**ENERGY STAR Homes Northwest Tech Tips**

**DUCTWORK CRITICAL DETAILS**

**COMPONENTS** — All HVAC supply and return ducts, air handlers, and plenums inside and outside the heated space are sealed at all joints and corners, including prefabricated joints, with approved mastic.

**FLEX DUCTS** — Flexible ducts are attached to the inner liner using nylon/plastic/Panduit® straps tightened with a manufacturer approved tool. Tape of any kind is not a mechanical fastener.

**METAL DUCTS** — All new duct joints, plenum drives, metal joints to include all slips and drives are mechanically fastened with screws. Tape of any kind is not a mechanical fastener.

**INSULATION** — All ducts, plenums, and supply/return boots outside the conditioned space (including exterior wall cavities) must be completely insulated to an installed value of at least R-8.

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4. **NO FAKE DUCTS** – Unlined building cavities are not used as ducts.

5. **ZONAL PRESSURE RELIEF** – Conditioned rooms without dedicated returns (except baths, laundry, and closets) have jump ducts, transfer grills, or door undercuts to provide return air paths.

7. **DUCT SUPPORT** – Ducts shall be cut to length and supported in such a manner to prevent air flow constriction.
**SUPPORT & BENDS** — Flexible duct (including spot ventilation) is supported at least every 4 feet and has no bends greater than 90°

**PENETRATIONS** — All HVAC penetrations to exterior/unconditioned space (e.g. chases, shafts, refrigerant lines, etc) are air sealed with foam, caulk, or mastic. NO fibrous insulation is used to fill holes.

**SPOT VENTILATION** — Spot ventilation (exhaust) duct work terminates to daylight.