



EarthCraft House™

Sensibly Built for the Environment

NORTHERN MIXED HUMID CLIMATE WORKSHEET

IECC 2004 Climate Zone 4

A completed worksheet must be submitted to EarthCraft House for each home to be certified. An EarthCraft House certification requires a minimum of 150 points. Point requirements for each Tier are listed below and throughout the worksheet. In addition to having a completed worksheet, each home must also have appropriate documentation, ENERGY STAR certification and Pre-drywall and Final Inspections by an EarthCraft House Inspector.

| | |
|---------------------------------------|------------|
| EarthCraft House Certified (Level I) | 150 points |
| EarthCraft House Gold (Level II) | 200 points |
| EarthCraft House Platinum (Level III) | 230 points |

Worksheets may be submitted via mail, fax, email or presented on-site to the inspector.

Mail: EarthCraft Virginia
 1431 W. Main St.
 Richmond, VA 23220
Fax: (804) 562-4159
Email: admin@earthcraftvirginia.org

Builder Group: _____
Contact Person: _____
Phone: _____
Fax: _____
Email: _____
House Address: _____
Lot #: _____
Community: _____

Builder - By accepting the EarthCraft House certification, I pledge that this house has been constructed to the standards listed on this Scoring Worksheet.

 Builder Signature date

Home Buyer - I have reviewed the EarthCraft House measures with the homebuilder or sales agent.

 Home Buyer Signature (required only for pre-sales) date

EarthCraft House Inspector




 Inspector Signature date

Worksheet Score

| | | Points | SCORE | DOCUMENTATION |
|--|---|------------|-------|---------------------|
| 1 - SITE PLANNING | | | | |
| 1 | REQUIRED: Must comply with all federal, state, and local government erosion control and tree protection measures. | - | | |
| 2 | REQUIRED: workshop on erosion and sediment control (Responsible Land Disturber Certificate) | - | | certificate |
| 3 | erosion control site plan <i>(required tiers II & III)</i> | 1 | | site plan |
| 4 | excavated topsoil protected from erosion | 2 | | |
| 5 | use of redundant mulch, compost, or straw bales for erosion control | 3 | | |
| 6 | permanent storm water control | 2 | | site plan |
| 7 | grind stumps and limbs for mulch | 2 | | |
| 8 | mill cleared logs | 2 | | |
| 9 | remove invasive plants from site | 1 | | |
| 10 | tree preservation plan | 3 | | tree plan |
| 11 | tree planting (min 12 trees per acre of developed land; min 2" caliper) | 4 | | |
| 12 | protected tree save area | 2 | | site plan |
| 13 | utilities in tree root zones tunneled or hand dug (1 point per tree, max 5 trees) | 1 per tree | | |
| 14 | individual trees fenced at drip line (1 point per tree, max 5 trees) | 1 per tree | | |
| 15 | registered Building <i>With</i> Trees development | 5 | | confirmation letter |
| 16 | protected green space (min 25% of lot or 40% of development) | 1 | | site plan |
| 17 | protected green space (min 40% of lot or 60% of development) | 2 | | site plan |
| 18 | certified wildlife habitat (development or lot) | 2 | | certificate |
| 19 | lot size ≤ 1/5 acre | 1 | | site plan |
| 20 | lot size ≤ 1/10 acre | 3 | | site plan |
| 21 | lot size ≤ 1/15 acre | 5 | | site plan |
| SITE PLANNING TOTAL | | | | |
| Builder must earn a minimum for: tier I - 4 pts., tier II - 6 pts., tier III - 8 pts. | | | | |
| 2 - ENERGY EFFICIENT BUILDING ENVELOPE AND SYSTEMS | | | | |
| 1 | REQUIRED: ENERGY STAR HOME CERTIFICATION. Note: Homes with all items marked ★ will likely qualify as ENERGY STAR Homes using a Builder Option Package. See www.energystar.gov . | | | |
| 2 | REQUIRED: IECC 2006 plus applicable state amendments | | | |
| 2A - REQUIRED AIR SEALING MEASURES | | | | |
| 1 | penetrations through top and bottom plate sealed | - | | |
| 2 | bottom plate sealed to floor or foundation | - | | |
| 3 | penetrations through insulated subfloor sealed | - | | |
| 4 | seal all HVAC boots to subfloor or drywall (including ceiling) | - | | |
| 5 | shower and tub drains sealed | - | | |
| 6 | cantilevered floor sealed above supporting wall | - | | |
| 7 | window and door rough openings sealed | - | | |
| 8 | gaps in exterior wall sheathing sealed | - | | |
| 9 | sheathing penetrations sealed (including exterior light fixtures) | - | | |
| 10 | exterior walls of fireplace chase sealed and behind exterior tubs sealed | - | | |
| 11 | penetrations through drywall in attached garage sealed | - | | |
| 12 | air barrier installed behind tubs and showers on insulated walls | - | | |
| 13 | no polyethylene shall be used on exterior walls or foundation walls | - | | |
| 14 | all chases in contact with building envelope have air barrier applied to the interior of the chase where it meets the building envelope | - | | |
| 15 | penetrations through band sealed (including bathroom exhaust fan) | - | | |
| 16 | whole house fan must include cover that is gasketed to framing assembly | - | | |
| 17 | all recessed can lights in insulated ceilings must be airtight and IC-rated | - | | |
| 18 | penetrations through insulated ceiling sealed | - | | |
| 19 | attic pull-down stairs, scuttle hole, & kneewall doors sealed at rough opening | - | | |
| 20 | attic kneewall doors & scuttle holes weather-stripped | - | | |
| 21 | chases sealed and insulated | - | | |
| 22 | stud cavities blocked at change in ceiling height | - | | |
| 23 | attic kneewall has sealed attic-side, rigid sheathing | - | | |
| 24 | joist cavities under attic kneewall blocked | - | | |
| 2B - ADDITIONAL AIR SEALING MEASURES | | | | |
| 1 | drywall penetrations in insulated walls sealed | 1 | | |
| 2 | seams in band joist between conditioned floors sealed | 2 | | |
| 3 | housewrap installed with all seams and edges taped | 1 | | |
| 4 | ceiling drywall sealed to top plate <i>(required tier III)</i> | 2 | | |
| 5 | attic access with sealed attic-side cover or attic access outside of building envelope <i>(required tier III)</i> | 2 | | |
| 6 | if vaulted ceiling, blocking installed with baffles to prevent air washing through insulation or use foam insulation or dense pack cellulose | 4 | | |
| 2C - BLOWER DOOR TEST | | | | |
| 1 | REQUIRED: Blower door test result <0.50 cfm ₅₀ / square foot of building envelope | - | | test results |
| 2 | test result <0.4 cfm ₅₀ / square foot of building envelope <i>(required tiers II & III)</i> | 25 | | test results |
| 3 ★ | test result <0.25 cfm ₅₀ / square foot of building envelope (fresh air ventilation required) | 35 | | test results |
| AIR SEALING SUBTOTAL | | | | |

| | | Points | SCORE | DOCUMENTATION |
|-----------------------------------|---|---------------------------|-------|--------------------|
| 2D - REQUIRED INSULATION | | | | |
| 1 | slab insulation R10 | - | | |
| 2 | foundation walls R10 continuous or R13 cavity (if basement/crawl is inside building envelope) | - | | |
| 3 | framed floors R19 (if basement/crawl is outside building envelope) with insulation in contact with subfloor | - | | |
| 4 | cantilevered floors R19 (blocking between joists required) | - | | |
| 5 | exterior walls & band joist R13 | - | | |
| 6 | insulated sheathing R3 on metal framed exterior walls (thermal break) | - | | |
| 7 | for fireplace chase(s) on exterior wall, fireplace chase must have solid air barrier to interior of chase | - | | |
| 8 | flat ceilings R38 (requires baffles and blocking in vented attics) | - | | |
| 9 | sloped ceilings R30 (or R20 spray foam) (Note: BOP requires R30) | - | | |
| 10 | attic kneewalls R19 insulation & attic side air barrier | - | | |
| 11 | attic pull-down or scuttle hole R5 (compressed batt not acceptable) | - | | |
| 12 | whole house fan must include sealed, min R5 insulated cover | - | | |
| 2E - ADDITIONAL INSULATION | | | | |
| 1 | insulation installation quality Grade II based on RESNET standard | (required tier II) | 1 | |
| 2 ★ | insulation installation quality Grade I based on RESNET standard | (required tier III) | 5 | |
| 3 | foundation walls insulated instead of floor over basement (no paper faced batts) | | 5 | |
| 4 | foundation walls insulated with continuous insulation | (required tier III) | 2 | |
| 5 | sealed, insulated crawlspace walls R8 | | 4 | |
| 6 | install a minimum of R3 continuous insulation on underside of framed floors over unconditioned spaces | | 2 | |
| 7 | no fireplaces on exterior walls | | 1 | |
| 8 | cantilevered floors R30 (blocking between joists required) | | 1 | |
| 9 | band joist insulated R19 | | 2 | |
| 10 | spray applied wall insulation | | 5 | |
| 11 | insulated wall stud cavities R15 | | 1 | |
| 12 | wall insulation without vapor retarder | | 2 | |
| 13 | insulated headers | | 1 | |
| 14 | 2-stud corners with drywall clips or alternative framing | | 1 | |
| 15 | T-walls or alternative framing for insulation coverage improvements in wall field | | 1 | |
| 16 | insulated wall sheathing R 2.5 or greater (min. 75%) | | 2 | |
| 17 | insulated wall sheathing R 5 or greater (min. 75%) | | 3 | |
| 18 | insulated wall sheathing R 2.5 or greater (100%) | | 4 | |
| 19 | insulated wall sheathing R 5 or greater (100%) | | 5 | |
| 20 | ICF or SIP for complete building envelope walls (minimum R13) | | 2 | |
| 21 | loose-fill attic insulation card and rulers | | 1 | |
| 22 | attic insulation extended over wall cavity (energy heel trusses or raised top plate) | | 2 | |
| 23 | vaulted and tray ceilings R38 | (required tier III) | 1 | |
| 24 | attic radiant barrier | | 2 | |
| 25 | attic kneewall doors R8 | (required tiers II & III) | 2 | |
| 26 | attic pull-down or scuttle hole R19 (compressed batt not acceptable) | | 3 | |
| 27 | 2x6 attic kneewalls with R19 cavity insulation & R3 insulating sheathing (U=0.051) | (required tier III) | 3 | |
| 28 | 2x4 attic kneewalls with R13 cavity insulation & R5 insulating sheathing (U=0.058) | (required tier III) | 3 | |
| 29 | complete roofline spray insulation or SIP roof with code-approved air barrier (minimum R20) | | 2 | |
| INSULATION SUBTOTAL | | | | |
| 2F - WINDOWS | | | | |
| 1 | REQUIRED: Maximum window U-factor 0.40, SHGC 0.45 | | - | window label |
| 2 | REQUIRED: windows are NFRC certified with label (0.75% WFA exemption) | | - | window label |
| 3 ★ | window U-factor < 0.40 | | 2 | window label |
| 4 | window U-factor < 0.35 | (required tiers II & III) | 5 | window label |
| 5 | glass door U-factor < 0.40 | | 1 | window label |
| 6 | skylight U-factor < 0.60 | | 1 | window label |
| 7 ★ | window, skylight and glass door SHGC < 0.40 | (required tiers II & III) | 3 | window label |
| 8 | window, skylight and glass door SHGC < 0.35 | | 5 | window label |
| 9 | 1.5-foot overhangs over 80% of windows (max 2 feet above windows) | | 1 | |
| 10 | solar shade screens (min all east and west windows) | | 3 | |
| 11 | west facing glazing less than 2% of floor area | | 2 | house plan |
| 12 | east facing glazing less than 3% of floor area | | 2 | house plan |
| 13 | certified passive solar design (25% load reduction) | | 10 | computer print-out |
| WINDOWS SUBTOTAL | | | | |
| 2G - ROOF | | | | |
| 1 | ENERGY STAR roof over minimum 75% of total roof area | | 5 | label |
| ROOF SUBTOTAL | | | | |









| | | Points | SCORE | DOCUMENTATION |
|---|--|--------|-------|-----------------------------------|
| 2H - HEATING AND COOLING EQUIPMENT | | | | |
| 1 | REQUIRED: Manual J calculation for sizing heating and cooling equipment based on actual house orientation | - | | load calc |
| 2 | REQUIRED: Installed cooling equipment and/or heatpump oversized by no more than 15% of Manual J (all units) | - | | load calc + eqmt size |
| 3 | REQUIRED: adaptive recovery for programmable thermostat(s) when programmable thermostat(s) is used with heat pump(s) | - | | product literature |
| 4 | REQUIRED: No electric resistance heat as primary heat source for any portion of conditioned space | - | | |
| 5 | REQUIRED: Indoor and outdoor coils matched | - | | ARI or manufacturer's certificate |
| 6 | installed heating equipment within 25% of Manual J (all units) | 2 | | load calc + eqmt size |
| 7 ★ | 90% AFUE furnaces or 8.5 HSPF heat pumps (required tiers II & III) | 6 | | energy guide label |
| 8 | meets sensible and latent heat loads (all air conditioners) | 2 | | spec sheet |
| 9 ★ | SEER 14 cooling equipment (required tier III) | 4 | | energy guide label |
| 10 | SEER 16 cooling equipment | 6 | | energy guide label |
| 11 | dual-stage compressor cooling equipment | 3 | | |
| 12 | variable speed blower | 2 | | |
| 13 | geothermal heat pump | 8 | | |
| 14 ★ | ENERGY STAR certified programmable thermostat (all systems) (required tier III) | 1 | | product literature |
| 15 | outdoor thermostat for heat pumps | 1 | | |
| 16 | cooling equipment has non-CFC and non-HCFC refrigerant (e.g. R-410A) | 3 | | product literature |
| 17 | zone control with wired dampers - one system serves multiple zones | 3 | | |
| 18 | if zoned control, zoned returns or transfer grills between zones (required tier III) | 1 | | |
| 19 | verification of proper refrigerant charge (required tier II & III) | 5 | | test results |
| HEATING AND COOLING SUBTOTAL | | | | |
| 2I - DUCTWORK / AIR HANDLER | | | | |
| 1 | REQUIRED: air handlers & duct systems sealed with mastic or mastic tape | - | | |
| 2 | REQUIRED: code approved solid connector for all flex to flex connections | - | | |
| 3 | REQUIRED: all supply and return ducts fully ducted with code approved materials (no panned joists or stud cavities) | - | | |
| 4 | REQUIRED: supply and return duct work insulated to R8 outside of conditioned space | - | | |
| 5 | all return ducts fully ducted with code approved materials (no panned joists) (required tiers II & III) | 1 | | |
| 6 | air handler located within conditioned space (all units) | 5 | | |
| 7 | ducts located within conditioned space (min 90%) | 5 | | |
| 8 | installed duct design complies with Manual D on a room-by-room basis | 5 | | sizing calculation |
| 9 | return plenum duct take-off free area is 120% of supply plenum duct take-off free area (requirement waived if installed per Manual D) (required tier III) | 3 | | |
| 10 | all supply duct take-offs spaced at least 6" apart (no ducts from cap) (required tier III) | 2 | | |
| 11 | no duct take-offs within 6" of supply plenum cap (required tier III) | 1 | | |
| 12 | rigid ductwork or all flex duct pulled tight with no pinches (required tier III) | 1 | | |
| 13 | no ducts in exterior walls or vaulted ceilings along rooflines (required tiers II & III) | 2 | | |
| 14 | rigid supply trunk | 3 | | |
| 15 | airflow for each duct run measured and balanced to within 15 cfm of design value (balancing dampers required) (required tier III) | 5 | | test results |
| 16 | multiple return ducts (min 1 in each bedroom) or transfer grills (required tiers II & III) | 3 | | |
| 17 | interior doors with 1 inch clearance to finish floor | 1 | | |
| DUCTWORK / AIR HANDLER SUBTOTAL | | | | |
| 2J - DUCT BLASTER TEST | | | | |
| 1 | REQUIRED: Duct blaster test result <6% of floor area served leakage to outside | - | | test results |
| 2 | REQUIRED: If infiltration is ≤0.25cfm50/sfbc and the air handler and ductwork are in conditioned space then total leakage must be <15% of floor area served. | - | | test results |
| 3 | Duct blaster test result <5% of floor area served leakage to outside (required tier II) | 20 | | test results |
| 4 ★ | Duct blaster result <4% of floor area served leakage to outside (required tier III) | 25 | | test results |
| DUCT BLASTER TEST SUBTOTAL | | | | |







| | Points | SCORE | DOCUMENTATION |
|---|--|-------|-----------------------|
| 2K - WATER HEATER | | | |
| 1 | REQUIRED: heat trap on all water heaters | - | |
| 2 | shower drain heat recovery device | 2 | |
| 3 | high efficiency water heater (min Energy Factor: gas 0.59 electric 0.92) <i>(required tier III)</i> | 1 | energy guide label |
| 4 ★ | high efficiency water heater (min Energy Factor: gas 0.61 electric 0.93) | 2 | energy guide label |
| 5 | tankless gas water heater | 3 | |
| 6 | water heater tank insulation | 1 | |
| 7 | pipe insulation on first two feet of pipe <i>(required tiers II & III)</i> | 1 | |
| 8 |  insulate 100% of hot water pipe to R4 | 1 | |
| 9 | heat recovery water heating | 1 | |
| 10 | solar domestic water heating (min 40% of annual load) | 10 | |
| 11 | heat pump water heater | 4 | |
| 12 | all hot water fixtures have less than 20 ft of pipe connecting them to water heater | 2 | |
| WATER HEATER SUBTOTAL | | | |
| 2L - ENERGY EFFICIENT LIGHTING / APPLIANCES | | | |
| 1 | light tubes, cupola, or clerestory for daylighting | 2 | |
| 2 | ENERGY STAR Advanced Lighting Package <i>(required tier III)</i> | 2 | |
| 3 | preset lighting control system (minimum 5 scenes and whole house off feature) | 2 | |
| 4 | automatic indoor lighting controls (min kitchen(s), bath, hall, closets, and utility room(s) have manual-on occupancy sensors or timers) | 3 | |
| 5 | indoor fluorescent fixtures with integrated ballast (min 10 watts / 100 s.f. of conditioned floor area) <i>(required tier III)</i> | 2 | |
| 6 | 100% fluorescent fixtures in garage | 1 | |
| 7 | all recessed light fixtures are ballasted compact fluorescents or LED | 2 | |
| 8 | screw-in compact fluorescent bulbs (min 90% of bulbs) or screw-in LED bulbs (min 50% of bulbs) (bulbs in appliances excluded) | 2 | |
| 9 ★ | 5 or more ENERGY STAR bath fans, light fixtures, ceiling fans with light fixtures, appliances (excluding dishwasher and refrigerator) <i>(required tiers II & III)</i> | 3 | product literature |
| 10 | automatic outdoor lighting controls (e.g. motion sensor) with integral photocell to prevent daytime use | 2 | |
| 11 | high efficiency exterior lighting | 2 | product literature |
| 12 |  ENERGY STAR dishwasher <i>(required tiers II & III)</i> | 1 | product label |
| 13 | ENERGY STAR refrigerator | 2 | product label |
| 14 | no garbage disposal | 1 | |
| 15 | ENERGY STAR clothes washer | 1 | product label |
| 16 |  ENERGY STAR clothes washer with a water factor ≤ 6.0 gals per cubic foot of capacity | 2 | product label |
| ENERGY EFFICIENT LIGHTING / APPLIANCES TOTAL | | | |
| ENERGY EFFICIENT BUILDING TOTAL | | | |
| Builder must earn for: tier 1 min 80 pts. max 90 pts., tier 2 min 90 pts. max 100 pts., tier 3 min 100 pts. max 110 pts. | | | |
| 3 - RESOURCE EFFICIENT DESIGN | | | |
| 1 | total floor area of house <1800 square feet | 6 | |
| 2 | total floor area of house 1800-2100 square feet | 4 | |
| 3 | total floor area of house 2100-2500 square feet | 2 | |
| 4 | outside dimensions of floor plan adheres to 2-ft dimensions | 2 | |
| 5 | floor joists @ 24-in. centers (all floors) | 5 | |
| 6 | floor joists @ 19.2-in. centers (all floors) | 3 | |
| 7 | non-load bearing wall studs @ 24-in. centers | 2 | |
| 8 | all wall studs @ 24-in. centers | 3 | |
| 9 | window rough openings eliminate jack stud | 2 | |
| 10 | non-structural headers in non-load bearing walls | 2 | |
| 11 | single top plate with stacked framing | 3 | |
| 12 | 2-stud corners with drywall clips or alternative framing | 2 | |
| 13 | T-walls with drywall clips or alternative framing | 2 | |
| 14 | job site framing plan with cut list <i>(required tier III)</i> | 1 | frame plan + cut list |
| 15 | job site framing plan with locations of studs, joists, and roof structure with cut list | 10 | frame plan + cut list |
| RESOURCE EFFICIENT DESIGN TOTAL | | | |
| Builder must earn a minimum for: tier 1 - 2 pts., tier 2 - 3 pts., tier 3 - 4 pts. | | | |

| | | Points | SCORE | DOCUMENTATION |
|--|---|--------|-------|--------------------|
| 4 - RESOURCE EFFICIENT BUILDING MATERIALS | | | | |
| 4A - RECYCLED AND NATURAL CONTENT MATERIALS | | | | |
| 1 | sustainably harvested lumber (50%) | 3 | | product literature |
| 2 | 25% of cement in concrete replaced with fly ash or slag | 3 | | content print-out |
| 3 | recycled concrete used as aggregate | 1 | | letter |
| 4 | insulation (min 25% recycled content) | 1 | | product literature |
| 5 | reclaimed wood flooring | 2 | | letter |
| 6 | recycled content tiles (min 30% recycled) | 2 | | product literature |
| 7 | cork or bamboo flooring (min 10% of total floor area) | 2 | | |
| 8 | carpet (min 50% recycled) | 2 | | product literature |
| 9 | biodegradable carpet and backing (wool, hemp, etc.) | 2 | | |
| 10 | outdoor decking and porches (min 40% recycled content) | 3 | | product literature |
| 11 | air conditioner condensing unit pad (min 50% recycled content) | 1 | | product literature |
| 12 | composite roofing shingle with recycled content (min 25% recycled) | 2 | | product literature |
| 13 | cabinet faces are reused, MDF, local species, or FSC certified wood | 2 | | product literature |
| RECYCLED AND NATURAL CONTENT MATERIALS SUBTOTAL | | | | |
| 4B - ADVANCED PRODUCTS | | | | |
| 1 | engineered floor framing (80%) | 2 | | |
| 2 | use of open web trusses to run ductwork | 2 | | |
| 3 | engineered roof framing | 3 | | |
| 4 | all beams are steel, engineered wood, or trusses | 1 | | |
| 5 | all structural headers are steel or engineered wood | 1 | | |
| 6 | engineered wall framing (25% of studs) | 1 | | |
| 7 | engineered wall framing (80% of studs) | 2 | | |
| 8 | interior trim finger jointed, MDF, or HDF | 1 | | product literature |
| 9 | engineered exterior trim including soffit, fascia, and trim | 1 | | |
| 10 | steel interior wall framing | 1 | | |
| 11 | panelized wall construction delivered to the job site pre-framed | 2 | | |
| 12 | modular construction for the entire house | 2 | | |
| 13 | Precast Autoclaved Aerated Concrete | 5 | | |
| 14 | Structural Insulated Panels for exterior walls | 2 | | |
| 15 | Structural Insulated Panels for roof | 2 | | |
| 16 | Insulated Concrete Forms for foundation walls | 2 | | |
| 17 | Insulated Concrete Forms for exterior walls | 2 | | |
| ADVANCED PRODUCTS SUBTOTAL | | | | |

| | | Points | SCORE | DOCUMENTATION |
|---|--|--------|-------|--------------------|
| 4C - DURABILITY | | | | |
| 1 | REQUIRED: flashing at wall/roof intersection integrated with wall and roof drainage planes | - | | |
| 2 | REQUIRED: flashing at deck/wall or porch/wall intersection integrated with drainage planes | - | | |
| 3 | REQUIRED: maintain 2" clearance between wall siding and roof surface (or per product manufacturer installation specification) | - | | |
| 4 | REQUIRED: for roofs that slope along an adjoining wall surface, kick-out flashing is installed | - | | |
| 5 | REQUIRED: all roof valleys direct water away from walls, dormers, chimneys, etc. | - | | |
| 6 | REQUIRED: double layer of builder paper or housewrap behind cementitious stucco or stone veneer or synthetic stone veneer (no drainage cavity necessary) on framed walls | - | | |
| 7 | REQUIRED: framed walls covered with drainage plane (drainage membrane, builder paper, housewrap or XPS foam) | - | | |
| 8 | sealed crawlspace (unless house is in 100-year flood plain) <i>(required tiers II & III)</i> | 4 | | |
| 9 | roofing (min 30-year warranty) | 1 | | warranty |
| 10 | roofing (min 40-year warranty) | 2 | | warranty |
| 11 | roofing (min 50-year warranty) | 3 | | warranty |
| 12 | roof drip edge | 1 | | |
| 13 | exterior cladding (min 3 sides) with 40-year warranty or durable natural material | 1 | | |
| 14 | drainage plane installed with all seams and edges sealed per manufacturer's recommendation | 1 | | |
| 15 | back-primed siding and trim (or vented rain screen behind siding) <i>(required tiers II & III)</i> | 1 | | |
| 16 | windows with minimum 25-year warranty | 1 | | |
| 17 | 10 year warranty on all insulated glazing | 1 | | warranty |
| 18 | window and door pan & sill flashing integrated with drainage plane <i>(required tiers II & III)</i> | 2 | | |
| 19 | window and door head flashing integrated with drainage plane <i>(required tiers II & III)</i> | 3 | | |
| 20 | continuous foundation termite flashing | 1 | | |
| 21 | roof gutters that discharge water 5 feet away from foundation or other drainage system meeting same intent <i>(required tier III)</i> | 1 | | |
| 22 | covered entryways (all doors) | 2 | | |
| 23 | insulate cold water pipes inside conditioned space and in inaccessible interstitial locations for condensation prevention | 1 | | |
| 24 | paperless drywall in kitchens, baths and foundation walls <i>(required tier III)</i> | 2 | | |
| 25 | non-toxic pest treatment of all lumber in contact with foundation | 1 | | product literature |
| 26 | non-toxic pest treatment applied to all lumber | 1 | | product literature |
| 27 | non-toxic mold inhibitor with warranty applied to lumber | 1 | | warranty |
| 28 | plants installed to maintain minimum 2 foot distance from home to maturity | 2 | | |
| 29 | outdoor deck material (min 25-year warranty) | 1 | | warranty |
| DURABILITY SUBTOTAL | | | | |
| RESOURCE EFFICIENT BUILDING MATERIALS TOTAL | | | | |
| Builder must earn a minimum for: tier 1 - 6 pts., tier 2 - 12 pts., tier 3 - 16 pts. | | | | |
| 5 - WASTE MANAGEMENT | | | | |
| 1 | REQUIRED: No construction materials shall be burned or buried on job site or anywhere but in a state-approved landfill | - | | |
| 2 | central cut area <i>(required tiers II & III)</i> | 3 | | |
| 3 | donation of excess materials or re-use (min \$500/job) | 1 | | letter |
| 4 | in-fill building deconstruction with minimum 25% material re-use | 2 | | |
| 5 | posted and enforced job site waste management plan - recycle 75% of 3 materials | 5 | | management plan |
| 6 | divert 75% of wood | 3 | | |
| 7 | divert 75% of cardboard | 1 | | |
| 8 | divert 75% of metal | 1 | | |
| 9 | divert 75% of drywall (recycle or grind and spread on site) | 3 | | |
| 10 | divert 75% of plastics | 1 | | |
| 11 | divert 75% of shingles | 1 | | |
| WASTE MANAGEMENT TOTAL | | | | |
| Builder must earn a minimum for: tier 1 - 3 pts., tier 2 - 4 pts., tier 3 - 6 pts. | | | | |

| | | Points | SCORE | DOCUMENTATION |
|-----------------------------------|--|--------|-------|-----------------|
| 6 - | INDOOR AIR QUALITY | | | |
| 1 | ENERGY STAR Indoor Air Package | 4 | | |
| 6A - COMBUSTION SAFETY | | | | |
| 1 | REQUIRED: No unvented combustion fireplaces or space heaters | - | | |
| 2 | REQUIRED: No duct runs from house system serving garage | - | | |
| 3 | REQUIRED: Attached garage - seal bottom plate, penetrations, and band area | - | | |
| 4 | REQUIRED: No air handler equipment in garage or conditioned air supplied to garage | - | | |
| 5 | REQUIRED: Sealed combustion furnace or furnace isolated from conditioned space (all units) | - | | |
| 6 | REQUIRED: water heater in conditioned space is sealed combustion, power vent, direct vent or electric (no atmospherically vented water heaters in conditioned space) | - | | |
| 7 | detached garage or no garage | 5 | | |
| 8 | attached garage - exhaust fan controlled by motion sensor or timer | 2 | | |
| 9 | all fireplaces have outside combustion air supplied to them <i>(required tiers II & III)</i> | 3 | | |
| 10 | carbon monoxide detector (one per floor required) | 4 | | |
| 11 | backdraft depressurization test | 4 | | test results |
| COMBUSTION SAFETY SUBTOTAL | | | | |
| 6B - MOISTURE CONTROL | | | | |
| 1 | REQUIRED: gravel bed beneath subgrade, on-grade, or raised slab | - | | |
| 2 | variable speed blower | 2 | | |
| 3 | humidistat or thermidistat used with variable speed cooling system | 2 | | |
| 4 | wholehouse, basement or sealed crawlspace dehumidification system | 3 | | |
| 5 | plastic as footing wrap or capillary break between footing and foundation | 2 | | |
| 6 | foundation drain on top of footing | 1 | | |
| 7 | foundation drain at outside perimeter edge of footing | 2 | | |
| 8 | drainage board for below grade walls | 4 | | |
| 9 | vapor barrier beneath slab (above gravel) or in crawlspace <i>(required tiers II & III)</i> | 1 | | |
| 10 | vapor barrier is 10 mil or thicker or reinforced | 1 | | |
| 11 | 100% coverage of vapor barrier in crawlspace all seams sealed to piers, walls <i>(required tier III)</i> | 1 | | |
| 12 | capillary break between foundation and framing for all walls <i>(required tiers II & III)</i> | 1 | | |
| MOISTURE CONTROL SUBTOTAL | | | | |
| 6C - VENTILATION | | | | |
| 1 | REQUIRED: bathroom exhaust fans & clothes dryers must be ducted to outside | - | | |
| 2 | REQUIRED: locate all air intakes >10' away from exhaust outlets and vehicle idling zones | - | | |
| 3 | REQUIRED: outside air intake with mechanical damper controlled by ventilation timer if blower door test result ≤ 0.25 cfm50/SFBE | - | | |
| 4 | passive, labeled radon/soil gas vent system <i>(required tier III, EPA zones 1 & 2)</i> | 4 | | |
| 5 | radon test of home prior to occupancy | 2 | | |
| 6 | bath fans ducted with rigid duct (all units) | 1 | | |
| 7 | automatic tub/shower room fan controls (e.g. timer or humidistat) | 1 | | |
| 8 | kitchen range hood or downdraft vented to exterior <i>(required tiers II & III)</i> | 3 | | |
| 9 | whole house fan | 2 | | |
| 10 | third-party testing of each exhaust air flow rate | 1 | | test results |
| 11 | outside air intake without damper (10 cfm/bedroom or ASHRAE 62.2) <i>(required tiers II & III)</i> | 3 | | |
| 12 | damper on outside air intake | 1 | | |
| 13 | outside air intake with mechanical damper controlled with ventilation timer <i>(required tier III)</i> | 4 | | |
| 14 | ventilation timer on outside air intakes <i>(required tiers II & III)</i> | 3 | | |
| 15 | third-party testing of the outdoor air flow rate | 1 | | test results |
| 16 | energy recovery ventilator | 7 | | |
| 17 | ceiling fans (minimum of 3 fans) | 1 | | |
| 18 | effective cross ventilation with insect screens | 3 | | design on plans |
| 19 | effective stack ventilation (e.g. cupola or clerestory with operable windows and insect screens) | 3 | | design on plans |
| 20 | if there is a garage storage room or cabinet, that space is vented to outside <i>(required for tier III)</i> | 1 | | |
| 21 | no power roof vents <i>(required tiers II & III)</i> | 1 | | |
| VENTILATION SUBTOTAL | | | | |

| | | Points | SCORE | DOCUMENTATION |
|--|---|--------|-------|--------------------------------------|
| 6D - INDOOR POLLUTANT CONTROL | | | | |
| 1 | REQUIRED: Ducts in floor protected until floor finishing | - | | |
| 2 | all insulation urea-formaldehyde free | 1 | | |
| 3 | subfloor urea-formaldehyde free | 1 | | product literature |
| 4 | all cabinets, shelves, and countertops urea-formaldehyde free | 3 | | product literature |
| 5 | all surfaces of particle board in house sealed with water-based sealant | 1 | | product literature |
| 6 | reduced VOC paints (less than 250 g/L) | 1 | | product literature |
| | | | | <i>(required tiers II & III)</i> |
| 7 | low VOC paints (less than 150 g/L) | 3 | | product literature |
| 8 | reduced VOC stains and finishes on wood floors | 1 | | product literature |
| 9 | low VOC sealants and adhesives (less than 250 g/L) | 1 | | product literature |
| 10 | no carpet in below grade rooms | 1 | | |
| 11 | low VOC carpet certified by the Carpet & Rug Institute Green Label or no carpet in home | 1 | | product literature |
| | | | | <i>(required tier III)</i> |
| 12 | low VOC carpet certified by the Carpet & Rug Institute Green Label Plus | 2 | | product literature |
| 13 | low VOC carpet pad certified by the Carpet & Rug Institute Green Label or no carpet in home | 1 | | |
| | | | | <i>(required tier III)</i> |
| 14 | low VOC carpet pad adhesive certified by the Carpet & Rug Institute Green Label Plus or no carpet in home | 1 | | product literature |
| | | | | <i>(required tier III)</i> |
| 15 | use of 10 GreenGuard certified materials or equivalent inside the home | 3 | | product literature |
| 16 | flush home with fresh air continuously for one week prior to occupancy | 1 | | |
| 17 | alternative termite treatment with no soil pretreatment unless required by code | 2 | | |
| | | | | <i>(required tiers II & III)</i> |
| 18 | alternative pest control | 2 | | |
| 19 | provide rodent and corrosion proof screens for all openings not fully sealed or caulked | 1 | | |
| | | | | <i>(required tiers II & III)</i> |
| 20 | central vacuum system with outside collection receptacle | 1 | | |
| 21 | permanent walk-off mats installed at each entry | 1 | | |
| 22 | filter / air cleaner MERV 8 or better (e.g. pleated filter) | 1 | | |
| 23 | 2" pleated filter or thicker | 2 | | |
| 24 | ducts protected until construction is completed | 2 | | |
| | | | | <i>(required tier III)</i> |
| INDOOR POLLUTANT CONTROL SUBTOTAL | | | | |
| INDOOR AIR QUALITY TOTAL | | | | |
| Builder must earn a minimum for: tier 1 - 15 pts., tier 2 - 25 pts., tier 3 - 35 pts. | | | | |
| 7 - WATER CONSERVATION | | | | |
| 1 | EPA WaterSense Home certification | 4 | | EPA Certification |
| 7A - INDOOR USE | | | | |
| 1 |  REQUIRED: All fixtures must meet National Energy Policy Act low flow standards. | - | | |
| 2 |  house water pressure 60 psi maximum | 3 | | |
| 3 |  water filter (NSF certified, minimum 85% efficient) | 1 | | product literature |
| 4 | ENERGY STAR clothes washer (or equivalent) or front-loading clothes washer | 3 | | product label |
| 5 | low-flow lavatory faucets (max 2.0 gal/min) | 1 | | product literature |
| 6 |  WaterSense labeled lavatory faucets (1.5 gal/min) | 3 | | product literature |
| 7 | low-flow showerheads (max 2.25 gal/min) | 1 | | product literature |
| 8 | high efficiency showerheads (max 1.75 gal/min) | 3 | | product literature |
| 9 |  low-flush (max 1.45 gal/flush) or dual-flush toilets | 2 | | product literature |
| 10 |  WaterSense labeled toilets (1.28 gal/flush) | 3 | | product literature |
| 11 | composting toilet | 5 | | |
| 12 |  hot water demand re-circulation (not continuous circulation) | 2 | | |
| 13 |  manifold distribution system (longest branch max 10 feet for 1-story and max 15 feet for 2-story) | 4 | | |
| INDOOR USE SUBTOTAL | | | | |

| | | Points | SCORE | DOCUMENTATION |
|--|---|--------|-------|-----------------------|
| 7B - OUTDOOR USE | | | | |
| 1 | REQUIRED: if installed, irrigation system must have rain sensor shutoff switch | - | | |
| 2 | xeriscape™ landscape with maintenance plan provided to homeowner | 4 | | xeriscape plan |
| 3 | soil tested and amended | 4 | | test results |
| 4 |  turf does not exceed the lesser of 40% of landscaped area or 1000 square feet. Turf is not installed in strips less than 8 feet wide or on slopes greater than 4:1. | 4 | | |
| 5 |  non-turf, non-hardscapes covered with at least 2 inch layer of mulch or gravel | 1 | | |
| 6 |  installed landscape has a water budget with <60% evapotranspiration rate | 1 | | calculations |
| 7 | drought-tolerant / native landscaping plant (minimum 85% of plantings) <i>(required tier III)</i> | 3 | | |
| 8 | use no invasive plant species, as identified by local Agricultural Cooperative Extension Service <i>(required tier III)</i> | 1 | | |
| 9 | shade at least 50% of hardscape within 50 feet of home | 1 | | |
| 10 |  irrigation system designed and installed by WaterSense certified irrigation professional | 1 | | |
| 11 | weather station or soil moisture sensor on irrigation system | 2 | | |
| 12 | irrigation system zoned for specific water needs in each planting area | 1 | | |
| 13 | check valves in heads | 1 | | |
| 14 | no irrigation system and xeriscape™ guidebook given to homeowner | 3 | | resource |
| 15 |  drip irrigation system | 3 | | |
| 16 | greywater irrigation | 5 | | |
| 17 | rainwater harvest system | 4 | | |
| 18 | at least one rain barrel with hose bib (minimum 1 downspout connection) | 1 | | |
| 19 | permeable pavement driveway / parking area | 2 | | |
| 20 | timer on exterior water spigots | 1 | | |
| OUTDOOR USE SUBTOTAL | | | | |
| WATER CONSERVATION TOTAL | | | | |
| <i>Builder must earn a minimum for: tier 1 - 3 pts., tier 2 - 5 pts., tier 3 - 10 pts.</i> | | | | |
| 8 - HOMEBUYER EDUCATION | | | | |
| 1 | guaranteed energy bills | 10 | | energy bill guarantee |
| 2 | review energy operations with homeowner <i>(required tiers II & III)</i> | 1 | | |
| 3 |  review irrigation system operations and xeriscape™ guidebook given to homeowner <i>(required tiers II & III)</i> | 1 | | resource |
| 4 | environmental features checklist for walk through | 4 | | |
| 5 | built-in recycling center | 2 | | |
| 6 | local recycling contact | 1 | | |
| 7 | household hazardous waste resources | 1 | | |
| 8 | backyard composting bin with instructions for use | 1 | | |
| 9 | backyard composting bin with instructions for use and no garbage disposal | 2 | | |
| HOMEBUYER EDUCATION TOTAL | | | | |
| <i>Builder must earn a minimum for: tier 1 - 1 pts., tier 2 - 2 pts., tier 3 - 4 pts.</i> | | | | |
| 9 - BUILDER OPERATIONS | | | | |
| 1 | REQUIRED: Must build at least 1 EarthCraft House every year (if building >50 homes a year, must build at least 5 EarthCraft Houses every year) | - | | |
| 2 | builder commits 80% of total homes to EarthCraft House standards | 3 | | |
| 3 | builder commits 100% of total homes to EarthCraft House standards | 5 | | |
| 4 | markets EarthCraft House program | 2 | | |
| 5 | environmental checklist provided to all subcontractors <i>(required tier III)</i> | 2 | | |
| 6 | uses HBA Homeowner Handbook for warranty standards (or approved equiv.) | 2 | | |
| 7 | Certified Professional Home Builder (or approved equiv.) | 2 | | certificate |
| BUILDER OPERATIONS TOTAL | | | | |
| <i>Builder must earn a minimum for: tier 1 - 2 pts., tier 2 - 4 pts., tier 3 - 6 pts.</i> | | | | |

| | | Points | SCORE | DOCUMENTATION |
|---------------------------|--|--------------|-------|-----------------------------------|
| 10 - BONUS POINTS | | | | |
| 1 | house located within 1/2 mile of park available for homeowner use | 1 | | |
| 2 | site located within 1/4 mile of mass transit | 5 | | |
| 3 | sidewalk connects house to business district (max 2 miles) | 5 | | |
| 4 | lot designed for clearly defined pedestrian access to community paths | 1 | | |
| 5 | covered and usable front porch | 1 | | |
| 6 | brownfield site | 5 | | |
| 7 | green roof system installed minimum 30% of total roof area on lot | 4 | | |
| 8 | solar, micro-hydro or wind electric system (minimum 0.5 kW production) | 25 | | system specs |
| 9 | on-site fuel cell or co-generation system | 3 | | |
| 10 | solar-ready home | 5 | | |
| 11 | use building materials extracted, processed and manufactured within 500 miles of site (0.5 pts each, max 5 pts) | 0.5 per item | | list of products and manufacturer |
| 12 | Easy Living accessibility / visitability certification | 2 | | certificate |
| 13 | USGBC LEED for Homes certification | 2 | | |
| 14 | American Lung Association Health House | 4 | | certificate |
| 15 | exceeds ENERGY STAR (1 point for each 3%) max 5 points | | | HERS rating index |
| 16 | Innovation points - Builder submits specifications for innovative products or design features to qualify for additional points | | | |
| BONUS POINTS TOTAL | | | | |

| EARTHCRAFT HOUSE TOTALS | Earned | Min/Max |
|---|--------|---|
| SITE PLANNING | | (Min 4, 6, 8) |
| ENERGY EFFICIENT BUILDING ENVELOPE AND SYSTEMS | | (Min 80, 90, 100) (Max 90, 100, 110) |
| RESOURCE EFFICIENT DESIGN | | (Min 2, 3, 4) |
| RESOURCE EFFICIENT BUILDING MATERIALS | | (Min 6, 12, 16) |
| WASTE MANAGEMENT | | (Min 3, 4, 6) |
| INDOOR AIR QUALITY | | (Min 15, 25, 35) |
| WATER CONSERVATION | | (Min 3, 5, 10) |
| HOME BUYER EDUCATION | | (Min 1, 2, 4) |
| BUILDER OPERATIONS | | (Min 2, 4, 6) |
| BONUS POINTS | | |
| GRAND TOTAL | | (Min 150, 200, 230) |