



Residential Green Building Guidelines

NEW CONSTRUCTION VERSION 1.0

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TOTAL POINTS

85-100 Points = Silver (Bright)
 101-125 Points = Gold (Genius)
 126+ = Platinum (Einstein)

CATEGORIES

- I SITE AND LAND USE
- II BUILDING ASSEMBLY & MATERIALS
- III HEALTH & SAFETY
- IV ENERGY*
- V WATER CONSERVATION
- VI MAINTAINING A GREEN HOME
- VII INNOVATIONS
- VIII TRAINING

Yes ? No

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REQUIREMENTS

Required

Meet Michigan energy code	Required
Meet Michigan ventilation/indoor air quality code	Required
Meet Michigan water use efficiency standards	Required
Erosion Control Plan as reqd by local bldg department	Required
Provide "User's Manual" as described in section VI (Maintaining a Green Home)	Required

Total Points

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I. SITE AND LAND USE

42 points

Yes ? No

A. Tree and plant preservation

Use the following guidelines for site preservation measures. For measures not listed below, submit a proposal to review board for approval.

Remove less than 50% of existing trees on site	3
Replant or donate removed native (or non-invasive) perennials, shrubs and trees	2
Plant minimum of 12 trees per acre of developed land - 1.5" caliper or larger	4
Protect a "tree save" area (minimum of 25% of developed land)	4

B. On site use of cleared materials

Mill cleared trees, or preserve for mulching - work with qualified vendor to ensure yard waste is not landfilled	2
Innovative reuse - stumps and limbs for mulch/landscape	1

C. Topsoil preservation

Use pervious walkways (all)	2
Use pervious driveway (all)	4
Use pervious patios (all)	3
Save and reuse any removed topsoil	2
Install rooftop gardens	4

D. Home design

1.75 square foot/footprint ratio	3
Under 2100 square feet	5
Provide accessible entry to meet ADA guidelines	3

Total Points

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II. BUILDING ASSEMBLY AND MATERIALS

119 points

Yes ? No

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A. Framing

Use engineered structural products instead of large dimensional lumber, as beams, windows/door headers, plate material, joist, etc., for at least 75% of possible applications	3
Use advanced framing (material reduction) techniques (or)	5
Use structural insulated panels (or)	4
Use ICFs or similar cementitious/foam wall components (or)	4
Use wood/concrete composite wall system	4
Use finger-jointed framing materials (plates and studs)	2
FSC Certified dimensional lumber - 50% of possible applications (or)	3
FSC Certified dimensional lumber - 90% of possible applications	5
FSC Certified sheathing material (minimal 50%)	3

Note: Alternative building technologies see section VII (Innovations)



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Yes ? No

B. Foundation

- Slab on Grade Foundation (reduced materials, energy) 4
- Use pre-cast cement foundation (or) 4
- Use ICF or insulated poured foundation (or) 4
- Use regionally produced block 3
- Use flyash in concrete (minimal 30%) or use recycled content concrete, asphalt, or glass cullet for base or fill (minimal 50%) 3

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C. Sub-Floor

- Use agri-board underlayment, FSC certified underlayment, or recycled content underlayment (minimum 75% of applications) 2

D. Doors

- Use no lauan doors (or wood harvested from designated tropical rain forests) 1
- Use domestically-grown wood interior doors (minimum 50% of applicable) 2
- Use FSC certified wood, recycled content, or recovered interior doors (minimum 50% of applicable) 3

E. Finish Floor

- Use no vinyl flooring 1
- Use 100% recycled-content or 100% natural carpet pad (any combination, 100% of applications) 1
- Use any combination of recycled-content or non-petroleum based fiber carpet, cork, natural bamboo, palm, FSC certified, domestically produced hardwood, recovered, recycled content ceramic tile, domestically produced ceramic tile, stamped concrete, or natural linoleum (40% of applications) (or) 3

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- Use any combination of recycled-content or non-petroleum based fiber carpet, cork, natural bamboo, palm, FSC certified, domestically produced hardwood, recovered, recycled content ceramic tile, domestically produced ceramic tile, stamped concrete, or natural linoleum (80% of applications) 6

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F. Interior Walls

- Use recycled content drywall or finish board (minimum 40% of applications) 3

G. Exterior Walls

- Use 50-year siding product, such as fiber cement, metal, stone, for minimum of 80% of surface area 1
- Use salvaged siding material, regionally produced stone or brick (within 200 mile radius), FSC certified wood siding, or recycled content siding (no vinyl) for 20% of application (or) 1

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- Use salvaged siding material, regionally produced stone or brick (within 200 mile radius), FSC certified wood siding, or recycled content siding (no vinyl) for 50% of application (or) 3

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- Use salvaged siding material, regionally produced stone or brick (within 200 mile radius), FSC certified wood siding, or recycled content siding (no vinyl) for 80% of application 5

H. Roof

- Use 50-year roofing material 2
- Use recycled-content roofing material (30% or greater) including steel, aluminum, plastic or FSC certified wood 4

I. Insulation

- Use recycled-content insulation (40% of applications) (or) 2
- Use recycled-content insulation (80% of applications) 4
- Use non-toxic spray foam insulation (40% of applications) (or) 1
- Use non-toxic spray foam insulation (80% of applications) 2

J. Moisture Management

- Install drywall using the airtight drywall approach (ADA) 2
- Seal at doors, windows, plumbing and electrical penetrations against moisture and air leaks 2
- Properly install and inspect exterior drainage plane 2
- Properly flash and inspect all installed windows 2
- Properly install and inspect all roof flashings 2
- Install and inspect continuous foundation wall drainage system 2

K. Finishes

- Use no vinyl wall covering 1
- Use recycled content, natural fiber, or petroleum free interior wall finish (40% of application) (or) 1
- Use recycled content, natural fiber, or petroleum free interior wall finish (80% of application) 2
- Use non-petroleum exterior finish products (40% of application) (or) 1
- Use non-petroleum exterior finish products (80% of application) 2
- Use water soluble foundation waterproofing 1
- Use non-petroleum based deck finish 1

L. Cabinetry, Trim, Counters

- Use finger-jointed trim (minimum of 50% of applications) 1
- Use FSC certified wood trim (minimum of 50% of applications) 2
- Use salvaged trim (minimum 50% of applications) 2
- Use domestically produced wood trim (minimum 50% of applications) 1
- Use FSC certified cabinetry (minimum 50% of applications) 2



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Yes ? No

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use salvaged cabinetry (minimum 50% of applications)	3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use domestically produced wood cabinetry (minimum 50% of applications)	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use agri-board cabinet facing (minimum 50% of applications)	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use domestically produced stone/tile countertops, concrete, or agi-board composite countertops (or)	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use salvaged countertops or recycled content countertops	3

M. Misc Exterior

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use salvaged material for landscaping walls	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use recycled-content composite lumber for decks and porches (minimum 50% of applications)	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use FSC certified or recovered decking (minimum 50% of applications)	2

N. Recycling Reuse

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Construction waste management (to include any demo materials): recycle all cardboard, steel, wood scrap, concrete and other qualified materials	3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Dedicated Home Recycle Center: recycle all bottles, cans, paper (no paint or otherwise hazardous containers)	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Set up onsite system to store excess but still usable items (or)	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Work with certified recycling waste management company/reuse/salvage org to handle all recycling/reuse	6

Total Points

III. HEALTH & SAFETY 36 points

Yes ? No

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A. ALA Certified Home	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	B. Materials	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Limit use of carpet to one-third (33%) of home's square footage	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install carpeting with tacking (no glue)	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use Formaldehyde free insulation	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use low-VOC, low toxic, water-based, solvent free sealers, grouts, mortarsm caulks and adhesives inside the home	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use plywood and composites of exterior grade or formaldehyde free for interior use (Phenol vs. urea formaldehyde used in exterior)	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install cabinets made with formaldehyde free board	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use low VOC/low toxic interior paints and finishes for all large surface areas	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	C. Air Distribution and Filtration	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install return-air ducts in every bedroom (no plenums used as ducts)	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use medium efficiency pleated filter or better	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install furnace and/or duct-mounted air cleaner or high efficiency air filter	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install mechanical air exchange system	3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install CO detector (in vicinity of furnace and other combustion devises)	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install bath, laundry and kitchen exhaust fans, vented to outside (using rigid ducting with minimum 4" diameter)	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install power venting for combustion furnaces and water heating equipment	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install exhaust fan in attached garage on timer or wired to door opener	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use advanced sealing details between home and attached garage (see appendix)	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Detached garage	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Seal the forced air heating system with mastic or install a ductless heating system	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Clean ducts upon completion of home prior to owner occupation	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide lockable cabinets for hazardous materials, sealed off from living space and garage, vented to exterior	1

Total Points

IV. ENERGY 92 points

Use the following guidelines for energy conservation measures. For measures not included in Energy Star Home certification or not listed below, submit a proposal to review board for approval.

Yes ? No

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A. Energy Star Homes	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5 Star Energy Star rating	25
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	B. Orientations	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Passive solar design such as design allows for 60% of total glass area facing within 20% of south. Alternatives considered on a case by case basis (25% load reduction minimum)	6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	C. Water Heating	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install solar pre-heater (minimum 3' x 7')	6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install on demand water heater	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install maximum efficiency gas water heater (85% gas)	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install GFX heat recovery system	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Insulate all water pipes to 20 feet from water heater	1



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Yes	?	No		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	D. HVAC	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install water/energy recovery ventilator (HRV/ERV)	4
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install 12, 14 SEER air conditioning unit	1, 2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cooling equipment sized within 6000 btu/h or Manual J (all units)	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Design for appropriate passive cooling	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install Geothermal heat pump (75% total capacity)	4
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install 90(+) AFUE high efficiency furnace	4
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	E. Electric	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install Energy Star refrigerator	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install Energy Star dishwasher	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install Energy Star clothes washer	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install energy efficient lighting fixtures (minimum of 8 fixtures)	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install energy efficient lighting fixtures (100%)	3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	F. Solar (Photovoltaic or Space Heat)/Wind Electric	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install 500 watt system	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install 1000 watt system	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install 1500 watt system	13
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install 2000 watt system	17
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install Solar Heat Collector (minimum of 21 square feet)	5

Total Points

V. WATER CONSERVATION 29 points

Use the following guidelines for water conservation measures. For measures not listed below, submit a proposal to review board for approval.

Yes	?	No		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A. Conservation - Outdoor	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Landscape with drought resistant, native species	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Turfgrass does not exceed 50% of pervious surface area	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install no irrigation system	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drip irrigation system	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install rainwater harvesting system	4
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All downspouts filter to planted beds	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	B. Conservation - Indoor	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install low-flow high efficiency faucets (1.8 gpm in bathrooms, 2.0 in kitchens) for all sinks and shower applications	3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install alternative toilets using 1.45 gallon/flush or less (super low flow, waterless, composting, dual flush) maximum 5	1/per
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install point of use water heaters (maximum 5)	1/per
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install hot water reduction system	3

Note: Alternative systems such as gray water, etc., see section VII (Innovations)

Total Points

VI. MAINTAINING A GREEN HOME 5 points

Yes	?	No		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A. Provide education for owners/occupants in the use and care of their dwellings	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide a "User's Manual" for the house, including written operation instructions for the house, maintenance schedule, maintenance instructions, environmentally preferred products list, equipment literature, and equipment warranties.	RQD
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide Residential Green Building Guidelines scorecard	RQD
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide Energy Star Rating (if applicable)	RQD
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide American Lung Association Certification (if applicable)	RQD
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	B. Document As-Built construction conditions with photo record	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide photo record of framing with wiring and utilities installed, photos taken prior to installing insulation and interior sheathing/drywall. Photos keyed to location in or around home.	5

Total Points

VII. INNOVATIONS 10 points

Innovation points will be awarded on a case-by-case basis. Upon submission, the WGBC Criteria Committee will review potential innovations and award points based on a consensus vote regarding the impact and value of the innovation (up to 5 points). There will be a limit of 2 innovation credits per project.

Yes	?	No		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	INNOVATION #1: _____	5 max
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	INNOVATION #2: _____	5 max



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Total Points

VIII. TRAINING

The WGBC offers a Program Orientation course to assist builders and homeowners with understanding the process of using the guidelines. For more information on orientation scheduling, contact the WGBC:

email: info@washtenawgbc.org
phone: (734) 662-6288

SCORING TOTALS	TOTAL
I. SITE & LAND USE	_____
II. BUILDING ASSEMBLY & MATERIALS	_____
III. HEALTH & SAFETY	_____
IV. ENERGY	_____
V. WATER CONSERVATION	_____
VI. MAINTAINING A GREEN HOME	_____
VII. INNOVATIONS	_____
VIII. TRAINING	_____
GRAND TOTAL:	_____



THANK YOU!

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