with sustainability in mind. Positive moisture drainage away from the home helps to mitigate moisture intrusion into building materials while durable cladding materials seek to minimize the effects of degradation and weathering, enhance the life expectancy of the home, and lessen maintenance needs.

Homeowner Education

Inadequate maintenance can defeat the designer's and builder's best efforts to create a healthy, resource-efficient home, which is why homeowner education is arguably the most important aspect of Green Built North Texas. Homeowners play a big role in the house performance and, therefore, should take the utmost care to operate their Green Built North Texas home as it was intended. Proper maintenance of the home's systems will help ensure that a Green Built North Texas home will operate at peak performance throughout its lifetime. Green Built North Texas builders will walk the homeowner through the basic operations of the home's systems and also provide the homeowner with information and resources on their proper maintenance.

For more information about the HBA of Greater Dallas's Green Built North Texas program and to contact participating builders visit www.GreenBuiltNorthTexas.com.