

MARIN COUNTY GREEN BUILDING FORM

STANDARDS FOR SINGLE-FAMILY RENOVATIONS 750 SQUARE FEET OR MORE

The provisions of this checklist apply to projects where the cumulative scope of the permitted work is 750 square feet or more. These green building standards have been established to ensure that single-family residential (one- and two-family dwellings and townhouses) undergoing renovations (aka additions and alterations) in Marin County are healthy for occupants, have limited impact on the environment, reduce demand for energy, and result in cost savings from building operations. Requirements were adopted November 2022 and enforced starting January 1, 2023, ending December 31, 2025. The three-step process below helps applicants understand and comply with the County's green building requirements. Please reference [Title 19.04 and 19.07 of the Marin County Building Code](#) to comply.

GREEN BUILDING PROJECT PROCESS

1 PROJECT DESIGN

It is important for project owners, architects, engineers, and designers to understand the applicable state and local green building requirements prior to project design. Early consideration of these standards allows for design of buildings and systems that are compliant, energy efficient, and cost effective, and minimize back and forth.

2 PLANNING APPLICATION (IF REQUIRED)

If your project is subject to planning review, be prepared to identify in your planning application what compliance methods you've selected and how you plan to meet the requirements. If you anticipate difficulties meeting the requirements outlined in the Green Building Checklist, these concerns and any requests for exemptions should be identified in your planning application.

3 INITIAL BUILDING PERMIT SUBMITTAL

All the following MUST be included with your initial application for a building permit:

- Completed [Marin County Green Building Checklist](#) (page 2-3)
- Completed [Marin County CALGreen Tier 1 Checklist](#) (pages 4-15), with plan sheet references where applicable.
- Completed [Marin County Energy Checklist](#) (unless exempt, pages 16-22)
- Energy Code compliance documents as required under State Energy Code

DEFINITION OF "NEW CONSTRUCTION"

Removal or substantial modification of more than 75 percent of the linear sum of a building's exterior walls for each story shall be considered demolition of the building (County of Marin Development Code Chapter 22.130.030), triggering the new construction requirements. If your renovation (addition and alteration) project meets this definition, please see the guide for new construction.

MARIN COUNTY GREEN BUILDING CHECKLIST

STANDARDS FOR SINGLE-FAMILY RENOVATIONS 750 SQUARE FEET OR MORE

PROJECT ADDRESS: _____

APN: _____ APPLICANT NAME: _____

1. GREEN BUILDING AND EV READINESS

- Complete this Marin County Green Building Checklist AND [CALGreen Tier 1 Checklist](#).

VERIFICATION: Checklists must be signed by a qualified building professional, such as an architect, engineer, or a qualified green building professional and attached to your application.

2. ENERGY EFFICIENCY AND ELECTRIFICATION (Check One of the Following)

- Complete the [Marin County Energy Checklist](#).

VERIFICATION: Checklist must be signed by a qualified building professional, such as an architect, engineer, or a qualified green building professional and attached to your application.

- Newer Vintage Building Exemption (Constructed on or after January 1, 2011)

VERIFICATION: Provide evidence of the original permit date for construction of your building

- All-Electric Exemption

Proposed design includes ALL the following: All-electric end uses, no natural gas, and no electric resistance space or water heat. Gas meters or propane infrastructure are not allowed, except that infrastructure is not required to be removed after being capped.

VERIFICATION: Attach Title 24 Energy Reports that complies with State minimum energy code

3. LOW CARBON CONCRETE (Check One of the Following)

- Permit application includes completed Cement or Embodied Carbon limit compliance forms that can be found on the [County's Low-Carbon Concrete Requirements](#) webpage.

VERIFICATION: Compliance forms must be signed re-submitted after completion of poured concrete along with batch (proof) receipts.

- Not applicable; the project does not include pouring new concrete.

4. PROJECT VERIFICATION

This form and all referenced forms herein have been completed by

_____ (name) of _____ (company), the party

responsible for this building permit application for the above listed project who affirms under penalty of perjury that it accurately represents the project plans. Applicant still must complete the CALGreen Tier 1 Checklist, Energy Checklist, and/or Low Carbon Concrete form, as applicable.

Signature

Date

Name (Please Print)

5. SUMMARIZING ENERGY END USE (CHECK BOXES AND INPUT VALUES):

Total Conditioned Floor Area within the Project Scope _____ square feet

SELECT either the Performance or Prescriptive-based Compliance Pathway below and submit appropriate documentation as requested (Check One of the Following):

For projects using the Performance Based Pathway to Compliance, submit data extract in .xml format from the 2022 Energy Code Compliance Software (CBECC or EnergyPro)

For projects using the Prescriptive Based Pathway to Compliance (Check One of the Following):

Submit data extract in .xml format from the 2022 Energy Code Compliance Software (CBECC or EnergyPro), OR

If Energy Code Compliance Software was not used, please select the following measures planned for installation in Table 1 below, within the scope of your project (check all that apply):

Table 1. Measures and Appliances Installed			
Check All That Apply	Measures Installed	Check All That Apply	Measures Installed
<input type="checkbox"/>	Air Sealing	<input type="checkbox"/>	Heat Pump Water Heater, High Efficiency, NEEA Tier 3
<input type="checkbox"/>	Cool Roof	<input type="checkbox"/>	Hot water pipe and tank insulation, low-flow fixtures
<input type="checkbox"/>	Duct Sealing	<input type="checkbox"/>	Induction Cooktop
<input type="checkbox"/>	Exterior Photosensor	<input type="checkbox"/>	LED lamp vs CFL
<input type="checkbox"/>	Heat Pump Dryer	<input type="checkbox"/>	New Ducts
<input type="checkbox"/>	Heat Pump HVAC	<input type="checkbox"/>	R-49 Attic Insulation
<input type="checkbox"/>	Heat Pump HVAC, High Efficiency, SEER 21 or greater; HSPF 11 or greater	<input type="checkbox"/>	Solar PV _____ kW DC
<input type="checkbox"/>	Heat Pump Water Heater	<input type="checkbox"/>	Battery (storage) _____ kWh
<input type="checkbox"/>	Other (please describe): _____		

VERIFICATION: Compliance will be verified by 1) submitting 2022 Energy Code Compliance Software data extract (.xml) and attaching Title 24 Energy Reports that complies with State minimum energy code, OR 2) completing Table 1 above.

MARIN COUNTY CALGREEN TIER 1 CHECKLIST

STANDARDS FOR SINGLE-FAMILY RENOVATIONS 750 SQUARE FEET OR MORE

This checklist is effective January 1, 2023 and applies to additions and alterations of one- and two-family dwellings and townhouses with attached private garages.

The provisions of this checklist apply to projects where the cumulative scope of the permitted work being added to or altered is 750 square feet or more. Existing site and landscaping improvements that are not otherwise disturbed are not subject to CALGreen.

Submit this CALGreen Tier 1 checklist accompanied with the [Marin County Green Building Checklist](#) (page 2 above) with your plans to demonstrate compliance with the green building ordinance. This checklist includes modifications specific to Marin County. For more information on the County's Green Building requirements, please visit www.maringreenbuilding.org

For more information on CALGreen and complete measure language, see [Marin County Building Code, Chapter 19.04.135, Subchapter 2](#) which requires (with amendments) CALGreen [Chapters 4](#) and [Appendix A4](#).

PROJECT DETAILS

Project Address

APN

Applicant Name (Please Print)

PROJECT VERIFICATION

The green building professional¹ has reviewed the plans and certifies that the mandatory and elective measures listed below are hereby incorporated into the project plans and will be implemented into the project in accordance with the requirements set forth in the 2022 California Green Building Standards Code as amended by the County of Marin.

Signature

Date

Name (Please Print)

¹ A qualified building professional can be an architect, engineer, contractor, or qualified green building professional, such as a CALGreen Special inspector or LEED AP.

DIVISION 4.1 PLANNING AND DESIGN

- ✓ All measures marked as **(MANDATORY)** are required unless not in project scope.
- ✓ For all measures marked as **(ELECTIVE)**, a minimum of TWO **ELECTIVE** measures must be selected.
- ✓ Use the Checkboxes (☒) to mark as Completed, Not Applicable (N/A), or the measure selected.

4.106.2 (MANDATORY) A plan is developed and implemented to manage stormwater runoff from the construction activities through compliance with the [County of Marin's Stormwater Runoff Pollution Prevention Ordinance](#).

Completed N/A Plan sheet reference (if applicable): _____

4.106.3 (MANDATORY) Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings.

Completed N/A Plan sheet reference (if applicable): _____

A4.106.2.3 (MANDATORY) Displaced topsoil shall be stockpiled for reuse in a designated area and covered or protected from erosion.

Completed N/A Plan sheet reference (if applicable): _____

A4.106.4 (MANDATORY) Permeable paving is utilized for not less than 20 percent of the total parking, walking, or patio surfaces.

Completed N/A Plan sheet reference (if applicable): _____

A4.106.5 (MANDATORY) Roofing materials shall have a minimum 3-year aged solar reflectance and thermal emittance or a minimum Solar Reflectance Index (SRI) equal to or greater than the values specified in Tables A4.106.5.1(3).

In Marin County, this measure does not apply to low-rise residential. This measure applies only to high-rise residential buildings, hotels, and motels with a roof slope >2:12.

Completed N/A Plan sheet reference (if applicable): _____

A4.106.8.1 (MANDATORY) For one- and two-family dwellings and townhouses with attached private garages, if the project scope includes an upgrade of the electrical service panel, install a dedicated 208/240-volt branch circuit, including an overcurrent protective device rated at 40 amperes minimum per dwelling unit for future EV charging, in accordance with *CALGreen Measure A4.106.8.1 Tier 1 and Tier 2*.

Completed N/A Plan sheet reference (if applicable): _____

A4.103.1 Site Selection (ELECTIVE) - A site which complies with at least one of the following characteristics (check at least one):

- Infill
- Greyfield
- EPA-recognized Brownfield

Plan sheet reference (if applicable): _____

A4.103.2 Site Selection (ELECTIVE) - Facilitate Community connectivity by locating w/in true walking distance of (check at least one):

- ¼ mile of at least 4 basic services
- ½ mile of at least 7 basic services
- Other methods increasing access to additional resources

Plan sheet reference (if applicable): _____

A4.104.1 Site Preservation (ELECTIVE) - An individual with oversight responsibility of the project has participated in an educational program promoting environmentally friendly design or development and has provided training or instruction to appropriate entities

Completed N/A Plan sheet reference (if applicable): _____

A4.105.2 Deconstruction and Reuse of Existing Materials (ELECTIVE) - Existing buildings are disassembled for reuse or recycling of building material. The proposed structure utilizes at least one of the following materials which can be easily reused (check at least one):

- Light fixtures
- Plumbing fixtures
- Doors and trim
- Masonry
- Electrical devices
- Appliances
- Foundations or portions of foundations

Plan sheet reference (if applicable): _____

A4.106.2.1 Site Development (ELECTIVE) – Soil analysis is performed by a license design professional and the findings utilized in the structural design of the building

Completed N/A Plan sheet reference (if applicable): _____

A4.106.2.2 Site Development (ELECTIVE) – Soil disturbance and erosion are minimized by using one of the following (check at least one):

- Natural drainage patterns are evaluated and erosion controls are implemented to minimize erosion during construction and after occupancy.
- Site access is accomplished by minimizing the amount of cut and fill needed to install access roads and driveways.
- Underground construction activities are coordinated to utilize the same trench, minimize the amount of time the disturbed soil is exposed and the soil is replaced using accepted compaction methods.

Plan sheet reference (if applicable): _____

A4.106.3 Site Development (ELECTIVE) – Postconstruction landscape designs accomplish one or more of the following (check at least one):

- Areas disrupted during construction are restored to be consistent with native vegetation species and patterns
- Utilize 75 percent of native California or drought tolerant plant and tree species appropriate for the climate zone region.

A4.106.6 Site Development (ELECTIVE) – Install a vegetated roof for at least 50 percent of roof area and shall comply with requirements for roof gardens and landscaped roofs in California Building Code, Chapter 15/16

Completed N/A *Plan sheet reference (if applicable):* _____

A4.106.7 Site Development (ELECTIVE) – Reduce nonroof heat islands for 50 percent of sidewalks, patios, driveways or other paved areas by using one or more of the methods listed.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.106.9 Site Development (ELECTIVE) – Provide bicycle parking facilities as noted below or meet a local ordinance as per section A4.106.9.1, A4.106.9.2, or A4.106.9.3

Completed N/A *Plan sheet reference (if applicable):* _____

A4.306.1 Innovative Concepts and Local Environmental Conditions (ELECTIVE)

Completed N/A *Plan sheet reference (if applicable):* _____

DIVISION 4.2 ENERGY EFFICIENCY

- ✓ All measures marked as **(MANDATORY)** are required unless not in project scope.
- ✓ Use the Checkboxes (☒) to mark as Completed, Not Applicable (N/A), or the measure selected.

COMPLETE ENERGY CHECKLIST (MANDATORY) Building meets or exceeds the energy efficiency, electric readiness, and electrification requirements illustrated in the [Marin County Energy Checklist](#) below (pg. 16) and in accordance with [Marin County Building Code, Chapter 19.04.130](#) which amends Title 24, part 6 of the California Building Energy Efficiency Standards.

Completed N/A *Plan sheet reference (if applicable):* _____

DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION

- ✓ All measures marked as **(MANDATORY)** are required unless not in project scope.
- ✓ For all measures marked as **(ELECTIVE)**, a minimum of TWO **ELECTIVE** measures must be selected.
- ✓ Use the Checkboxes (☑) to mark as Completed, Not Applicable (N/A), or the measure selected.

4.303.1 Indoor Water Use (MANDATORY) Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) installed in residential buildings shall comply with the prescriptive requirements of Sections 4.303.1.1 through 4.303.1.4.5.

Completed N/A Plan sheet reference (if applicable): _____

4.303.1.4.3 Indoor Water Use (MANDATORY) – Metering faucets in residential buildings shall not deliver more than 0.2 gallons per cycle.

Completed N/A Plan sheet reference (if applicable): _____

4.303.2 Indoor Water Use (MANDATORY) – Submeters for multifamily building and dwelling units in mixed-use residential/commercial buildings. Submeters shall be installed to measure water usage of individual rental dwelling units in accordance with the *California Plumbing Code*.

Completed N/A Plan sheet reference (if applicable): _____

4.303.3 Indoor Water Use (MANDATORY) – Plumbing fixtures and fittings required in Section 4.303.1 shall be installed in accordance with the *California Plumbing Code* and shall meet the applicable referenced standards.

Completed N/A Plan sheet reference (if applicable): _____

4.304.1 Outdoor Water Use (MANDATORY) – Residential developments shall comply with local water efficient landscape ordinance or the current California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

Completed N/A Plan sheet reference (if applicable): _____

4.305.1 Water Reuse Systems (MANDATORY) – Newly constructed residential developments, where disinfected tertiary recycled water is available from a municipal source to a construction site, may be required to have recycled water supply systems installed, allowing the use of recycled water for residential landscape irrigation systems.

Completed N/A Plan sheet reference (if applicable): _____

A4.303.1 Indoor Water Use (ELECTIVE) – The maximum flow rate of kitchen faucets shall not exceed 1.5 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.5 gallons per minute at 60 psi. Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

Completed N/A Plan sheet reference (if applicable): _____

A4.303.2 Indoor Water Use (ELECTIVE) – Alternate water sources for nonpotable applications. Alternate nonpotable water sources are used for indoor potable water reduction. Alternate nonpotable water sources shall be installed in accordance with the *California Plumbing Code*.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.303.3 Indoor Water Use (ELECTIVE) – Install at least one qualified ENERGY STAR dishwasher or clothes washer.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.303.4 Indoor Water Use (ELECTIVE) – Nonwater urinals and waterless toilets are installed.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.303.5 Indoor Water Use (ELECTIVE) – One- and two-family dwellings shall be equipped with a demand hot water recirculation system.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.304.1 Outdoor Water Use (ELECTIVE) – A rainwater capture system is designed and installed.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.304.2 Outdoor Water Use (ELECTIVE) – A landscape design is installed that eliminates the use of potable water.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.304.3 Outdoor Water Use (ELECTIVE) – For new water service connections, landscaped irrigated areas less than 5,000 square feet shall be provided with separate submeters or metering devices for outdoor potable water use

Completed N/A *Plan sheet reference (if applicable):* _____

A4.305.1 Water Reuse Systems (ELECTIVE) – Piping is installed to permit future use of a graywater irrigation system served by the clothes washer or other fixtures.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.305.2 Water Reuse Systems (ELECTIVE) – Recycled water piping is installed.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.305.3 Water Reuse Systems (ELECTIVE) – Recycled water is used for landscape irrigation.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.306.1 Innovative Concepts and Local Environmental Conditions (ELECTIVE) – Items that address innovative concepts or local environmental conditions.

Completed N/A *Plan sheet reference (if applicable):* _____

DIVISION 4.4 MATERIAL CONSERVATION & RESOURCE EFFICIENCY

- ✓ All measures marked as **(MANDATORY)** are required unless not in project scope.
- ✓ For all measures marked as **(ELECTIVE)**, a minimum of TWO **ELECTIVE** measures must be selected.
- ✓ Use the Checkboxes (☑) to mark as Completed, Not Applicable (N/A), or the measure selected.

A4.403.2 Foundation Systems (MANDATORY) – Cement use in foundation mix design is reduced in accordance with [Marin County Building Code, Chapter 19.07 – Carbon Concrete Requirements](#). Select one Pathway and submit the appropriate compliance forms during Plan Review AND for Final Inspection:

Cement Limit Pathway

For Plan Review: [Design Team \(Structural Engineer/Architect\) Low Carbon Concrete Cement Compliance Form](#)

For Final Inspection: [Contractor Low Carbon Concrete Cement Compliance Form](#) accompanied by batch receipts from ready-mix supplier

Embodied Carbon Pathway

For Plan Review: [Design Team \(Structural Engineer/Architect\) Low Carbon Concrete EC Compliance Form](#)

For Final Inspection: [Contractor Low Carbon Concrete EC Compliance Form](#) accompanied by batch receipts from ready-mix supplier

Plan sheet reference (if applicable): _____

A4.405.3 Material Sources (MANDATORY) – Postconsumer or preconsumer recycled content value (RCV) materials are used on the project, not less than a 10 percent recycled content value.

Completed N/A *Plan sheet reference (if applicable):* _____

4.406.1 Enhanced Durability and Reduced Maintenance (MANDATORY) – Annular spaces around pipes, electric cables, conduits, or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method acceptable to the enforcing agency.

Completed N/A *Plan sheet reference (if applicable):* _____

4.408.1 Construction Waste Reduction, Disposal and Recycling (MANDATORY) – Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with the reporting standards outlined by [Zero Waste Marin](#).

Completed N/A *Plan sheet reference (if applicable):* _____

A4.408.1 Construction Waste Reduction, Disposal and Recycling (MANDATORY) – Construction waste generated at the site is diverted to recycle or salvage in compliance with at least a 65 percent reduction. Any mixed recyclables that are sent to mixed-waste recycling facilities shall include a qualified third party verified facility average diversion rate. Verification of diversion rates shall meet minimum certification eligibility guidelines, acceptable to the local enforcing agency.

Completed N/A *Plan sheet reference (if applicable):* _____

4.410.1 Building Maintenance and Operation (MANDATORY) – An operation and maintenance manual shall be provided to the building occupant or owner.

Completed N/A *Plan sheet reference (if applicable):* _____

4.410.2 Building Maintenance and Operation (MANDATORY) – Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible areas that serve all buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance if more restrictive.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.403.1 Foundation Systems (ELECTIVE) - Frost protected foundation systems is designed and constructed.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.404.1 Efficient Framing Techniques (ELECTIVE) – Beams and headers and trimmers are the minimum size to adequately support the load.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.404.2 Efficient Framing Techniques (ELECTIVE) – Dimensions and layouts are designed to minimize waste.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.404.3 Efficient Framing Techniques (ELECTIVE) – Use premanufactured building systems to eliminate solid sawn lumber whenever possible.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.404.4 Efficient Framing Techniques (ELECTIVE) – Material lists are included in the plans which specify material quantity and provide direction for on-site cuts.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.405.1 Material Sources (ELECTIVE) – One or more of the following materials, that do not require additional resources for finishing are used (check at least one):

- Exterior trim not requiring paint or stain
- Windows not requiring paint or stain
- Siding or exterior wall coverings which do not require paint or stain

Plan sheet reference (if applicable): _____

A4.405.2 Material Sources (ELECTIVE) – Floors that do not require additional coverings are used including but not limited to stained, natural or stamped concrete floors

Completed N/A *Plan sheet reference (if applicable):* _____

A4.405.4 Material Sources (ELECTIVE) – Renewable source building products are used.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.407.1 Water Resistance and Moisture Management (ELECTIVE) – Install foundation and landscape drains.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.407.2 Water Resistance and Moisture Management (ELECTIVE) – Install gutter and downspout systems to route water at least 5 feet away from the foundation or connect to landscape drains which discharge to a dry well, sump, bioswale, rainwater capture system or other approved on-site location.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.407.3 Water Resistance and Moisture Management (ELECTIVE) – Provide flashing details on the building plans and comply with accepted industry standards or manufacturer's instructions.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.407.4 Water Resistance and Moisture Management (ELECTIVE) – Protect building materials delivered to the construction site from rain and other sources of moisture.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.407.6 Water Resistance and Moisture Management (ELECTIVE) – Exterior doors to the dwelling are protected to prevent water intrusion.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.407.7 Water Resistance and Moisture Management (ELECTIVE) – A permanent overhang or awning at least 2 feet in depth is provided.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.411.1 Innovative Concepts and Local Environmental Conditions (ELECTIVE)

Completed N/A *Plan sheet reference (if applicable):* _____

DIVISION 4.5 ENVIRONMENTAL QUALITY

- ✓ *All measures marked as (MANDATORY) are required unless not in project scope.*
- ✓ *For all measures marked as (ELECTIVE), a minimum of ONE ELECTIVE measure must be selected for this division.*
- ✓ *Use the Checkboxes (☒) to mark as Completed, Not Applicable (N/A), or the measure selected.*

4.503.1 Fireplaces (MANDATORY) – Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with the U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances in accordance with [Marin County Building Code, Chapter 19.08](#)

Completed N/A *Plan sheet reference (if applicable):* _____

4.504.1 Pollutant Control (MANDATORY) – Duct openings and other related air distribution component openings shall be covered during construction.

Completed N/A *Plan sheet reference (if applicable):* _____

4.504.2.1 Pollutant Control (MANDATORY) – Adhesives, sealants and caulks shall be compliant with VOC and other toxic compound limits.

Completed N/A *Plan sheet reference (if applicable):* _____

4.504.2.2 Pollutant Control (MANDATORY) – Paints, stains and other coatings shall be compliant with VOC limits.

Completed N/A *Plan sheet reference (if applicable):* _____

4.504.2.3 Pollutant Control (MANDATORY) – Aerosol paints and coatings shall be compliant with product weighted MIR Limits for ROC and other toxic compounds.

Completed N/A *Plan sheet reference (if applicable):* _____

4.504.2.4 Pollutant Control (MANDATORY) – Documentation shall be provided to verify that compliant VOC limit finish materials have been used.

Completed N/A *Plan sheet reference (if applicable):* _____

4.504.3 Pollutant Control (MANDATORY) – Carpet and carpet systems shall be compliant with VOC limits.

Completed N/A *Plan sheet reference (if applicable):* _____

4.504.4 Pollutant Control (MANDATORY) – 80 percent of floor area receiving resilient flooring shall comply with specified VOC criteria.

Completed N/A *Plan sheet reference (if applicable):* _____

4.504.5 Pollutant Control (MANDATORY) – Particleboard, medium density fiberboard (MDF), and hardwood plywood used in interior finish systems shall comply with low formaldehyde emission standards.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.504.2 Pollutant Control (MANDATORY) – Install VOC compliant resilient flooring systems. Ninety (90) percent of floor area receiving resilient flooring shall comply with the VOC-emission limits established in section A4.504.2.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.504.3 Pollutant Control (MANDATORY) – Thermal insulation installed in the building shall be in compliance with VOC limits.

Completed N/A *Plan sheet reference (if applicable):* _____

4.505.2 Interior Moisture Control (MANDATORY) – Vapor retarder and capillary break is installed at slab on grade foundations.

Completed N/A *Plan sheet reference (if applicable):* _____

4.505.3 Interior Moisture Control (MANDATORY) – Moisture content of building materials used in wall and floor framing is checked before enclosure.

Completed N/A *Plan sheet reference (if applicable):* _____

4.506.1 Indoor Air Quality and Exhaust (MANDATORY) – Each bathroom shall be provided with the following:

1. ENERGY STAR fans ducted to terminate outside the building.
2. Fans must be controlled by a humidity control (Separate or built-in); OR functioning as a component of a whole-house ventilation system.
3. Humidity controls with manual or automatic means of adjustment, capable of adjustment between a relative humidity range of ≤ 50 percent to a maximum of 80 percent.

Completed N/A *Plan sheet reference (if applicable):* _____

4.507.2 Environmental Comfort (MANDATORY) – Duct systems are sized, designed, and equipment is selected using the following methods:

1. Establish heat loss and heat gain values according to ANSI/ACCA 2 Manual J-2016 or equivalent.
2. Size duct systems according to ANSI/ACCA 1 Manual D – 2016 or equivalent.
3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S-2014 or equivalent.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.504.1. Pollutant Control (ELECTIVE) – Use composite wood products made with either California Air Resources Board approved no-added formaldehyde (NAF) resins or ultra-low emitting formaldehyde (ULEF) resins.

Completed N/A *Plan sheet reference (if applicable):* _____

A4.506.2 Indoor Air Quality and Exhaust (ELECTIVE) – Provide filters on return air openings rated MERV 8 or higher during construction when it is necessary to use HVAC equipment

Completed N/A *Plan sheet reference (if applicable):* _____

A4.506.3 Indoor Air Quality and Exhaust (ELECTIVE) – Direct-vent appliances shall be used when equipment is located in conditioned space; or the equipment must be installed in an isolated mechanical room

Completed N/A *Plan sheet reference (if applicable):* _____

A4.509.1 Innovative Concepts and Local Environmental Conditions (ELECTIVE)

Completed N/A *Plan sheet reference (if applicable):* _____

MARIN COUNTY ENERGY CHECKLIST

STANDARDS FOR SINGLE-FAMILY RENOVATIONS 750 SQUARE FEET OR MORE

This checklist is effective January 1, 2023 and applies to additions and alterations of one- and two-family dwellings and townhouses being added to or altered when the cumulative square footage of the project is 750 square feet or more.

Submit this checklist accompanied with the [Green Building Checklist](#) with your plans to demonstrate compliance with the green building ordinance.

For more information on the energy requirements and complete measure language, see [Marin County Building Code, Chapter 19.04.130, Subchapter 2](#) which requires (with amendments) stronger energy and electrification requirements under the State Energy Code.

PROJECT DETAILS

Project Address

APN

Applicant Name (Please Print)

PROJECT VERIFICATION

The green building professional² has reviewed the plans and certifies that the measures indicated in this form are incorporated into the project plans and will be implemented into the project in accordance with the requirements set forth in the 2022 California Energy Code as amended by the County of Marin.

Signature

Date

Name (Please Print)

² A qualified building professional can be an architect, engineer, contractor, or qualified green building professional, such as a CALGreen Special inspector or LEED AP.

1. MANDATORY MEASURES REQUIRED OF ALL PROJECTS

Complete Steps (1) – (2) below as listed in Table 1. Mandatory Measures.

Table 1. Mandatory Measures			
Check (☒)	Measures		Steps
	Specification	Spec. ID	
<input type="checkbox"/>	LED + Exterior Photosensor <i>Mandatory</i>	E1	(1) All measures installed or to be installed MUST be marked with a Check (☒) in this table’s far left column. (2) Use the Specification Number (Spec. ID) column as a key and conform to the List of Measure Specifications in Table 4 , pages 19-21, below. Table 4 describes, specifies, and details compliance with each corresponding measure. (Continue below to Section 2).
<input type="checkbox"/>	Electric Readiness Measures <i>Mandatory</i> when remodeling kitchen, laundry, or upgrading panel	ER2	

2. LOW INCOME EXEMPTION (Check One of the Following)

- A resident owner or occupant applicant can be exempt if they can demonstrate low-income qualification by submitting proof (e.g., copy of a utility bill) of enrollment in one of the following:
 - PG&E California Alternative Rates for Energy (CARE) program
 - PG&E Family Electric Rate Assistance (FERA) program

MANDATORY: Low-income exempt applicants are still required to install the following measures See [List of Measure Specifications in Table 4](#), pages 19-21 below (Must check all the following):

- E1 (Lighting)**
- ER2 (Electric Readiness)**
- E2 (Water Heating Package)**

NOTE: This completes your application. DO NOT CONTINUE to Section 3.

Not applicable ([Continue to Section 3](#) on the following page 18).

3. MEASURE MENU AND TARGET SCORE

- Complete Steps (1) – (6) below as listed in Table 2. Energy and Electrification Menu of Measures by Climate Zone.

Table 2. Energy and Electrification Menu of Measures by Climate Zone					
Measures			Climate Zone (CZ)		Steps
			2	3	
			<input type="checkbox"/> ↓	<input type="checkbox"/> ↓	(1) Choose your Climate Zone (CZ) based on zip codes listed in Table 5 , pg. 22, then continue to Step 2
Check All That Apply	Specification	ID (Table 4)	Target Score		(2) Note minimum target score needed to comply (1 point = 1MMBTU savings per yr.) then continue to Step 3
			8	6	
<input type="checkbox"/>	Water Heating Package	E2	1	1	(3) Choose a measure or a combination of measures that adds up to at least the minimum target score noted in step 2 above.
<input type="checkbox"/>	Air Sealing	E3	1	1	
<input type="checkbox"/>	R-49 Attic Insulation	E4	1	1	
<input type="checkbox"/>	Duct Sealing	E5	1	--	(4) Measures installed or to be installed MUST be marked with a corresponding Check (☒) in this table's far left column.
<input type="checkbox"/>	New Ducts + Duct Sealing	E6	2	2	
<input type="checkbox"/>	PV + Electric Ready Pre-Wire	ER1	12	12	(5) Use the Specification Number (Spec. ID) column as a key and conform to the List of Measure Specifications in Table 4 , pages 19-21 below. Table 4 describes, specifies, and details compliance with each corresponding measure.
<input type="checkbox"/>	Heat Pump Water Heater (HPWH)	FS1	12	12	
<input type="checkbox"/>	High Eff HPWH	FS2	13	13	
<input type="checkbox"/>	HVAC Heat Pump	FS3	13	10	
<input type="checkbox"/>	High Eff HVAC Heat Pump	FS4	14	11	
<input type="checkbox"/>	Heat Pump Clothes Dryer	FS5	1	1	
<input type="checkbox"/>	Induction Cooktop	FS6	1	1	(6) Sum points then complete Summary of Results a., b., c. in Table 3, Section 4 on the following page 19.
Total Points Claimed					

4. SUMMARY OF RESULTS (from Table 2 Above)

Complete a., b., and c. listed below in Table 3. Summary of Results.

Table 3. Summary of Results	
a.	_____ Target Score (from Table 2 , Step 2 where CZ 2 = 8 points and CZ 3 = 6 points)
b.	_____ Total Points Claimed (from Table 2 , Step 6)
c.	_____ Subtract line a from line b (must be greater than or equal to 0 to comply)
*You have completed your application	

5. LIST OF MEASURE SPECIFICATIONS

Table 4. List of Measure Specifications	
ID	Measure Specification
Energy Measures	
E1	Lighting Measures – Replace all interior and exterior screw-in incandescent, halogen, and compact fluorescent lamps with LED lamps. Install photocell controls on all exterior lighting luminaires.
E2	Water Heating Package: Add exterior insulation meeting a minimum of R-6 to existing storage water heaters. Insulate all accessible hot water pipes with pipe insulation a minimum of ¾ inch thick. This includes insulating the supply pipe leaving the water heater, piping to faucets underneath sinks, and accessible pipes in attic spaces or crawlspaces. Upgrade fittings in sinks and showers to meet current California Green Building Standards Code (Title 24, Part 11) Section 4.303 water efficiency requirements. Exception 1: Water heater blanket is not required on water heaters less than 20 gallons. Exception 2: Water heater blanket not required if application of a water heater blanket voids the warranty on the water heater. Exception 3: Upgraded fixtures are not required if existing fixtures have rated or measured flow rates of no more than ten percent greater than 2022 California Green Building Standards Code (Title 24, Part 11) Section 4.303 water efficiency requirements. Exception 4: Water heaters with factory installed insulation of R-24 or greater
E3	Air Sealing: Seal all accessible cracks, holes, and gaps in the building envelope at walls, floors, and ceilings. Pay special attention to penetrations including plumbing, electrical, and mechanical vents, recessed can light luminaires, and windows. Weather-strip doors if not already present. Verification shall be conducted following a prescriptive checklist that outlines which building aspects need to be addressed by the permit applicant and verified by an inspector. Compliance can also be demonstrated with blower door testing conducted by a certified HERS Rater no more than three years prior to the permit application date that either: a) shows at least a 30 percent reduction from pre-retrofit conditions; or b) shows that the number of air changes per hour at 50 Pascals pressure difference (ACH50) does not exceed ten. If combustion appliances are located within the pressure boundary of the building, conduct a combustion safety test by a professional certified by the Building Performance Institute in accordance with the ANSI/BPI-1200-S-2017 Standard Practice for Basic Analysis of Buildings ¹ , the Whole House Combustion Appliance Safety Test Procedure for the Comfortable Home Rebates Program 2020 or the California Community Services and Development Combustion Appliance Safety Testing Protocol.

E4	<p>R-49 Attic Insulation: Attic insulation shall be installed to achieve a weighted assembly U-factor of 0.020 or insulation installed at the ceiling level shall have a thermal resistance of R-49 or greater for the insulation alone. Recessed downlight luminaires in the ceiling shall be covered with insulation to the same depth as the rest of the ceiling. Luminaires not rated for insulation contact must be replaced or fitted with a fire-proof cover that allows for insulation to be installed directly over the cover.</p> <p>Exception: In buildings where existing R-30 is present and existing recessed downlight luminaires are not rated for insulation contact, insulation is not required to be installed over the luminaires.</p>
E5	<p>Duct Sealing: Air seal all space conditioning ductwork to meet the requirements of the 2022 Title 24 Section 150.2(b)1E. The duct system must be tested by a HERS Rater no more than three years prior to the Covered Single Family Project permit application date to verify the duct sealing and confirm that the requirements have been met. This measure may not be combined with the New Ducts and Duct Sealing measure in this Table.</p>
E6	<p>New Ducts + Duct Sealing: Replace existing space conditioning ductwork with new R-8 ducts that meet the requirements of 2022 Title 24 Section 150.0(m)11. This measure may not be combined with the Duct Sealing measure in this Table. To qualify, a preexisting measure must have been installed no more than three years before the Covered Single Family Project permit application date.</p>
E7	<p>Windows: Replace all existing windows with high performance windows with an area-weighted average U-factor no greater than 0.32.</p>
E8	<p>R-13 Wall Insulation: Install wall insulation in all exterior walls to achieve a weighted U-factor of 0.102 or install wall insulation in all exterior wall cavities that shall result in an installed thermal resistance of R-13 or greater for the insulation alone.</p>
Fuel Substitution Measures	
FS1	<p>Heat Pump Water Heater (HPWH): Replace all existing electric resistance and natural gas storage water heaters with heat pump water heaters.</p>
FS2	<p>High Efficiency Heat Pump Water Heater (HPWH): Replace all existing electric resistance and natural gas storage water heaters with heat pump water heaters with a Northwest Energy Efficiency Alliance (NEEA) Tier 3 or higher rating.</p>
FS3	<p>HVAC Heat Pump: Replace all existing gas space heating system and existing electric resistance heating systems with electric heat pump systems.</p>
FS4	<p>High Efficiency HVAC Heat Pump: Replace all existing gas space heating system and existing electric resistance heating systems with electric heat pump systems with a SEER rating of 21 or greater and an HSPF rating of 11 or greater.</p>
FS5	<p>Heat Pump Clothes Dryer: Replace all existing gas and electric resistance clothes dryers with heat pump dryers with no resistance element and cap the gas lines.</p>
FS6	<p>Induction Cooktop: Replace all existing gas and electric resistance stove tops with inductive stove tops and cap the gas lines.</p>
Solar PV and Electric-Readiness Measures	
ER1	<p>PV+ Electric Ready Pre-Wire: For New PV Systems: Install a new solar PV system that meets the requirements of 2022 Title 24 Section 150.1(c)14 and upgrade the service panel to meet the requirements of ER2.G. and install any two of the other measures from ER2.A – ER2.F. For Existing PV Systems: If the home already has an existing PV system that meets the requirements above, to claim credit for this measure, ER1, upgrade the service panel to</p>

	<p>meet the requirements of ER2.G. and install any two of the other measures from ER2.A – ER2.F.</p> <p>The size of the system may be reduced to the maximum allowable under NEM requirements.</p>
ER2	<p>Electric Readiness Measures:</p> <p>To claim credit for Item ER1, in addition to the solar PV system installed, upgrade the panelboard to meet the requirements of Item ER2.G and install any two of the other measures ER2.A – ER2.F, below to allow for installation of electric appliances at a future date.</p> <p>If the service panel is being upgraded, install any two of the other measures below.</p> <p>If the laundry room is being remodeled, comply with Item ER2.D and upgrade the panelboard to meet the requirements of Item ER2.G.</p> <p>If the kitchen is being remodeled, comply with Item ER2.C and upgrade the service panel to meet the requirements of Item ER2.G.</p> <ul style="list-style-type: none"> A. Heat Pump Water Heater Ready, as specified in Section 150.0(n)1. B. Heat Pump Space Heater Ready, as specified in Section 150.0(t). C. Electric Cooktop Ready, as specified in Section 150.0(u). D. Electric Clothes Dryer Ready, as specified in Section 150.0(v). E. Energy Storage Systems (ESS) Ready, as specified in Section 150.0(s). F. EV Charger Ready. Install a listed raceway for an EV charger, that meets the requirements of the California Green Building Standards Code (Title 24, Part 11) Section A4.106.8.1, Tier 1 and 2, which otherwise applies to new construction. G. Upgrade the panelboard serving the individual dwelling to either: <ul style="list-style-type: none"> (i) a minimum 200 amp panel with a minimum 225 amp busbar rating to accommodate future connection of electric appliances, including heat pump water heaters, heat pump space heaters, electric cooktops, electric clothes dryers as specified in California Energy Code Section 150.0 (n), (t), (u) and (v) and Level 2 electric vehicle supply equipment; or, (ii) provide electrical load calculations and appliance specifications for serving all of these end-uses with a minimum 100-amp panel. <p>Exception: If an electrical permit is not otherwise required for the project other than compliance with this Item, ER2.</p>

6. CHOOSING CLIMATE ZONE BY ZIP CODE

Table 5. Climate Zone by Zip Code			
Marin Zip Codes	Climate Zone	Marin Zip Codes	Climate Zone
94901	2	94947	2
94903	2	94948	2
94904	2	94949	2
94912	2	94950	3
94913	2	94952	2
94914	2	94956	3
94915	2	94957	2
94920	3	94960	2
94924	3	94963	2
94925	3	94964	2
94929	3	94965	3
94930	2	94966	3
94933	3	94970	3
94937	3	94971	3
94938	3	94973	2
94939	2	94974	2
94940	3	94976	3
94941	3	94977	3
94942	3	94978	2
94945	2	94979	2
94946	2	94998	2

If the climate zone can't be found using Table 5, visit and use the [California Energy Commission climate zone tool finder](#).