

# SCOTTSDALE GREEN BUILDING CHECKLIST - TIER 1

SOLID WASTE	Tier 1	Verification
M19. Provide not less than two 7-gallon pull-out recycling/trash bins in kitchen cabinet area.	<input type="checkbox"/>	Plan Review Cert. of Compl.
OPERATION AND MAINTENANCE	Tier 1	Verification
M20. A homeowner's manual shall be provided including the following: a) City supplied Green Certificate of Occupancy. b) Copy of signed Green Certificate of Compliance. c) List of green building measures (including green building checklist items). d) Product literature and maintenance instructions for materials and finishes. e) Manufacturer's operation and maintenance manuals for equipment, fixtures and appliances. f) Operations & maintenance documentation for whole-house ventilation including: i. Date installed and serviced ii. Installer's name and contact information iii. Description of system: ventilation system type, manufacturer, model number, components, operation controls, location iv. Whole-house ventilation worksheet v. Operating instructions and schedule (frequency and duration of each cycle) vi. Performance test: testing protocol and test results including measured airflow rate vii. Required maintenance including but not limited to air filter MERV rating and replacement interval g) Listing and contact information of vendors and contractors. h) A diagram showing the location of safety valves and controls for major building systems including electrical panels, water shut-off valves, sewer diverter valves and clean-outs.	<input type="checkbox"/>	Plan Review Cert. of Compl.

HEATING, COOLING, VENTILATION	Tier 1	Verification																														
M7. Ducts and air handlers shall be located entirely within the building thermal envelope (excluding underground return ducts) and not located inside a garage. a) <u>Duct seams and connections</u> shall be sealed with water-based mastic. b) Ducts shall be insulated with min. R-4.2, where located within a semi-conditioned space such as an unventilated cathedralized attic (insulation at roof deck).	<input type="checkbox"/>	Plan Review Cert. of Compl.																														
M8. Every habitable room with a door (not including bathrooms, kitchens, closets, pantries, and laundry rooms) shall have a return air path through the use of return air inlets, transfer grills and/or jumper ducts.	<input type="checkbox"/>	Plan Review Cert. of Compl.																														
M9. All bathroom exhaust fans shall be Energy Star certified. Each exhaust fan outlet shall be equipped with a motorized or back-draft damper, preferably located near the thermal barrier.	<input type="checkbox"/>	Plan Review Cert. of Compl.																														
M10. Install air filters with a min. MERV rating of 11. Ensure air handlers are designed to maintain adequate pressure and air flow. Filter locations shall be labeled with the design airflow and maximum allowable clean-filter pressure drop. Filters shall be located and installed so as to facilitate access and regular service by the owner without special tools. Filter access panels shall include gasket or comparable sealing mechanism and fit snugly against the exposed edge of filter when closed to prevent bypass.	<input type="checkbox"/>	Plan Review Cert. of Compl.																														
M11. Ducts shall be sealed off during construction <u>OR</u> the ducts, coils and blower fan shall be cleaned before occupancy.	<input type="checkbox"/>	Cert. of Compl.																														
M12. Install electrical ceiling boxes for Energy Star certified ceiling fans in at least 50% of habitable rooms (e.g. - living room, dining room, study, bedrooms).	<input type="checkbox"/>	Plan Review Cert. of Compl.																														
M13. Garages shall be meet one or more of the following: a) Install a carbon monoxide (CO) alarm inside the house/garage entry door. b) Verify (test) that the garage-to-house air barrier will maintain a pressure difference of greater than 45 Pascals while the home maintains a 50 Pascal pressure difference with respect to the outdoors. c) Provide at least a 70 cfm non-ducted exhaust fan or at least a 100 cfm ducted exhaust fan with automatic timer control linked to a light switch, occupant sensor, carbon monoxide sensor, or garage door opening/closing device. The timer shall be set to provide at least three air changes each time the fan is turned on. Balance the exhausted air with outside make-up air through a screened opening. d) Detached or no garage.	<input type="checkbox"/>	Plan Review Cert. of Compl.																														
LIGHTING AND APPLIANCES	Tier 1	Verification																														
M14. Design and install <u>individually switched task lighting</u> in at least 3 separate task areas (e.g. - bathroom vanity, kitchen counter, laundry).	<input type="checkbox"/>	Plan Review Cert. of Compl.																														
M15. Installed <u>appliances</u> (refrigerator, freezer, dishwasher, clothes washer, clothes dryer) shall be Energy Star certified ( <a href="http://www.energystar.gov/products">www.energystar.gov/products</a> ).	<input type="checkbox"/>	Plan Review Cert. of Compl.																														
PLUMBING	Tier 1	Verification																														
M16. Kitchen <u>faucets</u> shall have a max. flow rate of 1.8 gallons per minute. (kitchen faucets may temporarily increase the flow rate to 2.2 gpm when there is an integral faucet default setting for the max. 1.8 gpm).	<input type="checkbox"/>	Plan Review Cert. of Compl.																														
M17. Water treatment systems. a) Where installed, <u>water softeners</u> shall be equipped with <u>demand-initiated regeneration</u> control systems and have a max. water consumption during regeneration of 4 gallons per 1000 grains of hardness removed as measured and certified in accordance with NSF/ANSI 44 (cation exchange water softeners). Such water softeners shall use <u>potassium</u> rather than sodium. Devices that use auto-initiated regeneration on a fixed time schedule will not meet these requirements. b) Where installed, <u>reverse osmosis treatment systems</u> shall be listed and labeled in accordance with NSF/ANSI 58 and shall be equipped with an automatic shut off valve that prevents the production of reject water when there is no demand for treated water. Such systems shall yield at least 85 gallons of treated water for each 100 gallons of water processed.	<input type="checkbox"/>	Plan Review Cert. of Compl.																														
INTERIOR FINISHES	Tier 1	Verification																														
M18. Interior <u>paints, coatings, adhesives and sealants</u> shall meet the following VOC (volatile organic compound) content limits in grams/liter:	<input type="checkbox"/>	Plan Review Cert. of Compl.																														
<table border="1"> <thead> <tr> <th>Interior Paints, Coatings, Adhesives and Sealants</th> <th>VOC Limits grams/liter</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Wall and Ceiling Paints</td> <td>Flat: 50</td> </tr> <tr> <td>Nonflat: 100</td> </tr> <tr> <td>Nonflat high-gloss: 150</td> </tr> <tr> <td>Primers, Sealers &amp; Undercoaters</td> <td>100</td> </tr> <tr> <td>Floor Coatings</td> <td>100</td> </tr> <tr> <td>Concrete and Masonry Sealers</td> <td>100</td> </tr> <tr> <td>Stains</td> <td>250</td> </tr> <tr> <td>Wood Coatings</td> <td>275</td> </tr> <tr> <td>Carpet and carpet pad adhesives</td> <td>50</td> </tr> <tr> <td>Ceramic tile adhesives</td> <td>65</td> </tr> <tr> <td>Wood flooring adhesives</td> <td>100</td> </tr> <tr> <td>Drywall and panel adhesives</td> <td>50</td> </tr> <tr> <td>Structural glazing adhesives</td> <td>100</td> </tr> <tr> <td>Multipurpose adhesives</td> <td>70</td> </tr> <tr> <td>Architectural sealants</td> <td>250</td> </tr> </tbody> </table>		Interior Paints, Coatings, Adhesives and Sealants	VOC Limits grams/liter	Wall and Ceiling Paints	Flat: 50	Nonflat: 100	Nonflat high-gloss: 150	Primers, Sealers & Undercoaters	100	Floor Coatings	100	Concrete and Masonry Sealers	100	Stains	250	Wood Coatings	275	Carpet and carpet pad adhesives	50	Ceramic tile adhesives	65	Wood flooring adhesives	100	Drywall and panel adhesives	50	Structural glazing adhesives	100	Multipurpose adhesives	70	Architectural sealants	250	
Interior Paints, Coatings, Adhesives and Sealants	VOC Limits grams/liter																															
Wall and Ceiling Paints	Flat: 50																															
	Nonflat: 100																															
	Nonflat high-gloss: 150																															
Primers, Sealers & Undercoaters	100																															
Floor Coatings	100																															
Concrete and Masonry Sealers	100																															
Stains	250																															
Wood Coatings	275																															
Carpet and carpet pad adhesives	50																															
Ceramic tile adhesives	65																															
Wood flooring adhesives	100																															
Drywall and panel adhesives	50																															
Structural glazing adhesives	100																															
Multipurpose adhesives	70																															
Architectural sealants	250																															



## City of Scottsdale One- and Two-Family Residential Green Rating Checklist

New Construction, Major Remodels & Additions  
Version 5.0 (January 2017)

Plan Check # \_\_\_\_\_ Building Permit # \_\_\_\_\_ GB Rating \_\_\_\_\_

Project or Owner's Name: \_\_\_\_\_

Project Address: \_\_\_\_\_

Architect / Designer Name: \_\_\_\_\_

Builder Name: \_\_\_\_\_

Use this rating worksheet to qualify projects under the Green Building Program for one and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories in height with a separate means of egress (International Residential Code - IRC Section R101.2).

All building system components, materials, and equipment must be installed per code and manufacturer's instructions.

Tier 1 - Baseline GB Designation	Tier 2 - Advanced GB Designation
• Meet all 20 mandatory measures (Tier 1).	• Meet all 20 mandatory measures (Tier 1). • Accumulate at least 25 points from the rated options in the checklist (Tier 2).

Advanced Level - Rating Categories and Maximum Available Points					
1. Site	14 pts	6. Lighting and Power	10 pts	11. Doors, Cabinetry, Trim	12 pts
2. Structural Elements	22 pts	7. Plumbing System	16 pts	12. Flooring	15 pts
3. Energy Rating/Renewables	39 pts	8. Roofing	10 pts	13. Solid Waste	12 pts
4. Thermal Envelope	8 pts	9. Exterior Finishes	6 pts	14. House Size	+/- varies
5. HVAC	16 pts	10. Interior Finishes	4 pts	15. Innovative Design	8 pts

TIER 1 - BASELINE MANDATORY MEASURES	LEVEL	VERIFICATION			
SITE	Tier 1	Tier 2	Plan Review	City Insp.	3rd Party
M1 a) All <u>primary exterior entrances</u> shall be protected from direct summer sun exposures (east, west, south) with recessed or covered elements. b) At least 50% of <u>site hardscape</u> (e.g. walkways, patios, playgrounds, recreation courts, driveways, parking areas) shall be provided with one or more of the following: 1) <u>Light colored surface</u> with a minimum solar reflectance index (SRI) of 29. 2) <u>Permeable paving system</u> with an open-graded engineered base to accommodate drainage and migration of water (e.g., - permeable and open-cell pavers, pervious concrete, porous asphalt) 3) Stabilized decomposed granite (open-graded uniform-sized aggregate). c) At least 80% of improved landscape shall be Xeriscape with native and/or adapted plants and a non-sprinkler type irrigation system (e.g. - drip or no irrigation). d) Divert roof run-off to landscape areas via roof edge, gutters, downspouts, scuppers, grading, swales and micro-basins. e) Where installed, <u>landscape irrigation systems</u> shall meet the following: 1) Shall be divided into zones to regulate water needs based on plant materials, soil, exposure, and other factors (e.g., ground cover, shrubs and trees on separate valves). 2) Shall be provided with a moisture sensor or weather-based smart controller.	<input type="checkbox"/>		Plan Review		Cert. of Compl.
ENERGY RATING & RENEWABLE ENERGY	Tier 1	Verification			
M2. Comply with one or more of the following <u>energy efficiency rating</u> options: a) <u>ENERGY STAR</u> for Homes certification (version 3.1); b) Maximum <u>HERS index</u> rating of 52; c) <u>REScheck</u> compliance report demonstrating a <u>minimum 5% improvement over the 2015 International Energy Conservation Code (IECC)</u> .	<input type="checkbox"/>	Plan Review Cert. of Compl.			
M3. Provide a <u>solar-ready zone</u> by designating not less than 500 sq. ft. of flat roof or sloped roof area that is oriented between 110 degrees and 270 degrees of true north. Provide a 1" electrical conduit from the electrical service panel and/or a 1" insulated water line loop from the water heater storage area to the solar ready zone. <u>Or</u> demonstrate a minimum 20% improvement over 2015 IECC.	<input type="checkbox"/>	Plan Review Cert. of Compl.			
THERMAL ENVELOPE	Tier 1	Verification			
M4. Ceiling/roof insulation shall comply with one of the following: a) Provide <u>unventilated attic with spray applied insulation</u> (with adhesive binder) installed at underside of roof sheathing (batt is not acceptable for meeting the purposes of this requirement when installed at the underside of roof sheathing). b) Provide <u>ventilated attic with batt, blown-in or foam insulation</u> installed at bottom of attic space with a <u>radiant barrier</u> at underside of roof sheathing.	<input type="checkbox"/>	Plan Review Cert. of Compl.			
M5. Where permitted by zoning and HOA rules, <u>low-slope roofs</u> (less than or equal to a 2 in 12 pitch) shall have a minimum three-year-aged <u>Solar Reflectance Index (SRI)</u> of 64 as measured in accordance with the Cool Roof Rating Council standard (CRRC-1) or otherwise qualify as an Energy Star certified roof.	<input type="checkbox"/>	Plan Review Cert. of Compl.			
HEATING, COOLING, VENTILATION	Tier 1	Verification			
M6. <u>Cooling and heating systems</u> shall consist of one or more of the following: a) <u>Energy Star certified</u> air-source heat pumps (or air conditioners) with variable speed air blower fan, and dual-speed or dual-capacity compressor. b) <u>Ground-source</u> or <u>water-source</u> heat pumps. c) <u>Energy Star certified ductless</u> mini-split heat pumps. d) <u>Hydronic/radiant</u> systems. e) Pre-coolers, indirect evaporative cooling and/or thermal storage.	<input type="checkbox"/>	Plan Review Cert. of Compl.			

24x36 Sheet  
1/8" Text  
Tier 1

PROJECT TITLEBLOCK AREA