



2011 Multifamily Checklist

Place Your Logo Here.

Company Name: Enter GC Name			
Project Name & Address: Enter Project Name			
SOURCE (Checklist and Ref #)	Avail. Points	Action Item	Third Party Verification Requirements
PROGRAM CERTIFICATION REQUIREMENTS			
General Requirement			
R-1	*	Complete Program Orientation	Receipt from Orientation
Sustainable Sites Requirements			
R-2	*	Meet applicable stormwater/site development standards	Statement that all local codes were met
R-3	*	Establish and maintain a single stabilized construction entrance (quarry spall or crushed rock)	Site plan showing entrance
R-4	*	Install and maintain sediment traps	Site visit or photo documenting traps
R-5	*	Do not dispose of topsoil in lowlands or wetlands	Photo of protected topsoil/stockpile, or letter stating how achieved, or site visit
R-6	*	Prohibit burying construction waste	Copy of prohibition policy or posted notice (all subcontractors should be notified)
R-7	*	When construction is complete, leave no part of the disturbed site uncovered or unstabilized and repair any damaged landscape	Site visit or photo
R-8	*	Dispose of non-recyclable hazardous waste at legally permitted facilities and reduce hazardous waste through good jobsite housekeeping (including but not limited to: antifreeze, oil, and oil filters)	Letter stating where disposed and policies implemented to reduce use
R-9	*	Establish and post clean-up procedures for spills to prevent illegal discharges	Copy of procedures for spills, or posted notice; Statement from contractor on training conducted
R-10	*	Prepare jobsite recycling plan, post on site, and provide resource sheet to on-site personnel and subcontractors	Copy of posted notice
Water Efficiency Requirement			
R-11	*	Meet Washington State water use efficiency standards	Statement that all local codes were met
Energy Efficiency Requirements			
R-12	*	Meet Washington State Energy Code	Statement that all local codes were met
R-13	*	Insulate all hot water pipes to at least R-4	Site inspection or photos
R-14	*	Seal all ducts with approved mastic and test to comply with state code duct leakage threshold	Cut sheet or receipt and documentation of test
R-15	*	Implement at least one Efficient Hot Water Distribution strategy: See Handbook for list of options	Statement listing strategies
Health and Indoor Air Quality Requirements			
R-16	*	Meet Washington State Ventilation/IAQ Code	Statement that all local codes were met
R-17	*	Compartmentalize each unit	Site air sealing inspection for at least 25% of units (photos for remaining units);
R-18	*	No HVAC equipment in garage	Site visit or photos
R-19	*	No carpeting adjacent to water closets, bathing fixtures, kitchen areas, or entryways (within 4 feet)	Site visit or photos
R-20	*	Install CO detector(s) (hardwired preferred for all projects, required for 4 and 5 star projects)	Site inspection
R-21	*	During construction, thoroughly seal and protect ducts and openings from contamination	Coordinate with HVAC prior to construction; Site inspection (for at least 25% of units) and photos
Materials Efficiency Requirements			
R-22	*	Provide a waste reduction resource sheet to on-site personnel and subcontractors	Waste reduction resource sheet
R-23	*	Achieve 85% minimum recycling rate for at least two of the following products: cardboard, metal scraps, wood/pallet scraps, packaging & pallet wrap, drywall, concrete, asphalt rubble, rock, brick, paint, asphalt roofing, land clearing debris, yard waste & soil, glass, carpet padding, and upholstery foam	Provide documentation from waste hauler for each source-separated product
Promote Environmentally Friendly Operations & Maintenance Requirement			
R-24	*	Provide resident with Built Green® Operations and Maintenance Tool Kit	Letter stating toolkit was supplied
R-25	*	Provide building manager with basic green Operations & Maintenance training and manual	Letter stating manual was supplied and date/description of training
1 Star REQUIREMENTS			
-	*	Meet all program certification requirements	
-	*	Earn minimum number of points from each of Sections 2 through 7, see Checklist Point Table or Handbook	
2 Star REQUIREMENTS			
-	*	Meet One-Star requirements plus point minimum	
-	*	Earn minimum number of points from each of Sections 2 through 7, see Checklist Point Table or Handbook	
R-26	*	Attend a Built Green® approved workshop within 12 months of certification	Workshop registration
3 Star REQUIREMENTS			
-	*	Meet Two-Star requirements plus point minimum	
-	*	Earn minimum number of points from each of Sections 2 through 7, see Checklist Point Table or Handbook	
4 Star REQUIREMENTS			
-	*	Meet Three-Star requirements plus point minimum	
-	*	Earn minimum number of points from each of Sections 2 through 7, see Checklist Point Table or Handbook	
-	*	Third party verification (Refer to handbook for instructions on third party verification)	Written description
Health & IAQ 5-24	3	Use urea-formaldehyde-free insulation or GreenGuard certified product	Receipt, photo of installed product, or site visit
Sustainable Sites 2-5	3	Restrict heavy equipment use zone to the site entry and building footprint to limit soil compaction	Site visit or photo of boundary markers used
Sustainable Sites 2-28	5	Do not use zinc galvanized ridge caps, copper flashing, copper wires, or copper/zinc impregnated shingles	Statement of compliance with requirements or site visit
Health & IAQ 5-56	1 to 3	Install Medium Efficiency Pleated Filter MERV 10 (1 point), or High Efficiency MERV 12 or Better (2 points), or HEPA Filter (3 points) *Medium-Efficiency Required for 4 and 5 Star	Site visit or photos
Energy Efficiency 4-53	1 to 10	Install hard-wired Energy Star fixtures, (75% required for 4 star) [linear fluorescents exempt from EStar Req't]	Bldg plans or site visit
Materials 6-5	1	Provide weather protection for stored materials	Site visit, photo, or written description
Materials 6-8	3	Contractually require subcontractors to participate in waste reduction efforts	Copy of contract language

5 Star REQUIREMENTS			
-	*	Meet Four-Star requirements plus point minimum	
-	*	Earn minimum number of points from each of Sections 2 through 7, see Checklist Point Table or Handbook	
Sustainable Sites 2-29	3	Use non-toxic or low-toxic outdoor lumber for landscaping (e.g. plastic, least-toxic treated wood)	Cut sheet or receipt for low-toxic landscaping timbers
Water Efficiency 3-5	1 to 5	Limit use of turf grass to 25% of landscaped area	Site plan or photo documenting % of turf, or site visit
Energy Efficiency 4-53	1 to 10	Install hard-wired Energy Star fixtures, (100% required for 5 star) [linear fluorescents exempt from EStar Req'l]	Bldg plans or site visit
Energy Efficiency 4-59	3	Pre-wire for future PV installation	Site visit or photos
Health & IAQ 5-3	1	Use only biodegradable and non-toxic cleaners	List or photo of job site cleaners
Materials 6-28	1 to 3	Use wood products certified as "sustainably produced" by a recognized third party (FSC required for 5 star)	Provide receipts with COC documentation
Materials 6-48	3	No vinyl flooring	Statement that home contains no vinyl
Materials 6-58	4	No vinyl siding or exterior trim	Statement that home contains no vinyl siding or exterior trim
Materials 6-71	3	Use 50-year roofing material	Site visit or documentation
SECTION 1: BUILT GREEN® PROGRAM PROMOTION			
1-1	1 to 10	Use Built Green® member subcontractors, vendors, and service providers (1 point for each up to 10 max)	Written description
1-2	2	Attend 3 or more Built Green® approved workshops per year	Receipts
1-3	5	Use certified third-party verifier to review checklist (Refer to Handbook for instructions on third-party verification)	Third-party memo (see Handbook)
1-4	10	Certify the project using the National Green Building Standard (ICC 700-2008)	Certification document
1-5	1 to 10	Promote the Built Green® brand through innovation in marketing	Written description and materials/photos
SECTION 1: BUILT GREEN® PROGRAM PROMOTION Subtotal			
SECTION 2: SUSTAINABLE SITES			
SITE PROTECTION			
Overall			
2-1	6 to 25	Pursue certification through Sustainable Sites Initiatives	Certification document
2-2	10 to 30	Build on an infill lot to take advantage of existing infrastructure and reduce development of virgin sites	Statement identifying site's previous condition
2-3	10	Build in a Low Impact Development or a Built Green® Community	Documentation of property status
Protect Site's Natural Features			
2-4	5 to 10	Set aside 20% or more of site to be left undisturbed; alternatively, restore 20% or more of site if previously disturbed	Site calculations and development plans
2-5	3	Restrict heavy equipment use zone to the site entry and building footprint to limit soil compaction	Site visit or photo of boundary markers used
2-6	3	Preserve existing native vegetation as landscaping (not including trees)	landscaper stating native vegetation preserved
2-7	3	Retain 30% of existing trees on site	Site visit or photo of protected trees during construction or letter from contractor stating preservation method, and calculation including original trees on site and retained trees
2-8	2	Take extra precautions to protect trees during construction	Photo of protected trees during construction or letter from contractor stating preservation method or site visit
2-9	3	Exceed code to preserve and protect wetlands, shorelines, bluffs, and other critical areas during construction	Letter from contractor stating what steps were taken beyond code requirements, or site visit, or photo
Protect Natural Processes On Site			
2-10	5	Develop and implement a stormwater management plan to minimize concentrated flows and simulate the site's natural hydrology.	Provide stormwater management plan
2-11	5	Use a water management system that allows groundwater to recharge	Site visit or letter describing system and its effectiveness
2-12	1	Install redundant erosion control devices and optimally maintain them to exceed code requirements and complete full site clean-up upon construction completion	Letter from contractor stating what steps were taken beyond code requirements, or site visit, or photo. Photo of cleaned up site upon completion.
2-13	1	Use compost to stabilize disturbed slopes	Site visit or letter stating where compost was obtained and how it was applied
2-14	1	Exceed code requirements to protect topsoil with mulch, jute, or other appropriate material	Site visit or photo of protected topsoil/stockpile or letter stating how it was protected
2-15	3	Balance cut and fill, while maintaining original topography	Letter from contractor stating how achieved (cut and fill quantities)
2-16	3	Limit grading to 15 feet outside building footprint	Site visit or site plan/dwg showing limits of construction
2-17	4	Amend disturbed soil to a depth of 10 to 12 inches to restore soil environmental functions	Letter from contractor stating how soil was amended
2-18	5	Replant or donate removed vegetation for immediate reuse	Letter from contractor stating how achieved
2-19	1 to 9	Design to achieve effective pervious site (1 point for each 10% perviousness starting at 20%)	Site visit or documentation showing how achieved
2-20	5	Construct no impervious surfaces by using pervious materials for any driveways, walkways, patios (does not apply to building footprint)	Site visit/letter describing pervious materials and site plan showing areas of pervious material
2-21	4 to 10	Install vegetated roof system to reduce impervious surface	Documentation of type of green roof used
2-22	2 to 4	Use an alternative foundation system to minimize disturbance to soil and/or to water flow (2 points for 50% of foundation, 4 points for 100%)	Plans, site visit, or photos
2-23	2	Provide an infiltration trench for rooftop runoff	Site visit or provide description of system or photo

WATER PROTECTION			
Eliminate Water Pollutants			
2-24	5	No clearing or grading during winter months	Statement from contractor demonstrating compliance with requirements or verifier site visit
2-25	1	Wash out concrete trucks into storage containers for recycling	Photo, description of containers used, or site visit
2-26	2	Establish and post clean-up protocol for tire wash and construct wash facility on site if necessary	Protocol language and/or photo of sign on site
2-27	2	Use less toxic form releasers	Cut sheet or receipt for form releasers, or letter, or site visit
2-28	5	Do not use zinc galvanized ridge caps, copper flashing, copper wires, or copper/zinc impregnated shingles	Letter stating compliance with requirements or site visit
2-29	3 to 5	Use non-toxic or low-toxic outdoor lumber for landscaping (e.g. plastic, least-toxic treated wood)	Cut sheet or receipt for low-toxic landscaping timbers
2-30	2	Use slow-release organic fertilizers to establish vegetation	Cut sheet or receipt for fertilizers
2-31	1	Educate residents about fish-friendly moss control	Copy of information provided to homeowners
2-32	4	Provide food waste chutes and compost or worm bins instead of a food garbage disposal	Bldg plan documenting installation, or photo, or site visit
2-33	2	Clearly label all storm sewer inlets to inform residents about proper surface water protection	Site visit or photos
DESIGN ALTERNATIVES			
2-34	3 to 6	Design for compact development (3 points for maximum density allowable by zoning) and within Growth Management Area (6 points for maximum density allowable by zoning within the Growth Management Area)	Documentation of density and language of local zoning ordinance and map showing location within Growth Management Area
2-35	2 to 4	Size parking capacity to meet minimum local zoning requirements (2 points); appeal to provide less parking than code requires (4 points)	Local zoning requirements and documentation of actual project parking AND photos or site visit
2-36	3	On larger projects with internal streets, install traffic calming devices, such as curb bulbs	Site visit or photos
2-37	5	Design below-grade space for non-occupancy uses	Site visit
2-38	2 to 6	Reduce site heat island effects (point range based on shading and SRI values, or combination of both)	Product cut sheets demonstrating actual SRI value of pavements (where applicable), and statement from contractor demonstrating compliance with requirements
2-39	2 to 6	Reduce roof heat island effects (point range based on vegetated roof, SRI value, or combination of both)	Product cut sheets demonstrating actual SRI value of installed roofing and/or statement, photos, or site visit describing vegetated roof
2-40	4 to 10	Develop the site to provide solar access (build on the north end of the lot, preferably)	Solar Site Analysis documentation
2-41	2	Provide gardening space with solar access to residents (minimum 200 square feet per home for duplex, triplex, or townhome, minimum 80 square feet per unit for multi-unit multifamily buildings)	Site inspection; calculations of total space provided and number of units
2-42	1 to 2	If the project includes a garage(s), minimize garage size	Building plan/dwg showing garage and house, and design features incorporated to minimize impact
2-43	3	If the project includes a garages(s), position garage so it is not in front of the home/building	Building plan/dwg that shows garage or site visit
2-44	4	For duplexes and triplexes, provide an accessory dwelling unit or accessory living quarters	Site visit or building plan/dwg that shows accessory unit
2-45	3	Provide a front covered porch	Building plan/dwg that shows porch or site visit
2-46	4	Provide built-in recycling center in kitchen or utility room	Site visit or photos
COMMUNITY CONNECTIVITY			
2-47	3	Install a special bike storage area or other design features to encourage bike ownership and use	Site visit or photos
2-48	1 to 6	Design innovation to promote and encourage pedestrian-friendly and safe neighborhoods	Site plan showing features that promote community or statement describing compliance
2-49	5 to 10	Locate to reduce dependence on automobiles: nearby goods & services	Map or list of nearby goods & services with distances from project site provided
2-50	5 to 10	Locate to reduce dependence on automobiles: access to public transit	Map or list of nearby public transportation with distance from project site provided
2-51	3	Provide on-site transportation shelters OR create easy access to existing public transportation options/facilities	Site visit or photos
2-52	2 to 4	Provide subsidized buspasses	Documentation showing cost of passes and lease agreement showing benefit to tenants
2-53	15	Provide dedicated space(s) and enter into agreement with a car sharing program	Documentation of agreement
2-54	5 to 10	Provide charging stations for electric vehicles (5 points for 1 station, 10 points for 4 stations)	Site visit or photos
2-55	3	Develop within walking distance to publicly-accessible open space	Map or statement of nearby open space
INNOVATION			
2-56	2 to 5	Include innovative design, equipment and operation solutions to protect the site's natural features	Document as appropriate
SECTION 2: SUSTAINABLE SITES Subtotal:			
SECTION 3: WATER EFFICIENCY			
WATER CONSERVATION			
Overall			
3-1	10	WaterSense Labeled Home (10 points in addition to the points for individual water-saving fixtures) www.epa.gov/watersense/spaces/new_homes.html Not applicable to multi-unit buildings (applicable to single-family, duplexes, and townhomes)	Certification document
Outdoor Conservation			
3-2	1	Mulch landscape beds with 2 to 4 inches organic mulch	Site plan or photo documenting mulch in beds, or site visit
3-3	1	Use grass types requiring less irrigation and minimal maintenance	Site plan or photo documenting grass type, or site visit
3-4	1	Use compost soil amendments to establish turf and other vegetation with less irrigation	Site plan or photo documenting compost used, or site visit
3-5	1 to 5	Limit use of turf grass to a % of landscaped area (≤ 25% required for 5 star)	Site plan or photo documenting % of turf, or site visit
3-6	2 to 3	Landscape with plants appropriate for site topography and soil types, emphasizing use of plants with low watering requirements (2 points); OR Landscape with NATIVE plants appropriate for site topography and soil types, emphasizing use of plants with low watering requirements (3 points)	Site visit or letter from developer/builder/landscaper stating native/drought tolerant vegetation used
3-7	4	Plumb for greywater or rainwater irrigation (check local permit and code requirements related to greywater use)	Bldg plan documenting plumbing system, or photo, or site visit
3-8	2 to 6	Install rainwater collection system (cistern) for irrigation use (points depend on storage capacity)	Bldg plan documenting collection system, or photo, or site visit

3-9	10	Install irrigation system to use only non-potable water (either greywater and/or rainwater)	Site plan documenting irrigation system, or photo, or site visit
3-10	3	Install intelligent irrigation system	Site plan documenting irrigation system, or photo, or site visit
3-11	2	Sub-surface or drip systems used for irrigation	Site plan documenting irrigation system, or photo, or site visit
Indoor Conservation			
3-12	2	Install bathroom faucets with flow rate ≤ 1.5 gpm	Cut sheet of fixtures, letter stating performance, or in-field measurements
3-13	4	Install WaterSense labeled toilets with effective flush volume ≤ 1.1 gpf	Cut sheet of fixtures, letter stating performance, or in-field measurements
3-14	1 to 2	Install only high efficiency showerheads; ≤ 2.0 gpm (1 point), ≤ 1.75 gpm (2 points) (no more than one showerhead per stall)	Cut sheet of fixtures, letter stating performance, or in-field measurements
3-15	1	Install kitchen faucets with GPM less than code	Cut sheet of fixtures, letter stating performance, or in-field measurements
3-16	4	Install a whole-house water filtration system	Bldg plan documenting installation, or photo, or site visit
3-17	3	Stub in plumbing to use greywater or rainwater for toilet flushing (check local permit and code requirements)	Bldg plan documenting stub-in, or photo, or site visit
3-18	6	Use greywater or rainwater for toilet flushing	Bldg plan documenting greywater system, or photo, or site visit
3-19	10	Use greywater or rainwater for internal potable water substitute (check local permit and code requirements)	Bldg plan documenting collection system, or photo, or site visit
3-20	12	Install composting toilets	Site photo, or site visit
3-21	25	Provide on-site wastewater treatment	Site plan documenting wastewater treatment system, or photo, or site visit
3-22	2	Minimize water waste that results from waiting for hot water by implementing one of the following: 1) Install instant (tankless) hot water systems at point of use (additional points in 4-37 if EF>0.83) 2) Use a recirculating pump with a "home run" manifold water pipe configuration and demand control	Receipt of pump or tankless system, or photo, or site visit
INNOVATION			
3-23	3	For duplex, triplex, or townhomes, provide domestic hot water meter in each home (Note: domestic hot water is required to be submetered per 2009 WSEC Section 1446 for Nonresidential, therefore no points will be awarded to multi-unit multifamily buildings that are required to meter hot water by code)	Bldg plan documenting metering plan and equipment, or letter describing system
3-24	2 to 5	Include innovative design, equipment and operation solutions to conserve water and reduce impact on water resources	Document as appropriate
SECTION 3: WATER EFFICIENCY Subtotal:			
SECTION 4: ENERGY EFFICIENCY			
ENVELOPE			
Thermal Performance			
4-1	10 to 45	Improve overall energy efficiency and document envelope improvements beyond code (component performance approach)	Provide documentation and appropriate output of energy model
Air Sealing			
4-2	3	Use Airtight Drywall Approach for framing	Site inspection or photos
4-3	3	Use airtight building method, such as Structural Insulated Panels (SIPs) or Insulated Concrete Forms (ICFs)	Cut sheets, photos or site inspection
4-4	2 to 6	For duplex, triplex, or townhomes, exceed building air leakage requirements as outlined in WSEC 502.4.5; for multi-unit multifamily buildings, exceed requirements as outlined in WSEC 1314.6.2	Documentation of final blower door test results
Reduce Thermal Bridging			
4-5	1	Use blown-in insulation	Receipt/cut sheets, photos or site inspection
4-6	1	Fully insulate corners (requires 2-stud instead of 3 stud corners) by using drywall clips	Site inspection or photos
4-7	1	Fully insulate at interior/exterior wall intersection by using drywall clips	Site inspection or photos
4-8	1	Specify and use energy heels with a height \geq full depth of insulation on trusses to allow added insulation over top plate	Receipt/cut sheets, photos or site inspection
4-9	3	Use advanced wall framing—24 inches O.C., with double top plate	Site inspection or photos
4-10	2 to 10	Install windows with NFRC U-factor ≤ 0.30 ; $u \leq 0.28$; $u \leq 0.25$ (see Handbook for point allocation)	Window labels from all windows or site inspection and associated glazing calculations
Solar Design Features			
4-11	2	Provide south shading—install properly sized overhangs on south facing glazing or retain/add deciduous trees on south side of building	Plans, photos or site inspection
4-12	2	Orient windows to optimize use of passive solar energy	Plans, photos or site inspection
4-13	2	Use glazing with solar heat gain coefficient < 0.32	Window labels, photos or site inspection
4-14	2	Use building and landscaping plans that reduce heating/cooling loads naturally	Landscape plan identifying energy benefits
HEATING/ COOLING			
Equipment			
4-15	2	Size HVAC equipment according to heating and cooling loads calculated using ACCA Manual J, or equivalent. WSEC allows a maximum of 150% of design load for equipment sizing. Install equipment that meets 100-140% of design load to achieve 2 points.	loads; AND: HVAC equipment cut sheets documenting size or site inspection of equipment sizing
4-16	1 to 2	Install one or more properly supported ceiling fan pre-wires in each unit (1 point) or install ENERGY STAR® Ceiling Fan (2 points)	Photos or site inspection
4-17	4	Install ENERGY STAR® heating equipment; if gas furnace AFUE $\geq 90\%$	Cut sheets of equipment, name plate photos or site inspection
4-18	3	Design to not require mechanical cooling; do not install mechanical cooling equipment	Documentation of cooling load calculations
4-19	1	Install ENERGY STAR® cooling equipment and/or exceed WSEC Section 1411.1	Cut sheets of equipment, name plate photos or site inspection
4-20	1 to 3	Use direct vent gas or propane hearth product; AFUE rating must be $\geq 90\%$ (1 point), $\geq 92\%$ (2 points), $\geq 94\%$ (3 points)	Cut sheets of equipment, name plate photos or site inspection
4-21	3	Do not install gas-burning appliances inside of home/unit	Site visit inspection
4-22	10	Install ductless mini-split heat pumps in individual units	Site visit inspection
Distribution			
4-23	1 to 2	Exceed State Energy Code for duct leakage threshold by 15% (1 point), 30% (2 points)	Documentation of final duct leakage tests
4-24	2 to 4	Locate heating/cooling equipment, ducts, and the distribution system inside the conditioned space (4 points if the entire system is within conditioned space)	Provide plans or site inspection, or photo
4-25	1	Centrally locate heating/cooling system to reduce the size of the distribution system	Provide plans or site inspection
4-26	3	Install heating systems with separate zones and independent controls for sleeping and living areas	Provide plans or site inspection

Controls			
4-27	2	Install 60-minute timers or humidistat for bathroom and laundry room fans	Cut sheet, site inspection, or photo
4-28	1	Provide separate switching for bathroom exhaust fan/heat lamp and exhaust fan/light combination fixtures	Wiring plans, site inspection, or photo
4-29	2	Install ENERGY STAR® programmable thermostats with nighttime setback (where applicable)	Receipt/cut sheet, site inspection, or photo
Heat Recovery			
4-30	4	Install in-unit heat recovery ventilator	Receipt/cut sheet, site inspection, or photo
4-31	3	Install common area heat recovery regardless of system size (see WSEC Section 1436) (no points awarded if system size dictates that heat recovery is required by code)	Receipt/cut sheet, site inspection, or photo
WATER HEATING			
Distribution			
4-32	2	Insulate hot water pipes beyond code (see WSEC Section 1443 and Table 14-6)	Site inspection or photos
4-33	1	Locate water heater within 20 pipe feet of highest use	Site inspection or photo
4-34	2 to 6	Design and install hot water piping that reduces indoor hot water use by using one of the following strategies: a) proper piping length and size; b) piping system with structured-plumbing, engineered parallel plumbing, or central core plumbing; or c) utilize on-demand recirculation or tankless water heater	Plumbing layout plans and calculations or site inspection
Water Heating Equipment			
4-35	3 to 4	Install electric water heater with energy factor (EF) of .93 or higher (3 points) OR Install heat pump water heater or de-superheater with EF 1.9 or higher (4 points)	Receipt/cut sheet, site inspection, or photo
4-36	3 to 4	Install gas or propane tank water heater with energy factor (EF) of .60 or higher (3 points) OR with EF of .83 or higher (4 points)	Receipt/cut sheet, site inspection, or photo
4-37	4	Install gas-fired tankless hot water heater with energy factor (EF) of 0.80 or higher	Receipt/cut sheet, site inspection, or photo
4-38	4	Install ground source heat pump with efficiency ≥ 14.1 EER, ≥ 3.3 COP (for closed loop systems)	Receipt/cut sheet, site inspection, or photo
4-39	4	Install the water heater inside the heated space (electric, direct vent, or sealed venting only)	Site inspection or photo
APPLIANCES			
4-40	3	Install a permanent and easily accessible outdoor clothesline	Site inspection, or photo
4-41	1	Install a retractable clothes line in the bathtub IF the bathroom exhaust fan is equipped with humidistat control	Site inspection, or photo
4-42	1	Install gas clothes dryer	Receipt/cut sheet, site inspection, or photo
4-43	1	Install ENERGY STAR® dishwasher that uses ≤ 6 gallons/cycle	Receipt/cut sheet, site inspection, or photo
4-44	1 to 2	Install ENERGY STAR® clothes washer (2 points if MEF ≥ 2.0 and WF <6.0)	Receipt/cut sheet, site inspection, or photo
4-45	9	Install energy efficient elevators	Receipt/cut sheet, site inspection, or photo
Drainwater Heat Recovery			
4-46	3	Install drainwater heat recovery (DHR) system regardless of system size (see WSEC Section 1445) (Since some system sizes predicate heat recovery, points are only awarded if drainwater heat recovery is NOT required by code)	Site inspection, or photo of installation
LIGHTING			
Natural Light			
4-47	1	Use light-colored interior finishes	Site inspection or photo
4-48	2	Use clerestory for natural lighting (refer to NFRC U-factor for glazing in Action Item 4-10)	Bldg plans or site visit
4-49	2	Use light tubes for natural lighting and to reduce electric lighting	Site inspection or photo
Exterior Lighting			
4-50	1	Install solar-powered walkway or outdoor area lighting	Site inspection or photo
4-51	1	Install motion detectors on exterior lighting	Site inspection or photo
Interior Lighting			
4-52	1	Furnish four ENERGY STAR® compact fluorescent light bulbs to each home/unit (required if installing screw-in compacts, See Action Item 4-55)	Statement indicating number of bulbs supplied to each unit
4-53	1 to 10	Install hard-wired ENERGY STAR® fixtures, 1 point for each 10% of lighting [linear fluorescents exempt from EStar Req't]	Site inspection
4-54	2	Install lighting dimmers, timers, and/or motion detectors on interior lights	photo
4-55	2 to 5	Install minimum % of CFLs or LEDs (2 points for 50%, 3 points for 75%, 5 points for 100%)	Site inspection
4-56	2	Install occupancy sensors in closets, pantries, and utility rooms	Site inspection
4-57	1	Do not install can lights that penetrate building envelope	Site inspection
RENEWABLE ENERGY SYSTEM			
4-58	5	Include solar thermal water heating system	Site inspection
4-59	3	Pre-wire for future PV installation	Site inspection or photo
4-60	10 + 5	Install photovoltaic system so that more than 2% of project is powered by PV (5 extra points if measures are taken to minimize electrical load first)	Documentation from mechanical / PV designer; comparison with energy model results
4-61	2	Install inverter manufactured in Washington State	Receipt/cut sheet
4-62	3	Install PV panels manufactured in Washington State	Receipt/cut sheet
Innovation			
4-63	10	Provide submetering that exceeds 2009 WSEC and complete a plan to utilize energy/water data with feedback to tenants (Section 1201)	Submetering wiring diagram AND copy of written submetering plan
4-64	10	Follow Commissioning and Completion Requirements in 2009 WSEC regardless of heating/cooling capacity (Section 1416) (Since some system sizes predicate, points are only awarded if commissioning is NOT required by code)	Final Commissioning Plan and Report
4-65	4 to 10	Include innovative design, equipment and operation solutions to enhance the energy efficiency of each home/unit	Document as appropriate
SECTION 4: ENERGY EFFICIENCY Subtotal:			

SECTION 5: HEALTH AND INDOOR AIR QUALITY			
OVERALL			
5-1	5	Certify Builder to have taken American Lung Association (ALA) of Washington's "Healthy Home Training for Building Professionals" course or approved equivalent	Copy of training certification
5-2	4	Perform combustion safety test	Test documentation
JOB-SITE OPERATIONS			
5-3	1	Use only biodegradable and non-toxic cleaners	List or photo of job site cleaners
5-4	1	Require workers to use VOC-safe masks	Copy of specs of mask and work protocol
5-5	2	Isolate construction from non-construction spaces	visit
5-6	2	Keep materials dry during construction and conduct a moisture test prior to close-in of walls and conditioned space	visit
5-7	2	Manage construction dust and air pollution within building envelope during construction	visit
5-8	3	Clean ducts and furnace thoroughly at job completion	visit
5-9	2	Protect exterior building components from water or moisture damage	Receipt of work, photo, or site visit

5-10	3	Properly ventilate with fans after each new finish is applied	Letter stating ventilation practices
5-11	3	Do not use unvented heaters during construction	Written description of type of heat used during construction
5-12	4	Involve and train subs in implementing a healthy building job-site plan for the project	Written description of how this was done
5-13	4	Do not use HVAC system to dry the home/unit during construction	Written description to confirm this was done
LAYOUT AND MATERIAL SELECTION			
5-14	10	No carpet in home/unit (not applicable to common areas in multi-unit multifamily buildings)	Site inspection
5-15	3	If using carpet, install by tacking (no glue)	Site inspection or confirmation from contractor
5-16	2 to 6	If installing carpeting, install low pile or less allergen-attracting carpet and pad and choose carpet without brominated flame retardant, or made with natural fibers (e.g. jute, sisal, wool, bamboo)	Copy of carpet cut sheets
5-17	2 to 4	If installing carpeting, specify low VOC carpets with the Carpet and Rug Institute (CRI) Indoor Air Quality (IAQ) label (2 points for carpet, 1 point for carpet pad, 1 point for carpet adhesives that meet CRI Green LabelPlus)	Copy of carpet certification or receipt
5-18	1	Build a lockable storage unit for hazardous cleaning and maintenance products, detached from occupied space	Site visit, photo, or bldg plan
5-19	1	If installing water filter at sink, select one with a biodegradable carbon filter	Receipt/cut sheet, site inspection, or photo
5-20	1	Install showerhead filter	Receipt/cut sheet, site inspection, or photo
5-21	3	Optimize air quality in family bedrooms (see Handbook for strategies)	Mechanical specs, or natural vent calcs proving optimization, or written description
5-22	3	No garage	Site inspection or photo
5-23	2 to 4	If garage is attached, air seal it from building and install proper ventilation	Site inspection or photo
5-24	3	Use urea-formaldehyde-free insulation or GreenGuard certified product	Receipt/cut sheet, site inspection, or photo
5-25	4	No fiberglass insulation	Site inspection
5-26	3	Use no- or low-VOC, low-toxic, water-based, solvent-free sealers, grouts, mortars, caulks, and adhesives inside the home/unit	Cut sheets for ALL products used, contractor should provide example containers to verifier during site visits
5-27	3	Use plywood and composites of exterior grade or urea-formaldehyde-free (for interior use)	Provide MSDS for products used or receipts
5-28	3	Use cabinets made without added urea-formaldehyde board or exterior grade plywood and low- or non-toxic finish	Provide MSDS for products used or receipts
5-29	3	Use glass, ceramic, or porcelain tile for flooring	Receipt/cut sheet, site inspection, or photo
5-30	3	Use polyethylene piping for plumbing (no PVC)	Provide MSDS for products used or receipts
5-31	3 to 5	Use no- or low-VOC / low-toxic interior paints and finishes for large surface areas	Provide MSDS for products used or receipts
MOISTURE CONTROL			
5-32	2	Utilize a rain screen siding system	Bldg plan details, site inspection or photo
5-33	1 to 2	Provide cleanable doormat(s) and shoe racks at main entry(ies) to home/unit	Receipt/cut sheet, site inspection, or photo
5-34	3	Provide exterior grate at each main building entrance, at least 4 feet in length and accessible to cleaning	Site visit or photo
5-35	1	Direct stormwater at least 5 ft away from building using grading and approved drain system as appropriate	Construction drawings highlighting drainage strategies, photos during site work
5-36	1	Seal at doors, windows, plumbing, and electrical penetrations against moisture and air leaks	Site inspection, photos
5-37	1	If slab is used, install poly barrier properly; if no slab, bottom of floor is sufficient height above backfilled dirt with vapor barrier properly installed	Plans, photos or site visit
5-38	2	Seal all penetrations through the ceiling (where adjacent to attic) and include gasketing on attic hatches	Site inspection or photo
5-39	1	Use roof gutters to drain out onto splash blocks or approved system to drain water away from building	Site inspection or photo
5-40	1	Pitch and flash roofs properly	Site inspection or photo
5-41	2	Roof overhangs are at least 24"	Site inspection or photo
5-42	2	Protect windows and doors on tall walls with additional overhang protection	Site inspection or photo
5-43	2	Install metal flashing at all windows and door heads	Site inspection or photo
5-44	4	Install a sloped sill pan with end dams and back dam for all windows and exterior doors exposed to the weather	Site inspection or photo
5-45	1	Install a rigid perforated footing drain at foundation perimeter, not connected to roof drain system	Site inspection or photo
5-46	3	Show and build moisture management details for below grade walls beyond code, such as dimple drainage mat at exterior face, and capillary breaks	Construction drawings highlighting moisture management details; photos during installation
5-47	2	Perform calcium chloride moisture test on all slabs on grade prior to installing any finish flooring in conformance with product warranties	Moisture test results and date of test
5-48	3	Perform moisture test on wood and concrete floors prior to installing any finish	Moisture test results and date of test
5-49	3	Have crawl space, attic, and garage building performance tested for disconnection to the living space of the house	Test results
5-50	1	Design exterior wall system to allow water to drain out in the event of possible water penetration	Bldg plan details, site inspection or photo
5-51	1	Install floor drain, drain pan, or shut off valve with moisture sensor in the laundry room(s)	Site inspection or photo
5-52	1	Install moisture alarms under sinks and dishwasher	Site inspection or photo
AIR DISTRIBUTION AND FILTRATION			
5-53	3	Install return-air ducts in bedroom(s)	Mechanical plans or site visit
5-54	1	Install an operable skylight (manual or automated) high up in the structure to aid natural ventilation; use U-factor ≤ 0.45 and solar heat gain coefficient ≤ 0.35	Window labels, photos or site inspection
5-55	3	Verify performance of ventilation system; measure supply and exhaust airflow, check control activation and damper operation	Provide documentation of test results
5-56	1 to 3	Install Medium Efficiency Pleated Filter MERV 10 (1 point), or High Efficiency MERV 12 or Better (2 points), or HEPA Filter (3 points) *Medium-Efficiency Required for 4 and 5 Star	Filter cut sheets and site visit or photos
5-57	3	Install furnace and/or duct-mounted air cleaner or high efficiency air filter (non-electronic)	Cutsheet, site visit, or photos
5-58	2	Do not install electronic, metal mesh, horse hair, or non-pleated fiberglass filters	Site inspection
5-59	3	Install central vacuum, exhausted to outside	Site inspection or photo
5-60	3	Provide for cross ventilation using operable windows on walls facing more than one direction	Site inspection or photo
HVAC EQUIPMENT			
5-61	3	Install only EnergyStar Exhaust fans in bathrooms	Receipt/cut sheet, site inspection, or photo
5-62	1 to 3	Flow-test exhaust fans (1 point for contractor testing, 3 points for third-party testing)	Provide documentation of test results
5-63	2	Do not install wood burning fireplace	Written statement or site inspection
5-64	1	Install crank or electronic timers and humidistat controls or occupancy sensors for bath exhaust fans	Site inspection or photo
5-65	2	Install spot ventilation fans to same standard as whole house fan (Fan noise at 1.5 sones or less, etc.)	Receipt/cut sheet, site inspection, or photo
5-66	2	Install Energy Star exhaust fans in rooms where office equipment is used	Mechanical plan, site visit, or photo
5-67	2	Install sealed combustion heating and hot water equipment	Site inspection or photo

5-68	5	Where appropriate, install furnace fan motor with an electrically commutated motor (ECM)	Receipt/cut sheet, site inspection, or photo
5-69	1	Limit kitchen exhaust to 300cfm maximum, or provide dedicated make-up air with heat recovery	Receipt/cut sheet, site inspection, or photo
5-70	1	Reduced or zero use of ozone-depleting compounds in refrigeration and fire suppression systems	Receipt/cut sheet and site inspection
5-71	10	Install a ductless heating system (e.g. radiant floor or hydronic baseboard)	Site inspection or photo
INNOVATION			
5-72	4 to 10	Include innovative design, equipment and operation solutions to protect human health and enhance indoor air quality during construction and/or after occupancy	Document as appropriate
SECTION 5: HEALTH AND IAQ Subtotal:			
SECTION 6: MATERIALS EFFICIENCY			
OVERALL			
6-1	5 to 25	Create functional, multi-purpose spaces while limiting overall square footage and unit square footage	Calculations appropriate to meeting credit requirements
6-2	1 to 5	Eliminate materials and systems that require finishes (qualifying areas \geq 100s.f. per unit)	Letter stating how this was achieved
6-3	3 to 10	Design and build for deconstruction	Letter stating how this was achieved
JOBSITE OPERATIONS			
Reduce			
6-4	1	Use suppliers who offer reusable or recyclable packaging	Signed statement from supplier or packaging sample
6-5	1	Provide weather protection for stored materials	Site inspection, photo, or written description
6-6	2	Create detailed take-offs and provide as cut list to framer	Copy of the take-off for framer
6-7	2	Use central cutting area or cut packs	Site visit, photos or receipt for cut packs
6-8	3	Contractually require subcontractors to participate in waste reduction efforts	Copy of contract language
6-9	1	Substitute products that require solvent-based cleaning methods with solvent-free or water-based methods	List of products used, or receipts
Reuse			
6-10	1	Reuse building materials when appropriate	Provide list of materials reused & receipts if available
6-11	1 to 3	Reuse dimensional lumber for non-structural use	Provide list of materials reused & receipts if available
6-12	5 to 10	Reuse dimensional lumber for structural use - must be regraded for structural use	Provide list of materials reused and documentation of structural grading
6-13	1	Use reusable supplies for operations, such as construction fences, tarps, refillable propane tanks	Provide list of materials reused & receipts if available
6-14	1	Move leftover materials to next job or provide to owner	Letter stating what was done
6-15	1	Donate, give away, or sell wood scraps	Letter stating what was done
6-16	1	Donate, give away, or sell reusable finish items	Letter stating what was done
6-17	2	Use reusable forms, including wood if it is well maintained	Documentation or description of what was done
6-18	1 to 8	Purchase or source used building materials for your job	Documentation or description of what was done
6-19	2	Save and reuse site topsoil	Documentation or description of what was done
Recycle			
6-20	3	Contractually require subcontractors to participate in recycling efforts	Copy of contract language
6-21	1 to 7	Achieve 1 point per two materials with 85% minimum recycling rate (in addition to the required two) of the following products: cardboard, metal scraps, wood/pallet scraps, packaging & pallet wrap, drywall, concrete, asphalt rubble, rock, brick, paint, asphalt roofing, land clearing debris, yard waste, soil, glass, carpet padding, and upholstery foam	Provide documentation from waste hauler for each source-separated product
6-22	5 to 7	Send at least 85% of jobsite waste (by weight, excluding concrete) to a comingle facility with a 50% recycling rate (5 points), 75% recycling rate (6 points) or 90% recycling rate (7 points)	Provide documentation from waste facility documenting facility rate during the duration of your project
Hazardous Waste			
6-23	2	Dispose of fluorescent lights and ballasts at appropriate facility	Letter stating how they were collected and where they were disposed
DESIGN AND MATERIAL SELECTION			
Overall			
6-24	1	Use standard dimensions in design	Provide plans that demonstrate dimensions
6-25	1	Install materials with longer life cycles	Provide documentation or description
6-26	2 to 5	Install locally produced materials from within the Pacific Northwest – approximately 500 miles radius	Documentation of sources
6-27	3	Use re-milled salvaged lumber	Documentation or description
6-28	1 to 3	Use wood products certified as "sustainably produced" by a recognized third party (FSC required for 5 star)	Provide receipts with COC documentation
6-29	1 to 5	Use rapidly renewable building materials and products made of plants harvested within a 10-year cycle or shorter	Documentation of what was used, receipts, or site visit and photos
Framing			
6-30	1	Use stacked floor plans for multi-story construction	Plans or site visit
6-31	1	Use engineered structural products and do not use dimensional 2x's larger than 2x8 or 4x's larger than 4x8	Site visit, receipts, or photos
6-32	2	Use structural insulated panels (SIPs)	Plans, receipts, or photos
6-33	3	Use cementitious foam-formed walls with flyash concrete	Plans, receipts, or photos
6-34	3	Use finger-jointed framing material (e.g. risers and studs) for longitudinal compression loads only	Plans, receipts, or photos
6-35	3 to 6	Use at least 50% of dimensional lumber certified as "sustainably produced" by a recognized third party	Provide receipts with COC documentation
6-36	5 to 10	Use at least 90% of dimensional lumber and 50% of sheathing certified as "sustainably produced" by a recognized third party	Provide receipts with COC documentation
Foundation			
6-37	1	Use regionally produced block for foundation	Documentation of supplier and receipt
6-38	1	Use flyash in concrete for foundation	Batch receipt
6-39	2	Use recycled concrete, asphalt, or glass cullet for base or fill for foundation	Site visit, receipts, or photos
6-40	2	Use alternative foundation system that minimizes volume of foundation material	Plans, site visit, or photos
Doors			
6-41	2	Select wood interior doors that include domestically grown or reclaimed wood	Receipts and cut sheets with documentation of source material

Finish Floor			
6-42	1	Use recycled-content underlayment for sub-floor	Documentation and receipts
6-43	5	Install durable tile (glass, ceramic, or porcelain)	Documentation and receipts
6-44	1 to 3	Use flooring with recycled content (1 point for carpet pad, 2 points for carpet)	Documentation and receipts
6-45	3	Use flooring made with rapidly renewable resources	Documentation and receipts
6-46	5	Use salvaged flooring	Documentation of source
6-47	1	If using carpet, use replaceable carpet tile for high-traffic areas and common spaces (at least 50% of all carpet)	Site visit or photos
6-48	3	No vinyl flooring	Site visit and letter stating that home contains no vinyl flooring
Interior Walls			
6-49	1 to 2	Specify and use drywall with recycled-content gypsum and/or use recycled or "reworked" paint and finishes	Documentation and receipts
6-50	1	Reduce interior walls through open floor plan for kitchen, dining, and living space	Plans
6-51	1	Use natural wall finishes, such as lime paint and clay	Documentation and receipts
Exterior Walls			
6-52	1	Use recycled content sheathing	Documentation and receipts
6-53	1	Use siding with reclaimed or recycled material	Documentation and receipts
6-54	2	Use 50-year warranted siding product	Documentation or site visit
6-55	2	Use salvaged masonry brick or block	Documentation or site visit
6-56	2	Use locally produced stone or brick	Documentation of supplier
6-57	4 to 8	Use straw bale, rammed earth, or cob construction	Plans, site visit, or photos
6-58	5	No vinyl siding or exterior trim	Letter stating this
Windows			
6-59	3	Use wood/composite or fiberglass windows	Site visit or receipts
6-60	1	Use finger-jointed wood windows	Site visit, photos, or receipts
6-61	1 to 3	Use wood windows made from third party certified sustainably harvested wood	Provide receipts with COC documentation
6-62	3	No vinyl windows	Letter stating this
Cabinetry and Trim			
6-63	2	If using hardwood trim, use domestic products for cabinetry and trim	Documentation or receipts
6-64	2	Use finger-jointed trim cabinetry and trim	Site visit, photos, or receipts
6-65	2 to 4	For cabinetry/trim, use domestic hardwood trim that is certified as "sustainably produced" by a recognized third party	Provide receipts with COC documentation
6-66	1 to 3	For cabinetry/trim, use tropical hardwood trim or cabinets only if certified as "sustainably produced" by a recognized third party	Provide receipts with COC documentation
6-67	3	Use cabinet casework and shelving constructed of agricultural fiber with no added urea-formaldehyde	Documentation / cut sheets and receipts
6-68	3 to 4	Use materials that are salvaged, include recycled content, or third party certified for sustainably harvested wood	Documentation / cut sheets and receipts
Roof			
6-69	2	Use recycled-content roofing material	Documentation from supplier noting recycled content
6-70	2	Use 40-year roofing material	Site visit or documentation
6-71	3	Use 50-year roofing material	Site visit or documentation
6-72	2	Use light colored roofing	Site visit or photo
6-73	3	Use Structurally Insulated Panels (SIPs)	Site visit or receipt
6-74	5	Use solar shingles where applicable (optimal orientation)	Site visit or documentation/receipts
Insulation			
6-75	1	Use recycled-content (minimum 40%) insulation	Site visit during insulation or receipts and cut sheets documenting content
6-76	4	Use environmentally preferred insulation products (urea-formaldehyde-free, CFC-free, HCFC-free)	Site visit during insulation or receipts and cut sheets documenting content
Other Exterior			
6-77	2	Use reclaimed or salvaged material for landscaping walls	Site visit or receipts
6-78	3	Use 100% recycled-content plastic or wood polymer lumber for decks and porches, or third-party certified wood products	Documentation and receipts
6-79	2 to 5	Use non-toxic or low-toxic pressure-treated wood	Documentation and receipts
INNOVATION			
6-80	4 to 10	Include innovative design, equipment and operation solutions to conserve natural resources and minimize waste produced on the project	Document as appropriate
SECTION 6: MATERIALS EFFICIENCY Subtotal			
SECTION 7: PROMOTE ENVIRONMENTALLY FRIENDLY RESIDENT OPERATIONS & MAINTENANCE			
HOMEOWNER'S KIT			
7-1	4 to 10	Develop or deliver innovative education to residents and the general public regarding environmentally friendly O&M practices	
SECTION 7: PROMOTE ENVIRONMENTALLY FRIENDLY RESIDENT OPERATIONS & MAINTENANCE Subtotal			
PROJECT SUMMARY			
SECTION 1: BUILT GREEN PROGRAM PROMOTION			
SECTION 2: SUSTAINABLE SITES			
SECTION 3: WATER EFFICIENCY			
SECTION 4: ENERGY EFFICIENCY			
SECTION 5: HEALTH AND INDOOR AIR QUALITY			
SECTION 6: MATERIALS EFFICIENCY			
SECTION 7: PROMOTE ENVIRONMENTALLY FRIENDLY HOMEOWNER OPERATIONS & MAINTENANCE			
TOTAL BUILT GREEN SCORE:			

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