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 (RES*check*)[i]

☐ 2015 IECC/IRC Ch. 11 – Simulated Performance Alt.[ii]

☐ 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 RES*check*, Energy Cost Compliance, or ERI report			
Ceilings			
Ceiling with attic space	Y	N	NA
Ceiling w/o attic space	Y	N	NA
Above grade framed walls			
Typical above grade walls	Y	N	NA
Attic knee walls	Y	N	NA
Rim/band joists	Y	N	NA
Walkout portion of basement	Y	N	NA
Fenestration			
Windows	Y	N	NA
Skylights	Y	N	NA
Opaque doors	Y	N	NA
Mass walls (>50% above grade)			
1st through 3rd floors	Y	N	NA
Enclosing a conditioned basement	Y	N	NA
Floors			
Over outside air (e.g. cantilever)	Y	N	NA
Over vented crawl space	Y	N	NA
Over unconditioned basement[iii]	Y	N	NA
Foundation			
Basement walls	Y	N	NA
Unvented crawl space walls	Y	N	NA
Slabs on grade[iv]	Y	N	NA

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: Weatherstripped and insulated to the same R-value as the surrounding surface

☐ 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

MUNICIPALITY OR THIRD-PARTY AGENCY LETTERHEAD

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 or 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)

---

[i] Applicant must provide the compliance certificate and inspection checklist generated by RES*check* (or other approved UA calculation tool)

[ii] 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.

[iii] A minimum of R-19 may be installed when using the Pennsylvania Alternative

[iv] 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

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