## MUNICIPALITY OR THIRD-PARTY AGENCY LETTERHEAD

### PENNSYLVANIA RESIDENTIAL ENERGY PLAN REVIEW CHECKLIST

Building ID: __________  Date: __________  Name of Plans Examiner: ________________________________

Building Contact Name: ___________________________  Phone: __________  Email: ________________________________

Building Address: __________________________________________

### COMPLIANCE PATH

- [ ] 2015 IECC/IRC Ch. 11 – Prescriptive
- [ ] 2015 IECC/IRC Ch. 11 – UA Alternative (Rescheck)\(^{1}\)
- [ ] 2015 IECC/IRC Ch. 11 – Simulated Performance Alt.\(^{2}\)
- [ ] 2015 IECC/IRC Ch. 11 – Energy Rating Index Alt.
- [ ] 2018 Pennsylvania Alternative (PA-Alt)

### BUILDING THERMAL ENVELOPE

#### Insulation R-Values and Fenestration U-factors

Insulation values are shown on plans and all values meet or exceed the values in R402.1.2. Otherwise, compare values on plans to passing Rescheck, Energy Cost Compliance, or ERI report.

| Insulation Type                  | R-Value
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceiling with attic space</td>
<td>Y N NA</td>
</tr>
<tr>
<td>Ceiling w/o attic space</td>
<td>Y N NA</td>
</tr>
</tbody>
</table>

#### Air Barrier and Insulation Details:

- [ ] Slab on grade with insulation extending downward from the top of the slab
- [ ] Insulated corners: Framing allows space for insulation
- [ ] Insulated headers: Insulation installed in headers as space allows
- [ ] Fireplaces on exterior walls: Air barrier between insulation and fireplace insert
- [ ] Dropped ceiling/soffit: Air barrier aligned with insulation
- [ ] Porch roofs: Exterior wall sheathing extends behind intersection with porch roof
- [ ] Skylight shafts: Shaft walls are insulated and include attic-side air barriers
- [ ] Showers/tubs on exterior walls: Air barrier located between wall insulation and the shower/tub
- [ ] Knee walls: Air barrier on attic side of knee wall, top plate installed, blocking between floor joists under knee wall
- [ ] Blocking between joists above walls separating garages from conditioned space
- [ ] Cantilevered floors: Insulated with solid air barriers underneath insulation and blocking between joists
- [ ] Attic access hatches: Weatherstrapped and insulated to the same R-value as the surrounding surface

#### Opaque windows

- [ ] Skylights: Y N NA
- [ ] Opaque doors: Y N NA

#### Mass walls (>50% above grade)

| Mass Wall Type                  | R-Value
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1st through 3rd floors</td>
<td>Y N NA</td>
</tr>
<tr>
<td>Enclosing a conditioned basement</td>
<td>Y N NA</td>
</tr>
</tbody>
</table>

#### Floors

| Floor Type                      | R-Value
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Over outside air (e.g. cantilever)</td>
<td>Y N NA</td>
</tr>
<tr>
<td>Over vented crawl space</td>
<td>Y N NA</td>
</tr>
<tr>
<td>Over unconditioned basement</td>
<td>Y N NA</td>
</tr>
</tbody>
</table>

#### Foundation

| Foundation Type                | R-Value
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Basement walls</td>
<td>Y N NA</td>
</tr>
<tr>
<td>Unvented crawl space walls</td>
<td>Y N NA</td>
</tr>
<tr>
<td>Slabs on grade(^{3})</td>
<td>Y N NA</td>
</tr>
</tbody>
</table>

\(^{1}\) Notes indicate that insulation is to be installed per manufacturer’s installation instructions or RESNET Grade I

Document prepared by Performance Systems Development with support funding from the Pennsylvania Department of Environmental Protection and the US Department of Energy’s State Energy Program
MECHANICAL SYSTEMS

Thermostats
☐ R403.1.1 All thermostats are programmable

Ducts and Air Handler
☐ R403.3.1 Notes or drawings specify insulation for ducts in unconditioned spaces
   ≥ 3” diameter insulated to ≥ R-8 in attics and ≥ R-6 elsewhere
   < 3” diameter insulated to ≥ R-6 in attics and ≥ R-4.2 elsewhere
☐ R403.2.2.1 Equipment specs indicate air handler has ≤ 2% air leakage when tested per ASHRAE 193

HVAC Piping
☐ R403.4 Notes or drawings indicate R-3 minimum HVAC pipe insulation (e.g. hydronic systems, refrigerant lines)
☐ R403.4 Notes or drawings indicate HVAC pipe insulation protection for pipes/insulation located outdoors (e.g. refrigerant lines)

Review HVAC Design Worksheet – Page 1 (HVAC Equipment)
☐ R403.7 Manual J report, including heating and cooling design loads, is attached
☐ Manual S. Specified cooling equipment capacity is ≤ 1.15 times the design load or the next larger nominal size, whichever is greater. (Exception: Heat pumps may exceed the design load by 1.25 times the next nominal size.)
☐ Manual S. Specified heating equipment capacity is ≤ 1.40 times the design load or the next larger nominal size, whichever is greater

Whole-House Mechanical Ventilation
☐ IRC R303.4 Whole-house mechanical ventilation worksheet has been completed by applicant
☐ IRC M1507.3.3 Required airflow (CFM) input correctly based on conditioned floor area and number of bedrooms
☐ IRC M1507.3.3 Specified fan airflow (CFM) is ≥ required airflow (CFM)
☐ IRC M1507.3.3 Specified fan has controls to operate fan continuously or intermittently
☐ R402.6.1 Specified fan efficacy (CFM/watt) is ≥ required fan efficacy (CFM/watt)

Documentation
☐ R403.3.3 Blank Duct and Envelope Testing Form has been provided to the permit applicant with approved plans

LIGHTING
☐ Notes indicate 75% of lamps in permanently installed fixtures will be high-efficacy (or 75% of fixtures contain only high-efficacy lamps)

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1 Applicant must provide the compliance certificate and inspection checklist generated by REScheck (or other approved UA calculation tool)
2 Applicant must provide compliance certificate and inspection checklist, including proposed infiltration and duct leakage rates. To receive a certificate of occupancy, blower door and duct leakage test results must be provided to verify that the leakage rates are not exceeded.
3 A minimum of R-19 may be installed when using the Pennsylvania Alternative
4 Slab insulation is required anywhere the space above the slab is conditioned and the floor is location 12” or less below grade. This may include portions of walkout basements. A half-inch thermal break instead of a full R-10 is allowed under the Pennsylvania Alternative

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