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2018 International Energy Code (IECC): 1 & 2 Family Insulation Requirements

With the adoption of the International Energy Code (IECC) by the State of Illinois, effective January 2018, the Village of Barrington has the following insulation requirements:

CLIMATE ZONE	5
FENESTRATION <i>U</i> -FACTOR ¹	0.30
SKYLIGHT <i>U</i> -FACTOR ¹	0.55
GLAZED FENESTRATION SHGC ¹	NR
CEILING <i>R</i> -VALUE	49
WOOD FRAME WALL <i>R</i> -VALUE	19 or 13+5 ²
MASS WALL <i>R</i> -VALUE ³	3/17
FLOOR <i>R</i> -VALUE	30 ⁴
BASEMENT WALL <i>R</i> -VALUE ⁵	15/19
SLAB <i>R</i> -VALUE & DEPTH ⁶	10, 2 ft.
CRAWL SPACE WALL <i>R</i> -VALUE ⁵	15/19

¹ The fenestration *U*-factor column excludes skylights. The SHGC column applies to all glazed fenestration. Exception: Skylights may be excluded from glazed fenestration SHGC requirements in Climate Zones 1 through 3 where the SHGC for such skylights does not exceed 0.30.

² First value is cavity insulation, second is continuous insulation or insulated siding, so “13+5” means R-13 cavity insulation plus R-5 continuous insulation or insulated siding. If structural sheathing covers 40 percent or less of the exterior, continuous insulation *R*-value shall be permitted to be reduced by no more than R-3 in the locations where structural sheathing is used – to maintain a consistent total sheathing thickness.

³ The second *R*-value applies when more than half of the insulation is on the interior of the mass wall.

⁴ Or insulation sufficient to fill the framing cavity, R-19 minimum.

⁵ “15/19” means R-15 continuous insulation on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall. “15/19” shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the home. “10/13” means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall.

⁶ R-5 shall be added to the required slab edge *R*-values for heated slabs. Insulation depth shall be the depth of the footing or 2 feet, whichever is less in Climate Zones 1 through 3 for heated slabs.