BUILT GREEN™ CHECKLIST

Effective January 1, 2009

The Built Green™ program has four levels of achievement, shown below as Bronze, Silver, Gold and Platinum. Points are awarded based on the minimum *EnerGuide* rating with additional points selected from each of the seven other areas of the checklist to give a cumulative total. Each separate category has minimum point totals that must be selected.

Built Green™ Level (For Detached, Semi- Detached & Row House Units)

Checklist Categories			Bronze	Silver	Gold	Platinum
EnerGuide for New Houses Rating			72	75	77	82
I.	Operational Systems	Min. 10/84	76 Points	90 Points	100 Points	120 Points
II.	Building Materials	Min. 15/72				
III.	Exterior & Interior Finishes	Min. 10/70				
IV.	Indoor Air Quality	Min.15/58				
V.	Ventilation	Min. 6/24				
VI.	Waste Management	Min. 7/35				
VII.	Water Conservation	Min. 7/50				
VIII.	Business Practices	Min. 6/30				

CHECKLIST CRITERIA

Five fundamental pillars serve as a basis for each item to be considered in the checklist. Each line item must meet at least one of the criteria listed in the left hand column, where two or more of the subsidiary points listed on the right must be addressed.

- Resource Use
- Energy Efficiency
- Recycled Content
- Indoor Air Quality
- Durability
- Innovation
- Alternative Construction
- Measurable or Validated
- Promotion of greater use
- Environmental Impact

ENERGUIDE RATING

This rates the energy efficiency and energy consumption of the home using the *EnerGuide for Houses* software, HOT2000. Information such as home orientation, home dimensions, insulation values, type of heating system, construction material, window type and window design are input into HOT2000 in order to calculate a rating. An average rate of air changes per hour (ACH) is initially used for the calculation. Prior to completion of each house, a mandatory blower door test is performed and the actual rate of air changes per hour is then input into HOT2000 and the final *EnerGuide* rating is calculated. This standard applies to low-rise detached, semi-detached and row houses covered by Part 9 of the *National Building Code of Canada* that do not share heated areas, ventilation systems or heating systems with other dwelling units.

CHECKLIST REQUIREMENTS

In order to properly verify the Built Green™ program, for each item chosen from the checklist, a verification must be ready to be supplied, if the home is randomly chosen to be audited. The Builder will be given a short amount of time to compile verifications and supply them to the auditor. Forms of verification include: Installing Contract Letter, Supplier Verification Letter, Invoice or Purchase Order as well as an On-Site visual verification. Please ensure each verification has the required information included, as verifications missing required details will be rejected.

AUDIT VERIFICATION REQUIREMENTS

Built Green™ will conduct random verifications of the Built Green™ Checklist to maintain quality control and program credibility. The goal of the program is to perform random verifications on 5% of certified homes. If deficiencies are found, follow-up inspections will be done to verify corrections at the expense of the Builder. Random testing will include the builder producing the documentation to support checklist selections. The checklist selections must be supported by at least one of the following criteria: on-site verification or documentation stating when and from whom the product was purchased, as well as when, where and by whom it was installed.

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To select points, click on boxes and select point value from drop-down list

#REF!

Section 1: 0 Section 2: 0 Section 3: 0 Section 4: 0 Section 5: 0 Section 6: 0 Section 7: 0 Section 8: 0 = TOTAL POINTS: 0

I. OPERATIONAL SYSTEMS

This section awards points for construction methods and types of products that contribute toward lower energy consumption as well as alternative heating and electrical systems.

Minimum 10 Points Required

1-1	Zoning from a HVAC source utilizing two or more thermostatically controlled zones or zoning from separate systems programmed through separate thermostats. (2 zones = 2 points, 3 zones = 3 points, 4 zones = 4 points.) Efficiency can be significantly improved by only heating or cooling when occupants are present and by only heating/cooling to the exact desired temperature. Different desired temperatures can be set in each room or space and an individual zone can be turned off when not occupied. This type of system results in a dramatic reduction of energy consumption and operating costs.		2, 3 or 4
1-2	Install high efficiency, sealed combustion heating appliance with a minimum 92% AFUE (1 point), 94% AFUE (2 points) or 95% AFUE and above (3 points). (Not for electric heat.) High efficiency furnaces or boilers, such as condensing systems, reduce energy consumption and consequently fossil fuel reliance. Because AFUE takes into account efficiency losses during start-up and cool down its rating is slightly lower.		1, 2 or 3
1-3	Install ground or water source heat pumps (10 points) or air source heat pumps (6 points) for heating and cooling. Heat pumps can significantly reduce primary energy use for building heating and cooling. The renewable component displaces the need for primary fuels, which, when burned, produce greenhouse gases and contribute to global warming. Please Note: Cool climate heat pump systems are often more efficient due to the costs of electricity however cold climate heat pump systems are often not as efficient as typical boiler/furnace natural gas systems.		6 to 10
1-4	Install power vented domestic hot water (DHW) tank system (1 point), sealed combustion 2 pipe tank system (2 points), or condensing DHW tank system (3 points) Hot water heater is direct vented with a closed combustion system. All air for combustion is taken directly from the outside. A direct system utilizes a co-axial vent pipe (pipe inside a pipe) draws combustion air in through the outer pipe, and exhausts the products of combustion through the inner pipe. A power vented heater exhausts air out of the building via a positive exhaust during main burner operation. Both systems eliminate the need for conventional chimneys or flue systems.		1, 2 or 3
1-5	Install instantaneous “tankless” hot water heater. A tankless water heater does not have a storage tank to keep heated all day, or a pilot light; it burns gas only when you need hot water. This eliminates standby heat loss and its higher efficiency will save on utility costs.		4
1-6	Install high efficiency (AFUE 90 or better) boiler domestic hot water system.		4
1-7	Install geoexchange DHW heating system to supply a minimum of 25% of the peak DHW heating load and 70% of the total DHW energy load. A geoexchange system uses the earths constant temperature to heat water for the home.		4
1-8	Install drainwater heat recovery units on the main drainage stack. 3 foot stack (1 point), 6 foot stack (2 points) Drainwater heat recovery units transfer the heat from waste water to incoming water. This reduces the amount of energy needed for the DHW system.		1 or 2
1-9	Sealed combustion fireplace with electronic ignition if gas fueled. Sealed combustion fireplaces involve a double-walled special vent supplied by the manufacturer that normally vents through a sidewall in a horizontal position. The unit must be Sealed Combustion meaning that combustion gasses can not enter the home even if the home becomes depressurized.		2
1-10	Install an EPA or CSA certified high-efficiency wood stove or pellet stove with a minimum efficiency of 72% (1 point) or 85% (2 points). State-of-the-art wood and pellet stoves are among the cleanest burning heating appliances and deliver a high overall efficiency. EPA and CSA certified stoves ensure reduced emissions.		1 or 2
1-11	Install fireplace fan kit to circulate warm air into room (1 point per fan, maximum 2 points). A fan kit allows the heat generated by a fireplace to be transferred into the home more effectively.		1 or 2

1-12	All windows in home are ENERGY STAR labeled or equivalent for the climatic zone of home. ENERGY STAR labeled windows save energy by insulating better than standard windows, making the home more comfortable all year round, reducing outside noise and can result in less condensation forming on the window in cold weather.		2
1-13	Electric range is self cleaning and/or Convection based Ranges that self clean or have convection are better insulated and sealed, performing at or less than 500 kwh (520 kwh for convection) when rated by EnerGuide.		1
1-14	Refrigerator is an ENERGY STAR labeled product. An ENERGY STAR label for refrigerator indicates the product has met strict requirements to reduce energy consumption.		2
1-15	Dishwasher is an ENERGY STAR labeled product. An ENERGY STAR label for a dishwasher indicates the product has met strict requirements to reduce energy consumption.		1
1-16	Clothes washer or combo washer dryer is an ENERGY STAR labeled product. An ENERGY STAR label for a clothes washer indicates the product has met strict requirements to reduce energy consumption.		1
1-17	Clothes dryer has an energy performance "auto sense" dry setting which utilizes a humidity sensor for energy efficiency.		1
1-18	Home is built "Solar Ready" following Canadian Solar Industries Association (CANSIA) guidelines. Designing a home to be solar ready will make the addition of panels in the future much easier. Contact the Canadian Solar Industries Association for more info: www.cansia.ca.		2
1-19	Install active solar hot water heating system. Sized for 30% of DHW load (4 points), 50% (6 points), 80% (8 Points)		4, 6,8
1-20	Install photovoltaic electrical generation system. Sized for 30% of electric load (4 points), 50% (6 points), 80% (8 points). A photovoltaic system will greatly reduce the reliance on fossil fuel energy and reduce greenhouse gas emissions. System capacity must be verified by professional installer or engineer.		4, 6, 8
1-21	50% (2 points) or 100% (4 points) of electricity used during construction of home is generated by wind power or equivalent green power certificate.		2 or 4
1-22	50% (2 points) or 100% (4 points) of electricity used by homeowner during first year of occupancy is generated by wind power or equivalent green power certificate. (prepaid by builder)		2 or 4
1-23	A properly supported and wired ceiling fan and a wall mounted switch roughed in for future installation. Intended to allow for future temperature equalization.		1
1-24	Install interior motion sensor light switches. 1 point per switch to a maximum of 3 points. Motion sensor switches prevent lights from remaining on in rooms that are unoccupied. This helps reduce electricity consumption. Switches on closet doors and pantries are also acceptable.		1 to 3
1-25	Install central, computerized control systems capable of unified automation control of lighting loads. Lighting and automation control systems prevent lights from remaining on in rooms without occupants, thereby reducing electricity consumption.		4
1-26	Minimum 25% (1 point), 50% (2 points), 75% (3 points) or 100% (4 points) of interior and exterior light fixtures are fluorescent, compact fluorescent light bulbs or LEDs. Fluorescent, compact fluorescent and LED lamps use 50% less energy than standard lamps and last up to ten times longer.		1 to 4
1-27	Minimum 50% of recessed lights use halogen bulbs. Halogen bulbs are slightly more energy efficient, last longer and provide a more effective task light than conventional bulbs.		1
1-28	Air tight, insulation contact-rated recessed lights are used in all insulated ceilings, or insulated ceilings have no recessed lights. Prevents heated air from exhausting through ceiling. Air tight light fixtures lead to a more airtight, energy efficient home.		1
	TOTAL SECTION POINTS	**0**	

II. BUILDING MATERIALS

This section deals with building components that make up the structure of the home. Items involve alternatives to using large dimensional lumber, products with a recycled component, utilizing wood products that come from sustainably managed forests and reducing the overall amount of lumber used.

Minimum 15 Points Required

2-1	Insulated Concrete Form (ICF) system used for foundation walls. Insulating Concrete Forms (ICF) are hollow building elements made of plastic foam that are assembled, often like building blocks, into the shape of a buildings exterior walls. The ICFs are filled with reinforced concrete to create structural walls. Unlike traditional forms, the ICFs are left in place to provide insulation and a surface for finishes.		2
2-2	Insulated Concrete Form (ICF) system used for main house walls. See description in 2.1.		3
2-3	Non-solvent based damp proofing (seasonal application). Water based damp proofing products use water as a thinner. Oil based damp proofing gives off a number of volatile organic compounds (VOCs) as the solvent evaporates after application. These VOCs can be a strong irritant and can add to air pollution.		1
2-4	Steel studding made from a minimum of 75% recycled steel is used to replace a minimum of 15% of wood studs in the home.		1
2-5	Exterior and interior wall stud spacing at 19.2” on-center (1 point) or 24" on-center (2 points) . Increasing stud spacing reduced the thermal performance of homes while saving materials.		1 or 2
2-6	Use of insulated headers / lintels (either manufactured or site built insulated headers) with minimum insulation value of R10. Headers can either be insulated on site or can be a pre-manufactured product (often insulated with a foamed plastic).		1
2-7	Install manufactured insulated rim/band joist, or build on-site built header wrap detail for continuous air barrier. Rim and band joists can either be insulated on site or can be pre-manufactured (often insulated with a foamed insulation).		1
2-8	Elimination of headers at non-bearing interior and exterior walls. It is not necessary to use the additional wood involved in header construction if the opening is less than 4' wide and is non-load bearing. For more details on Optimum Value Engineering framing principles see www.buildingscience.com.		1
2-9	Use of header hangers instead of jack studs. Using metal header hangers instead of jack studs allows for savings in wood use. For more details on Optimum Value Engineering framing principles see www.buildingscience.com.		1
2-10	Elimination of cripples on hung windows. For hung window openings, cripples are only necessary for siding or gypsum board attachment. For more details on Optimum Value Engineering framing principles see www.buildingscience.com.		1
2-11	Elimination of double plates, using single plates with connectors by lining up roof framing with wall and floor framing. Stack framing principles might allow for reduced wood usage. For more details on Optimum Value Engineering framing principles see www.buildingscience.com.		1
2-12	Use of two stud corner framing with drywall clips or scrap lumber for drywall backing instead of studs. Drywall clips can be used instead of a third corner stud allowing for reduced wood usage. For more details on Optimum Value Engineering framing principles see www.buildingscience.com.		1
2-13	Deck or veranda surfaces (1 point) and/or structure (1 point) made from a third-party certified sustainably harvested wood source. Wood must come from a sustainably harvested source with certification from Forest Stewardship Council (FSC), Sustainable Forestry Initiative (SFI), or Canadian Standards Association's Sustainable Forest Management Standard (CAN/CSA-Z809-02).		1 or 2
2-14	Deck or veranda surfaces (1 point) and/or structure (1 point) made from a third-party certified sustainable concrete. Concrete produced from aggregates derived from a pit or quarry with a valid reclamation plan approved by Materials and Resources Canada or the governing provincial body.		1 or 2
2-15	Structural insulated panel system used for at least 75% of roof (4 points) and/or 75% of walls (6 points). Reduces thermal migration and controls air leakage – keeps heating and cooling costs to a minimum compared to a conventionally framed wall.		4 or 6
2-16	Dimensional lumber from a third-party certified sustainably harvested source used for floor framing. Saves old growth forests by using trees form a second generation forests.		1
2-17	Dimensional lumber from a third-party certified sustainably harvested source used for wall framing. Saves old growth forests by using trees form a second generation forests.		2

2-18	Dimensional lumber from a third-party certified sustainably harvested source used for roof framing. Saves old growth forests by using trees form a second generation forests.		1
2-19	Use manufactured wood products for floor systems instead of dimensional lumber. Engineered wood floor systems saves old growth forests by using components from second generation forests and the use of recycled materials.		2
2-20	Reduce dimensional lumber use by using engineered product for all load bearing beams & columns. Engineered products include wood products, concrete and recycled steel.		2
2-21	Reduce dimensional lumber use by using engineered products for all exterior window and door headers. Engineered products include wood products, concrete and recycled steel.		1
2-22	Finger-jointed plate material and/or engineered plate material used for all framing plates. Use of recycled materials saves old growth forests.		1
2-23	Reduce dimensional lumber use by using engineered stud material for 10% of structural stud wall framing. Use of engineered lumber products saves old growth forests by using components from second generation forests and the use of recycled materials.		1
2-24	Finger-jointed studs for 90% of non-structural (1 point) and/or 90% of structural (1 point) wall framing. Use of recycled materials saves old growth forests.		1 or 2
2-25	Recycled and/or recovered content gypsum wallboard, minimum of 15% recycled content.		1
2-26	Recycled content exterior wall sheathing (minimum 50% pre- or post-consumer).		2
2-27	Use rain screen system separating cladding from the wall sheathing with a drainage plane (2 point), 60% or more recycled content (additional 1 point). Use of recycled content polypropylene, steel or aluminium rain screen strapping may replace the traditional use of wood strapping on rain screen systems.		1 or 2
2-28	Advanced sealing package, non HCFC expanding foam around window and door openings and all exterior wall penetrations. Controls air leakage and keeps heating and cooling costs to a minimum.		2
2-29	All sill plates sealed with foam sill gaskets or a continuous sandwiched bead of acoustical sealant. Controls air leakage and keeps heating and cooling costs to a minimum.		1
2-30	All insulation used in home is certified by a third-party to contain a minimum recycled content: 40% (1 point) or 50% (2 points).		1 or 2
2-31	Install site applied spray foam to insulate entire rim joist area (1 point), Garage to Bonus room floor (2 points) and/or house walls (2 points). Spray insulations provide excellent air sealing and insulation value. Spray foam must be fire protected and some types cannot come in contact with heating ducts or lines. Consult supplier or installer for further information.		2 or 4
2-32	Replace exterior wood sheathing with insulating sheathing and structurally required metal bracing. Using less materials when possible saves the forest reserves, reduces thermal migration and controls air leakage and keeps heating and cooling costs to a minimum compared to a conventional wall.		2
2-33	Install R5 (1 point), R8 (2 points) or R12 (3 points) above building code required under entire basement slab. Insulation installed under the basement slab will reduce the downward heat transfer into the ground below the slab, especially when hydronic in-slab heating is installed. Insulation under the slab can reduce temperature swings in the heated space and respond quicker to new changes in thermostat settings.		1,2 or 3
2-34	Install Exterior Insulations system using extruded Polystyrene (XPS) on exterior of foundation, 1.5" R7.5 (1 point), 2" R10 (2 points), or 3" R15 (3 points) Insulation on the outside of a foundation system reduced energy loss		1, 2 or 3
2-35	Overhead garage door is made of 75% or greater recycled material.		1
2-36	Attached garage overhead door is insulated with R8 to R12 (1 point) or greater than R12 (2 points).		1 or 2
2-37	Attached garage is fully insulated. A fully insulated garage serves an additional insulating capacity for any walls encapsulated by it, further slowing heat loss through those walls.		1
2-38	Builder uses passive solar design shading devices for home. Permanent horizontal and/or vertical exterior shading devices for glazing (2 points), computer controlled devices (additional 1 point). Excludes interior blinds.		2 or 3
2-39	Install 100% recycled content carpet underlayment.		1
2-40	Install finished concrete interior floors instead of other types of finished floors (tile, carpet, hardwood, etc). For 300-500 ft² (1 point), 501-1000 ft² (2 points), 1001-1500 ft² (3 points), 1501+ ft² (4 points). Not applicable in unfinished basement areas. Using the concrete itself as a finished floor where concrete is being used regardless (for in floor heat or basement slabs) provides a durable floor with less material usage.		1 to 4
2-41	Install weather-stripped and insulated (R15 minimum) manufactured interior attic hatch (1 point), or no interior attic access (1 point)		1
	TOTAL SECTION POINTS	**0**	

III. EXTERIOR and INTERIOR FINISHES

This section focuses on the finish materials used both inside and outside of the home. The items listed include using longer lasting products, products with recycled content and products that are harvested from third-party certified sustainably managed forests.

Minimum 10 Points Required

3-1	Exterior doors with a minimum of 15% recycled and/or recovered content. Recycled or recovered content ensures we keep our landfill use to a minimum. Not including overhead garage doors (see 2-33).	☐	1
3-2	Interior doors with a minimum of 15% recycled and/or recovered content.	☐	1
3-3	Interior doors made from third-party certified sustainably harvested wood. Uses trees from forests managed sustainably, that prevent clear cutting and replant trees in areas from which they've been harvested.	☐	2
3-4	All exterior doors manufactured from fiberglass. Fiberglass doors insulate better than steel skinned or wood doors, have a longer lifespan, do not warp, twist or crack, and therefore reduce landfill use.	☐	1
3-5	Exterior window frames contain a minimum of 10% recycled content. Reusing materials such as plastics reduces landfill usage and may not be biodegradable.	☐	1
3-6	Exterior window frames made from third-party certified sustainably harvested wood. Uses trees from forests managed sustainably, that prevent clear cutting and replant trees in areas from which they've been harvested.	☐	2
3-7	Natural cementitious stone/stucco/brick or fiber cement siding – complete or combination thereof for 100% of exterior cladding. Strong, long lasting, fireproof material.	☐	4
3-8	Recycled or reclaimed exterior cladding material. 1/3 of exterior (1 point), 2/3 or more of home (2 points). Recycled brick blocks etc, intent is to replace siding materials, primarily exterior finish materials.	☐	1 or 2
3-9	Fiber cement fascia and soffit. Fiber cement fascia and soffit, made with recycled content from sawmill waste and Portland cement, is a strong, long lasting and fireproof material.	☐	2
3-10	Recycled and/or recovered-content fascia and soffit (minimum 50% pre- or post-consumer). Recycled and/or recovered-content fascia and soffit reduces the amount of new material used in production by gluing up mill scraps into large pieces, which conserves natural resources and reduces landfill usage.	☐	1
3-11	Recycled and/or recovered-content siding (minimum 50% pre- or post-consumer). Recycled and/or recovered-content siding reduces the amount of new material used in production by gluing up mill scraps into large pieces, which conserves natural resources and reduces landfill usage.	☐	4
3-12	Exterior trim materials are made from alternatives to solid lumber. Trim materials manufactured from OSB uses a laminating process to make larger pieces from smaller pieces or strands of wood. The process saves old growth forests by using trees from forests managed sustainably, that prevent clear cutting and replant trees in areas from which they've been harvested.	☐	1
3-13	Exterior trim materials have recycled and/or recovered-content (minimum 50%). Recycled and/or recovered-content trim materials reduce the amount of new material used in production by gluing up mill scraps into large pieces, which conserves natural resources and reduces landfill usage.	☐	3
3-14	All exterior trim is clad with pre-finished metal (1 point over wood backings, 2 points without wood backings). Trim clad with pre-finished metal is a durable long lasting product that requires no maintenance and reduces waste in landfills due to long life of product.	☐	1 or 2
3-15	Deck or veranda surfaces made from low maintenance materials - deck surfaces do not need maintenance of any kind, including painting, for a minimum of 5 years. Materials that last longer reduce landfill usage and tend to require little to no maintenance, saving replacement costs and reducing energy use.	☐	2
3-16	Minimum 25-year manufacturer warranty roofing material (2 points plus 1 point for each additional 5 years). A 25-year roof system saves homeowners money in replacement costs, and reduces the use of landfills due to the longevity of the product.	☐	2 or more
3-17	Minimum 25% recycled-content roofing system (1 point underlay and 2 points roofing finish). Recycled content roofing material reduces the use of new resources and waste in landfills.	☐	1 to 3
3-18	Domestic wood from reused/recovered or re-milled sources, 500 ft² minimum for flooring or all cabinets or all millwork. Reused, recovered or re-milled sources eliminate the need for new resources, saving energy, transportation costs, and forestry from depletion.	☐	6
3-19	Natural or recycled-content carpet pad made from textile, carpet cushion or tire waste (rebond still qualifies). Natural or recycled-content carpet pad is a good use of reusable resources.	☐	2

3-20	Install carpet that has a minimum of 50% recycled content. Recycled-content carpet is a good use of renewable resources, lessens off-gassing and improves air quality.		2
3-21	Install a minimum of 300 ft² of laminate flooring.		2
3-22	Bamboo, cork or hardwood flooring used in home, minimum of 300 ft² installed. Products must be third-party certified from sustainably managed forests or certified sustainable sources. Cork flooring comes from stripping the bark off cork oak, which regenerates itself. The cork tiles are moisture, rot and mould resistant, providing a floor that can last over 30 years. Bamboo flooring is a good use of natural resources because it is fast growing, durable and flexible. All hard floorings promote better indoor air quality by not trapping contaminates.		3
3-23	All ceramic tile installed in home has a minimum of 25% recycled-content. Reduces landfill usage.		2
3-24	MDF and/or finger jointed casing and baseboard used throughout home (1 point), and all jambs (1 point) Medium Density Fiberboard (MDF) casing is created from sawdust and glues, utilizing all wood waste to create usable product.		1 to 2
3-25	Solid hardwood trim from third-party certified sustainably harvested sources approved for millwork and/or cabinets (2 points per application – maximum of 4 points). This process saves old growth forests by using trees from forests managed sustainably, that prevent clear cutting and replant trees in areas from which they've been harvested.		2 or 4
3-26	Paints or finishes with minimum of 20% recycled content. Paints or finishes made form recycled content are environmentally friendly because recycling paint reduces the hazardous waste in landfills.		1
3-27	Domestically sourced natural granite, stone or recycled glass (30% of content) countertops in 100% of the kitchen. Natural product is more durable, easy to clean and maintain, resistant to heat and scoring. By quarrying and sourcing in Canada, the environmental cost of shipping is greatly reduced. Foreign stone cut or polished in Canada is not acceptable.		2
3-28	Natural granite, stone, recycled glass or concrete countertops for all other countertop areas. Natural product is more durable, easy to clean and maintain, resistant to heat and scoring.		1
3-29	100% agricultural waste or 100% recycled wood particle board used for shelving. Products such as wheat board are made from agricultural waste.		2
3-30	PVD finish on all door hardware. Physical Vapour Disposition provides a more durable product. No toxic wastes are produced making it.		1
3-31	PVD finish on all faucets. Physical Vapour Disposition provides a more durable product. No toxic wastes are produced making it.		1
3-32	Install only Type 1 or 2 grade door hardware with lifetime mechanical and coating warranty. High quality, durable Type 1 and 2 hardware will not require replacing for life of home.		2
	TOTAL SECTION POINTS	**0**	

IV. INDOOR AIR QUALITY

This section focuses on the quality of the air within the finished home. Products listed here include materials that are low in VOC's, products made from all natural materials as well as various air cleaning and ventilation systems.
Minimum 15 Points Required

4-1	Install pleated media filter on HVAC system with minimum MERV 7 rating. MERV rating system specifies allowable amounts and practical sizes that a filter must catch. The higher the MERV rating, the smaller and greater number of particulates are caught, providing better indoor air quality.	☐	1
4-2	Install electrostatic air cleaner on HVAC system. Permanent washable air filter that traps and removes airborne particles from the air before being circulated through the furnace and into the home.	☐	2
4-3	Install electronic air cleaner on HVAC system. An electronic air cleaner offers a superior level of filtration by using advanced, 3-stage filtration technology to trap and filter airborne particles like dust, cat dander and smoke. It works by placing an electric charge on airborne particles, and then collecting the charged pollutants like a magnet. The air cleaner cells can be washed in your dishwasher or sink.	☐	3
4-4	Install HEPA filtration system in conjunction with an HVAC system. HEPA stands for High-Efficiency Particle Arresting. HEPA filtration offers the highest particulate removal available - 99.97% of particles that pass through the system including dust, cat dander, certain bacteria, pollens and more. The system is connected to the cold air return of the forced air heating/cooling system which provides a whole house filtration system.	☐	6
4-5	Install ultraviolet air purifier on HVAC system. Ultraviolet (UV) air treatment systems kill mould spores and certain live, airborne bacteria passing by the lamp to prevent them from being re-circulated into the air of the home.	☐	2
4-6	Install thermostat that indicates the need for the air filter to be changed or cleaned. This feature displays filter maintenance reminders on the thermostat. Regular furnace maintenance is required to keep your mechanical equipment running efficiently and problem free as well as ensuring a healthy indoor air environment.	☐	1
4-7	Install hardwired carbon monoxide detector outside main sleeping areas. Carbon monoxide detectors warn against high levels of toxic carbon monoxide.	☐	1
4-8	Power vacuum all HVAC ducting prior to occupancy by homeowner. This process helps eliminate pollutants that drop into the HVAC ducting during the construction process from being circulated into the home.	☐	2
4-9	Central vacuum system vented to exterior & central vacuum system has Carpet and Rug Institute (CRI) IAQ approval. A central vacuum system collects dust centrally, while exhausting to the exterior so that dust mites and bacteria do not have the opportunity to re-circulate. The result is cleaner, healthier air. Note: install far enough from air intake areas, see manufacturer's installation guidelines.	☐	1
4-10	All insulation in the home is third-party certified or certified with low or zero formaldehyde. Formaldehyde is colorless gaseous organic compound, water soluble, with a characteristic pungent and stifling smell. Products with low formaldehyde emission levels will improve indoor air quality of homes and long term owner health.	☐	2
4-11	Low formaldehyde sub floor sheathing (less than 0.18 ppm). Formaldehyde is colorless gaseous organic compound, water soluble, with a characteristic pungent and stifling smell. Products with low formaldehyde emission levels will improve indoor air quality of homes and long term owner health. Industry Standard ANSI A208.1-1999 sets a 0.20 ppm limit. Built Green™ requires a 10% better level of performance at 0.18 ppm. Products using Phenol Formaldehyde, or PMDI or MDI will meet this standard without testing.	☐	3
4-12	Low formaldehyde underlayment is used in home (less than 0.18 ppm). Low formaldehyde (phenol) and formaldehyde-free binders (PMDI) are available and becoming more common. FSC certified OSB is becoming more common, reducing environmental impacts on air, water, social quality.	☐	1
4-13	Low formaldehyde particle board/MDF (less than 0.18 ppm) = 1 point, or zero formaldehyde particle board/MDF (2 points) used for cabinets. Urea formaldehyde-free fiberboard can be used in the same way as conventional fiberboard, but with the added caution of greater potential for water damage.	☐	1 or 2
4-14	Low formaldehyde particle board/MDF (less than 0.18 ppm) = 1 point, or zero formaldehyde particle board/MDF (2 points) for shelving. Urea formaldehyde-free fiberboard can be used in the same way as conventional fiberboard, but with the added caution of greater potential for water damage.	☐	1 or 2
4-15	All interior wire shelving is factory coated with low VOC / no off gassing coatings Vinyl coating on conventional shelving units and site built MDF shelving offgas VOCs.	☐	2
4-16	Water-based urethane finishes used on all site-finished wood floors. Water-based epoxy finish (generally referred to as epoxy-modified finish) differs from its solvent-based counterpart in that the epoxy resin is itself the catalyst for an acrylic or urethane resin.	☐	2

4-17	All wood or laminate flooring in home is factory finished. Installing a pre-finished floor eliminates the time, the dust and the odours associated with the on-site sanding and finishing of an unfinished product.		2
4-18	Water-based lacquer or paints are used on all site built and installed millwork, including doors, casing and baseboards. (less then 200 grams/litre of VOC's) Water based interior finish products reduces VOC off-gassing which improves indoor air quality.		3
4-19	Interior paints used have low VOC content (less than 200 grams/litre of VOCs). Volatile Organic Compounds (VOCs) are a class of chemical compounds that can cause short or long-term health problems. A high level of VOCs in paints/finishes off-gas and can have detrimental effects to a buildings indoor air quality and occupant health.		2
4-20	Interior paints used have no VOC's in base paint prior to tint. Volatile Organic Compounds (VOCs) are a class of chemical compounds that can cause short or long-term health problems. A high level of VOCs in paints/finishes off-gas and can have detrimental effects to a buildings indoor air quality and occupant health.		3
4-21	Natural linoleum in place of any vinyl sheet flooring. Linoleum installed with low VOC adhesives (low VOC standard is less than 150 grams per litre). Natural linoleum is made from natural linseed and other abundant renewable materials.		2
4-22	All ceramic tiles are installed with low VOC adhesives and plasticizer-free grout (low VOC standard is less than 150 grams per litre). Most adhesives are still based on SB latex which releases large quantities of VOCs. The volatile solvents are used to emulsify (or liquefy) the resin that acts as the bonding agent. However, water-based adhesives emit far less VOCs than their conventional solvent based counterparts. There are three types of low-VOC formulas: water-based (latex and acrylics); reactive (silicone and polyurethane); and exempt solvent-based (VOC-compliant solvents). While all three technologies yield low- or zero-VOC caulks, sealants, and adhesives, their performance is slightly different.		1
4-23	All vinyl flooring in home is replaced by hard surface flooring. Hard surface flooring is generally more durable and improves the Indoor Air Quality within a building. Carpets collect dust, dust mites and other allergens which when disturbed become airborne particulates, directly affecting the health of the occupants.		2
4-24	Carpet and Rug Institute (CRI) IAQ label on all carpet used in home. To identify carpet products that are truly low-VOC, CRI has established a labeling program. The CRI Indoor Air Quality Carpet Testing Program green and white logo displayed on carpet samples in showrooms informs the consumer that the product type has been tested by an independent laboratory and has met the criteria for very low emissions.		2
4-25	Carpet and Rug Institute (CRI) IAQ label on all underlay used in home. The adhesives used to install carpets and the latex rubber by some manufacturers to adhere face fibers to backing materials generate volatile organic compounds (VOCs). Carpets also cover large surfaces within an interior environment and can provide "sinks" for the absorption of VOCs from other sources.		1
4-26	Natural material based carpet in all living areas. Natural wool carpets are durable and use less secondary backing materials and chemicals. Off-gassing is typically caused by the secondary backings and chemical additives in synthetic carpets, for controlling mildew, fungus, fire and rot.		2
4-27	All carpet in home is replaced by hard surface flooring. Hard surface flooring is generally more durable and improves the Indoor Air Quality within a building. Carpets collect dust, dust mites and other allergens which when disturbed become airborne particulates- directly affecting the health of the occupants.		4
		TOTAL SECTION POINTS	**0**

V. VENTILATION

This section covers the mechanical ventilation systems in the home, including filtrations and heat recovery.

Minimum 6 Points Required

*** Platinum Level Note* Platinum level homes must use item 5-9 " Ventilation system is installed according to CSA Standard F326, as recommended by the Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI)." as well as 6 additional points from this section.**

5-1	All ductwork joints and penetrations sealed with low toxic mastic or aerosolized sealant system. Duct mastic is a preferred flexible sealant that can move with the expansion, contraction, and vibration of the duct system components. A high quality duct system greatly minimizes energy loss from ductwork. The system should be airtight, sized and designed to deliver the correct airflow to each room.		3
5-2	Programmable ENERGY STAR thermostat with dual set back and continuous fan setting. A set back thermostat regulates the heating/cooling system to provide optimum comfort when the house is occupied and to conserve energy when it is not.		2
5-3	Install HVAC appliance with variable speed fan (ECM). A variable speed fan motor (ECM or DC powered) is designed to vary its speed based on the homes heating and air conditioning requirements. Working in conjunction with the thermostat, it keeps the appropriate air temperature circulating through the home, reducing temperature variances in the home. It also provides greater air circulation and filtration, better temperature distribution, humidity control, higher efficiency and quiet performance.		3
5-4	Install motorized damper on fresh air inlet (must be interlocked with furnace system). A constantly open fresh air supply (passive air) wastes energy. Positive control of this air will assure building comfort, safety and energy efficiency.		1
5-5	Install all ventilation fans (bath or in-line type) to meet or exceed the Energy Star requirements Energy Star fans have to meet standards for efficiency, and sound transmission, providing quiet and effective ventilation fans. www.oee.nrcan.gc.ca/energystar/english		2
5-6	Install a programmable time or humidistat controlled ventilation fan meeting the Energy Star requirements for efficiency and sound level A programmable timer ensures necessary, regular, automatic mechanical ventilation of the home.		2
5-7	Install passive Heat Recovery Ventilator (HRV) and verify balanced installation. A Heat Recovery Ventilator (HRV) is an air exchanger that exhausts humid, stale, polluted air out of the home and draws in fresh, clean outdoor air into the home. Invisible pollutants produced by common household substances, plus dust and excess humidity that get trapped in today's houses, can increase your risk of chronic respiratory illness and your homes risk of serious structural damage. A passive HRV unit does not have its own internal fan and is 100% furnace assisted. It works by tying the exhaust side of the unit to the supply air plenum which forces air to exhaust from the home and at the same time fresh air enters from outside through the unit and into the cold air return duct work.		2
5-8	Install an active Heat Recovery Ventilator or Energy Recovery Ventilator (HRV or ERV) and verify balanced installation. A Heat Recovery Ventilator (HRV) is an air exchanger that exhausts humid, stale, polluted air out of the home and draws in fresh, clean outdoor air into the home. Invisible pollutants produced by common household substances, plus dust and excess humidity that get trapped in today's houses, can increase your risk of chronic respiratory illness and your homes risk of serious structural damage. Much like the HRV, the ERV recovers heat; however, it also recuperates the energy trapped in moisture, which greatly improves the overall recovery efficiency. In dry climates and humidified homes the ERV limits the amount of moisture expelled from the home. In humid climates and air conditioned homes, when it is more humid outside than inside, the ERV limits the amount of moisture coming into the home.		4
5-9	Ventilation system is installed according to CSA Standard F326, as recommended by the Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI). www.hrai.ca		5
5-10	All bath fans used throughout home have a noise level of 1 sone or less Installing quiet fans will encourage use for home ventilation.		1
	TOTAL SECTION POINTS	**0**	

VI. WASTE MANAGEMENT

This section deals with the handling of waste materials on the construction site and encourages recycling.
Minimum 7 Points Required

6-1	Comprehensive recycling program for building site including education, site signage and bins. A comprehensive recycling program that is strictly followed significantly reduces the amount of waste ending up in landfills. Currently it is estimated that up to 50% of landfill waste is construction related.		2
6-2	Collection of waste materials from site by a waste management company that is a current member of a provincial recycling council or equivalent association and verifies that a minimum of 10% of the materials collected from the construction site have been recycled. Not only does this reduce overall waste of product, it ensures that as much product as possible is being utilized for the production of future resources.		4
6-3	Suppliers and trades recycle their own waste, including leftover material and packaging (1 point per trade - maximum 4 points). Trades being responsible for recycling and removal of waste not only reduces landfill waste, but also promotes a cleaner and safer working environment.		1 to 4
6-4	Minimum 25% (2 points) or 50% (6 points) by weight of waste materials collected from construction site is diverted from waste stream. Trades being responsible for recycling and removal of waste not only reduces landfill waste, but also promotes a cleaner and safer working environment.		2 or 6
6-5	Use of recycled materials derived from local construction sites (1 point for each different product used, to max. of 3). Products recycled from the construction site, such as mulched wood cut offs or mulched gypsum are often useable as either clay/soil water retention additives or for organic burning.		1 to 3
6-6	Trees and natural features on site protected during construction. The protection of existing trees and other natural features such as streams, ponds and other vegetation reduces environmental and ecosystem impact. Many of these features can be protected simply by following good waste management procedures.		1
6-7	Metal or engineered durable form systems used for concrete foundation walls. The use of metal forming systems reduces the requirement of lumber, a limited resource.		1
6-8	Concrete used in home has a minimum supplementary cementing material of 25% (1 point) or 40% (2 points) within the scope of proper engineering practices. For every one ton of Portland cement generated, eighth tenths of a ton of carbon dioxide is produced. Supplementary cementations products include fly ash, blast furnace slag as well as metakaolin.		1 or 2
6-9	Reusable bracing is used for framing. The use of reusable bracing for framing reduces the requirement of lumber, a limited resource.		1
6-10	Install recycling center with two or more bins. By installing built in recycling centers, which can be as simple as labeled containers (paper, cardboard, cans, plastics, etc), homeowners are more likely to utilize the pre-existing facilities and thus contribute to the reduction in landfill waste.		3
6-11	Provide composter to homeowner. Providing a composter promotes a reduction in wastes heading to the landfill by giving homeowners an option for organic waste such as food leftovers.		2
6-12	Existing dwellings onsite are recycled or moved instead of demolished (recycled 2 points, moved 4 points).		2 or 4
	TOTAL SECTION POINTS	**0**	

VII. WATER CONSERVATION

This section encourages a reduction in the amount of water used in the home or in individual units within multi-story buildings.

Minimum 7 Points Required

7-1	CSA approved single flush toilet averaging 1.6 GPF or less installed in all bathrooms (1 point)		1
7-2	Install a dual flush or pressure assisted toilet in one or more bathrooms (3 points for first, 1 additional point for each after) Dual flush toilets offer a choice between two water levels for every flush; at minimum should use, 1.6 GPF (6 LPF) or 0.8 GPF (3 LPF).		3 or more
7-3	Install a 1.28 GPF toilet in one or more bathrooms (2 points for first, 1 additional point for each after) 1.28 GPF (Gallon per Flush) is general considered the new standard in water efficiency		2 or more
7-4	Install manufactured non-electric composting toilet (3 points each, max of 6 points). A composting toilet uses no water and is odourless. It uses a biological processes to break down the human excrement into organic compost material.		3 or 6
7-5	Insulate the hot water lines with flexible pipe insulation, first three feet of the water lines (1 point) or all hot water lines (2 points). Minimizing the heat loss in the water line will decrease the initial water wasted by delivering hot water faster.		1 or 2
7-6	Install hot water recirculation line with insulted hot water lines and pump system. Having the hot water re-circulated from the hot water source to the fixture points will decrease the initial water wasted by delivery the hot water faster. Pump should be on program or timer to reduce stand-by losses.		3
7-7	Install low flow faucets for all kitchen faucets and lavatories (2 points), all showers & tub/showers (additional 1 point). Reduces water consumption by lowering the flow rate. Showers must use 9.8 L/min (2.2 imp. Gal/min) or less. Faucets, both kitchen and bath, must use 8.3 L/min (1.8 imp. Gal./min) or less.		2 or 3
7-8	Install hands free lavatory faucets. 1 point per faucet/unit. Battery powered electronic sensor minimizes the spread of germs and saves water.		1 per unit
7-9	Provide front loading clothes washer (3 points), or Condensing Combination wash/dry unit (4 points) Front loading clothes washers conserve water by design, as they are only required to fill up the washing compartment 1/3 full to effectively wash clothing. Additionally they use up to 75% less environmentally damaging laundry detergent, AND they also conserve electrical or gas energy by significantly reducing drying time for clothes with a more thorough spin cycle.		3 or 4
7-10	Install water saving dishwasher that uses less than 26.0 L/water per load. Water saving dishwasher use technology to reduce both the amount of water required as well as electrical energy requirements. The EnerGuide appliance directory put out by Natural Resources Canada has a comprehensive listing of all manufacturers and models of dishwashers and other appliances with water usage and energy efficiency ratings.		1
7-11	Install efficient irrigation technology that utilizes automatic soil moisture-based sensor technology at minimum Show storm water management plan & design; water efficient irrigation systems, sensors, regulators, micro drip feed systems etc.		3
7-12	Install permeable paving materials for all driveways and walkways. Permeable paving allows for storm water to flow back into the ground rather than into the storm sewers.		3
7-13	Provide a list of drought tolerant plants and a copy of the local municipality water usage guide to homebuyers with closing package. Most municipalities provide a guide that gives the water requirements of various plants and grasses. When properly designed, landscaping choices can significantly contribute to water conservation.		1
7-14	Builder supplies a minimum of 8” of topsoil or composted yard waste, as finish grading throughout site. Compared to subsoil materials, topsoil usually has higher aggregate stability, lower bulk density, and more favorable pore size distributions which leads to higher hydraulic conductivity, water holding capacity, and aeration porosity.		2
7-15	Builder incorporates water wise landscaping or xeriscaping in show home or customer home (customers 50% of lawn 2 points, 100% 4 points). Xeriscaping (or drought resistant landscaping) plans and options can be obtained from professional landscaping contractors, and once a xeriscaping landscape is in place, it requires no manual watering. (Rain barrel usage, astro turf ineligible.)		2 or 4
7-16	Builder attaches water barrel with insect screen to downspout. Water barrel should also have a drain spout and overflow spout (1 point per barrel - maximum of 3 barrels). Supplying a water barrel encourages homeowners to use rainwater for landscaping needs and therefore save on potable water.		1, 2 or 3
7-17	Install grey water system collecting waste from sinks, shower and/or kitchen to capture and treat for use in toilets or irrigation (6 pts), rough-in for future grey water system (3 points) By reusing waste water, consumption can be drastically reduced. Rough-in must include clearly identified grey water drain stack, separated from sewer line.		6
	TOTAL SECTION POINTS	**0**	

VIII. BUSINESS PRACTICE

VIII. BUSINESS PRACTICE

This section deals more with manufacturers and builders office and business practices.
Minimum 6 Points Required

8-1	Products used for home are manufactured within 800 km (1 point for each product - maximum of 5). Products made closer to the location of use will have less embodied energy. Basically this means that the shorter the transportation distance the less energy used in moving the product. Less energy used means fewer emissions.		1 to 5
8-2	Builder provides Built Green™ homeowner manual, completed Built Green™ checklist and educational walkthrough with sale or possession.		3
8-3	Builders office and show homes purchase a minimum of 50% (1 point) or 100% (2 points) solar, wind or renewable energy. Wind energy is a cleaner way to provide energy. Lower CO2 emissions will benefit the environment.		1 or 2
8-4	Manufacturers and/or suppliers purchase 50% or more solar, wind or renewable electricity. Wind energy is a cleaner way to provide energy. Lower CO2 emissions will benefit the environment.		1
8-5	Builder has written an environmental policy which defines their commitment (must include an office recycling program and energy efficient lighting). A statement of commitment helps to emphasize priority and ultimately define a corporate culture.		1
8-6	Manufacturer and/or supplier has written an environmental policy which defines their commitment (must include an office recycling program and energy efficient lighting). (1 point per supplier/manufacturer - maximum of 2 points).		1 or 2
8-7	Builder has written an environmental policy which prioritizes milestones for future net zero housing developments.		1
8-8	Builders' company vehicles are hybrid or bio-diesel vehicles (1 point per vehicle - maximum of 3 points). A commitment to the environment shouldn't stop at construction. Using a hybrid vehicle produces lower harmful emissions. Diesel construction vehicles converted to bio-diesel reduce fuel consumption by up to 75%.		1 to 3
8-9	Environmental certification for builders place of business (building, office, etc). Many commercial buildings have been rated with various energy efficiency standards. Does your company work within an ENERGY STAR, EnerGuide for Houses (EGH), EnerGuide for New Houses (EGNH), REAP or LEED (or other certification standard) certified office building?		3
8-10	Builder agrees to construct and label a minimum of 50% of all homes to the Built Green™ standard per calendar year (3 points for 50%, 5 points for 100%).		3 or 5
8-11	Contracted trades and/or suppliers have successfully taken and maintained Built Green™ Builder Training status (1 point per trade organization, Max 5).		1 to 5
	TOTAL SECTION POINTS	0	
	TOTAL CHECKLIST POINTS	0	