**Consensus modification to REPI-28 jointly submitted by:**

* **2050 Partners**
* **Fenestration & Glazing Industry Alliance (FGIA)**
* **Glazing Industry Code Committee (GICC)**, proponent of REPI-28
* **New Buildings Institute (NBI)**, proponent of REPI-29
* **Window & Door Manufacturers Association (WDMA)**

## Original proposed changes shown in black. Modifications relative to REPI-28 shown in red.

Modify as follows:

**TABLE R402.1.2 (TABLE N1102.1.2) MAXIMUM ASSEMBLY U-FACTORSa AND FENESTRATION REQUIREMENTS**

**Portions of table not shown remain unchanged.**

|  |  |  |  |
| --- | --- | --- | --- |
| Climate Zone | Fenestration U-Factord | Skylight U-Factord | Glazed Fenestration SHGCd~~,e~~ |
| 0 | ~~0.50~~ ~~0.40~~ 0.50 | ~~0.75~~ 0.60 | 0.25 |
| 1 | ~~0.50~~ ~~0.40~~ 0.50 | ~~0.75~~ 0.60 | 0.25 |
| 2 | 0.40 | ~~0.65~~ 0.60 | 0.25 |
| 3 | 0.30 | ~~0.55~~ 0.53 | 0.25 |
| 4 except Marine | 0.30 | ~~0.55~~ 0.53 | 0.4 |
| 5 and Marine 4 | ~~0.30~~ ~~0.27~~ 0.28f~~,g~~ | ~~0.55~~ 0.50 | ~~0.4~~NR |
| 6 | ~~0.30~~ ~~0.27~~ 0.28f~~,g~~ | ~~0.55~~ 0.50 | NR |
| 7 and 8 | ~~0.30~~ 0.27f~~,g~~ | ~~0.55~~ 0.50 | NR |

For SI: 1 foot = 304.8 mm.

1. Nonfenestration U-factors shall be obtained from measurement, calculation or an

approved source.

1. Mass walls shall be in accordance with Section R402.2.5. Where more than half the insulation is on the interior, the mass wall U-factors shall not exceed 0.17 in Climate Zones 0 and 1, 0.14 in Climate Zone 2, 0.12 in Climate Zone 3, 0.087 in Climate Zone 4 except Marine, 0.065 in Climate Zone 5 and Marine 4, and 0.057 in Climate Zones 6 through 8.
2. In warm-humid locations as defined by Figure R301.1 and Table R301.1, the basement wall U-factor shall not exceed 0.360.
3. The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.

**Exception:** In Climate Zones 0 through 3, skylights shall be permitted to be excluded from glazed fenestration SHGC requirements provided that the SHGC for such skylights does not exceed ~~0.30~~ 0.28.

1. ~~There are no SHGC requirements in the Marine Zone.~~
2. A maximum U-factor of ~~0.32~~ 0.30 shall apply in Marine Climate Zone 4 and Climate Zones 5 through 8 to vertical fenestration products installed in buildings located either:
	1. Above 4,000 feet in elevation above sea level, or
	2. In windborne debris regions where protection of openings is required by Section R301.2.1.2 of the *International Residential Code*.
3. ~~In Marine Climate Zone 4 and Climate Zones 5 through 8, the maximum U-factor for vertical fenestration shall be 0.28 when the SHGC is from 0.32 to 0.36, 0.29 when the SHGC is from 0.37 to 0.42, and 0.30 when the SHGC is greater than or equal to 0.42.~~

**TABLE R402.1.3 (TABLE N1102.1.3)** **INSULATION MINIMUM R-VALUES AND FENESTRATION REQUIREMENTS BY COMPONENTa**

**Portions of table not shown remain unchanged.**

|  |  |  |  |
| --- | --- | --- | --- |
| Climate Zone | Fenestration U-Factorb | Skylight U-Factorb | Glazed Fenestration SHGCb~~,e~~ |
| 0 | ~~NR~~ ~~0.40~~ 0.50 | ~~0.75~~ 0.60 | 0.25 |
| 1 | ~~NR~~ ~~0.40~~ 0.50 | ~~0.75~~ 0.60 | 0.25 |
| 2 | 0.40 | ~~0.65~~ 0.60 | 0.25 |
| 3 | 0.30 | ~~0.55~~ 0.53 | 0.25 |
| 4 except Marine | 0.30 | ~~0.55~~ 0.53 | 0.4 |
| 5 and Marine 4 | ~~0.30 0.27~~ 0.28i~~,j~~ | ~~0.55~~ 0.50 | ~~0.4~~NR |
| 6 | ~~0.30 0.27~~ 0.28 i~~,j~~ | ~~0.55~~ 0.50 | NR |
| 7 and 8 | ~~0.30~~ 0.27 i~~,j~~ | ~~0.55~~ 0.50 | NR |

For SI: 1 foot = 304.8 mm.

NR = Not Required.
ci = continuous insulation.

1. *R*-values are minimums. *U*-factors and SHGC are maximums. Where insulation is installed in a cavity that is less than the label or design thickness of the insulation, the installed *R*-value of the insulation shall be not less than the *R*-value specified in the table.
2. The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.

**Exception:** In Climate Zones 0 through 3, skylights shall be permitted to be excluded from glazed fenestration SHGC requirements provided that the SHGC for such skylights does not exceed ~~0.30~~ 0.28.

1. "5ci or 13” means R-5 continuous insulation (ci) on the interior or exterior surface of the wall or R-13 cavity insulation on the interior side of the wall. "10ci or 13" means R-10 continuous insulation (ci) on the interior or exterior surface of the wall or R-13 cavity insulation on the interior side of the wall. "15ci or 19 or 13 & 5ci" means R-15 continuous insulation (ci) on the interior or exterior surface of the wall; or R-19 cavity insulation on the interior side of the wall; or R-13 cavity insulation on the interior of the wall in addition to R-5 continuous insulation on the interior or exterior surface of the wall.
2. R-5 insulation shall be provided under the full slab area of a heated slab in addition to the required slab-edge insulation R-value for slabs. as indicated in the table. The slab edge insulation for heated slabs shall not be required to extend below the slab.
3. ~~There are no SHGC requirements in the Marine Zone.~~
4. Basement wall insulation is not required in warm-humid locations as defined by Figure R301.1 and Table R301.1.
5. The first value is cavity insulation; the second value is continuous insulation. Therefore, as an example, “13 & 5” means R-13 cavity insulation plus R-5 continuous insulation.
6. Mass walls shall be in accordance with Section R402.2.5. The second R-value applies where more than half of the insulation is on the interior of the mass wall.
7. A maximum U-factor of ~~0.32~~ 0.30 shall apply in Marine Climate Zone 4 and Climate Zones 5 through 8 to vertical fenestration products installed in buildings located either:
	1. Above 4,000 feet in elevation above sea level, or
	2. In windborne debris regions where protection of openings is required by Section R301.2.1.2 of the *International Residential Code*.
8. ~~In Marine Climate Zone 4 and Climate Zones 5 through 8, the maximum U-factor for vertical fenestration shall be 0.28 when the SHGC is from 0.32 to 0.36, 0.29 when the SHGC is from 0.37 to 0.42, and 0.30 when the SHGC is greater than or equal to 0.42.~~