MARIN COUNTY
COMMUNITY DEVELOPMENT AGENCY
ALEX HINDS, DIRECTOR

New Home Green Building Residential Design Guidelines Certification Form

Green building is a whole systems approach to the design, construction and operation of buildings. This approach benefits both builders and homeowners by reducing resource consumption, increasing livability, and saving money in operation and maintenance. The following is a list of green building measures that apply the principles of sustainability to projects involving new construction. This form shall be used for new single-family residences and for substantial additions where the addition is 500 square feet or larger. A point system has been developed to assess the overall sustainability of the project. Points are located in the right hand columns and indicated in parentheses. The higher the number of points the better the project rating. This rating system is a self-documenting procedure. **These guidelines are intended to assist applicants in complying with sections 22.42.010.B and 22.42.060.G of the Marin County Development Code by demonstrating how the project conserves energy and protects natural resources**.

Instructions: Please fill out the information below completely and indicate the number of points for each measure to be incorporated into the project. A completed form with the "As Designed" column filled out and a signed Statement of Design Conformance below is required to be submitted with the application for a Planning permit such as Design Review. A completed form with the "As Constructed" column filled out and a signed Statement of Construction Conformance is required prior to the Final Inspection. For additional information contact: Alec Hoffmann, Green Building Program Coordinator; ahoffmann@co.marin.ca.us; at (415) 507-2659.

Applicant: _____ Phone: _____Email: _____

Project Address: _____ APN: _____

Total conditioned Floor Area: _____ sf.

Statement of Design Conformance (To be signed and submitted concurrently with the Planning application)
I hereby certify under penalty of perjury that the submitted project is designed to include the items indicated in this rating system to meet or exceed the "**Certified**" rating.

Signed: _____ _____
(Applicant) (Date)

Statement of Construction Conformance (To be stamped and signed prior to Final inspection)
I hereby certify under penalty of perjury that the items indicated in this rating system have been installed and/or utilized as part of the approved project to meet or exceed the "**Certified**" rating.

Signed: _____ _____
(Applicant) (Date)

Reviewed By CDA: _____ _____
(Planner) (Date: As Designed)

_____ _____
(Planner) (Date: As Completed)

3501 CIVIC CENTER DRIVE, ROOM 308 – SAN RAFAEL, CA 94903-4157
415-507-2659 – FAX 415-499-7880

Green Building Measures	***Designed***	***Completed***
A. Site		
1. Reuse or recycle job site construction and demolition waste. *Reduces pressure on landfills, saves money by reducing landfill fees, and provides materials for future building projects.*	_____ (50% required. 75% = 4 points; 85% = 8 points)	_____ (50% required. 75% = 4 points; 85% = 8 points)
2. Donate unused materials to local charitable organizations. *Reduce landfill deposits. Donations may be tax deductible.*	_____ (6 points)	_____ (6 points)
3. Minimize disruption of existing plants and trees. *Helps prevent soil erosion, maintains existing sources of natural cooling, diverts waste from landfills, and adds character to communities.*	_____ (2 points)	_____ (2 points)
4. Design native and resource-efficient landscapes and gardens. *This conserves water, reduces the use of chemicals, and creates healthier soil and plants.*	_____ (6 points)	_____ (6 points)
5. Install no turf grass lawn on project. *Lowers water and energy use.*	_____ (2 points)	_____ (2 points)
6. If irrigation is needed use drip irrigation. *Reduces water use and costs.*	_____ (3 points)	_____ (3 points)
7. If in a sunny area, plant deciduous trees to south and/or west. *Trees provide shade from summer sun and let winter sun through.*	_____ (3 points)	_____ (3 points)
8. Incorporate storm water infiltration and retention. *Reduces the volume of polluted water that flows into rivers or the bay, reduces irrigation requirements, and lowers risk of flooding.*	_____ (4 points)	_____ (4 points)
B. Foundation		
1. Incorporate at least 25% recycled flyash in concrete. *Adds strength and durability to the concrete and reduces the energy used in production.*	_____ (4 points)	_____ (4 points)
2. Use reusable form boards. *Saves money and conserves resources.*	_____ (2 points)	_____ (2 points)
3. Use recycled content rubble for backfill drainage. *Saves money and natural resources by using recycled materials.*	_____ (1 point)	_____ (1 point)
4. Insulate foundation before backfill. *Reduces energy loss and lowers utility bills.*	_____ (2 points)	_____ (2 points)
5. Install insulated concrete forms (ICFs). *ICFs are energy efficient and are not subject to rot.*	_____ (4 points)	_____ (4 points)
C. Structural Frame		
1. Substitute "solid sawn lumber" with "engineered lumber". *Reduces demand for virgin lumber and is stronger, straighter, and more durable.*	_____ (3 points)	_____ (3 points)
2. Use Forest Stewardship Council (FSC) certified wood for framing. *FSC wood is not clear-cut and comes from well-managed forests.*	_____ (2 points for every 10% of FSC lumber used for framing; up to 10 points)	_____ (2 points for every 10% of FSC lumber used for framing; up to 10 points)

Green Building Measures	***Designed***	***Completed***
3. Use wood I-joists, for floors and ceilings. *I-joists use 50% less wood fiber, will not twist, warp or split, and are stronger and lighter than 2x10s or 2x12s.*	_____ (2 points; if no more than 10% is 2x lumber)	_____ (2 points; if no more than 10% is 2x lumber)
4. Use OSB for sub-floor and sheathing. *OSB reduces the need for large diameter old growth trees, is as strong as traditional plywood sheet material, and is less expensive.*	_____ (1 point for subfloor; 1 for sheathing).	_____ (1 point for subfloor; 1 for sheathing).
5. Use "finger-jointed studs". *Uses recycled content materials, are straighter and stronger than solid sawn studs, and eliminate crooked walls thereby reducing material wastes.*	_____ (2 points)	_____ (2 points)
6. Use structural insulated panels (SIPs) for walls/roof. *SIPS reduce infiltration, increase energy efficiency, and provide excellent soundproofing.* *They are erected quickly and save wood by eliminating much of the conventional framing lumber.*	_____ (5 points)	_____ (5 points)
7. Use reclaimed/salvaged lumber. *Reduces resource consumption and landfill deposits, and is often of higher quality than new lumber.*	_____ (5 points)	_____ (5 points)

D. Exterior Finish

1. For decking materials use recycled/reclaimed wood, recycled composite lumber, or FSC Certified wood. *Reduces the use of old-growth lumber.*	_____ (3 points)	_____ (3 points)
2. Use treated wood that does not contain chromium or arsenic. *Reduces "toxic exposure" which is particularly harmful to children who play on structures built with treated wood.*	_____ (1 point)	_____ (1 point)
3. Use sustainable siding materials such as mineral fiber board. *These last longer, are fire-resistant, and reduce maintenance costs.*	_____ (3 points)	_____ (3 points)
4. Use earth-based plaster. *This non-toxic exterior uses local materials.*	_____ (2 points)	_____ (2 points)
5. Use formaldehyde-free composite materials for paintable trim instead of wood.	_____ (2 points)	_____ (2 points)

E. Water Efficiency

1. Install flow reducers in faucets and showerheads. *Saves water and money.*	_____ (3 points)	_____ (3 points)
2. Pre-plumb for a graywater system. *Cuts down on the use of potable water for outside irrigation and lawn watering.*	_____ (4 points)	_____ (4 points)
3. Provide for on-site water catchment/retention with a cistern or other system(s). *Reduces the need to use treated, potable water for lawns and gardens.*	_____ (5 points)	_____ (5 points)

F. Plumbing

1. Insulate hot water pipes. *Saves energy and water, and also reduces water-heating costs.*	_____ (2 points)	_____ (2 points)

Green Building Measures	***Designed***	***Completed***
2. Install chlorine filters on showerheads. *Reduces chlorine absorbed by the skin.*	_____ (2 points)	_____ (2 points)
3. Install tankless water-heaters. *Saves energy and are quicker and more reliable.*	_____ (2 points)	_____ (2 points)
4. Install water filtration units at faucets. *Reduces contaminants in water.*	_____ (4 points)	_____ (4 points)
5. Install on-demand hot water circulation pump. *Allows hot water arrives more quickly to fixture while simultaneously saving water and energy.*	_____ (4 points)	_____ (4 points)

G. Electrical

1. Install compact fluorescent light bulbs. *Saves energy and money.*	_____ (>6 bulbs = 2 points; >12 bulbs = 4 points)	_____ (>6 bulbs = 2 points; >12 bulbs = 4 points)
2. Install insulation-compatible recessed lighting. *Reduces heat loss/gain.*	_____ (4 points)	_____ (4 points)
3. Install lighting controls. *Saves money and energy.*	_____ (1 point per fixture, up to 3 points)	_____ (1 point per fixture, up to 3 points)
4. Install ceiling fans in Climate Zone 2. *Reduces the need for air-conditioning.*	_____ (1 point per fan, up to 3 points)	_____ (1 point per fan, up to 3 points)
5. Meet the BEST incentive program requirements by exceeding Title 24 by 20%.	_____ (5 points)	_____ (5 points)

H. Appliances

1. Install a "Energy Star" dishwasher. *Reduces water and energy use.*	_____ (1 points)	_____ (1 points)
2. Offer an "Energy Star" horizontal axis washing machine. *Uses 40% less water and 50% less energy than conventional top loading washers.*	_____ (2 points)	_____ (2 points)
3. Offer an "Energy Star" refrigerator. *Reduces energy and utility costs.*	_____ (2 points)	_____ (2 points)

I. Roofing

1. Use durable, fire safe roofing materials such as metal, concrete tile, clay tile, or mineral fiber tile.	_____ (4 points)	_____ (4 points)

J. Insulation

1. Upgrade wall and ceiling insulation to exceed title 24 requirements. *Lowers utility bills, improves comfort, decreases heating and cooling requirements.*	_____ (6 for R-30 attic; 4 for R-20 crawl; 4 for R19 walls)	_____ (6 for R-30 attic; 4 for R-20 crawl; 4 for R19 walls)
2. Install recycled content, formaldehyde-free fiberglass insulation. *This reduces indoor air quality problems and increases use of recycled glass.*	_____ (1 point)	_____ (1 point)

Green Building Measures	***Designed***	***Completed***
3. Use cellulose insulation. *Cellulose lowers energy bills, uses recyclable materials, and reduces the use of formaldehyde.*	_____ (3 points)	_____ (3 points)
4. Use natural building materials such as strawbale and rammed earth. *Provides a higher insulation value, and a positive use for agricultural by-products and local materials.*	_____ (10 points)	_____ (10 points)

K. Windows and Doors

1. Install energy-efficient low-E2 double-glazed windows and doors lower. *Lowers utility bills and provides greater comfort.*	_____ (8 points)	_____ (8 points)
2. Use wood or thermal break metal frames for windows and sliding doors.	_____ (2 points)	_____ (2 points)

L. Heating, Ventilation and Air-Conditioning (HVAC)

1. Use duct mastic on all duct joints. *Improves indoor air quality and saves energy by preventing heating losses.*	_____ (2 points)	_____ (2 points)
2. Install ductwork within conditioned space. *Reduces energy loss and improves occupant comfort.*	_____ (1 point)	_____ (1 point)
3. Vent range hood to the outside. *Improves indoor air quality (IAQ).*	_____ (1 point)	_____ (1 point)
4. Clean all ducts before occupancy. *Reduces dust in the house after occupancy.*	_____ (2 points)	_____ (2 points)
5. Install attic ventilation systems. *Increases comfort and reduces air conditioning use.*	_____ (2 points)	_____ (2 points)
6. Install whole house fan. *Reduces energy usage and achieves comfort at higher temperatures without A/C.*	_____ (2 points)	_____ (2 points)
7. Install 90% or greater efficiency gas forced air furnace. *Saves energy and money.*	_____ (8 points)	_____ (8 points)
8. Install zoned, hydronic, radiant heating and insulate under entire slab and at edges. *Saves energy by only heating the zone that requires heat.*	_____ (5 points)	_____ (5 points)
9. Install high efficiency particulate air (HEPA) filter. *Reduces micro-particulates from the air.*	_____ (3 points)	_____ (3 points)
10 Install heat recovery ventilation unit (HRV). . *Improves indoor air quality and reduces heat losses.*	_____ (3 points)	_____ (3 points)

M Renewable and Solar Energy

1. Design for natural cooling to eliminate air conditioning. *This is a low cost item to incorporate into the home and site.*	_____ (2 points)	_____ (2 points)
2. Incorporate passive solar heating. *Reduces heating requirements by 30-50%.*	_____ (5 points)	_____ (5 points)
3. Pre-plumb for solar water heating. *Saves money if a solar system is to be installed in the future.*	_____ (3 points)	_____ (3 points)

Green Building Measures	*Designed*	*Completed*
4. Install solar water system. *Reduces the use of gas or electricity and has a payback in as little as seven years.*	_____ (7 points)	_____ (7 points)
5. Install a grid-intertied photovoltaic (PV) or wind energy system. *Decreases reliance on fossil fuel power plants.*	_____ (>1.2 kw = 8 points; >2.4 = 14 points; >3.6 kw = 20 points)	_____ (>1.2 kw = 8 points; >2.4 = 14 points; >3.6 kw = 20 points)

N. Indoor Air Quality / Finishes

1. Use low/no-VOC and formaldehyde-free paint. *Improves indoor air quality (IAQ) and is healthier for installers and occupants.*	_____ (2 points)	_____ (2 points)
2. Use low VOC, water-based wood finishes. *Improves IAQ and is healthier for installers and occupants*.	_____ (2 points)	_____ (2 points)
3. Use solvent-free adhesives. *Improves IAQ and is healthier for installers and occupants.*	_____ (2 points)	_____ (2 points)
4. Substitute particleboard with formaldehyde-free materials. *Improves IAQ and is healthier for installers and occupants.*	_____ (2 points per application; up to 6 points)	_____ (2 points per application; up to 6 points)
5. Use exterior grade plywood for interior uses. *Reduces urea-formaldehyde exposure to occupants.*	_____ (2 points)	_____ (2 points)
6. Seal all exposed particleboard or MDF. *Reduces exposure of harmful emissions to occupants.*	_____ (3 points)	_____ (3 points)
7. Use FSC certified trim material. *Protects ancient, old-growth forests.*	_____ (4 points)	_____ (4 points)
8. Use finger-jointed trim. *This uses material more effectively, saves money and resources, and is straighter and more stable than conventional wood.*	_____ (1 points)	_____ (1 points)
9. Utilize an alternative to PVC. *Production and burning of PVC is highly toxic.*	_____ (2 points per application up to 6 points)	_____ (2 points per application up to 6 points)
10. Install a central vacuum system. *Improves IAQ.*	_____ (2 points)	_____ (2 points)
11. Air out project with natural ventilation for at least one week between end of construction and occupancy.	_____ (2 points)	_____ (2 points)

O. Flooring

1. Select FSC certified or reclaimed/salvaged wood flooring. *Protects ancient, old-growth forests*.	_____ (6 points)	_____ (6 points)
2. Use rapidly renewable (bamboo or cork) flooring materials. *Reduces the demand for old-growth hardwoods.*	_____ (5 points)	_____ (5 points)
3. Use recycled content ceramic tile. *Reduces the use of virgin materials and is easy to maintain.*	_____ (4 points)	_____ (4 points)
4. Install natural linoleum in place of vinyl flooring.	_____ (2 points)	_____ (2 points)

Green Building Measures	***Designed***	***Completed***
5. Use exposed concrete as a finished floor. *Eliminates the need for additional flooring materials, is easy to maintain, and is very durable.*	_____ (4 points)	_____ (4 points)
6. Install Low VOC carpet with recycled content carpet and non-toxic adhesive.	_____ (2 points)	_____ (2 points)
7. Install natural fiber floor coverings such as jute and wool.	_____ (2 points)	_____ (2 points)

P. Community Design

1. Utilize passive solar design. *This reduces the need for energy and lowers utility bills.*	_____ (reduce heating load by 20% = 4 points, by 40% = 6 points, by 60% = 10 points)	_____ (reduce heating load by 20% = 4 points, by 40% = 6 points, by 60% = 10 points)
2. Orient living rooms and porches to streets and public spaces. *Enhances the sense of community.*	_____ (5 points)	_____ (5 points)
3. Locate building in a mixed use, residential/commercial area. *Supports walkable/bikeable communities, and reduces automobile use.*	_____ (8 points)	_____ (8 points)
4. Design for diverse family types to offer housing to a wider range of buyers.	_____ (5 points)	_____ (5 points)
5. Provide residential second units. *Creates affordable housing.*	_____ (5 points)	_____ (5 points)
6. Build within 1/2 mile of public transit hub. *Reduces dependence on automobile.*	_____ (5 points)	_____ (5 points)
7. Minimize street widths. *Calms traffic.*	_____ (5 points)	_____ (5 points)
Total Number of Points for All Green Building Measures #	_____	_____

Total # of points:

Site:	35
Foundation:	13
Structural Frame:	29
Exterior Finish:	11
Water Efficiency:	12
Plumbing:	14
Electrical:	19
Appliances:	5
Roofing:	4
Insulation:	28
Windows and Doors:	12
HVAC	29
Renewable Energy	41
Indoor Air Quality/Finishes	32
Flooring	23
Community Design	43
Total	**350**

Green Building Ratings:

The Marin Countywide Plan and Development Code require resource efficiency. Homes designed to meet the following ratings shall comply with these requirements.

Homes with conditioned square footage indicated in the far left column are required to meet or exceed the number of points in the "Certified Category".

	Certified	Silver	Gold	Platinum
<3500 sf	50 – 75	76 – 100	101- 125	126+
3501 – 6500 sf	76 – 100	101 – 125	126 – 150	151+
6501 - 9500 sf	101-125	126 – 150	151 – 175	176+
> 9501 sf	126 – 150	151 – 175	176 – 200	201+

This rating system is based on a collaborative effort undertaken in Alameda County among developers, builders, purchasing agents, architects, building officials, green building experts and county staff. For more information, please refer to the New Home Green Building Guidelines or the Home Remodeling Green Building Guidelines available from the Marin County Community Development Agency. These guidelines were also created with the input of Sim Van der Ryn Architects, County staff, and other *local green building experts. Experienced green building professionals are available to assist in the planning, design and construction of your project.*