### Framing Installation

**Critical Details**

Items in **bold** are a requirement of the ENERGY STAR Homes Northwest Program.

<table>
<thead>
<tr>
<th>PRE-CHECK</th>
<th>SELF-CHECK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Slab edge insulation is installed where required</td>
</tr>
<tr>
<td>2</td>
<td>Work site is broom cleaned and all safety precautions are taken prior to beginning work</td>
</tr>
<tr>
<td></td>
<td><em>Installer's Name ___________________________ Date _____________</em></td>
</tr>
<tr>
<td>1</td>
<td>Bottom plates of all exterior walls and party/common walls (ALL floors), and vertical members at foundation step downs are caulked, gasketed, or glued</td>
</tr>
<tr>
<td>2</td>
<td>There is both a top and bottom plate installed at every knee wall</td>
</tr>
<tr>
<td>3</td>
<td>All knee walls are backed with a rigid material (e.g. wall to attic, skylight shaft, wall to porch roof, staircase to attic)</td>
</tr>
<tr>
<td>4</td>
<td>All dropped ceilings/soffits are capped with a rigid material on the attic side and/or the exterior wall</td>
</tr>
<tr>
<td>5</td>
<td>All shafts/chases are capped</td>
</tr>
<tr>
<td>6</td>
<td>Insulation is installed behind showers, tubs, and fireplaces on exterior, attic, and party walls and rigid sheathing or other supporting material is installed to hold insulation in place</td>
</tr>
<tr>
<td>7</td>
<td>All floor system cavities between conditioned areas and unconditioned areas (e.g. floor/garages, bonus rooms/attic, cantilevers, porch/floor) are separated by blocking and air sealed</td>
</tr>
<tr>
<td>8</td>
<td>Overhanging floor cavities are insulated before being enclosed with rigid sheathing. Sheathing is attached to the underside of the cantilever. This can be the exterior finish material if it is continuous and air sealed</td>
</tr>
<tr>
<td>9</td>
<td>Gypsum shaft walls (e.g., common wall, area separation wall) are capped, closed, or sealed at all exterior boundaries (i.e. top and sides) (MULTIFAMILY ONLY)</td>
</tr>
<tr>
<td>10</td>
<td>Double wall conditions are backed with rigid material on the exterior side of the interior wall, or are entirely filled with insulation</td>
</tr>
<tr>
<td>11</td>
<td>Work site is broom cleaned after work is complete</td>
</tr>
</tbody>
</table>

**Verifier**

This Verification form should be signed and filled out by the Installer. Signing this form certifies that all Critical Details are correct and are as designated.

Installer Name ___________________________ Date _____________

Builder Name ___________________________ Builder's Job #: _____________

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**ENERGY STAR® HOMES NORTHWEST**  
**CERTIFICATION REQUIREMENTS**  
Single Family Homes

Builder Option Packages (BOP's area a prescriptive method for labeling new homes ENERGY STAR. All requirements of the NWBOP shall be met in order to qualify a home for ENERGY STAR Homes Northwest certification and verification by an ENERGY STAR Homes Northwest Verifier. **HIGHLIGHTED** sections pertain to the Critical Details on the opposite side of this sheet.

<table>
<thead>
<tr>
<th>Insulation</th>
<th>NWBOP 1</th>
<th>NWBOP 2</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceiling</td>
<td>R-38</td>
<td>R-38</td>
<td>Flat or vaulted.</td>
</tr>
</tbody>
</table>
| Wall            | R-21    | R-21 + 2.5 sheath | BOP 1: R-19 is optional with advanced framing techniques.  
BOP 2: R-21 is optional with advanced framing techniques.  |
| Floors Over Unconditioned Space | R-30    | R-30    | Insulation in floor joist cavity. Perimeter insulation is not allowed.  |
| Slab Floors     |         |         | Applies to all concrete slab floors above or below grade. R-5 thermal breaks at slab edge. Perimeter insulation shall be installed for a distance of 2 feet vertical, horizontal, or combined distance. In areas east of the Cascade mountains, 4 feet is recommended.  |
|                 | Unheated| R-10 Perimeter | R-10 Perimeter |
|                 | Heated  | R-10 Full Slab | R-10 Full Slab |
| Basement Wall   | R-19    | R-19    | Below grade walls can extend up to 24 inches above grade.  |

<table>
<thead>
<tr>
<th>Windows &amp; Doors</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Glazing</td>
<td>Windows</td>
<td>U-0.35</td>
<td>U-0.30</td>
</tr>
<tr>
<td></td>
<td>Skylights</td>
<td>U-0.50</td>
<td>U-0.50</td>
</tr>
<tr>
<td></td>
<td>Max. Glazing Area</td>
<td>21% of Heated Floor Area</td>
<td>21% of Heated Floor Area</td>
</tr>
<tr>
<td>Windows</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doors</td>
<td>R-5</td>
<td>R-5</td>
<td>One door up to 28 ft² exempt.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ducts</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sealing</td>
<td>Mastic</td>
<td>Mastic</td>
<td>Tapes not allowed.</td>
</tr>
<tr>
<td>Max. Leakage</td>
<td>&lt;0.06 CFM per ft²</td>
<td>&lt;0.06 CFM per ft²</td>
<td>All forced air heating and cooling system ducts shall be installed according to ENERGY STAR Homes Northwest Specifications for sizing and leakage. Performance testing is required.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ventilation &amp; Air Sealing</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ventilation System</td>
<td>Exhaust Ventilation</td>
<td>Central ventilation with 70% heat recovery</td>
<td>BOP 1 ONLY: Local code requirements are deemed to satisfy this requirement.</td>
</tr>
</tbody>
</table>
| envelope tightness        | 7.0 ACH @ 50 Pa | 2.5 ACH @ 50 Pa | BOP 1: Local code requirements for air sealing are deemed to satisfy this requirement.  
BOP 2: Air tightness in this path must be verified by blower door test before certification is granted.  |

<table>
<thead>
<tr>
<th>Heating &amp; Cooling Equipment</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Furnace</td>
<td>90 AFUE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heat Pump</td>
<td>8.5 HSPF / SEER 13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air Conditioner</td>
<td>SEER 13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propane or Oil Furnace</td>
<td>≥ 80 AFUE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Heating</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Gas</td>
<td>≤ 60 gal</td>
<td>EF ≥ 0.61</td>
<td>EF ≥ 0.61</td>
</tr>
<tr>
<td></td>
<td>&gt; 60 gal</td>
<td>EF ≥ 0.60</td>
<td>EF ≥ 0.60</td>
</tr>
<tr>
<td>Electric</td>
<td>≤ 70 gal</td>
<td>EF ≥ 0.93</td>
<td>EF ≥ 0.93</td>
</tr>
<tr>
<td></td>
<td>&gt; 70 gal</td>
<td>EF ≥ 0.92</td>
<td></td>
</tr>
<tr>
<td>Water Heating</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Gas</td>
<td></td>
<td></td>
<td></td>
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<td>Electric</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Appliances &amp; Lighting</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Appliances</td>
<td>ENERGY STAR Qualified</td>
<td>ENERGY STAR Qualified</td>
<td>Applies to built-in appliances only.</td>
</tr>
<tr>
<td>Lighting</td>
<td>ENERGY STAR Qualified</td>
<td>ENERGY STAR Qualified</td>
<td>A minimum of 50% of sockets to be either ENERGY STAR bulbs, fixtures, or both.</td>
</tr>
</tbody>
</table>