



**Table N1101.1(2) – Additional Measures**

Envelope Enhancement Measure (Select One)	1	<b>High efficiency walls &amp; windows:</b> Exterior walls – U-0.045/R-21 cavity insulation + R-5 continuous
	2	<b>Upgraded Features:</b> Exterior walls – U-0.057/R-23 intermediate or R-21 advanced, Framed floors – U-0.026/R-38 and Windows – U-0.28 (average UA)
	3	<b>High efficiency ceiling, windows &amp; duct sealing:</b> Exterior walls – E-0.055/R-23 intermediate or R-21 advanced, Flat ceilings <sup>e</sup> – U-0.017/R-60, and Framed floors – U-0.26/R-38
	4	<b>Super Insulated Windows and Attic OR Framed Floors:</b> Windows – U-0.22 (Triple Pane Low-e), and Flat ceiling <sup>e</sup> – U-0.017/R-60, and Framed floors – U-0.026/R-38
	5	<b>Air sealing home and ducts:</b> Mandatory air sealing of all wall coverings at top plate and air sealing checklist <sup>f</sup> , and Mechanical whole-building ventilation system with rates meeting M1503 or ASHRAE 62.2, and All ducts and air handlers contained within building envelope <sup>d</sup> or All ducts sealed with mastic <sup>b</sup>
	6	<b>High efficiency thermal envelope UA <sup>g</sup></b> Proposed UA is 8% lower than the code UA
Conservation Measure (Select One)	A	<b>High efficiency HVAC system <sup>a</sup>:</b> Gas-fired furnace or boiler with minimum AFUE of 94% a, or Air-source heat pump with minimum HSPF of 9.5/15.0 SEER cooling, or Ground source heat pump COP 3.5 or Energy Star rated
	B	<b>Ducted HVAC systems within conditioned space:</b> All ducts and air handler are conditioned within building envelope <sup>d</sup> <i>Cannot be combined with Measure 5</i>
	C	<b>Ductless heat pump:</b> Ductless heat pump HSPF 10.0 in primary zone of dwelling
	D	<b>High efficiency water heater <sup>c</sup>:</b> Natural gas/propane water heater with UEF 0.85 OR Electric heat pump water heater Tier 1 Northern Climate Specification Product

For SI: 1 square foot + 0.093 m<sup>2</sup>, 1 watt per square foot + 10.8 W/m<sup>2</sup>.

- a. Appliances located within the building thermal envelope shall have sealed combustion air installed. Combustion air shall be ducted directly from outdoors.
- b. All duct joints and seams sealed with listed mastic; tape is only allowed at appliance or equipment connections (for service and replacement). Meet sealing criteria of Performance Tested Comfort Systems program administered by the Bonneville Power Administration (BPA).
- c. Residential water heaters less than 55 gallon storage volume.
- d. A total of 5 percent of an HVAC system’s ductwork shall be permitted to be located outside of the conditioned space. Ducts located outside the conditioned space shall have insulation installed as required in this code.
- e. The maximum vaulted ceiling surface area shall not be greater than 50 percent of the total heated space floor area unless vaulted area has a U-factor no greater than U-0.026.
- f. Continuous air barrier. Additional requirement for sealing of all interior vertical wall covering to top plate framing. Sealing with foam gasket, caulk or other approved sealant listed for sealing wall covering material to structural material (example: gypsum board to wood stud framing).
- g. Table N1104.1(1) Standard base case design, Code UA shall be at least 8 percent less than the Proposed UA. Buildings with fenestration less than 15 percent of the total vertical wall area may adjust to the Code UA to have 15 percent of the wall area as fenestration.