

The Law of Green Building
Green Building Council
Tidewater Builders Association
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I. Development of Green Building Standards

A. Definition

1. Scope is broad/no set definition
2. Multi-disciplinary solution

B. Green Building Standards

1. No national regulatory standard
2. Private Voluntary Standards Being Established
3. National Efforts
 - a. Leadership in Energy and Environmental Design (LEED):
www.usgbc.org
 - b. Energy Star-appliances
 - c. WaterSense toilets and faucets
 - d. EPA Voluntary Standards
 - e. Green Globes Standard: www.greenglobes.com
 - f. National Association of Home Builders: working with
International Code Council and Green Building Council:
www.nahb.org/GBstandard
Builds on NAHB Model Green Building Model Home
Building Guidelines: www.nahbgreen.org
4. Local Efforts
 - a. Virginia Code is silent
 - b. City Codes
 - c. EarthCraft House Virginia: www.earthcraftvirginia.org

II. Limiting Green Building Liability

A. Tort Liability

1. negligence
2. breach of standard of care
3. mold claims

B. Contract Liability

1. breach of warranty
2. misrepresentation
3. damages

C. Leasing Issues

1. Are personnel trained?
2. Can lease be terminated?

D. Trademark Claims

E. Antitrust

F. Insurance Coverage

G. Steps to Take

1. control customer's expectations
2. contract documents are key
3. agree to specific terms and clear goals
4. don't forget advertising documents
5. review credentials of subs/suppliers
6. communication



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FAQ

FREQUENTLY ASKED QUESTIONS

LEED for Homes FAQs for Builders

What is LEED?

LEED is a national third-party certification system that recognizes leadership in green building. It is developed by consensus process by volunteer members of the U.S. Green Building Council who contribute their expertise to its technical development. LEED was first introduced eight years ago for new commercial construction, and has since grown to include specialized versions for homes, neighborhood development, commercial interiors, high performance building operations and maintenance, and core and shell development. More than 3.2 Billion square feet of real estate in the U.S. and in 60 countries are pursuing LEED certification.

LEED measures green homebuilding performance based on seven categories including: site selection, water efficiency, materials & resources, energy & atmosphere, indoor environmental quality, location & linkages, and innovation. Within each of these areas, projects earn points towards certification. LEED has four levels of certification: Certified, Silver, Gold and Platinum, with Platinum representing the highest level of achievement.

Why should I build a LEED Home?

LEED certification recognizes and celebrates *leadership* in high quality green homebuilding, and allows you as a builder to clearly differentiate your work.

For the homebuyer, LEED is like the nutrition label on the side of a box of crackers: It clearly labels in measurable terms that the home has healthy, green, efficient features that have been third-party verified.

What is the difference between LEED for Homes and other green home building programs?

LEED is a national third-party certification system for green homebuilding. It is designed to recognize leadership, so the program is rigorous and focused on measurable results. LEED for Homes features lots of support for builders who choose to work with rating system, including Reference Guides, instructor-led workshops, and online courses.

There are also more than 70 highly regarded local or regional green home building programs in the United States. (Visit www.usgbc.org/leed/homes for a complete list.) Each of these programs is unique, with its own specifications and requirements.

By reviewing the checklists for LEED and other available local or regional programs, you can choose the rating system that works best for your goals.

What types of homes can use the LEED certification system?

The LEED for Homes certification system is tailored for the construction of new single family or low-rise multi-family homes. Existing homes undergoing extensive renovations - down to the last studs on at least one side of each exterior wall - are also eligible to participate in the program.

What about remodeling projects?

For green remodeling projects, USGBC and the American Society of Interior Designers (ASID) partnered to create the REGREEN Program, which is the first nationwide green residential remodeling guideline for existing homes.

What about affordable housing?

Affordable housing is also addressed by LEED for Homes, and is funded by a generous grant from The Home Depot Foundation. Grant funds are available to cover costs associated with LEED certification including local rating and verification services. For more information, please contact a LEED for Homes Provider.

How can I participate in LEED for Homes?

First, check out www.usgbc.org/LEED/homes, and download the LEED for Homes Checklist. It's an easy way to familiarize yourself with the rating system so you can decide if you want to take the next step and register a project.

Builders interested in registering a project with LEED should contact their local LEED for Homes Provider.

OK, so I'm ready to register a project for LEED certification...

- Connect with the LEED for Homes Provider of your choice. If you're interested in building a LEED Certified home, your first step is to contact a LEED for Homes Provider. They'll walk through the checklist with you so that you can see how the LEED rating system would apply to your project. You can also work with your Provider to engage their help to complete the HERS rating and onsite green inspections that will be required to submit your project for LEED certification.
- Set your green goals. LEED is a flexible system, so you'll need to choose which credits are aligned with your project's green goals. Your goals should include which level of LEED – certified, silver, gold, or platinum – you want to achieve.

LEED for Homes
Frequently Asked Questions

- Register your project. You can register your project online at www.usgbc.org/LEED/homes. Registration fees apply.
- Document and verify. Working with your Provider, you'll need to complete a HERS rating, and two on-site inspections of the project to document that you've met the LEED credit requirements that reflect your green goals.
- Certify. Once your project is complete and your documentation is ready, your Provider will submit your final LEED checklist to USGBC for certification. Following a rigorous review, your project will be awarded its final certification.
- Celebrate! We want to help you to celebrate your achievement with a certification packet you can share with your homebuyer and a PR tool kit to share the good news with your local community.

Builders work with a LEED for Homes Provider in their area who will oversee performance testing and compliance with the LEED for Homes rating system. To participate, home builders should contact a geographically proximate Provider directly to complete a Builder Agreement.

How can I stay up to date on the progress of LEED for Homes?

Get involved in one of the many USGBC committees. USGBC members interested in LEED for Homes Committee activities can join the LEED for Homes "Corresponding Committee" e-mail listserv. Just sign up online in the Your Account section of the USGBC website (www.usgbc.org/YourAccount). Corresponding Committee members receive committee meeting minutes, periodic updates and announcements regarding LEED for Homes volunteer opportunities.

Non-USGBC members can join a public announcement distribution list by sending a request to homes@usgbc.org.

What does it cost to register my homes under the LEED program?

USGBC members are eligible to receive significant cost discounts for program participation. Registration and Certification fees vary based on housing type:

Single Family

Registration: \$150 Members/\$250 Non-Members

Certification: \$250 Members/\$350 Non-Members

Multi-Family

Registration: \$450 Members/\$600 Non-Members

Certification: \$0.035/sq.ft. Members/\$0.045/sq.ft. Non-Members

Volume Building Pilot (50+ single family homes)

Pilot information. Please contact Tom Flanagan at USGBC to express your interest:
tflanagan@usgbc.org.

Affordable Housing

No cost. Additional grant funding is available to help to cover the cost of HERS ratings, green inspections, and other associated fees.

It is very important to note that the total cost of getting LEED certified will include service fees associated with HERS rating and green inspections. Please contact the Provider of your choice regarding their rates.

How do I contact USGBC?

You can call USGBC at (202) 828-7422. Please mention that you're a homebuilder interested in LEED for Homes, and our receptionist will transfer you to a member of the Homes team.



for Homes

LEED for Homes Simplified Project Checklist

Builder Name:
Project Team Leader (if different):
Home Address (Street/City/State):

Project Description:

Building type: **Single detached**

Project type: **Custom**

Adjusted Certification Thresholds

Certified: **45.0** Gold: **75.0**

of bedrooms: **0**

Floor area: **0**

Silver: **60.0** Platinum: **90.0**

Project Point Total: 0	ID: 0	SS: 0	EA: 0	EQ: 0
Certification Level: Not Certified	LL: 0	WE: 0	MR: 0	AE: 0

date last updated :
last updated by :

Max Points
Available

Project
Points

Innovation and Design Process (ID)		(No Minimum Points Required)		Y / Pts Maybe No			
1. Integrated Project Planning	1.1	Preliminary Rating	Prerequisite				
	1.2	Integrated Project Team	1	0	0		
	1.3	Professional Credentialed with Respect to LEED for Homes	1	0	0		
	1.4	Design Charrette	1	0	0		
	1.5	Building Orientation for Solar Design	1	0	0		
2. Durability Management Process	2.1	Durability Planning	Prerequisite				
	2.2	Durability Management	Prerequisite				
	2.3	Third-Party Durability Management Verification	3	0	0		
3. Innovative or Regional Design	3.1	Innovation #1	1	0	0		
	3.2	Innovation #2	1	0	0		
	3.3	Innovation #3	1	0	0		
	3.4	Innovation #4	1	0	0		
Sub-Total for ID Category:				11	0		
Location and Linkages (LL)		(No Minimum Points Required)		Y / Pts Maybe No			
1. LEED ND	1	LEED for Neighborhood Development	LL2-6	10	0	0	
2. Site Selection	2	Site Selection		2	0	0	
3. Preferred Locations	3.1	Edge Development	LL 3.1	1	0	0	
	3.2	Infill		2	0	0	
	3.3	Previously Developed		1	0	0	
4. Infrastructure	4	Existing Infrastructure		1	0	0	
5. Community Resources/ Transit	5.1	Basic Community Resources / Transit		1	0	0	
	5.2	Extensive Community Resources / Transit	LL 5.1, 5.3	2	0	0	
	5.3	Outstanding Community Resources / Transit	LL 5.1, 5.2	3	0	0	
6. Access to Open Space	6	Access to Open Space		1	0	0	
Sub-Total for LL Category:				10	0		
Sustainable Sites (SS)		(Minimum of 5 SS Points Required)		Y / Pts Maybe No			
1. Site Stewardship	1.1	Erosion Controls During Construction	Prerequisite				
	1.2	Minimize Disturbed Area of Site	1	0	0		
2. Landscaping	2.1	No Invasive Plants	Prerequisite				
	2.2	Basic Landscape Design	SS 2.5	2	0	0	
	2.3	Limit Conventional Turf	SS 2.5	3	0	0	
	2.4	Drought Tolerant Plants	SS 2.5	2	0	0	
	2.5	Reduce Overall Irrigation Demand by at Least 20%		6	0	0	
3. Local Heat Island Effects	3	Reduce Local Heat Island Effects		1	0	0	
4. Surface Water Management	4.1	Permeable Lot		4	0	0	
	4.2	Permanent Erosion Controls		1	0	0	
	4.3	Management of Run-off from Roof		2	0	0	
5. Nontoxic Pest Control	5	Pest Control Alternatives		2	0	0	
6. Compact Development	6.1	Moderate Density		2	0	0	
	6.2	High Density	SS 6.1, 6.3	3	0	0	
	6.3	Very High Density	SS 6.1, 6.2	4	0	0	
Sub-Total for SS Category:				22	0		

LEED for Homes Simplified Project Checklist (continued)

						Max Points Available	Project Points		
Water Efficiency (WE)		(Minimum of 3 WE Points Required)		OR		Y / Pts	Maybe	No	
1. Water Reuse	1.1	Rainwater Harvesting System	WE 1.3	4	0	0			
	1.2	Graywater Reuse System	WE 1.3	1	0	0			
	1.3	Use of Municipal Recycled Water System		3	0	0			
2. Irrigation System	2.1	High Efficiency Irrigation System	WE 2.3	3	0	0			
	2.2	Third Party Inspection	WE 2.3	1	0	0			
	2.3	Reduce Overall Irrigation Demand by at Least 45%		4	0	0			
3. Indoor Water Use	3.1	High-Efficiency Fixtures and Fittings		3	0	0			
	3.2	Very High Efficiency Fixtures and Fittings		6	0	0			
Sub-Total for WE Category:						15	0		
Energy and Atmosphere (EA)		(Minimum of 0 EA Points Required)		OR		Y / Pts	Maybe	No	
1. Optimize Energy Performance	1.1	Performance of ENERGY STAR for Homes		Prerequisite					
	1.2	Exceptional Energy Performance		34	0	0			
7. Water Heating	7.1	Efficient Hot Water Distribution		2	0	0			
	7.2	Pipe Insulation		1	0	0			
11. Residential Refrigerant Management	11.1	Refrigerant Charge Test		Prerequisite					
	11.2	Appropriate HVAC Refrigerants		1	0	0			
Sub-Total for EA Category:						38	0		
Materials and Resources (MR)		(Minimum of 2 MR Points Required)		OR		Y / Pts	Maybe	No	
1. Material-Efficient Framing	1.1	Framing Order Waste Factor Limit		Prerequisite					
	1.2	Detailed Framing Documents	MR 1.5	1	0	0			
	1.3	Detailed Cut List and Lumber Order	MR 1.5	1	0	0			
	1.4	Framing Efficiencies	MR 1.5	3	0	0			
	1.5	Off-site Fabrication		4	0	0			
2. Environmentally Preferable Products	2.1	FSC Certified Tropical Wood		Prerequisite					
	2.2	Environmentally Preferable Products		8	0	0			
3. Waste Management	3.1	Construction Waste Management Planning		Prerequisite					
	3.2	Construction Waste Reduction		3	0	0			
Sub-Total for MR Category:						16	0		
Indoor Environmental Quality (EQ)		(Minimum of 6 EQ Points Required)		OR		Y / Pts	Maybe	No	
1. ENERGY STAR with IAP	1	ENERGY STAR with Indoor Air Package		13	0	0			
2. Combustion Venting	2.1	Basic Combustion Venting Measures	EQ 1	Prerequisite					
	2.2	Enhanced Combustion Venting Measures	EQ 1	2	0	0			
3. Moisture Control	3	Moisture Load Control	EQ 1	1	0	0			
4. Outdoor Air Ventilation	4.1	Basic Outdoor Air Ventilation	EQ 1	Prerequisite					
	4.2	Enhanced Outdoor Air Ventilation		2	0	0			
	4.3	Third-Party Performance Testing	EQ 1	1	0	0			
5. Local Exhaust	5.1	Basic Local Exhaust	EQ 1	Prerequisite					
	5.2	Enhanced Local Exhaust		1	0	0			
	5.3	Third-Party Performance Testing		1	0	0			
6. Distribution of Space Heating and Cooling	6.1	Room-by-Room Load Calculations	EQ 1	Prerequisite					
	6.2	Return Air Flow / Room by Room Controls	EQ 1	1	0	0			
	6.3	Third-Party Performance Test / Multiple Zones	EQ 1	2	0	0			
7. Air Filtering	7.1	Good Filters	EQ 1	Prerequisite					
	7.2	Better Filters		1	0	0			
	7.3	Best Filters	EQ 7.2	2	0	0			
8. Contaminant Control	8.1	Indoor Contaminant Control during Construction	EQ 1	1	0	0			
	8.2	Indoor Contaminant Control		2	0	0			
	8.3	Preoccupancy Flush	EQ 1	1	0	0			
9. Radon Protection	9.1	Radon-Resistant Construction in High-Risk Areas	EQ 1	Prerequisite					
	9.2	Radon-Resistant Construction in Moderate-Risk Areas	EQ 1	1	0	0			
10. Garage Pollutant Protection	10.1	No HVAC in Garage	EQ 1	Prerequisite					
	10.2	Minimize Pollutants from Garage	EQ 1	2	0	0			
	10.3	Exhaust Fan in Garage	EQ 1	1	0	0			
	10.4	Detached Garage or No Garage	EQ 1, 10.2, 10.3	3	0	0			
Sub-Total for EQ Category:						21	0		
Awareness and Education (AE)		(Minimum of 0 AE Points Required)				Y / Pts	Maybe	No	
1. Education of the Homeowner or Tenant	1.1	Basic Operations Training		Prerequisite					
	1.2	Enhanced Training		1	0	0			
	1.3	Public Awareness		1	0	0			
2. Education of Building Manager	2	Education of Building Manager		1	0	0			
Sub-Total for AE Category:						3	0		
LEED for Homes Point Totals:						136	0		
(Certification level)							Not Certified		



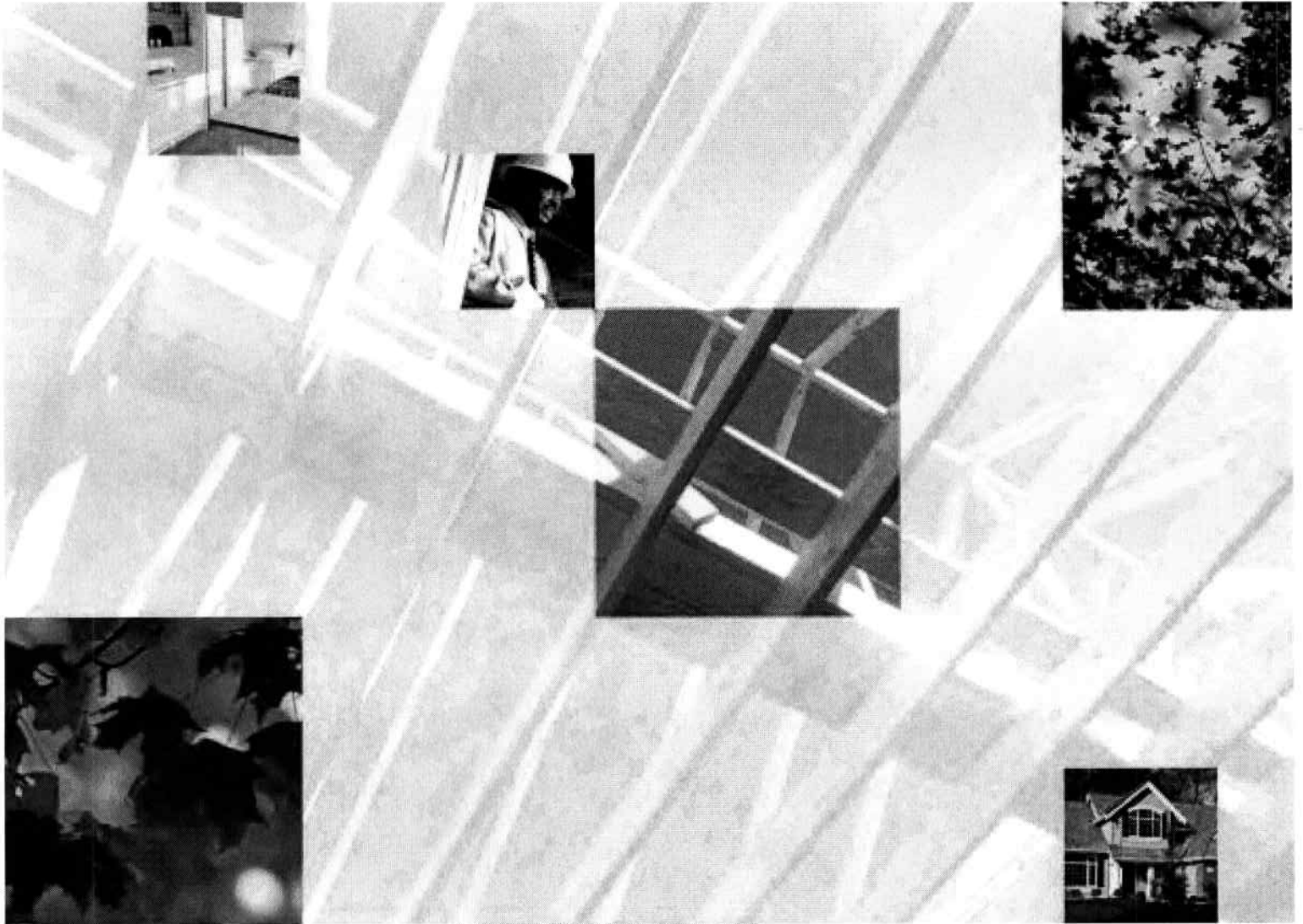
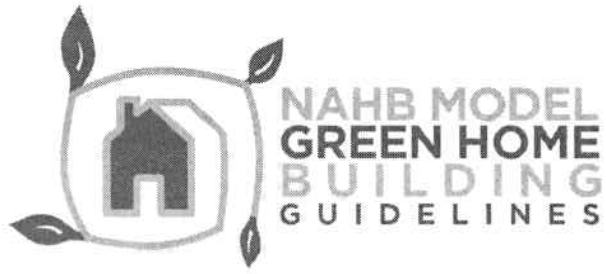
for Homes

LEED for Homes Simplified Project Checklist

Addendum: Prescriptive Approach for Energy and Atmosphere (EA) Credits

Points cannot be earned in both the Prescriptive (below) and the Performance Approach (pg 2) of the EA section.

					Max Points Available	Project Points		
Points cannot be earned in both the Prescriptive (below) and the Performance Approach (pg 2) of the EA section.								
Energy and Atmosphere (EA)		(No Minimum Points Required)			OR	Y / Pts	Maybe	No
2. Insulation	2.1	Basic Insulation			Prerequisite			
	2.2	Enhanced Insulation			2	0	0	
3. Air Infiltration	3.1	Reduced Envelope Leakage			Prerequisite	0		
	3.2	Greatly Reduced Envelope Leakage			2	0	0	
	3.3	Minimal Envelope Leakage			EA 3.2 3	0	0	
4. Windows	4.1	Good Windows			Prerequisite			
	4.2	Enhanced Windows			2	0	0	
	4.3	Exceptional Windows			EA 4.2 3	0	0	
5. Heating and Cooling Distribution System	5.1	Reduced Distribution Losses			Prerequisite			
	5.2	Greatly Reduced Distribution Losses			2	0	0	
	5.3	Minimal Distribution Losses			EA 5.2 3	0	0	
6. Space Heating and Cooling Equipment	6.1	Good HVAC Design and Installation			Prerequisite			
	6.2	High-Efficiency HVAC			2	0	0	
	6.3	Very High Efficiency HVAC			EA 6.2 4	0	0	
7. Water Heating	7.1	Efficient Hot Water Distribution			2	0	0	
	7.2	Pipe Insulation			1	0	0	
	7.3	Efficient Domestic Hot Water Equipment			3	0	0	
8. Lighting	8.1	ENERGY STAR Lights			Prerequisite			
	8.2	Improved Lighting			2	0	0	
	8.3	Advanced Lighting Package			EA 8.2 3	0	0	
9. Appliances	9.1	High-Efficiency Appliances			2	0	0	
	9.2	Water-Efficient Clothes Washer			1	0	0	
10. Renewable Energy	10	Renewable Energy System			10	0	0	
11. Residential Refrigerant Management	11.1	Refrigerant Charge Test			Prerequisite			
	11.2	Appropriate HVAC Refrigerants			1	0	0	
Sub-Total for EA Category:					38	0		



NAHB
NATIONAL ASSOCIATION
OF HOME BUILDERS

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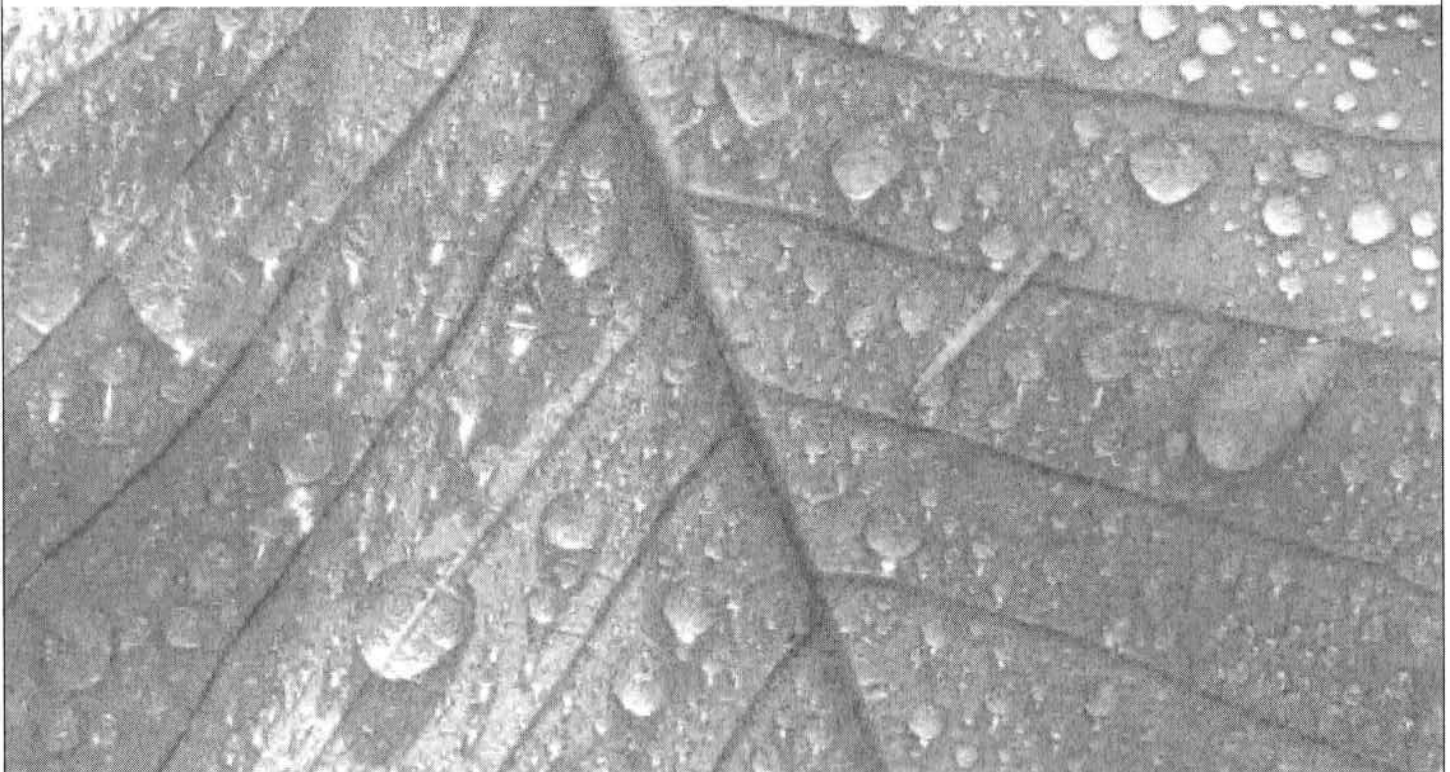
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The EarthCraft House program is a voluntary green building program for the Southeastern region of the United States that serves as a blueprint for healthy, comfortable homes that reduce utility bills and protect the environment. Any size and type of home can be certified EarthCraft House by following the technical guidelines in the program. The guidelines are flexible enough to allow for a variety of approaches to environmental construction. The program was created in 1999 as a partnership between the Greater Atlanta Home Builders Association and Southface Energy Institute, and is available in many different cities in the Southeast. Please contact an EarthCraft House staff member for availability in your area.

The technical guidelines in this book apply to all new construction in the EarthCraft House program, including single-family homes, duplexes, townhomes, and low-rise apartments and condominiums. These guidelines must be used in conjunction with the appropriate EarthCraft House Worksheet. Available worksheets can be obtained from the program website or at an EarthCraft House training. Please note that there are different worksheets for single family and multi-family housing, as well as different worksheets for different geographic areas in the Southeast.

In order to join the EarthCraft House program, the builder of the home must attend a one-day training. This training includes an overview of program requirements and detailed discussions about practical techniques for improving the energy efficiency, durability, comfort, air quality, and environmental sustainability of homes. For a list of upcoming trainings, please visit the EarthCraft House Virginia website.

In order to participate in the EarthCraft Multifamily program, the development team must conduct a charrette with EarthCraft Virginia staff specific to the project pursuing certification. This charrette will allow program specifics to be discussed and a strategy for certification to be agreed upon by all stakeholders involved in the project.

As part of the EarthCraft House certification process, the builder must complete the EarthCraft House worksheet to show that the home will score enough points to qualify, and every EarthCraft House is inspected and tested by an independent third-party inspector approved by EarthCraft House Virginia.

For technical assistance or scheduling information please contact:

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