## Weights of Building Materials – Pounds Per Square Foot [PSF]

### CEILING
- **Acoustical fiber board** \(^{(1)}\) 1
- **Suspended steel channel system** \(^{(1)}\) 2
- **Suspended wood channel system** 2.5
- **2x8 ceiling joists @ 16" o.c., R-49 insulation, 1/2" gypsum board** 7
- **1" Plaster** 8
- **1/2" gypsum board** \(^{(1)}\) 2.2
- **5/8" gypsum board** \(^{(1)}\) 2.75

### ROOF
- **Fiberglass shingles** 3
- **Asphalt shingles** \(^{(1)}\) 2
- **Wood shingles** \(^{(1)}\) 3
- **Spanish clay tile** \(^{(1)}\) 19
- **Concrete roof tile** 12

**Composition Roofing:**
- **Three-ply ready roofing** \(^{(1)}\) 1
- **Four-ply felt and gravel** \(^{(1)}\) 5.5
- **Five-ply felt and gravel** \(^{(1)}\) 6
  - **20 gage metal deck** \(^{(1)}\) 2.5
  - **18 gage metal deck** \(^{(1)}\) 3
  - **0.05" thick polyvinyl chloride polymer membrane** \(^{(2)}\) 0.35
  - **1" fiberglass batt insulation** 0.04
  - **1" loose fiberglass insulation** 0.04
  - **1" loose cellulose insulation** 0.14

**FLOOR (cont.):**
- **Hardwood flooring, 7/7-in** \(^{(1)}\) 4
- **1/4" linoleum or asphalt tile** \(^{(1)}\) 1
- **BCI/AJS\(^{®}\) joists @ 16" o.c., 3/4" sheathing, 1/2" gypsum board** 10
- **3/4" Gyp-Crete\(^{®}\) topping** 6.5
- **Carpet & Pad** 2.0

**Waterproofing Membranes:**
- **Bituminous, smooth surface** \(^{(1)}\) 1.5
- **Liquid applied** \(^{(1)}\) 1

### SHEATHING
- **11/32" or 3/8" Plywood – OSB\(^{(3)}\)** 1.0 - 1.2
- **15/32" or 1/2" Plywood - OSB\(^{(3)}\)** 1.4 - 1.7
- **19/32" or 5/8" Plywood - OSB\(^{(3)}\)** 1.8 - 2.1
- **23/32" or 3/4" Plywood - OSB\(^{(3)}\)** 2.2 - 2.5
- **7/8" Plywood - OSB\(^{(3)}\)** 2.6 - 2.9
- **1 1/8" Plywood - OSB\(^{(3)}\)** 3.3 - 3.6

**1/2" cementitious backerboard** 3
- **1-1/2" softwood T & G decking** 4.6

### FRAMING
- **2x4 @ 16" o.c.** 1.1
- **2x6 @ 16" o.c.** 1.7
- **2x8 @ 16" o.c.** 2.2
- **2x10 @ 16" o.c.** 2.9
- **2x12 @ 16" o.c.** 3.5

**BCI\(^{®}\):**
- **4500s, 5000 or 5000s @ 12" o.c.** 2.0 – 2.9
- **4500s, 5000 or 5000s @ 16" o.c.** 1.5 – 2.2
- **4500s, 5000 or 5000s @ 19.2" o.c.** 1.3 – 2.8
- **4500s, 5000 or 5000s @ 24" o.c** 1.0 – 1.5

**BCI\(^{®}\):**
- **6000 or 6000s @ 12" o.c.** 2.2 – 3.4
- **6000 or 6000s @ 16" o.c.** 1.7 – 2.6
- **6000 or 6000s @ 19.2" o.c.** 1.4 – 2.1

**BCI\(^{®}\):**
- **60, 60s, 6000 or 6500s @ 24" o.c.** 1.1 – 1.7
- **60, 60s, 6500 or 6500s @ 12" o.c.** 2.3 – 3.8
- **60, 60s, 6500 or 6500s @ 16" o.c.** 1.7 – 2.9
- **60, 60s, 6500 or 6500s @ 19.2" o.c.** 1.4 – 2.4
- **60, 60s, 6500 or 6500s @ 24" o.c.** 1.2 – 1.9
- **90 or 90s @ 12" o.c.** 3.9 – 4.9
- **90 or 90s @ 16" o.c.** 2.9 – 3.7
- **90 or 90s @ 19.2" o.c.** 2.4 – 3.1
- **90 or 90s @ 24" o.c.** 1.9 – 2.5

**AJS\(^{®}\):**
- **140, 150, 190 or 20 @ 12" o.c.** 2.2 – 3.3
- **140, 150, 190 or 20 @ 16" o.c.** 1.7 – 2.5
- **140, 150, 190 or 20 @ 19.2" o.c.** 1.4 – 2.1
- **140, 150, 190 or 20 @ 24" o.c.** 1.1 – 1.7
- **25 or 30 @ 12" o.c.** 3.1 – 3.9
- **25 or 30 @ 16" o.c.** 2.3 – 2.9
- **25 or 30 @ 19.2" o.c.** 1.9 – 2.4
- **25 or 30 @ 24" o.c.** 1.6 – 2.0

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**WALL**

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Quantity</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>5/16” x 7-1/2” fiber cement lap siding</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4” clay brick</td>
<td>39</td>
<td>(1)</td>
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<tr>
<td>1/4” ceramic wall tile</td>
<td>3.1</td>
<td>(1)</td>
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<tr>
<td>1 3/4” Cultured Stone®</td>
<td>12</td>
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<tr>
<td>2x4 studs @ 16” o.c., 5/8” gypsum, insulation, 3/8” siding</td>
<td>11</td>
<td>(1)</td>
</tr>
<tr>
<td>2x6 studs @ 16” o.c., 5/8” gypsum, insulation, 3/8” siding</td>
<td>12</td>
<td>(1)</td>
</tr>
<tr>
<td>Wood or steel studs, 1/2” gypsum board</td>
<td>8</td>
<td>(1)</td>
</tr>
<tr>
<td>Exterior stud walls w/ brick veneer</td>
<td>48</td>
<td>(1)</td>
</tr>
<tr>
<td>Windows: glass, frame and sash</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Stucco</td>
<td>10</td>
<td></td>
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<tr>
<td>Log Wall: 10” diameter</td>
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<tr>
<td>Glass Block</td>
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</tr>
<tr>
<td>4” thick - standard (hollow)</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>3” thick - standard (hollow)</td>
<td>16</td>
<td></td>
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<tr>
<td>4” thick - thick face</td>
<td>30</td>
<td></td>
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<tr>
<td>3” thick - solid glass block</td>
<td>40</td>
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**MISCELLANEOUS**

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Quantity</th>
<th>Notes</th>
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<tbody>
<tr>
<td>1” of sand</td>
<td>8</td>
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<tr>
<td>1” of water</td>
<td>5.2</td>
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</tr>
<tr>
<td>Hay: baled (dry)</td>
<td>15 PCF</td>
<td>(2)</td>
</tr>
<tr>
<td>Straw: baled (dry)</td>
<td>8 PCF</td>
<td>(2)</td>
</tr>
<tr>
<td>Saturated soil (garden/landscaped roof)</td>
<td>135 PCF</td>
<td></td>
</tr>
<tr>
<td>Grand Piano</td>
<td>1000 LB</td>
<td></td>
</tr>
</tbody>
</table>

Include at least 1.5 psf in all dead load summations to account for incidentals such as plumbing, ducts, light fixtures, etc.

(2) *National Farm Building Code (Canada) 1995. Value in pounds per cubic foot (PCF), multiply by maximum height to obtain PSF.*
(3) *Approximate Engineering Dead Load Weight of Wood Structural Panels, APA EWS TT-019, 1998.*
(4) *Duro-Last General Specifications, Duro-Last Roofing, Inc. 2005*