

GRADING SPECIFICATIONS, GRADE GREEN or “G”  
Category Addition, 2013

Narrative Description: Architecturally-designed and supervised dwellings with meticulous attention to detail and an increased focus on elements addressing sustainable concepts and development, including anticipated high-efficiency and/or premium innovative heat systems, high R- (or low U-) value-rated insulation materials, and functionally environmentally friendly and useful building components and fixtures with floor plans that may include either physically or visually conserving resources and space. This class of residential dwelling features the best quality of materials and labor available in the local market and may incorporate select specialized or imported materials typically foreign to the local market in order to obtain efficiency objectives. Construction methods, materials and functionality may be comprised of or contribute toward conserving or using clean or renewable energy and recycling materials from organic or local living.

Grade G home designs, including roof lines, fenestration and/or floor plans, may be minimalist, functional, utilitarian, typical, or elaborate with high quality or specialized functionality apparent in the materials. Living area sizes run from small footprint minimalist living to large areas comprised of communal accommodations or utilities, such as a shared kitchens or heat system(s), and may be combined with disproportionate amounts of storage. Minimalist housing of this grade may be complemented with similar quality and design shared living areas. Due to accepted functionality of a single bath, single bathrooms may be present and may contain standard-grade fixtures, though may address higher water efficiency than typically available.

Dwellings will likely have air filtration, air exchange, and/or air conditioning in addition to high-efficiency central heat, such as Energy Star-rated oil, kerosene, pellet, sawdust brick, biomass fuel (such as corn), wind, geo-thermal, solar or alternative fueled direct or conventional vented boilers or forced warm air furnaces with hot water baseboard, ducts, modern radiators, radiant floor or passive solar heat delivery or retention throughout. Complementary heat systems may be installed to allow flexibility to manage diverse heating fuel consumption strategies. Antique houses are included in this grade if outfitted with integrated modern mechanical systems and if the renovation has a specialized focus on reduced energy consumption through the use of renewable resources.

Though not a requirement, building designations may also be considered in confirming grading specifications as Grade G. Green building, as an overall concept or identity, is recognized as Green Approved with the National Association of Home Builders or, among other nationally recognized designations or accreditation, with the US Green Building Council's Leadership in Energy and Environmental Design, or LEED, Green Building Rating System, which considers environmental and economical impacts of new homes, including protecting eco-system and biodiversity, improving air and water quality, conservation and limits on natural resource use, reduced solid waste, lower building operational costs, higher building values, assets and profits, enhanced air, thermal and acoustical quality, higher levels of occupant comfort and health, reduced strain on local infrastructure and improved overall quality of life.

**FOUNDATION: SLAB, CRAWL SPACE, PARTIAL BASEMENT or FULL BASEMENT:**

Due to the added focus of insulation or heating efficiency over storage capacity, elevation, or accessibility, the foundation may be slab, crawl space, full basement or a combined partial basement with crawl space and/or slab foundation. Crawl space is typically below 5' for the local market. Partial basements may be sufficient in size only to accommodate heating or cooling system components with the remainder comprised of either crawl space or slab foundation. Footings are 12" x 24" (minimum) on inch-minus or equivalent gravel with 10" or greater poured walls (may also be double-parged fieldstone, brick, cut stone, or other type of masonry wall, or any combination thereof for renovated antique houses) with no less than 7'6" posted. Sufficient full perimeter and under-floor storm drainage will prevent surface water or dampness. Foundation may have 4" - 6" reinforced concrete slab with frost walls. EPS, or Expanded Poly-Styrene, insulation may be under the frost-protected slab. Foundation may have steel or concrete pilings driven to bedrock and fully skirted perimeter. Supplemental sheathing or insulation may be present to prevent heat loss or condensation issues. Full basements exceeding 5' in height in antique houses may have low head clearance with basement flooring typically poured concrete or crushed rock to embed drainage channels. Full basements may have exterior access and, if unfinished, flooring may have stress seams or be trowelled. Rarely will Grade G houses have a dirt floor.

**FRAMING:**

Joists - 2" x 10" or greater with 16" on center and solid bridging OR 10" composites at least as frequent as 16" oc.

Studs – Minimally 2" x 6" at least as frequent as every 16" on center or equivalent where exterior or interior support walls may also be structurally insulated EPS, Structural Insulated Panels or functionally similar structural material

Rafters - 2" x 10" at 16" oc OR 2" x 4" trusses at 16" oc OR 2" x 6" trusses 24" oc OR equivalent

Interior Partitions minimum 2" x 4" - 16" oc.

Post & Beam (hardwood if new; softwood if antique, EXCEPT if English chestnut). Half-timber construction for antique houses may be present, where the original joists, rafters and/or purlins may have sistering with conventional dimension lumber sized commensurately to add rigidity to the original members.

**ROOF:**

Support - See "Framing"

Sheathing - 3/4" CDX or equivalent OR 1" T&G spruce laid diagonally

Cover - Top-grade architectural-grade asphalt shingles (#235 / 30-yr. life) OR Natural or synthetic slate OR top-quality raised-seam steel OR clear cedar shingles or shakes; All over 30" bituthane (or equivalent) underlayment OR top-grade felt paper

Drip edge/Flashing – Copper, heavy-duty galvanized steel or composite

Boxed cornices

Other Green Roof materials, such as vegetative roofing or sustainable roofing, especially those approved by US Green Building Council's LEED certification.

## EXTERIOR:

Support - See "Framing"

Sheathing - 5/8" CDX or equivalent OR 1" T&G spruce laid diagonally

Cover - Clear or 2nd clear cedar shingles or shakes OR red cedar clapboards OR masonry veneer, including stucco; all over a moisture barrier such as *Tyvek*, *Typar* or other geo-textile equivalents OR solid brick, stone or other sustainable resource.

Fenestration - Best quality insulated double-hung, casement or other window types with or without mullions or muntins, dentilled mouldings or quoins; entrance fanlights and sidelights present with or without storm doors (depending on exterior door insulation quality). Antique houses will have high-efficiency replacement windows.

## INTERIOR:

Insulation - Fiberglass; *Celotex*; Styrofoam, Denim, Cellulose, Mineral, Rock or Slag Wool, Bio-Soluble Fibers and other modern types utilized to their fullest extent and maximum effectiveness. Insulation may have acoustic or soundproofing properties. If antique, walls will be double-plastered or replacement drywall (1/2" or greater).

Trim – Expertly fitted miters on trim comprised of clear or painted Cyprus, Douglas fir, Canadian spruce or miscellaneous native hardwood(s); wainscot or top or bottom moldings may be present with denticulated native softwood moldings if antique.

Doors – Typically, doors are all paneled and solid.

Cabinetry - Top-quality hardwoods, natural finish; may be stock, top-of-the-line items; may be custom-made hardwood. Counters may be polished granite or slate; tile; maple butcher-block, top-quality *corian* or other composite material.

Closets/Storage – May be minimal or ample in both number and size. Built-ins may be present to increase floor space. Overhead storage may be readily accessible in open or enclosed finished or partially finished attic spaces.

Finish - 5/8" or 1/2" sheetrock; gypsum plaster over metal laths OR, for antique homes, horsehair plaster over wooden laths. Plastered walls will likely have top-quality wallpaper; typically *Schumacher* or *Strahan*. Antique homes may have murals or stenciling by Moses Eaton or others, that are preserved, and/or original wallpaper with actual gold; all of which combine to dramatically affect value and retain quality.

## FLOORS:

Support - See "Framing"

Subfloor - 5/4 T&G OSB, CDX or equivalent; 1" T&G spruce laid diagonally or equivalent

Cover - Quarry tile; slate; select grade native or imported hardwoods, top-quality linoleum/congoleum, natural or synthetic carpet or textile. If antique home, flooring may include wide, native softwoods typically 8" - 22" in width over other wide softwoods.

## ELECTRICAL:

100 or 200 Amp entrance panel with 10 circuits or more serviced by 12-2 Romex sufficient for the design along with top quality fixtures, switches and numerous outlets are common. Direct and indirect rheostat-controlled lighting, sub-panel(s) and multiple sources of electricity may be present.

#### HEATING:

Central heat may be provided through market-accepted high-efficiency whole house heating sources, such as Energy Star-rated oil, kerosene, pellet, electric, sawdust brick, biomass fuel (such as corn), wind, geo-thermal, solar or alternative fueled direct or conventional vented boilers or forced warm air furnaces with hot water baseboard, ducts, modern radiators, radiant floor or passive solar heat delivery or retention throughout the dwelling. Complementary heat systems allow flexibility of the occupants to manage multiple heating fuel consumption strategies. System may have stand-alone air exchanger/conditioning system(s).

#### PLUMBING:

Bathrooms consist of the best quality or high efficiency fixtures with vinyl, tile or enamel over cast iron, vitreous china, or fiberglass. Bar or mop sinks or bidets may be present. High efficiency indirect or direct (tank-less) hot water is typically present. Drains, wastes and vents will be cast iron, copper, or schedule 40 PVC. Water piping is copper, galvanized, polyethylene (PEX) or rigid PVC.