

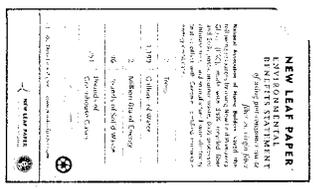
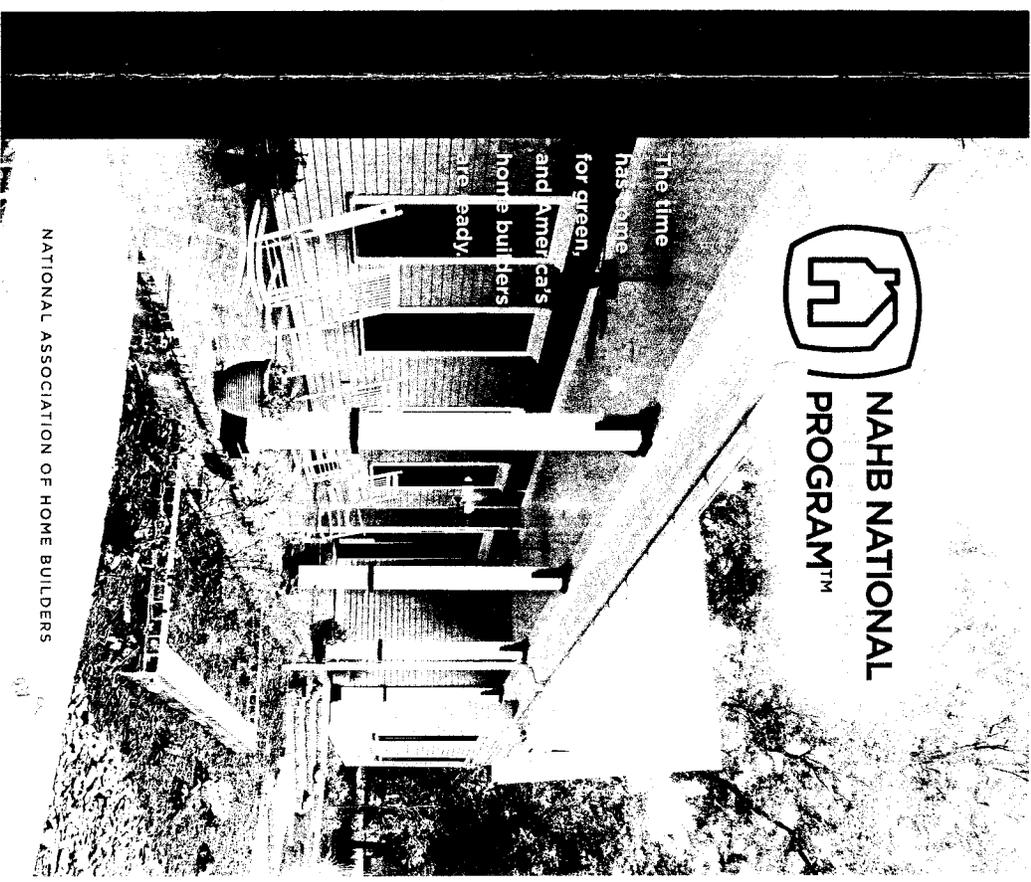
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A HOME BUILT TO THE NATIONAL GREEN BUILDING STANDARD™:

- Over time, these savings can really add up. For example, a Silver-rated home saves 35%-50% more energy than homes built to the latest energy codes (the IECC 2006).
- The systems used within the home work efficiently and effectively together, resulting in less upkeep and maintenance chores.
- Homes that are well ventilated allow for proper air exchange, and low-emitting products like low- or no-VOC paints reduce health risks from off-gassing.
- Decreased energy and water consumption and increased renewable, recycled, and other efficient building products all reduce the impact on our resources.

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 1-800-368-5242
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NAHB NATIONAL PROGRAM™

The time has come for green, and America's home builders are ready.

NATIONAL ASSOCIATION OF HOME BUILDERS



For more than 30 years, members of the National Association of Home Builders have worked to make homes more energy- and resource efficient. As builders pioneered innovative construction methods and as manufacturers introduced efficient new products, a quiet revolution began to unfold. The revolution came to be known as green building. The NAHB National Green Building Program now provides home buyers and home owners with more efficient, more durable and more authentically green, new and remodeled homes. The time has come for green, and America's home builders are ready.

- Green building minimizes environmental impact in every step of the land development and home building process. NAHB green builders are using improved technologies and practices in:
- Energy efficiency, using ENERGY STAR as a benchmark
- Water efficiency
- Resource efficiency
- Let and site development
- Indoor environmental quality
- Global impact
- Home owner education

COMPANING GREEN SYSTEMS

NAHB introduced the NAHB Model Green Home Building Guidelines in 2005 as the pioneer rating system for American home construction. Then, in partnership with the International Code Council,

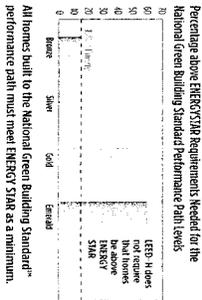
NAHB supported the first-ever ANSI-approved National Green Building Standard™ which will be published in Spring 2008. In comparison with other green rating tools, builders find that these scales set the bar higher in each category—



That is, the Guidelines and Standard require more points proportionally in each category than LEED for Homes.

ENERGY STAR AND THE NATIONAL GREEN BUILDING STANDARD

More than 3,500 home builders have constructed more than 750,000 homes earning the ENERGY STAR, the voluntary energy efficiency label from the U.S. Environmental Protection Agency and U.S. Department of Energy. That number should rise to more than two million by the end of the decade. Homes achieving ENERGY STAR use substantially less energy than other homes for heating and cooling, delivering \$200 to \$400 in annual savings to the consumer.



All homes built to the National Green Building Standard™ performance path must meet ENERGY STAR as a minimum.

GREEN BUILDING PROGRAMS ARE BECOMING AFFORDABLE

Every time the price of a home goes up by a thousand dollars, 217,000 potential home buyers are priced out of the market. Increasing construction costs worry everyone who is concerned about affordability.

Policy-makers must strike the right balance between our need to preserve the environment with our growing need for affordable, workforce housing. It's also critical that additional costs associated with green

building pay for construction, not paperwork. Figures from an ongoing study of different green rating systems demonstrate that builders and home buyers can go green at price points appropriate to their means.

Preliminary Comparison of Additional Construction Costs for Green Rating Compliance

Rating System	Green Building Guidelines	National Green Building Standard	LEED for Homes	Green Building Guidelines	National Green Building Standard	LEED for Homes
Green Building Guidelines	\$1,900 - \$2,700	\$2,000 - \$3,000	\$6,400 - 11,600	\$4,000 - \$6,000	\$4,700 - \$6,000	\$8,800 - \$13,800
National Green Building Standard				\$8,200 - \$11,000	\$11,500 - \$15,600	\$19,300 - \$22,500
LEED for Homes						\$29,800 - \$38,000

*Based on a sample of two model homes in different geographic regions for the three green rating systems. Includes only additional construction compliance costs from a base house of \$191,065-\$172,745, not programmatic costs like registration, certification, and verification.

VOLUNTARY GREEN BUILDING PROGRAMS ARE BECOMING AFFORDABLE

Many state and local governments already are engaging in green initiatives. Additional mandates on new home construction will do little to further these efforts. On the contrary, mandating energy code increases or green rating systems can conflict with successful existing programs and also make housing less affordable.

The NAHB, the International Code Council and the American National Standards Institute (ANSI) are presenting a proposal to create the first and only consensus standard for green residential construction. The National Green Building Standard™ will provide the highest level of credibility by virtue of the rigor, transparency, and public input required for ANSI approval. A balanced committee of government officials and industry professionals wrote and vetted the criteria, ensuring its integrity from any bias.

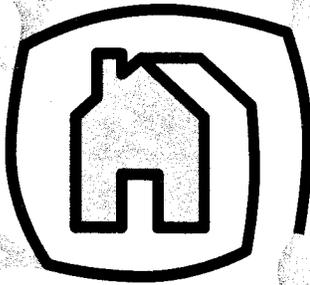
The new standard will be one of many American National Standards™ referred to in the building code.

Find your local green building program at www.nahb.org/green

1996 passage of the National Technology Transfer and Advancement Act. The law requires federal agencies to reuse their efforts in ANSI voluntary consensus standards and conforming assessments systems. Other green rating systems, such as the LEED systems, do not meet these



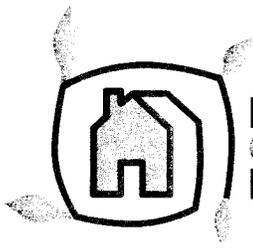
EXHIBIT 9
DATE 2-5-2009
HB HB 361



NAHB NATIONAL GREEN BUILDING PROGRAM™

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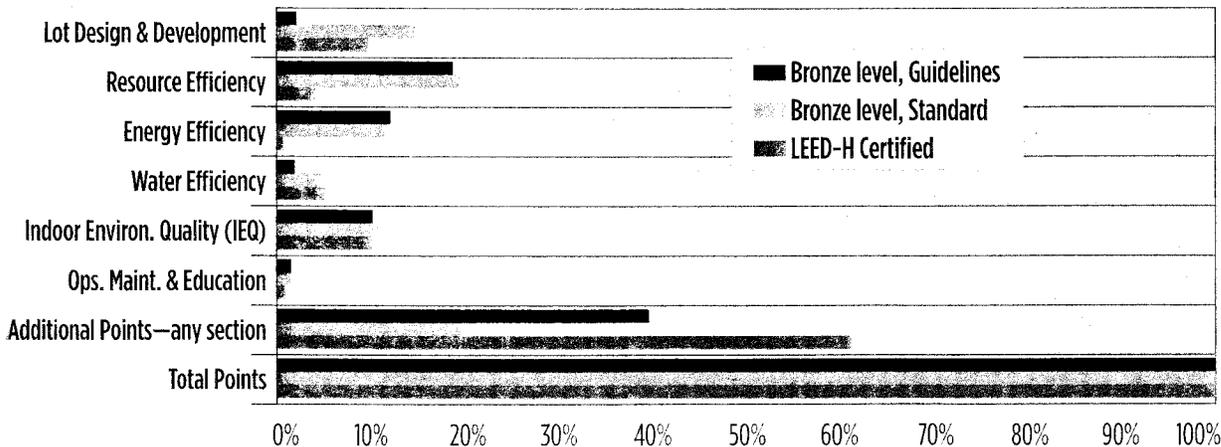
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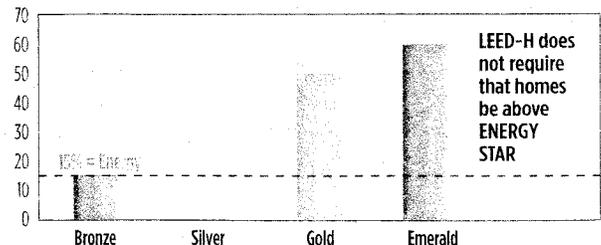


scales set the bar higher in each category—that is, the **Guidelines and Standard require more points proportionally in each category than LEED for Homes.**

ENERGY STAR AND THE NATIONAL GREEN BUILDING STANDARD

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Percentage above ENERGY STAR Requirements Needed for the National Green Building Standard Performance Path Levels



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THE COUNTRY NEEDS AFFORDABLE GREEN HOMES

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Rating System	Bronze/Silver	Gold	Platinum	Emerald/Platinum
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LEED for Homes	\$6,400 - 11,000	\$8,800 - \$13,800	\$19,300 - \$22,500	\$29,800 - \$38,000

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VOLUNTARY GREEN PROGRAMS ARE EFFECTIVE

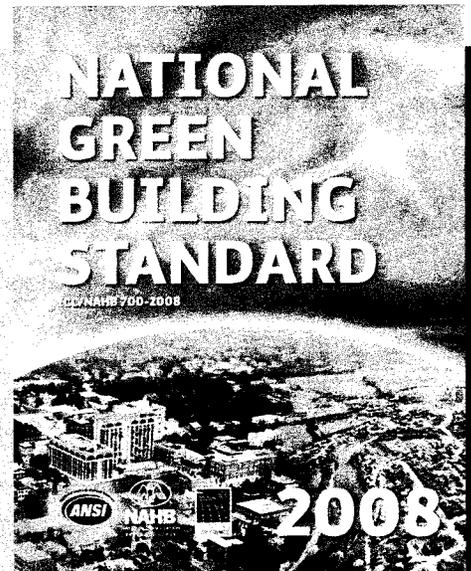
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NEW LEAF PAPER®

ENVIRONMENTAL BENEFITS STATEMENT *of using post-consumer waste fiber vs. virgin fiber*

National Association of Home Builders saved the following resources by using New Leaf Primavera Glass, (FSC), made with 80% recycled fiber and 50% post-consumer waste, 80% processed chlorine free, and manufactured with electricity that is offset with Green-e® certified renewable energy certificates.

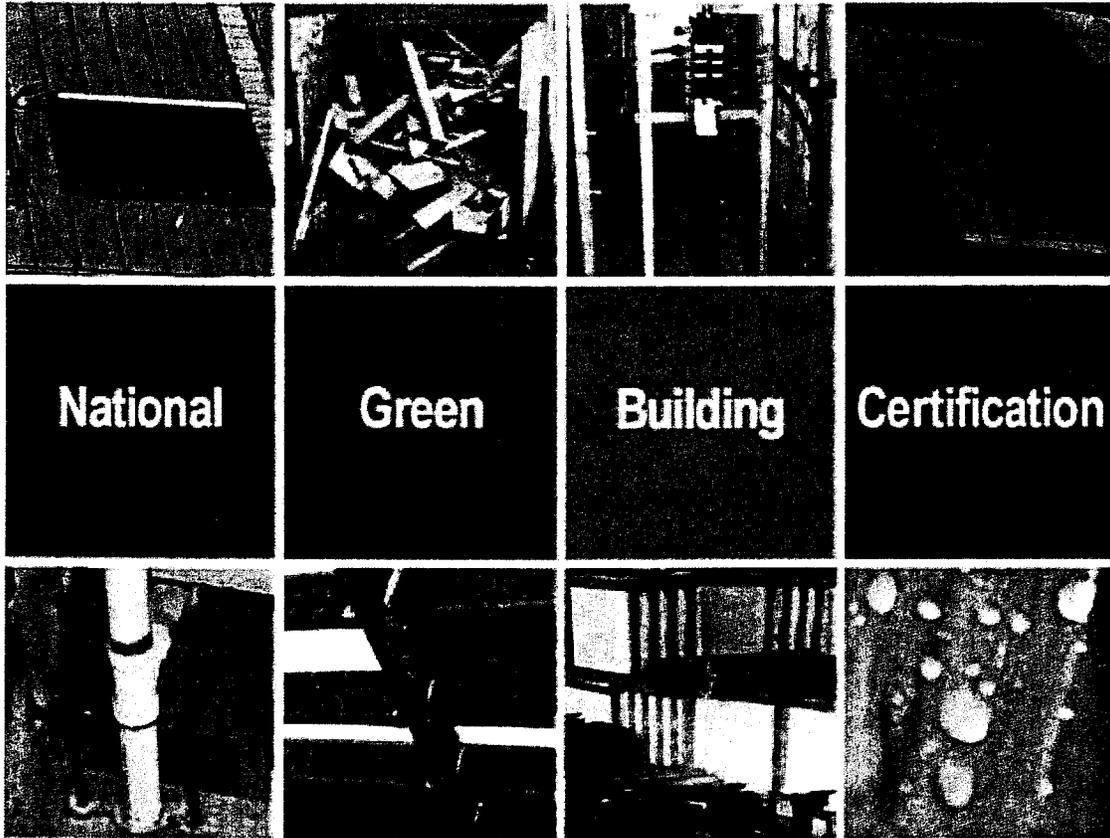
2	Trees
1,199	Gallons of Water
2	Million Btu of Energy
96	Pounds of Solid Waste
251	Pounds of Greenhouse Gases

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Verifier's Resource Guide

based on

NAHB Model Green Home Building Guidelines

GENERAL INSTRUCTIONS

This Resource Guide provides clear guidance on what to look for and when to award points. If there is any uncertainty about a particular line item, do not award the points but describe the situation in the "Notes Section". This is best done by inserting a sequential number in the "Notes" cell of the line item and then using the number to label a more descriptive note in the "Notes Section" at the end of the report. **(A note of explanation is always required when points are claimed but not awarded.)** Add an extra page if needed.

The verification process is intended to confirm that the Builder has met the intent of the requirement. Points should not be awarded if it appears that the Builder is merely trying to manipulate the system to earn points. Use your best judgment and include notes on the Verification Report.

When a specific type of analysis is requested, an equivalent analysis is also acceptable. When at least 80% of something is required the intent is that it was implemented in the majority of the house as best as possible. It is not expected that you will spend time calculating to see what the percentage is; use your best judgment without calculating.

When the instructions say:

"Verify" – Review the documentation, (and inspect when applicable) to determine compliance.

"Inspect" – Inspect the house and confirm compliance via observation.

After verifying or inspecting, enter the points awarded in the "Points Awarded" column for each item. Enter "0" if the points have not been earned and enter note of explanation. Only award points when you have personally verified them; in some instances this means that you personally verify that another third party has provided a document consistent with the documentation/instructions in this guide.

Sections 3.3.6.1 and 3.3.6.2 allow for sampling of 15% of similar homes rather than 100% inspection. If the Builder claims that the particular house is not one to be "sampled" and, therefore, the points should be awarded without the review, inspection or testing, be sure to include in the Notes Section the date and address provided by the builder of the last house that was sampled (reviewed, inspected, and/or tested).

INSPECTION REQUIREMENTS

Two inspections are generally required:

- 1) Before drywall but after complete framing, rough plumbing, electrical, HVAC, and insulation installation; and
- 2) After installation of all flooring, appliances, HVAC equipment, plumbing & electrical fixtures, and landscaping but before closing.

In certain situations the builder may be able to get enough points for certification without the verifier completing a rough inspection because the builder can provide other third party documentation as listed in the "Documentation..." section of the guide. This is most likely to occur when the builder is using a 3rd party energy rater since the energy rater is doing a rough inspection as part of the rating. However, other than the points available to be awarded based on documentation as listed in this guide, only award points for items that you personally inspect. For example, a 3rd party review for 3.1.3 and 3.2.1 will allow the verifier to say the mandatory requirement of 3.1.3 has been met and the points for 3.2.1 can be awarded. However, if a builder claims points for using dimensions and layouts maximizing use of resources per 2.1.3 and the Verifier can not see the stud layout as built at the final inspection, then these points are not to be awarded. If the builder has a 3rd party document that is not specified in the "Documentation..." section of the guide, that information can not be used for line items where this guide says "inspect" or "verify construction". If the builder elects not to have the verifier complete the rough inspection, the verifier should note on the Verification Report that all points are awarded based on the observations and document review at the final inspection only.

Each inspection is to document the condition of the house as built at the time of the inspection. Please do not take into account what the builder or a trade contractor says they will do in the future or what the homeowner may do in the future. The house is certified "as originally built".

A few items require partial inspection at the rough stage and part at the final stage. When this is the case, comment in the Notes Section at rough and award points at final. The inspection is to be done without climbing on roofs, ladders, in attics, or uncovering walls, foundation, etc. Follow all builder safety instructions.

Begin each inspection by confirming the address/description of the house on the Verification Report with the address/description of the house to be inspected. Also take a digital photo of the front of the home being inspected. Fill in the inspection date and start time on the Verification Report. Conduct the inspection with guidance from this Resources Guide and record the points awarded on the Verification Report. If there are questions please call 877-NAHB-GRN between 8:30 AM and 6:00 PM Eastern Time.

The Builder is expected to make certain documentation (listed in this Guide) available to the Verifier. This is typically done onsite during the inspection, but it can also be arranged for any mutually agreeable time.

NOTIFY THE NAHB RESEARCH CENTER OF SCHEDULED INSPECTIONS

The Builder schedules both the rough and final house inspections with the Verifier. Once each inspection date has been scheduled, **the Verifier must promptly notify the NAHB Research Center of the inspection date, address, and inspection type.** The Verifier will also provide the Builder's name and contact information so national certification program staff can contact the Builder. This is done for both the rough and final inspection via email initiated from the "Notify the NAHB Research Center" link at http://www.nahbgreen.org/WholsGreen/verifiers_process.aspx. The purpose of this notification is to start the certification process and allow for random spot checks by the Research Center on the verification process in order to ensure accuracy and consistency. Failure to promptly notify the Research Center of the schedule will jeopardize the issuing of the certificate for the house as well as continued participation as an Accredited Verifier.

SCHEDULING THE INITIAL INSPECTION

The green certification process begins with the scheduling of the initial site inspection. When the NAHB Research Center is advised of the initial inspection, this is the first notice that a home has entered the green certification pipeline. National green certification program staff will contact the builder and get ready to issue the green certification for the home once the verifier confirms that it has been earned.

Prior to the scheduled initial inspection, the builder will email or fax to the Verifier the Designer's Report (which the builder can export or print from the Scoring Tool) for the house to be certified. The Verifier should download a current copy of the Verification Report from <http://www.nahbgreen.org/WholsGreen/verifiers.aspx>. Prior to arriving at the initial inspection, the Verifier should enter all the points (that will be verified at both the rough and final inspections) claimed by the builder from the Designer's Report into the Verification Report. Be sure to also fill in the heading information on each page of the Verification Report. Double check the Summary Section to be sure that the points claimed in each section match the Designer's Report summary. Print a copy of this Verification Report to use during the inspections.

ROUGH INSPECTION

At the beginning of the rough inspection, confirm with the builder that the points claimed on the Verification Report and the desired certification level is as intended by the builder. The Verifier will use the Verification Report to record the points that have been awarded based on the inspections.

At the end of the Rough Inspection the Verifier should fill in the time completed and the Verifier and the Builder should sign off on the rough inspection. Inform the builder that your next step is to convey by e-mail or fax the results of the rough inspection to the NAHB Research Center. The Verifier should also inform the builder that a "builder agreement" will be sent from the Research Center if an agreement is not already on file. The Verifier should provide the Builder with a copy of the Verification Report after the Rough Inspection but the Verifier retains the original signed Verification Report until the Final Inspection has been completed. The Verifier must fax or scan/email ASAP the Verification Report, the digital photo of the home inspected, and

the Designer's Report after the Rough Inspection to the Research Center (301-430-6184 Attn: Green Home Certification Coordinator or VerificationReport@nahbrc.org) .

FINAL INSPECTION

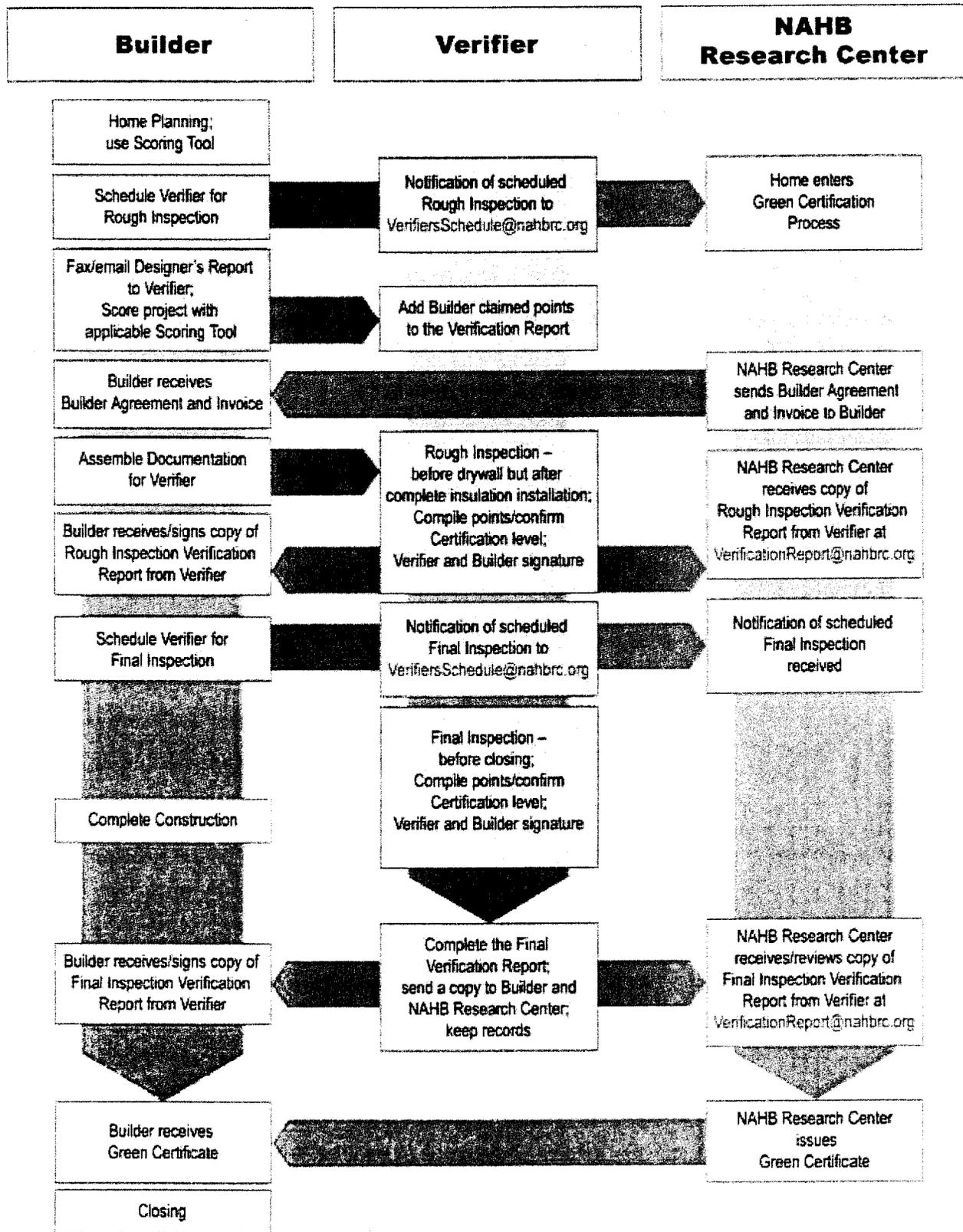
At the end of the Final Inspection the Verifier should fill in the time completed and the Verifier and the Builder should sign off on the Final Inspection. The Verifier should provide the Builder with a copy of the Verification Report after the Final Inspection but the Verifier retains the original signed Verification Report. Secure the builder's permission (as noted in the builder's signature line that you have permission to forward the Verification Report to the NAHB Research Center for issuing the certificate). The Verifier must fax or scan/email ASAP the Verification Report and the digital photo of the home inspected after the Final Inspection to the Research Center (301-430-6184 Attn: Green Home Certification Coordinator or VerificationReport@nahbrc.org). **This is time critical as most builders need the certificate at closing.**

The Builder is required to keep all the documentation provided as a part of the inspection process. The Verifier is required to keep a copy of the Verification Report (both after rough and final), the digital photos, and any information related to uncertain items as noted, as well as supporting information relative to points claimed by the builder but denied by the Verifier. The Verifier may keep any other records they want provided it is acceptable to the Builder. These records may be kept as hardcopies or electronically.

NAHB RESEARCH CENTER REVIEW OF VERIFICATION REPORTS

The NAHB Research Center will review all rough and final verification reports and may contact a verifier for clarification on particular items. Please respond promptly to any follow-up so that you will not delay the processing of the report and the certificate.

Verification Process Flowchart



NATIONAL GREEN BUILDING PROGRAM VERIFIER'S RESOURCE GUIDE

Requirement	
Documentation to be Available to Verifier	Instructions to Verifier
LOT DESIGN, PREPARATION, AND DEVELOPMENT	
1.1.1	<p>Avoid Environmentally Sensitive areas; identified through site foot-printing process.</p> <p>Site plan showing that no environmentally sensitive areas are present or impacted. An environmentally sensitive area is any area within wetlands as defined by federal, state, or local regulations; area of steep slopes; "Prime Farmland" as defined by the U.S. Department of Agriculture; areas of "critical habitat" for any federal or state threatened or endangered species.</p>
	<p>Verify documentation shows no sensitive area or if any sensitive area is present on the site that the sensitive area is not impacted by the development/construction.</p>
1.1.2	<p>Choose an infill site.</p> <p>None.</p>
	<p>Verify infill site (not applicable in new development). Surrounding neighborhood must be at least five years old, or the lot is a teardown. Can be visually verified onsite at rough or finish inspection.</p>
1.1.3	<p>Choose a Greyfield site.</p> <p>Evidence that the site was previously built for non-residential, non-agricultural uses and that at least 50% of the site was previously covered by impervious surfaces.</p>
	<p>Verify that site was previously built for non-residential, non-agricultural uses and that at least 50% of the site was previously covered by impervious surfaces. Onsite inspection may also provide visual evidence.</p>
1.1.4	<p>Choose an EPA-recognized Brownfield.</p> <p>Government letter or map identification that the lot is within an officially designated Brownfield.</p>
	<p>Verify documentation confirms Brownfield.</p>
1.2.1	<p>Establish a knowledgeable team.</p> <p>A. Identify team member roles and how they relate to various phases.</p> <p>B. Create a written mission statement that includes the project's goals and objectives.</p> <p>Project mission statement, goals, and specific team member roles.</p>
	<p>Verify mission statement includes goals and team member roles. When applicable, it must be subdivision specific.</p>
1.3	<p>Design the site: Minimize environmental impacts; protect, restore, and enhance the natural features and environmental quality of the site. Points for each guideline are only rewarded upon implementation.</p>
1.3.1	<p>Conserve natural resources.</p> <p>A. Complete a natural resources inventory used to drive/create the site plan.</p> <p>B. Create a protection and maintenance plan for priority natural resources/area during construction.</p> <p>C. Participate in a natural resources conservation program (Building with Trees).</p> <p>D. Provide basic training in tree and other natural resource protection to onsite supervisor.</p> <ul style="list-style-type: none"> • Natural Resources inventory before and after the development of the site. • Development management plan that addresses the issues in Section 1.4.1, 1.4.2 and 1.4.3. • Evidence of builder's participation in a natural resources conservation program. • Details of the company's site supervisor training program that addresses conservation, green development, and overall management of compliance with the company's development management plan. <p>All documentation must be signed by builder's rep or industry professional.</p>
	<p>All 4 items must be addressed. A qualified professional is not required for all sites or for all items. A qualified professional is required for large subdivisions of 25 or more lots or, subdivisions with multiple builders. Lots without natural resources are not eligible for points for 1.3.1. Verify documentation shows compliance/implementation and that it addresses A, B, C, and D.</p>
1.3.2	<p>Site the home and other built features to optimize solar resource.</p> <p>Information on how the siting of this house uses the guidelines listed in 3.3.5.1 A & B.</p>
	<p>Verify documentation was prepared by a competent professional. If either 10 points in Sec. 3.3.5.1 or 10 points in 3.3.5.1B are approved, these 6 points are ok as well. If the orientation of the house and windows meets 3.3.5.1A, then points are ok here, even without the glazing requirement.</p>

NATIONAL GREEN BUILDING PROGRAM VERIFIER'S RESOURCE GUIDE

Requirement		
	Documentation to be Available to Verifier	Instructions to Verifier
1.3.3	<p>Minimize slope disturbance.</p> <p>A. Limit development footprint on steep slopes (slopes greater than or equal to 25%).</p> <p>B. Complete a hydrological/soil stability study for steep slopes; use this study to guide the design of all structures onsite.</p> <p>C. Align road or extended driveway with natural topography to minimize its grade and reduce cut and fill.</p> <p>D. Reduce long-term erosion effects through the design and implementation of terracing, retaining walls, landscaping, and re-stabilization techniques.</p>	
	Site plan with existing and proposed contour lines. Identify slopes in excess of 25%. The hydrological/soil stability study. Provide report from licensed professional stating intent of the requirement has been met.	Verify documentation shows compliance. No points are awarded if there are no steep slopes on the lot. (slopes greater than or equal to 25)
1.3.4	<p>Minimize soil disturbance and erosion.</p> <p>A. Schedule construction activities to minimize time that soil is exposed.</p> <p>B. Use alternative means to install utilities, such as tunneling instead of trenching, use of smaller equipment, shared trenches or easements, and placement of utilities under streets instead of yards.</p> <p>C. Demarcate limits of clearing and grading.</p>	
	Details of how construction schedule minimizes exposed soils. List all approaches used to minimize utility trenching. Delineate no cut/no clear lines on site plan.	Verify plan addresses each of the items A, B, and C listed above.
1.3.5	<p>Manage storm water using low impact development.</p> <p>A. Preserve and utilize natural water and drainage features.</p> <p>B. Develop/implement storm water management plans that minimize concentrated flow; seek to mimic natural hydrology.</p> <p>C. Minimize impervious surfaces and use permeable materials for driveways, parking areas, walkways and patios.</p>	
	Site plan showing natural water and drainage features. Storm water management plan. Calculation of per cent of lot that is a permeable surface after all construction is complete.	Verify documentation and observe that a maximum of 50% of driveways, parking areas, patios and walkways are impervious.
1.3.6	<p>Devise landscape plans to limit water and energy demand while preserving or enhancing the natural environment.</p> <p>A. Formulate a plan to restore or enhance natural vegetation that is cleared during development. Within this plan, phase landscaping to ensure denuded areas are quickly vegetated.</p> <p>B. Select turf grass and other vegetation that are natives or regionally appropriate species.</p> <p>C. Limit turf areas of landscaped area, selecting native and regionally appropriate trees and vegetation in a way that complements the natural setting.</p> <p>D. Group plants with similar watering needs (hydrozoning).</p> <p>E. Specify planting of trees to increase site shading and moderate temperatures.</p> <p>F. Design vegetative wind breaks or channels as appropriate to local conditions.</p> <p>G. Require onsite tree trimmings or waste of regionally appropriate trees to be used as protective mulch during construction or as a base for walking trails.</p> <p>H. Establish an integrated pest management plan to minimize chemical use of pesticides and fertilizers.</p>	
	Landscape plan showing phased stabilization of lot; locations of native or regionally appropriate turf and plants; how plants are grouped by watering needs; trees specifically selected for site shading, temperature moderation, or wind breaks; areas where tree trimmings or waste is used as protective mulch during construction or as a base for walking trails; and the integrated pest management plan. List of locally approved plants.	Verify landscape plan is included with all the above applicable elements and is being implemented.
1.3.7	<p>Maintain wildlife habitat.</p>	
	Details of how wildlife habitat is to be protected/maintained on this site.	Verify documentation shows compliance during construction and inspect at finish.
1.4.1	<p>Provide onsite supervision and coordination during clearing, grading, trenching, and paving, to ensure targeted green development practices are implemented.</p>	
	None.	Interview builder rep to assess on-site supervision activities and implementation of erosion fencing or flagged lines to protect unexcavated areas; tunneling or common trenching; temporary soil stabilization plans, such as temp grass, straw, or erosion control matting; and a construction schedule that limits soil exposure to less than the 14-day EPA recommended timeframe.

NATIONAL GREEN BUILDING PROGRAM VERIFIER'S RESOURCE GUIDE

Requirement		
	Documentation to be Available to Verifier	Instructions to Verifier
1.4.2	Conserve existing onsite vegetation. A. Minimize disturbance of and damage to trees and other vegetation designated for protection through installation of fencing and avoidance of trenching, significant changes in grade, and compaction of soil and critical root zones. B. Prepare designated existing trees and vegetation for the impact of construction by pruning, root pruning, fertilizing, and watering.	
	Evidence such as photos that steps were taken to protect trees and roots during construction. Provide evidence, such as arborist's invoices, that remaining trees have been cared for.	Verify evidence such as an arborist's invoice for tree care and physical construction barriers to protect trees and roots.
1.4.3	Minimize onsite soil disturbance and erosion. A. Demarcate limits of clearing & grading. B. Create "no disturbance zones" on the site. C. Install and maintain sediment and erosion controls. D. Stockpile and cover. E. Reduce soil compaction with mulch, wood chips or plywood. F. Stabilize disturbed areas within EPA-recommended 14-day period. G. Improve soil with organic amendments and mulch	
	Construction schedule to support 14-day EPA target.	Inspect for evidence to support ALL of items A-G as applicable.
1.5.1	Share driveways or parking.	
	Site plan showing shared driveway or parking.	Inspect for shared driveway or parking at final inspection.
RESOURCE EFFICIENCY		
2.1.1.	Create an efficient home floor plan that maintains home's functionality.	
	Architectural plans indicating the number of bedrooms and the finished area of the home.	Verify points based on square footage size and # of bedrooms per the attached table to support claimed points.
2.1.2 Max=8 Points	Use advanced framing techniques: reduce building materials and maintain structural integrity	
	Listing of the advanced framing items that are included on the architectural plans.	Inspect for the at least 80% usage of at least 2 of the following advanced framing options in the house. <ul style="list-style-type: none"> • 19.2" or 24" on-center floor framing • 19.2" or 24" on-center bearing wall framing • 24" on-center roof framing • 24" on-center interior partition framing • Single top plate walls • Right sized or insulated headers (where required) • Eliminate headers in non-bearing walls • Doubling rim joist in lieu of header (2x6 or deeper wall framing) • Ladder blocking at interior wall-to-exterior wall intersections • Two stud corner framing Award 4 points for any 2 items and 1 additional point for each additional item.
2.1.3	Use building layouts that maximize resources and minimize material cuts.	
	Provide plans showing modular dimension concepts.	Verify plans & construction show all the modular dimension concepts listed below for at least 80% of construction: <ul style="list-style-type: none"> ▪ one side of 1 door or window at 16 or 24 o.c. stud position ▪ modular window sizes used between studs w/o additional framing ▪ building dimension parallel to primary joists evenly divisible by 4' ▪ building dimension perpendicular to primary joists evenly divisible by 4'
2.1.4	Create a detailed framing plan and detailed material takeoffs.	
	Detailed framing plan. Framing material list and on-site cut list for all framing and sheathing material.	Verify documentation includes detailed framing plan, material list, and on-site cut list.
2.1.5	Use materials requiring no additional finish resources to complete application onsite.	
	List of no-finish/pre-finish materials used in the house. Product literature if needed to support no-finish/pre-finish claim.	Inspect for use of at least one pre/no-finish material. Award 4 points if pre/no-finish materials are utilized in 80% of the construction for one or more categories of material. Examples of acceptable materials include: exposed interior concrete; pre-finished siding, shutters, exterior trim materials, hardwood floor, wall paneling, and acoustic ceiling tiles. Kitchen cabinets do not qualify. 4 points maximum.

NATIONAL GREEN BUILDING PROGRAM VERIFIER'S RESOURCE GUIDE

Requirement		
	Documentation to be Available to Verifier	Instructions to Verifier
2.1.6	Use pre-cut or pre-assembled building systems or methods as outlined below.	
	<p>A. Provide pre-cut joist or pre-manufactured truss floor or roof framing. (3 points for each)</p> <p>B. Provide panelized wall framing system. (6 points)</p> <p>C. Provide panelized roof framing system. (6 points)</p> <p>D. Provide modular construction for entire house. (7 points)</p>	<p>Inspect at rough stage and award points if at least 80% of the floor or roof system is pre-cut and/or shop made. Inspect house at rough and award points if at least 80% of the wall framing is panelized. Look for the double stud at points of panel intersections. Inspect house at rough and award points if at least 80% of the roof framing is panelized. Inspect at rough to verify modular units were delivered and used. At least 80% of the volume should be from modules. Possible 6 points for A. Either B or D available for max of 7 points. Either C or D points available but not both. Choosing D excludes A, B, and C.</p>
2.1.7	Use a frost-protected shallow foundation.	
	Plans showing frost protected shallow foundation details.	Verify with field manager that FPSF was used on at least 80% of foundation. Points not available with full in-ground basement. FPSF footings do not extend below local frost depth with this method.
2.2.1	Provide covered entry (awning, covered porch) at exterior doors.	
	None.	Inspect all exterior entry points for cover by roof or awning.
2.2.2	Use recommended-sized roof overhangs for the climate.	
	None.	Inspect all eave and rake for overhangs of 12", 18", or 24" per attached Climate Index Map. Gutters can be counted in the overhang dimension.
2.2.3	Install perimeter drain for all basement footings sloped to discharge to daylight, sump pit, or dry well.	
	None.	Inspect for daylight discharge of gravity perimeter drain or pumped discharge from basement sump or discharge to dry well.
2.2.4	Install drip edge at all eave and gable roof edges.	
	None.	Inspect for installation of drip edge on all eave and gable roof edges.
2.2.5	Install gutter and downspout system to divert water 5' away from foundation.	
	None.	Inspect for downspout discharge at a minimum of 5' from house wall.
2.2.6	Divert surface water from all sides of building.	
	None.	Inspect for positive drainage slope of 6" in 10' from all sides of building, or pipe water a minimum of 10' from the foundation.
2.2.7	Install continuous and physical foundation termite barrier in areas locally problematic.	
	None	Inspect for installation of continuous physical termite barrier. Points not available if termites are not a local issue. Typically this is a continuous or overlapped metal or plastic barrier below all framing members.
2.2.8	Use termite-resistant materials for walls, floor joists, trusses, exterior decks, etc	
	None	Inspect for use of steel, masonry, or treated lumber for all basement, 1st floor and exterior construction. Points not available if termites are not a local issue.
2.2.9	Provide a water-resistive barrier or drainage plain behind the exterior veneer or exterior siding.	
	Plans showing typical exterior wall detail with WRB or drainage plane behind exterior veneer or siding.	Inspect for use of WRB or drainage plane on all exterior surfaces of the envelope with a veneer finish. Section 3.3.6.1 may inspect this WRB installation as well. Points in both sections ok. EIFS is a veneer and conventional stucco directly on masonry is not.
2.2.10	Install ice flashing at roof's edge.	
	Plans showing typical eave edge detail with ice flashing beyond code-minimum requirements.	Inspect, when possible, for ice flashing installation at all eaves. If roofing is such that ice flashing is not visible accept plans as verification. Ice flashing at roof's edge must extend at least 24" past the inside wall surface.
2.2.11	Install enhanced foundation waterproofing.	
	Architectural plan detail showing enhanced waterproofing, not just code minimum damp-proofing.	Verify foundation waterproofing, not just damp-proofing, by field manager interview. Look for drainage panels or membrane solutions on the plans.
2.2.12	Employ and show on plans all flashing details.	
	Architectural plans showing flashing details as they apply to this design.	Verify use of flashing details per plans at: <ul style="list-style-type: none"> ▪ All windows & doors ▪ Valleys ▪ Deck/house juncture

NATIONAL GREEN BUILDING PROGRAM VERIFIER'S RESOURCE GUIDE

Requirement		
Documentation to be Available to Verifier	Instructions to Verifier	
		<ul style="list-style-type: none"> ▪ Roof/wall junctures, chimney step flashing ▪ Drip cap above W & D ▪ Section 3.3.6.1 may inspect these flashing details as well. Points in both OK
2.3.1	Disassemble existing buildings instead of demolishing.	
	Copy of invoice from company that performed the "disassembly" or provide photos of disassembly process.	Verify via invoice or photos disassembly was done.
2.3.2	Reuse salvaged materials, where possible.	
	List of the type and quantity of salvaged materials used on this home. Demonstrate that the installed cost of the salvaged materials to be >1% of total construction costs.	Verify that the installed cost of salvaged materials is > 1% of construction costs.
2.3.3	Dedicate and provide onsite bins and/or space to facilitate sorting/reuse of scrap materials.	
	None.	Inspect for jobsite practice of dedicating and providing onsite bins/space for sorting of scrap materials and is consistent with the C&D. Points ok if effort is made to provide clearly labeled bins.
2.4.1	Use recycled-content building materials.	
	List of products used in this home with at least 10% recycled (either post-consumer or post industrial) content and provide manufacturers literature or certificate to demonstrate recycle content.	Inspect for listed recycled content materials. Recycled content materials must contain at least 10% recycled content and must be used in 80% of the class of material to qualify for points. Verify 3 points for two recycled items, 1 point each for the next 3 recycled items. Maximum total points for 2.4.1 is 6 points.
2.5.1	Develop and implement a construction and demolition waste management plan and post at the job site.	
	Posted C & D waste management plan and evidence that at least 50% of waste materials are being recycled or salvaged.	Inspect that the C&D plan is posted on-site and being implemented to meet 50% goal. Typical evidence would be receipts for landfill with recycling weights.
2.5.2	Conduct onsite recycling efforts, e.g., use grinder and apply materials onsite, thus reducing transportation-related costs.	
	No documentation required but builder rep shall point out on-site recycling efforts.	Inspect for on-site recycling efforts such as grinding waste and re-using it on-site.
2.5.3	Recycle construction waste offsite, e.g., wood, cardboard, metals, drywall, plastics, asphalt roofing shingles, concrete, block, other.	
Max=12 points	Copy of agreement with and pick-up tickets by recycling contractor, list of materials sent to recycler.	Verify that all of each type of recycled material from the builder's list of construction and demolition materials has been sent to an off-site recycling location. Approve points as follows: 2 different materials equals 6 points, each additional material gets 2 more points.
2.6.1	Use materials manufactured from renewable resources or agricultural byproducts, such as soy-based insulation, bamboo, or wood based products	
Max=5 points	List the products, amounts, and provide manufacturers' literature or certificate documenting materials manufactured from renewable resources used on this site.	To qualify for points, the usage must be at least 50% of that class of materials. Verify 3 points for the any 2 materials, up to 2 more points, 1 for each additional material. (Note typical construction framing dimensional lumber is produced from a renewable resource.) Materials verified for this builder include: <ul style="list-style-type: none"> ▪ Products made from plants (i.e. natural fiber) ▪ 2x dimensional materials ▪ OSB or plywood sheathing ▪ Agrifiber products ▪ Low formaldehyde emitting MDF or particleboard ▪ Other (list in notes) Points ok here and in 2.7.1.
2.6.2	Use certified wood for wood and wood-based materials from certified sources.	
	List of major products used that are "certified" from sustainable sources and copies of 3rd party certifications. Acceptable 3 rd parties include Sustainable Forestry Initiative, American Tree Farm System, CAN/CSA Z809 accredited systems, Forest Stewardship Council, and Program for the Endorsement of Forest Certification Systems.	Verify 3rd party certification of wood products sources and verify use of certified products on this site. Approve 4 points for any certified major product provided at least 80% of that type of material used in the house is certified. Maximum of 4 points available.
2.7.1	Use products that contain fewer resources to meet same end-use as traditional products.	
	List the products used and justification that are claimed to use fewer resources.	Verify use of products. Two different products are required for the 3 points. For example: <ul style="list-style-type: none"> ▪ I-joists in lieu of 2x joists

NATIONAL GREEN BUILDING PROGRAM VERIFIER'S RESOURCE GUIDE

	Requirement	
	Documentation to be Available to Verifier	Instructions to Verifier
3.3.1 Max=16 points	Building envelope PRESCRIPTIVE PATH	
	(PP) A. Increase effective R-value of building envelope using advanced framing techniques, continuous insulation, and/or integrated structural insulating system. Builder must choose between SIPS, ICFS, or Advance Framing Techniques for max of 8 points. Continuous wall insulation (4 points) not available for either SIPS or ICFS. Continuous insulation on cathedral ceiling not available if ridge beam is used. Measures may include but are not limited to:	
	• SIPS*	
	Plans or details of the SIPS wall system and where in the home it will be used.	Inspect for SIPS system usage per plans for at least 75% of walls. (NOT AVAILABLE IF POINTS AWARDED IN 3.2.1)
	• ICFS*	
	Plans or details of the ICFS wall system and where in the home it will be used.	Inspect for ICFS system usage per plans for at least 75% of all walls. (NOT AVAILABLE IF POINTS AWARDED IN 3.2.1)
	• Advanced Framing, or Insulated corners /intersections /headers.	
	Plans or details of the advanced framing system and where in the home it will be used. Make sure EnergyStar™ labels are on windows or have documentation that windows are as specified on www.efficientwindows.org .	Inspect for the advanced framing details shown on the plans. (NOT AVAILABLE IF POINTS AWARDED IN 3.2.1)
	• Raised Heel Trusses	
	None.	Inspect for raised heel trusses used in 80% of the home. (NOT AVAILABLE IF POINTS AWARDED IN 3.2.1)
	• Continuous insulation on exterior wall.	
	Plans showing detail of continuous exterior wall insulation detail.	Verify the continuous wall insulation eliminated thermal short circuits. Acceptable examples include AAC block walls; ICFS; SIPS (Unless it was claimed above); block walls with continuous foam sheathing panels. (NOT AVAILABLE IF POINTS AWARDED IN 3.2.1)
• Continuous insulation on cathedral ceiling.		
Plans showing detail of continuous insulation over cathedral ceiling	Verify that insulation (foamed or batt) eliminates thermal short circuits in cathedral ceiling. (NOT AVAILABLE IF POINTS AWARDED IN 3.2.1)	
(PP) B. Incorporate air sealing package to reduce infiltration.		
A statement of which of the 11 measures apply to this house.	Verify ALL that apply to this house are used: <ul style="list-style-type: none"> • Sill sealer under between foundation & sill plate • Air seal band joists • Caulk bottom plate of exterior walls • Air barrier continuity • Caulk/foam all penetrations <div style="float: right;"> <ul style="list-style-type: none"> • Insulate around washer and dryer • block & seal cant floors & knee walls • Caulk/foam HVAC boots • W/S attic hatch & knee wall doors • Type IC housings on recessed lights • Fireplace is sealed combustion </div> (NOT AVAILABLE IF POINTS AWARDED IN 3.2.1)	
(PP) C. Use ENERGY STAR™- rated windows appropriate for local climate.		
None	Check for ENERGY STAR™ labels on 80% of all windows (NOT AVAILABLE IF POINTS AWARDED IN 3.2.1)	
3.3.2	HVAC design, equipment, and installation	
	A. Size, design, and install duct system using ANSI/ACCA Manual D® or equivalent.	
	Duct layout plan and sizing per Manual D.	Verify installation by spot checking that duct layout and sizes match Manual D® results.
	B. Design radiant or hydronic space heating systems using industry approved Guidelines.	
	None for 3.3.2 B. The 3.1.3 documentation will apply.	Verify radiant or hydronic space heating system installation in at least one room. A "bath only" system would earn the points.
	C. Use ANSI/ACCA Manual S® or equivalent to select heating/cooling equipment.	
Include results of Manual S® heating & cooling equipment sizing analysis.	Verify Manual S® sizing results match equipment installed.	
*** Also Award 15 additional points if the house has no ductwork		
D. Verify performance of the heating/cooling system.		

NATIONAL GREEN BUILDING PROGRAM VERIFIER'S RESOURCE GUIDE

	Requirement	
	Documentation to be Available to Verifier	Instructions to Verifier
3.3.2 Cont.	Field checklist showing that each of the 6 performance checks (as applicable to the selected system) have been successfully completed and signed by responsible representative of HVAC contractor.	Verify that the signed field checklist shows that each of the 6 performance checks (as applicable to the selected system) has been completed: <ul style="list-style-type: none"> • Start-up completed per manufacturer's instructions. • Refrigerant charge verified by proper method. • Burner set to fire at nameplate input. • Air handler setting/fan speed is correct. • Total air flow confirmed within 10% of design flow. • Total ext system static pressure does not exceed equipment capability at rated airflow.
	E. Use HVAC installer/tech certified by national/regional recognized program.	
	Certificates for HVAC installers and service technicians from NATE, BPI, RPA, or HVAC manufacturers training.	Verify that the HVAC installers and service techs are certified.
	(PP) F. Fuel-fired space heating equipment efficiency (AFUE).	
	Gas Furnace greater than or equal to 81%.	(4 points)
	Gas Furnace greater than or equal to 88% (ENERGY STAR™).	(6 points)
	Gas Furnace greater than or equal to 94%.	(8 points)
	Oil Furnace: greater than or equal to 83%.	(2 points)
	Gas or Oil Boiler greater than or equal to 85% (ENERGY STAR™)	(2 points)
	Gas or Oil Boiler greater than or equal to 90%.	(6 points)
	Manufacturer's literature with AFUE for the space heating equipment installed.	Verify equipment installation and AFUE for points claimed. (NOT AVAILABLE IF POINTS AWARDED IN 3.2.1)
	*** Also Award 3 additional points if 3.3.2 A & C also were given points.	
	(PP) G. Heat pump efficiency (cooling mode) and electric Air Conditioning Equipment.	
	1. SEER 11-12* (*No longer applicable since SEER 13 will be Federal minimum as of Jan. 2006.)	
	2. SEER 13-14 (6 points)	
	3. SEER 15-18 (6 points)	
	4. SEER 19+ (7 points)	
	Manufacturer's literature with SEER of equipment installed.	Verify installation and award points per SEER value. (NOT AVAILABLE IF POINTS AWARDED IN 3.2.1)
*** Also Award 3 additional points if 3.3.2 A & C also were given points.		
5. Staged air conditioning equipment.		
Provide documentation that HP air handler, heat exchanger, heating units, and condenser are tested as a matched set per the ARI directory.	Verify that model numbers of installed equipment are listed as a matched set in the ARI Directory	
(PP)H. Heat pump efficiency (heating mode)		
1. 7.2 – 7.9 HSPF (6 points)		
2. 8.0 – 8.9HSPF (7 points)		
3. 9.0 – 10.5HSPF (9 points)		
4. > 10.5 HSPF (10 points)		
Manufacturer's literature with heating mode HSPF of the heat pump equipment to be installed.	Verify HSPF of installed unit and award points per above guidelines. (NOT AVAILABLE IF POINTS AWARDED IN 3.2.1)	
(PP)I. Ground source heat pump installed by a certified geothermal service contractor. (cooling mode)		
1. EER = 13-14 (5 points)		
2. EER = 15-18 (6 points)		
3. EER = 19-24 (8 points)		
4. EER = >25 (10 points)		
"Geothermal loop performance guarantee" by equipment manufacturer and installer showing EER. Copy of the service certification for geothermal HP contractor.	Verify cooling mode EER of installed unit and award points per above guidelines. Confirm that copy of service certification is available. (NOT AVAILABLE IF POINTS AWARDED IN 3.2.1)	
*** Also Award 3 additional points if 3.3.2 A & C also were given points.		
(PP) J. Ground source heat pump installed by a Certified Geothermal Service Contractor. (heating mode)		
1. COP 2.4 – 2.6 (6 points)		
2. COP 2.7 – 2.9 (8 points)		
3. COP =3.0 (10 points)		
Manufacturer's literature or installer's certification of the COP of installed unit. Copy of service certification.	Verify COP of installed unit and award points per above guidelines and confirm that copy of service certification is available. (NOT AVAILABLE IF POINTS AWARDED IN 3.2.1)	
K. Seal ducts, plenums, equipment to reduce leakage. Use UL 181 foil tapes and/or mastic		
None.	Inspect for UL 181 foil tape or mastic sealing all ducts.	

NATIONAL GREEN BUILDING PROGRAM VERIFIER'S RESOURCE GUIDE

Requirement	
Documentation to be Available to Verifier	Instructions to Verifier
3.3.2 Cont.	<p>L. When installing ductwork: 1. No building cavities used as ductwork, e.g., panning joists or stud cavities. 2. Install all heating and cooling ducts and mechanical equipment within conditioned envelope. 3. No ductwork installed in exterior walls.</p>
None.	Inspect for ALL items below: • No building cavity used as ductwork • All ducts and mechanical equipment inside envelope • No ducts in exterior walls
M. Install return ducts / transfer grilles in rooms w/door (except baths, kitchen, closets, laundry).	
None.	Inspect for return ducts / transfer grilles in all rooms w/door (except baths, kitchen, closets, laundry).
N. Install ENERGY STAR™ ceiling fans. (1 point per fan)	
Product literature or label that fans are ENERGY STAR™ rated.	Inspect for installed ENERGY STAR™ fans. Award 1 point per fan.
O. Install whole-house fan with insulated louvers.	
None.	Inspect for installation of whole-house fan with insulated louvers.
Max=8 points	P. Install ENERGY STAR™-labeled mechanical exhaust in every bathroom ducted to the outside.
Make sure label on fan or manufacturers light is available showing EnergyStar™ fan is used.	Verify at installation of an EnergyStar™ fan vented to outside in all bathrooms in the home before approving 8 points.
3.3.3	Water Heating Design, Equipment, and Installation.
A. Water heater Energy Factor (EF) equal to or greater than those listed in Chart.	
Manufacturer's literature with EF on water heater equal to or greater than chart values for fuel type used.	Verify water heater installed has the Energy Factor required by the attached table from the Guidelines.
B. Install whole house instantaneous (tankless) water heater.	
Manufacturer's literature including compliance with DOE Standard 10CFR430.	Verify whole-house tankless WH and review manufacturer's literature to verify compliance with DOE standard. Tankless system is to be connected to house piping system not to a single water using fixture.
C. Insulate all hot water lines with a minimum of 1" insulation.	
None.	Inspect for minimum of 1" insulation on concealed HW piping at rough inspection and piping at WH at final inspection. Pex or CPVC piping needs to be insulated as well as metal piping.
D. Install heat trap on cold and hot water lines to and from the water heater.	
None.	Inspect for heat traps on hot and cold lines at water heater. See attached sketch of typical installation.
E. Install manifold plumbing system with parallel piping configuration with smallest code allowed pipe diameter.	
None.	Verify installation of appropriate manifolded water distribution system.
3.3.4	Lighting and Appliances
A. Use an ENERGY STAR™ Advanced Lighting Package (ALP) in home.	
Lighting plan showing the location of all lighting fixtures, both interior and exterior, with the locations of the ALP fixtures noted. Provide calculations of the % of energy saving fixtures in high use rooms, medium to low use rooms, and in exterior locations for confirm the required 50%, 25% and 50% minimums. Fixtures must be listed http://www.energystar.gov/ia/products/prod_lists/fixtures_prod_list.pdf or ENERGY STAR™ labeled.	Verify % calculations show compliance with guideline and inspect for ALP fixtures installed in locations shown on lighting layout. These points require ALP fixtures not simply CFL bulbs.
B. Install recessed fixtures in conditioned envelope: housing not to penetrate insulated ceiling.	
None.	Inspect to confirm no recessed light fixtures penetrate the insulation.
C. Install motion sensors on outdoor lighting (7 points)	
None.	Inspect for installation of motion sensors on all exterior fixtures. One sensor to control all ext. fixtures is acceptable.
D. Install tubular skylights in rooms without windows. (2 points)	
None.	Inspect for installation of tubular skylights in at least one room w/o windows.
E. Install ENERGY STAR™ -labeled appliance:	
<ul style="list-style-type: none"> • Refrigerator (3 points) • Dishwasher (3 points) • Washing machine (5 points) 	
None.	Inspect for ENERGY STAR™ label is on Refrigerator, Dishwasher and/or

NATIONAL GREEN BUILDING PROGRAM VERIFIER'S RESOURCE GUIDE

Requirement	
Documentation to be Available to Verifier	Instructions to Verifier
	Washing Machine.
3.3.5.1	Solar Space Heating and Cooling
A. Use sun-tempered design: building orientation, sizing of glazing, design of overhangs to provide shading are in accordance with guidelines below:	
<ul style="list-style-type: none"> • Long side of home faces within 30 deg of south • Glazing area <2% of FFA on west face – low E, low SHGC • Overhangs designed to shade south facing glass per Guidelines pages 114-118. 	<ul style="list-style-type: none"> • Glazing area <7% of FFA on south face – low E • Glazing area <4% of FFA on east face – low E, low SHGC • Skylights less than 2% of finished ceiling area, with shades & insulated wells • Glazing area <4% of FFA on north face – low E
Statement from a professional passive solar designer that all 7 sun tempered conditions have been complied with for this house on this lot.	Verify design is the same as reviewed in 3.1.3 and that house is built as planned with ALL 7 sun-tempered features. (Note: See also Section 1.3.2)
B. Use passive solar design: sun-tempered design as above plus additional south-facing glazing, appropriately designed thermal mass to prevent overheating per guidelines below:	
<ul style="list-style-type: none"> • Sun tempered design as outlined above except additional glazing permitted on south wall, AND • For any room with south facing glazing >7% of FFA, properly size thermal mass, AND 	<ul style="list-style-type: none"> • Provision for forced air flow to adjoining areas as needed, AND • SBIC Passive solar Design Guidelines for your climate should be referenced to size thermal mass.
Designer's statement that the 4 additional passive solar heating design conditions have been complied with.	Verify design is the same as reviewed in 3.1.3 and that house is built as planned. Approve points only if 3.3.5.1 A is also approved.
C. Use passive cooling.	
<ul style="list-style-type: none"> • Exterior shading on east & west windows • Overhangs designed to provide shading on south facing glass. 	<ul style="list-style-type: none"> • Windows located to facilitate cross ventilation • Solar-reflective roof or radiant barrier
Designer statement to indicate compliance with criteria in all 4 passive solar cooling items.	Verify house 'as built' is consistent with designer statement. (All items applicable to this home must be verified; NO POINTS AVAILABLE IF POINTS IN 3.3.5.1.A)
3.3.5.2	Solar Water Heating
A. Install solar water heating system. Must use SRCC rated system.	
Solar fraction: >= 0.3 (8 points); Solar fraction: >=0.5 (10 points)	
Manufacturer's literature indicating solar water heating system is expected to provide SF of 0.3 in this climate.	Verify documentation consistent with installed equipment.
3.3.5.3 A	Additional Renewable energy options
<ul style="list-style-type: none"> • Supply electricity by on-site renewable source. • Renewable energy system providing 2,000 to 3,999 kWh/year. (8 points) • Renewable energy system providing 4,000 to 5,999 kWh/year. (10 points) • Renewable energy system providing 60000 + kWh/year. (12 points) 	
Manufacturer's literature showing capacity and installer's certificate of installation and expected performance.	Verify documentation consistent with installed equipment. Equipment should carry all IEEE and UL certifications and be local code approved.
3.3.5.3 B	Provide min of 200 sf clear and unshaded roof area (+/- 30 degrees of south or flat) for future solar collector or PV. - with Conduit - with Insulated piping
Architectural plans showing clear/unshaded roof area.	Verify proposed clear roof area and installation of conduit/piping. Award 3 points for conduit or 5 points for insulated piping.
3.3.5.3 C	Provide homeowner with green power options.
Copy of info to be given to Homeowner.	Verify documentation.
3.3.6.1	Conduct onsite third party inspection to verify energy related feature:
3 rd party documentation of inspections for duct installation and sealing; building envelope air sealing details; gap, void, and compression free insulation installation; accurately cut insulation in envelope cavities; and windows and doors flashed, caulked, and sealed properly.	Verify inspection documentation from 3 rd party addresses all listed items and indicates a reinspection of any identified deficiencies.
3.3.6.2	Conduct third party testing to verify performance, e.g., blower door, duct leakage, flow hood testing.
Provide documentation of test results showing:	Verify that test results show required performance. Award 8 points for each test completed and meeting criteria.
A. Envelope leakage with blower door <0.35 ACHnat;	
B. <5% duct leakage of rated blower capacity to	

NATIONAL GREEN BUILDING PROGRAM VERIFIER'S RESOURCE GUIDE

Requirement		
Documentation to be Available to Verifier	Instructions to Verifier	
unconditioned space; total leakage <10% of rated blower capacity; C. flow hood tests showing measured flow within 25% of design flow; and/or total airflow within 10% of design flow		
3.3.7	Innovative options	
	A. Install drain water heat-recovery system.	
None.	Inspect for installation of heat recovery system.	
	B. Install desuperheater in conjunction with ground source heat pump.	
None.	Inspect for installation of desuperheater on ground source HP.	
	C. Install heat pump water heater.	
Manufacturer's literature with the DOE EF rating for the heat pump water heater.	Verify that heat pump water heater with a DOE EF rating of > 1.7 is installed.	
	D. Install occupancy sensors for lighting control.	
None	Inspect for and award 4 points per occupancy sensor installed.	
WATER EFFICIENCY		
4.1.1	Hot water delivery to remote locations aided by installation of:	
	A. On-demand water heater at point of use served by cold water only.	
None.	Inspect for and award 6 points per point-of-use water heater installed.	
	B. Control-activated recirculation system.	
None.	Inspect for system insulation & control button or switch near point of HW use.	
4.1.2	Water heater located within 30 foot pipe run of all bathrooms and kitchen.	
None.	Inspect for max of 30 foot pipe run to all bath and Kitchen locations.	
4.1.3	ENERGY STAR™ water-conserving appliances, e.g., dishwasher, washing machine.	
None.	Inspect for installation of ES water conserving appliances at 7 points per ENERGY STAR™ appliance. See also 3.3.4 E items 2 & 3. It is OK for points here and in 3.3.4.	
4.1.4	Water efficient showerhead using aerator/venture with flow rate < 2.5 gpm.	
Spec sheet for showerheads showing <2.5 gpm.	Inspect for and award 2 points per qualified showerhead.	
4.1.5	Water-efficient sink faucets/aerators < 2.2 gpm.	
Spec sheet for faucets showing flow rate of <2.2 gpm.	Inspect for and award 2 points per qualified faucet.	
4.1.6	Ultra low flow (< 1.6 gpm/flush) toilets. (power assist = 4 points, dual flush = 6 points)	
Spec sheet on toilets to be installed.	Verify 4 points if all ultra low flow toilets in home are power assist OR 6 additional points if all are dual flush.	
4.1.7	Low-volume, non-spray irrigation system installed, e.g., drip irrigation, bubblers.	
Spec sheet for irrigation system showing no spray.	Verify installed system has zero spray zones.	
4.1.8	Irrigation system zoned separately for turf and bedding areas.	
Specs sheet for irrigation system; plan showing separate zoning	Verify installed system with zones per system spec or inspection of control panel	
4.1.9	Weather-based irrigation controllers, e.g., computer-based weather record.	
Specs for irrigation system controller.	Verify system controller uses weather records or moisture sensors not simply timer.	
4.1.10	Collect and use rainwater as permitted by local code.	
Details of how rainwater is used.	Verify permitted installation.	
4.1.11	Innovative wastewater technology as permitted by local code	
Local approval of on-site wastewater treatment system specs that are advancements over conventional septic systems.	Verify that approved system as installed includes constructed wetland, sand filter, or aerobic system.	
4.2.1	Innovative options (See User Guide for options/points). Shut-off valve, motion sensor, or pedal-activated faucet to enable intermittent on/off operation.	
None.	Verify installation of hands-free user controls or motion sensors on ALL water faucets.	
4.2.2	Separate and re-use greywater as permitted by local code.	
Spec sheet and layout for greywater system.	Verify installation of greywater system.	

NATIONAL GREEN BUILDING PROGRAM VERIFIER'S RESOURCE GUIDE

Requirement		
	Documentation to be Available to Verifier	Instructions to Verifier
4.2.3	Composting or waterless toilet as permitted by local code.	
	None.	Inspect for composting or waterless toilet in at least one bathroom.
INDOOR ENVIRONMENTAL QUALITY		
5.1.1	Install direct vent equipment or induced/mechanical draft combustion equipment.	
	Spec sheet for equipment to be installed.	Verify installation. Note direct vent of induced draft.
5.1.2	Install space heating and water heating equipment in isolated mechanical room or closet with an outdoor source of combustion and ventilation air.	
	None.	Inspect for isolated mechanical room. Points not allowed for non-combustion systems or if points claimed in 5.1.1.
5.1.3	Install direct-vent, sealed-combustion gas fireplace, sealed wood fireplace or sealed woodstove OR No fireplace or woodstove installed.	
	Spec sheet for equipment to be installed.	Verify installed unit or confirm no F/P or woodstove installed.
5.1.4	Ensure a tightly-sealed door in between the garage and living area and provide continuous air barrier between garage and living areas including air sealing penetrations walls, ceilings, and floors.	
	None	Inspect for AB installation and sealed garage penetrations at rough inspection. Inspect for fully gasketed door & tight threshold at final inspection.
5.1.5	Ensure particleboard, medium density fiberboard (MDF) and hardwood plywood substrates are certified to low formaldehyde emission standards ANSI A208.1, ANSI A208.2 and ANSI/HPVA HP1, respectively. Composite wood/agrifiber panel products must either contain no added urea-formaldehyde resins or must be third party certified for low formaldehyde emissions.	
	Manufacturer's product literature showing compliance with ANSI standards or 3 rd party certification of low formaldehyde emissions for all particleboard, MDF, and hardwood plywood and signed delivery tickets for these materials delivered to jobsite.	Verify at least 80% of particleboard, MDF, and hardwood plywood installed is certified.
5.1.6	Install carpet, carpet pad, and floor covering adhesives that hold "Green Label" from Carpet and Rug Institute's indoor air quality testing program or meet equivalent thresholds verified by a third party.	
	Manufacturer's product literature and P.O. or contract for all applicable required green-labeled materials.	Verify at least 80% all carpet, pad, and floor covering adhesives are Green Label.
5.1.7	Mask HVAC outlets during construction and vacuum ducts, boots, and grilles before turning on central heating/cooling system.	
	None	Inspect for masking of required ducts, boots, and grills at rough inspection. Inspect for clean boots/ducts at final inspection.
5.1.8	Use low VOC emitting wallpaper.	
	Manufacturer's literature showing VOC for wallpaper installed in home by builder.	Verify that low VOC wallpaper coverage is at least equal to one average size room and that low VOC wallpaper comprises at least 80% of all wallpaper used.
5.2.1	Vent kitchen range exhaust to the outside.	
	None.	Inspect for installation and venting to outside during final inspection
5.2.2	Provide mechanical ventilation at a rate of 7.5 cfm per bedroom + 7.5 cfm and controlled automatically or continuous with manual override. The ventilation equipment may be:	
	Max=10 points A. Exhaust or supply fan(s), or (7 points) B. Balanced exhaust and supply fans, or (9 points) C. Heat-recovery ventilator, or (10 points) D. Energy-recovery ventilator (10 points)	Manufacturer's literature showing capacity. Verify that system installed has appropriate capacity.
5.2.3	Install MERV 9 filters on central air or ventilation systems.	
	None.	Inspect for MERV 9 or better filters installed on central air/ventilation systems.
5.2.4	Install humidistat to control whole-house humidification system.	
	Max=4 points	Verify installation of humidistat to control the whole-house humidification system.
5.2.5	Install sub-slab de-pressurization system or infrastructure to facilitate future installation of radon mitigation system. (The more stringent requirement between a local building code and this provision shall apply.)	
	Spec sheet of system.	Verify system is installed.
5.2.6	Verify all exhaust flows meet design specifications.	
	HVAC contractor or 3 rd party test report that documents	Verify that designed exhaust flows have been achieved.

NATIONAL GREEN BUILDING PROGRAM VERIFIER'S RESOURCE GUIDE

Requirement	
Documentation to be Available to Verifier	Instructions to Verifier
designed flows are actually achieved in this house.	
5.3.1	Control bathroom exhaust fan with a timer or humidistat.
None	Inspect for installation of timer or humidistat on fan in EACH bathroom with tub or shower.
5.3.2	Install moisture resistant backerboard – not paper-faced sheathing – under tiled surfaces in wet areas.
Manufacturer's material spec and contract with installer.	If possible, verify installation of moisture resistant backerboard not paper-faced sheathing (presumably behind wall tile and under bath flooring). Or, confirm by plan review or contractor scope of work.
5.3.3	Install vapor retarder directly under slab (6-mil) or on crawl space floor (8-mil). In crawl spaces extend poly up wall and affix with glue and furring strips, or damp proof wall below grade. Joints lapped 12 inches.
Inspection form showing specific item on QC checklist for 6 mil vapor barrier under slab or 8 mil in crawl space.	For slabs, verify 6 mil underslab inspection via builder checklist documentation. For crawl space homes, inspect for 8 mil vapor barrier including foundation wall at final inspection.
5.3.4	Protect unused moisture-sensitive materials from water damage by just-in-time delivery, storing unused materials in dry area, or tenting materials and storing on raised platform.
Include copy of moisture management practice or plan.	Verify field practices consistent with builder's moisture management practice plan.
5.3.5	Keep plumbing supply lines out of exterior walls.
None.	Inspect for no plumbing supply lines in exterior walls during rough inspection.
5.3.6	Insulate cold water pipes in unconditioned spaces and with ½" insulation or other coating that comparably prevents condensation.
None.	Inspect for ½" insulation on any cold water piping in unconditioned spaced before concealment.
5.3.7	Insulate HVAC ducts, plenums, and trunks in unconditioned basements / crawl spaces.
None.	Inspect for applicable insulation
5.3.8	Check moisture content of wood before it is enclosed on both sides. (4 points)
Documentation of moisture content and location in the home.	Verify moisture content log kept by builder in field and that moisture content of framing lumber is less than 19% and subfloor, when hardwood is installed, is less than 14% before covering.

OPERATION, MAINTENANCE, AND HOMEOWNER EDUCATION

6.1	Provide Home Manual to owners/occupants on the use and care of the home: Manual must include information on ALL of the following topics: A. Narrative detailing importance of maintenance/ operation to keep a green built home green. B. Local Green Building Program certificate. C. Warranty, operation, and maintenance instructions for equipment and appliances. D. Household recycling opportunities. E. Info on how to enroll in program where home receives energy from renewable energy provider. F. Explanation of the benefits of using compact fluorescent light bulbs in high usage areas. G. A list of habits/actions to optimize water and energy use. H. Local public transportation options (if applicable). I. Clearly labeled diagram showing safety valves and controls for major house systems.
Home owner's information manual.	Verify company's homeowner manual addresses all required items. The standard company document may be used provided it is adapted for the applicable local information when appropriate.
6.2	Optional information to include in the Home Manual. (Choose at least 5) A. List of local service providers that focus on regularly scheduled maintenance and proper operation of equipment and the structure (sealants, caulks, gutter & downspout system; shower/tub surrounds, irrigation systems, etc). B. A photo record of framing with utilities installed. Photos should be taken prior to installing insulation, clearly marked, and provided in homeowner's manual. C. List of Green Home Building Guidelines items included in the home. D. User-friendly maintenance checklist. E. Instructions for proper handling and disposal of hazardous materials. F. Information on organic pest control, fertilizers, de-icers and cleaning products. G. Information about native or low-water landscape. H. Information on how to keep a home's relative humidity in the range of 30-60%. I. Instructions for checking crawlspace for termite tubes periodically. J. Instructions for keeping gutters clean and that downspouts should direct water at least five feet away from the foundation.
Provide guidance for verifier of which 5 of these items are	Verify that at least 5 of the additional subjects are addressed in the builder's

NATIONAL GREEN BUILDING PROGRAM VERIFIER'S RESOURCE GUIDE

Requirement	
Documentation to be Available to Verifier	Instructions to Verifier
	included in the homeowner manual.
6.3	<i>Provide education to owners/occupants in the use and care of their dwellings. Instruct homeowner about the building's goals and strategies and occupant's impacts on costs of operating the building. Provide training to owners/occupants for all control systems in the house.</i>
	Script for homeowner training on GB strategy and use of all home control systems.
	Verify script/process address the above items and includes an appropriate demonstration for the homeowner of the required items.
6.4	<i>Solid waste Encourage homeowners/occupants to recycle by providing built-in space in the home's design (e.g., kitchen, garage, covered outdoor space) for recycling containers.</i>
	None
	Inspect for built-in recycling space in completed home.
GLOBAL IMPACT	
7.1.1	<i>Product Manufacturer's operations and business practices include environmental management system concepts (the product line, plant, or company must be ISO 14001 certified)</i>
Max=3 points	Manufacturer's literature for products and materials from plants that are ISO 14001 certified. PO's or records to show cost of these materials is at least 10% of construction cost.
	Verify materials from ISO14001 factories are at least 10% of construction cost.
7.1.2	<i>Choose low- or no-VOC indoor paints, VOC concentrations (grams per liter) of interior paints should be equal to or less than those specified by the EPA's Environmentally Preferable Purchasing Program:</i>
	<ul style="list-style-type: none"> • <i>Interior latex coatings: Flat: 100 grams per liter; non-flat: 150 grams per liter.</i> • <i>Interior oil-based paints: 380 grams per liter</i>
	Builder to provide scope of work for painting contractor stating what paint is to be used. Paint manufacturers spec sheet or MSDS showing the VOC concentrations.
	Verify specs of MSDS sheets match the contract scopes.
7.1.3	<i>Use low-VOC sealants, VOC concentrations for construction adhesives and sealants should meet the limits specified in the California Air Resources Board Regulations for Reducing Volatile Organic Compound Emissions from Consumer Products:</i>
	<ul style="list-style-type: none"> • <i>Construction Adhesives: The greater of 15% by weight or 200 grams per liter.</i> • <i>Sealants and caulks: The greater of 4% by weight or 60 grams per liter.</i> • <i>Contact adhesives: The greater of 80% by weight or 650 grams per liter.</i>
	Builder to provide scope of work for trades using sealants (flooring installers, painters, VAC contractor, plumber, etc.) specifying what sealants are to be used. Add list of applicable trades. All trades must be covered in scopes. Builder contract must specify materials to be used or verifier has to identify actual materials used. Manufacturers spec sheet or MSDS showing the VOC concentrations.
	Verify specs or MSDS sheets match the contract scopes. Be sure to check all applicable trades. All 3 materials, if used, must meet the requirements. Contract language is required and verifier is to identify what materials were actually used.
7.2.1	<i>Builder's operations and business practices include environmental management concepts and certified to ISO 14001</i>
	Copy of ISO 14001 Certificate
	Verify builder is ISO 14001.

Figures

GAS	
Size (gallons)	Energy Factor
30	0.64
40	0.62
50	0.60
65	0.58
75	0.56

ELECTRIC	
Size (gallons)	Energy Factor
30	0.95
40	0.94
50	0.92
65	0.90
80	0.88
100	0.86

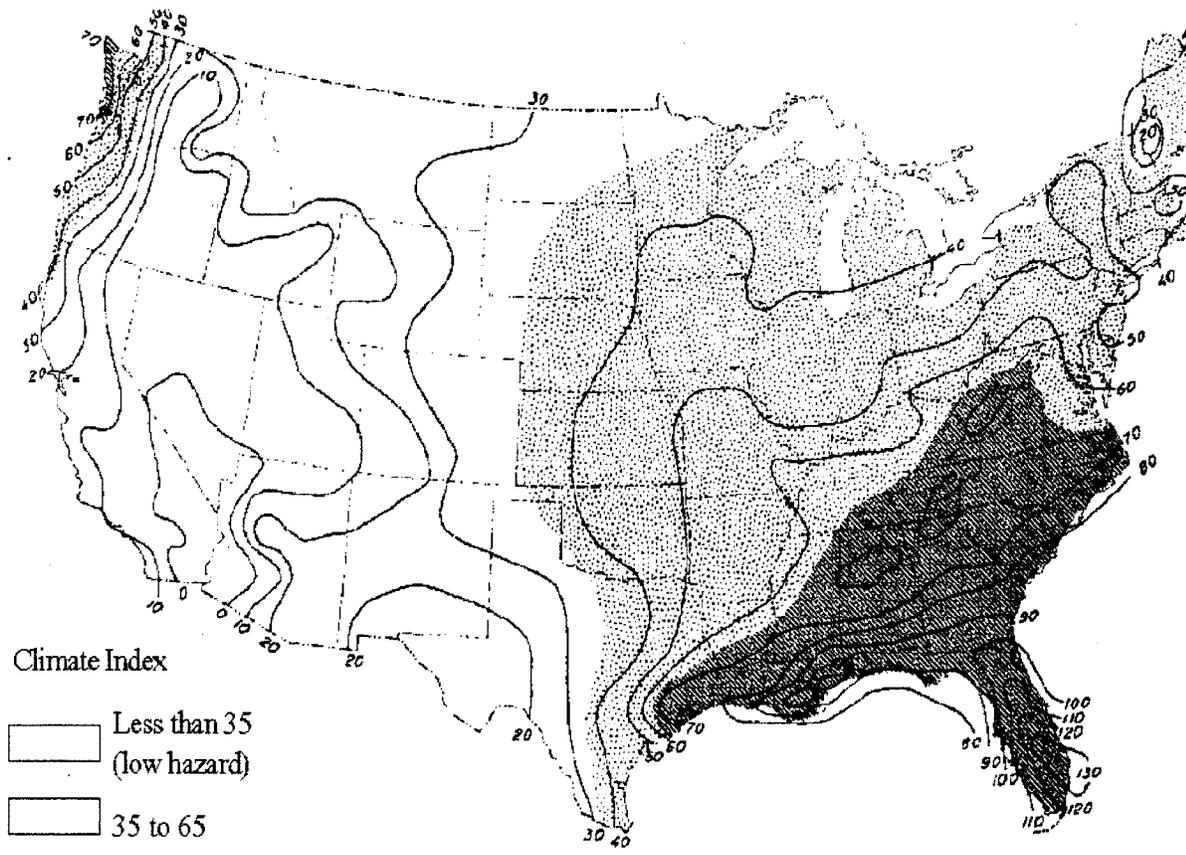
OIL	
Size (gallons)	Energy Factor
30	0.59
50	0.55

Figure 1: Water Heater Energy Factor

RECOMMENDED MINIMUM ROOF OVERHANG WIDTHS FOR ONE- AND TWO-STORY WOOD FRAME BUILDINGS*

Climate Index (see map below)	Eave Overhang (inches)	Rake Overhang (inches)
Less than 20	N/A	N/A
21 to 40	12	12
41 to 70	18	12
More than 70	24 or more	12 or more

Figure 2: Roof Overhang Chart



The climate index map estimates decay hazard

Figure 3: Climate Map

GUIDELINES FOR EFFICIENT FLOOR PLAN DESIGN

In this table, from the # of bedrooms column, find the Area of Home between the values in the table and claim or approve the points for the row above the Area of Home

Area of Home (Square Feet) (Based on ANSI Z765-2003)	# of Bedrooms				Points
	2	3	4	5+	
1382	1890	2648	3424	0	
1332	1825	2555	3296	1	
1282	1756	2459	3172	2	
1232	1688	2363	3048	3	
1182	1619	2267	2925	4	
1132	1551	2171	2801	5	
1082	1482	2075	2677	6	
1032	1414	1979	2553	7	
982	1345	1883	2430	8	
932	1277	1788	2306	9	

Figure 4: Sq. Ft. vs. # of Bedrooms

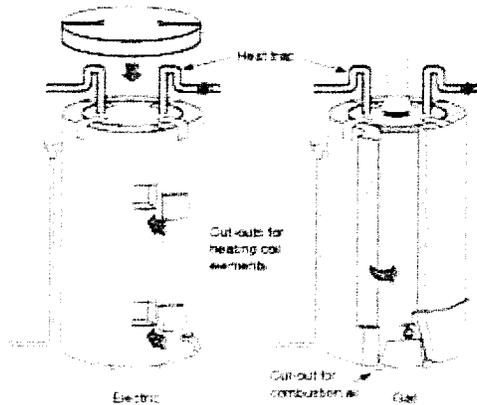


Figure 5: Heat Traps

National Green Home Certification Program Verification Report

Builder/Applicant:	
Mailing (physical) Address with Zip Code of Home:	
Community/Lot#:	

**Suggested inspection at R=rough, F=final, D=document review, C=once per year if community
After inspecting/verifying enter points awarded. If points are denied enter "0" and enter note.*

Section 1: Lot Design, Preparation, and Development					
Points avail	Requirements	*inspection at	Points Claimed	Points Awarded	Notes
	1.1 Select the site: Select the site to minimize environmental impact.				
7	1.1.1 Avoid environmentally sensitive areas.	D			
9	1.1.2 Choose an infill site.	R			
7	1.1.3 Choose a Greyfield site.	D			
7	1.1.4 Choose an EPA-recognized Brownfield.	D			
	1.2 Identify goals with your team.				
6	1.2.1 Establish a knowledgeable team.	D			
	1.3 Design the site: Minimize env impacts; protect, restore, and enhance.				
6	1.3.1 Conserve natural resources.	C/D			
6	1.3.2 Site the home and other built features to optimize solar resource.	D			
5	1.3.3 Minimize slope disturbance.	D/R			
6	1.3.4 Minimize soil disturbance and erosion.	R			
8	1.3.5 Manage storm water using low impact development.	F			
8	1.3.6 Devise landscape plans to limit water and energy demand while preserving or enhancing the natural environment.	F			
5	1.3.7 Maintain wildlife habitat.	F			
	1.4 Develop the site. Minimize environmental intrusion during construction.				
5	1.4.1 Onsite supervision and coordination during clearing, grading, trenching	R			
5	1.4.2 Conserve existing onsite vegetation.	R			
6	1.4.3 Minimize onsite soil disturbance and erosion.	R			
	1.5 Innovative options (Seek to obtain local waivers/variances)				
6	1.5.1 Share driveways or parking.	F			
0	1.5.2 Other (specify).				
	Total Points For Section 1				
Section 2: Resource Efficiency					
Pts avail	Requirements		Points Claimed	Points Awarded	Notes
	2.1 Reduce quantity of materials and waste				
9	2.1.1 Create an efficient home floor plan that maintains home's functionality.	D			
8	2.1.2 Advanced framing techniques.	R			20 or 24 OC (<input type="checkbox"/> floor <input type="checkbox"/> roof <input type="checkbox"/> ext. walls <input type="checkbox"/> int. walls) <input type="checkbox"/> single top plate <input type="checkbox"/> right sized headers <input type="checkbox"/> no headers in non bearing walls <input type="checkbox"/> ladder blocking at wall intersections <input type="checkbox"/> 2 stud corners
6	2.1.3 Use building layouts that maximize resources/minimize material cuts.	R			
7	2.1.4 Create a detailed framing plan and detailed material takeoffs.	D			
4	2.1.5 Use materials requiring no additional onsite finish resources.	F			
	2.1.6 Use pre-cut or pre-assembled building systems as outlined below:				
3 each	A. Pre-cut or pre-manufactured (truss) floor or roof package	R			
6	B. Provide panelized wall framing system.	R			
6	C. Provide panelized roof framing system.	R			
7	D. Provide modular construction for entire house.	R			
4	2.1.7 Use a frost-protected shallow foundation.	R			
	2.2 Enhance durability and reduce maintenance				
6	2.2.1 Provide covered entry (awning, covered porch) at exterior doors.	F			
7	2.2.2 Use recommended-sized roof overhangs for the climate.	F			
7	2.2.3 Install perimeter drain for all basement footings properly sloped.	R			
6	2.2.4 Install drip edge at eave and gable roof edges.	F			
6	2.2.5 Gutter and downspout system to divert water 5' from foundation.	F			
7	2.2.6 Divert surface water from all sides of building.	F			
7	2.2.7 Install continuous and physical foundation termite barrier.	R			
7	2.2.8 Use termite-resistant materials for walls, floor joists, trusses, etc.	R			
8	2.2.9 Provide a water-resistive barrier behind the exterior veneer or siding.	R			
5	2.2.10 Install ice flashing at roof's edge.	R			
7	2.2.11 Install enhanced foundation waterproofing.	D			
9	2.2.12 Employ and show on plans all flashing details.	D			

Builder/Applicant:

Mailing (physical) Address with Zip Code of Home:

Community/Lot#:

*Suggested inspection at R=rough, F=final, D=document review, C=once per year if community

Pts avail	Requirements		Points Claimed	Points Awarded	Notes
2.3 Reuse materials					
6	2.3.1 Disassemble existing buildings instead of demolishing.	D			
5	2.3.2 Reuse salvaged materials, where possible.	D			
6	2.3.3 Dedicate and provide onsite bins and/or space for sorting materials.	C			
2.4 Recycled content materials					
3	2.4.1 Use recycled-content building materials.	R/F			
2.5 Recycle waste materials during construction					
7	2.5.1 Develop and implement a C/D waste management plan.	D/R			
5	2.5.2 Conduct onsite recycling efforts.	R/F			
6-12	2.5.3 Recycle construction waste offsite.	R/F			
2.6 Use renewable materials					
3	2.6.1 Use materials manufactured from renewable resources.	R			
4 each	2.6.2 Use cert wood for wood and wood based materials from cert sources.	D/R/F			
2.7 Use resource-efficient materials					
3	2.7.1 Use products with fewer resources instead of traditional products.	F			
2.8 Innovative options					
3-5	2.8.1 Use locally available, indigenous materials. Must list components.	F			List mat'ls:
8	2.8.2 Use a life-cycle assessment (LCA) tool to compare materials.	D			
Total Points For Section 2					
Section 3: Energy Efficiency					
Pts avail	Requirements		Points Claimed	Points Awarded	Notes
3.1 Integrated & comprehensive approach to energy efficient design:					
REQUIREMENTS – The home must meet conditions in 3.1.1, 3.1.2 and 3.1.3 below. The home must also earn at least 37 Points (Bronze Level) from (Section 3.2) or (Section 3.3).					
Req.	3.1.1 Home meets IECC 2003 or local energy code, use stricter.	D			Report reviewed: <input type="checkbox"/> ResCheck or _____ Result observed:
Req.	3.1.2 Size space heating and cooling system/equipment according to building heating and cooling loads calculated using ANSI/ACCA Manual J®.	D			Name of report reviewed: Equipment size recommended:
Req.	3.1.3 Third party plan review to verify compliance w/ Energy Eff. section.	D/ R/F			Reviewer used: Date of compliance confirmation:
3.2 Performance path					
3.2.1 Home is X% above IECC 2003 - The 3rd party review has to document the claim of X% above					
37	A. 15% (Bronze) 37 points	D			Percent above 2003 IECC: _____
62	B. 30% (Silver) 62 points	D			
100	C. 40% (Gold) 100 points	D			
3.3 Prescriptive path					
3.3.1 Building envelope					
8	(PP)A • SIPS*	R			
8	(PP)A • ICFS*	R			
6	(PP)A • Advanced Framing, or Insulated corners /intersections /headers	R			
2	(PP)A • Raised Heel Trusses	R			
4	(PP)A • Continuous insulation on exterior wall	R			
4	(PP)A • Continuous insulation on cathedral ceiling	R			
10	(PP)B. Incorporate air sealing package to reduce infiltration.	R			
8	(PP)C. Use ENERGY STAR® – rated windows appropriate for local climate.	R			
3.3.2 HVAC design, equipment, and installation					
8	A. Size, design, and install duct system using ANSI/ACCA Manual D®.	D/R			
8	B. Design radiant or hydronic space heating systems using industry stds.	D/R			
8	C. Use ANSI/ACCA Manual S® to select heating/cooling equipment.	D/F			
8	D. Verify performance of the heating/cooling system.	D/F			
6	E. Use HVAC installer/tech certified by national/regional recognized program	D/F			Certified by: _____ Certificate#: _____
(PP)F. Fuel-fired space heating equipment efficiency (AFUE):					
4	Gas Furnace greater than or equal to 81%.	F			AFUE=
6	Gas Furnace greater than or equal to 88%. (ENERGY STAR)	F			
8	Gas Furnace greater than or equal to 94%.	F*			
2	Oil Furnace: greater than or equal to 83%.	F			
2	Gas or Oil Boiler greater than or equal to 85%. (ENERGY STAR)	F			
6	Gas or Oil Boiler greater than or equal to 90%.	F			

Builder/Applicant:
Mailing (physical) Address with Zip Code of Home:
Community/Lot#:

**Suggested inspection at R=rough, F=final, D=document review, C=once per year if community*

Points avail	Requirements	Points Claimed	Points Awarded	Notes
	(PP)G. Heat pump efficiency (cooling mode)			
	1. SEER 11-12* (*N/A since SEER 13 is fed min since 1/06)			
6	2. SEER 13-14 (6 points)	F		SEER=
6	3. SEER 15-18 (6 points)	F		
7	4. SEER 19+ (7 points)	F		
9	5. Staged air conditioning equipment	F		Attach certificate showing matched coils
	(PP)H. Heat pump efficiency (heating mode)			
6	1. 7.2 - 7.9 HSPF (6 points)	F		HSPF=
7	2. 8.0 - 8.9HSPF (7 points)	F		
9	3. 9.0 - 10.5HSPF (9 points)	F		
10	4. > 10.5 HSPF (10 points)	F		
	(PP)I. Ground source heat pump installed by a Certified Geothermal Service Contractor. (cooling mode)			
5	1. EER = 13-14 (5 points)	F		EER=
6	2. EER = 15-18 (6 points)	F		
8	3. EER = 19-24 (8 points)	F		
10	4. EER = >25 (10 points)	F		
	(PP) J. Ground source heat pump installed by a Certified Geothermal Service Contractor. (heating mode)			
6	1. COP 2.4 - 2.6 (6 points)	F		COP=
8	2. COP 2.7 - 2.9 (8 points)	F		
10	3. COP =3.0 (10 points)	F		
6	K. Seal ducts, plenums, equip with UL 181 foil tapes and/or mastic.	R		<input type="checkbox"/> UL181 <input type="checkbox"/> mastic
8	L. When installing ductwork:	R		
	1. No building cavities used as ductwork, e.g., panning joist or stud cavities.*			<input type="checkbox"/>
	2. All HVAC ducts and mechanical equipment within conditioned envelope.*			<input type="checkbox"/>
	3. No ductwork installed in exterior walls.*			<input type="checkbox"/>
6	M. Install return ducts / transfer grilles in rooms w/door.	F		
1 per fan	N. Install ENERGY STAR ceiling fans.	F		
4	O. Install whole-house fan with insulated louvers.	F		
8	P. Install ENERGY STAR mechanical ducted exhaust for every bathroom.	F		
	3.3.3 Water heating design, equipment, and installation			
4	A. Water heater Energy Factor (EF) = or > those listed in Chart.	F		EF=
4	B. Install whole house instantaneous (tankless) water heater.	F		
4	C. Insulate all hot water lines with a minimum of 1" insulation.	R		
3	D. Install heat trap on cold and hot water lines to and from the water heater.	R/F		
5	E. Manifold plumbing system with parallel piping and stacking plumbing.	R		
	3.3.4 Lighting and appliances			
7	A. Use an ENERGY STAR Advanced Lighting Package (ALP) in home.	F		
7	B. Recessed fixtures in conditioned envelope.	R		
7	C. Install motion sensors on outdoor lighting.	F		
2	D. Install tubular skylights in rooms without windows.	R		
	E. Install ENERGY STAR-labeled appliance:			
3	• Refrigerator	F		
3	• Dishwasher	F		
5	• Washing machine.	F		
	3.3.5 Renewable energy/solar heating and cooling.			
	3.3.5.1 Solar space heating and cooling.			
10	A. Use sun-tempered design: building orientation, glazing, overhangs.	D		
10	B. Use passive solar design: sun-tempered design as above plus southfacing glazing, thermal mass to prevent overheating.	D		
8	C. Use passive cooling. Ext. shading, overhangs, window cross ventilation.	D		
	3.3.5.2 Solar water heating			
	A. Install solar water heating system. Must use SRCC rated system.			
8	Solar fraction: 0.3	D		solar fraction =
10	Solar fraction: 0.5	D		
	3.3.5.3 Additional renewable energy options (see User Guide)			
	3.3.5.3 A			kWh/year =
8	Renewable energy system providing 2,000 to 3,999 kWh/year	F		
10	Renewable energy system providing 4,000 to 5,999 kWh/year	F		
12	Renewable energy system providing 6,000 + kWh/year	F		
	3.3.5.3 B Provide min of 200 sf clear and unshaded roof area (+/- 30 degrees of south or flat) for future solar collector or PV.			
3	- with Conduit.	F		
5	- with Insulated piping.	F		
2	3.3.5.3 C Provide H.O. with green power options.	C/D		

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Points avail	Requirements		Points Claimed	Points Awarded	Notes
	3.3.6 Verification / Inspection may be performed.				
8	3.3.6.1 Conduct onsite third party inspection to verify energy related feature.	D			Inspected by:
8/test	3.3.6.2 Conduct third party testing to verify performance.	D			Blower door ACH = duct leak % of blower capacity= flow hood total=
	3.3.7 Innovative options				
2	A. Install drain water heat-recovery system.	F			
6	B. Install desuperheater in conjunction with ground source heat pump.	F			
6	C. Install heat pump water heater.	F			
4/ sensor	D. Install occupancy sensors for lighting control.	F			
Total Points For Section 3					

Section 4: Water Efficiency

Points avail	Requirements		Points Claimed	Points Awarded	Notes
	4.1 Indoor/Outdoor Water Use				
	4.1.1 Hot water delivery to remote locations aided by installation of:				
6 per unit	A. On-demand water heater at point of use served by cold water only.	F			
6 per unit	B. Control-activated recirculation system.	F			
9	4.1.2 Water heater located within 30 foot pipe run of all baths and kitchen.	R/F			
7 per appl.	4.1.3 ENERGY STAR® water-conserving appliances, e.g., dw, washer.	F			<input type="checkbox"/> Dishwasher <input type="checkbox"/> Washer
2/fixture	4.1.4 Water efficient showerhead w/ aerator/venturi with flow rate < 2.5 gpm	F			
2/fixture	4.1.5 Water-efficient sink faucets/aerators < 2.2 gpm	F			
4 and 6	4.1.6 Ultra low flow (<1.6 gpm/flush) (power assist = 4 pts, dual flush = 6 pts)	F			
7	4.1.7 Low-volume, non-spray irrigation system installed, e.g., drip irrigation	F			
6	4.1.8 Irrigation system zoned separately for turf and bedding areas.	F			
7	4.1.9 Weather-based irrigation controllers.	F			
9	4.1.10 Collect and use rainwater as permitted by local code.	F			
7	4.1.11 Innovative wastewater technology as permitted by local code.	F			
	4.2 Innovative options (See User Guide for options/points)				
6	Shut-off valve, motion sensor, or pedal-activated faucet.	F			
6	Separate and re-use greywater as permitted by local code.	F			
6	Composting or waterless toilet as permitted by local code.	F			
Total Points For Section 4					

Section 5: Indoor Environmental Quality

Points avail	Requirements		Points Claimed	Points Awarded	Notes
	5.1 Minimize potential sources of pollutants				
	5.1.1 For vented space heating and water heating equipment: (A or B)				
8	5.1.1 A. Use direct vent equip or B. induced/mech draft combustion equip.	F			
6	5.1.2 Install space heating and water heating equip in isolated mech room	F			
6	5.1.3 Install direct-vent, sealed-combustion gas fireplace, sealed wood fireplace or sealed woodstove OR No fireplace or woodstove.	F			<input type="checkbox"/> No Fireplace <input type="checkbox"/> Direct vent <input type="checkbox"/> Sealed
9	5.1.4 Ensure a tightly-sealed door in between garage and living area w/ continuous air barrier.	F			
6	5.1.5 Ensure particleboard, medium density fiberboard (MDF) and hardwood plywood substrates are certified to low formaldehyde emission standards.	D/R/F			
6	5.1.6 Install carpet, carpet pad, and floor covering adhesives w/ "Green Label".	D/R/F			
5	5.1.7 Mask HVAC outlets during const and vacuum ducts, boots, and grilles.	R			
3	5.1.8 Use low VOC emitting wallpaper.	D/F			
	5.2 Manage potential pollutants generated in the home				
7	5.2.1 Vent kitchen range exhaust to the outside.	F			
	5.2.2 Mech ventilation of 7.5 cfm per bedroom + 7.5 cfm and controlled automatically or continuous with manual override.				
7	A. Exhaust or supply fan(s), or	F			CFM =
9	B. Balanced exhaust and supply fans, or	F			
10	C. Heat-recovery ventilator, or	F			
10	D. Energy-recovery ventilator	F			

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Points avail	Requirements		Points Claimed	Points Awarded	Notes
3	5.2.3 Install MERV 9 filters on central air or ventilation systems.	F			
4	5.2.4 Install humidistat to control whole-house humidification system.	F			
6	5.2.5 Install sub-slab de-pressurization system or infrastructure.	R			
9	5.2.6 Verify all exhaust flows meet design specifications.	D			
5.3 Moisture management (vapor, rainwater, plumbing, HVAC)					
6	5.3.1 Control bathroom exhaust fan with a timer or humidistat.	F			<input type="checkbox"/> Timer <input type="checkbox"/> Humidistat
6	5.3.2 Moisture resistant backerboard -under tiled surfaces in wet areas.	R			
9	5.3.3 Install vapor retarder under slab (6-mil) or on crawl space floor (6-mil).	D/R/F			
6	5.3.4 Protect unused moisture-sensitive materials from water damage.	R			
5	5.3.5 Keep plumbing supply lines out of exterior walls.	R			
4	5.3.6 Insulate cold water pipes in unconditioned spaces.	R			
4	5.3.7 Insulate HVAC ducts, plenums, and trunks in unconditioned basements/crawl spaces.	F			
4	5.3.8 Check moisture content of wood before it is enclosed on both sides.	R			
Total Points For Section 5					
Section 6: Operation, Maintenance, and Homeowner Education					
Points avail	Requirements		Points Claimed	Points Awarded	Notes
9	6.1 Provide Home Manual to owners/occupants on the use/care of home:	D/C			<input type="checkbox"/> Green Maint. <input type="checkbox"/> Green Certificate <input type="checkbox"/> Warranty info <input type="checkbox"/> Recycling <input type="checkbox"/> renewable energy <input type="checkbox"/> CFL bulbs <input type="checkbox"/> water/energy use <input type="checkbox"/> public transp. <input type="checkbox"/> safety diagram
2	6.2 Optional information to include in the Home Manual (Choose at least 5)	D/C			<input type="checkbox"/> Local maint. providers <input type="checkbox"/> Photo Record <input type="checkbox"/> Green items <input type="checkbox"/> Maint checklist <input type="checkbox"/> Haz Mat info <input type="checkbox"/> pest info <input type="checkbox"/> landscape info <input type="checkbox"/> RH info <input type="checkbox"/> Crawl space check <input type="checkbox"/> gutter info
7	6.3 Instruct homeowner about the building's goals and provide training.	D/C			
1	6.4 Encourage homeowners to recycle by providing built-in recycle space.	F			
Total Points For Section 6					
Section 7: Global Impact					
Points avail	Requirements		Points Claimed	Points Awarded	Notes
7.1 Products					
3	7.1.1 Manufacturer's product line, plant, or company must be ISO 14001 certified.	D			
6	7.1.2 Choose low- or no-VOC indoor paints.	D/F			
5	7.1.3 Use low VOC sealants.	D/R/F			
7.2 Innovative options					
4	7.2.1 Builder's practices include environmental management concepts.				Registrar: Certificate #:
Total Points For Section 7					
Total points claimed Sections 1-7			#VALUE!	#VALUE!	

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SUMMARY

Target Points and Points Awarded

Section:					Level Claimed	Points Claimed	Point Summary	
		Bronze	Silver	Gold			Points Awarded	Level Achieved
1	Lot Design, Preparation, and Development	8	10	12	none			none
2	Resource Efficiency	44	60	77	none			none
3	Energy Efficiency	37	62	100	none			none
4	Water Efficiency	6	13	19	none			none
5	Indoor Environmental Quality	32	54	72	none			none
6	Operation, Maint. & Owner Education	7	7	9	none			none
7	Global Impact	3	5	6	none			none
	Additional points (Sections of your choice)	100	100	100			enter target level at left	
	Total Target Points for Bronze, Silver or Gold:	237	311	395	#VALUE!	#VALUE!		none

Target Level:

ROUGH INSPECTION SIGN OFF

Inspection Start Time: _____ End: _____

To be Completed by the Builder	To be Completed by Verifier
I authorize Verifier to submit this report to the NAHB Research Center to begin the certification process for this house.	
Signature _____	Signature _____
Printed Name _____ Date _____	Printed Name _____ Date _____
Contact Name _____	Verifier Phone _____
Contact Phone _____	Verifier Email _____
Contact Email _____	
NAHB Member # _____	
Verifier to scan/email this report and designer report to Verifiersreport@nahbrc.org OR fax to 301-430-6184 Attn: Green Certification Included are: <input type="checkbox"/> Designer Report <input type="checkbox"/> Photo <input type="checkbox"/> Signatures in Rough Sign Off <input type="checkbox"/> Start/Finish Times	

FINAL INSPECTION SIGN OFF

Inspection Start Time: _____ End: _____

To be Completed by the Builder	To be Completed by Verifier
I certify to the best of my knowledge all items in this verification report have been properly installed in this home. By signing this, I am requesting that the verifier submit this for consideration of a certificate of certification under the National Green Home Certification Program. I authorize the following method of certificate delivery <input type="checkbox"/> US Mail (first class) <input type="checkbox"/> Overnight Fedex or UPS (\$30 shipping/special handling) Address to send certificate: _____	I certify that to the best of my knowledge, based on documentation presented to me and inspections completed by me, the items noted in this verification report are correct. I hereby disclose that I conducted other business related to this home (design consulting; HERs rating; performance testing; etc.) _____ (Initial here if YES and describe briefly below)
Signature _____	Signature _____
Printed Name _____ Date _____	Printed Name _____ Date _____
Verifier to scan/email this report and designer report to Verifiersreport@nahbrc.org OR fax to 301-430-6184 Attn: Green Certification Included are: <input type="checkbox"/> Photo <input type="checkbox"/> Signatures in Final Sign Off <input type="checkbox"/> Start/Finish Times <input type="checkbox"/> Certificate Address/Instructions	

Verifier Rough Inspection Notes: _____ _____	Verifier Final Inspection Notes: _____ _____
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