



Code Administrators, Inc.

Plan Review ~ Code Inspection ~ Code Consulting ~ Code Education ~ Code Development
York Lancaster

4184 Lincoln Highway • York, PA 17406
Phone: 717.755.9120 • Fax: 717.755.9135

4340 Oregon Pike • Ephrata, PA 17522
Phone: 717.859.3350 • Fax: 717.859.3363

REQUIREMENTS FOR THE ENERGY CODE 1 & 2 FAMILY DWELLINGS USING THE PENNSYLVANIA ALTERNATIVE

Using PHRC

- Lancaster County is in the Central zone; York County is in the South zone
- Table PA401.1

	Central	South
✓ Fenestration (windows) Max U-Factor	.35	.40
✓ Skylights Max U-Factor	.60	.60
✓ Roof/ceiling (min)	R-38	R-38
✓ Wood framed enclosure walls (min)	R-19	R-13
✓ Floors over non-conditioned space (min)	R-30	R-19
✓ Slab perimeter R-value & depth (min)	R-10; 2'	R-10; 2'
✓ Basement walls (min)	R-10; R-13	R-10; R-13
✓ Crawlspace walls (min)	R-10; R-13	R-10; R-13

Exemptions

The following buildings and portions of buildings are exempted from the requirements of this chapter:

- Historic building exemption is regulated by Section 902 of act 45 of 1999
- An addition to an existing building shall comply with the provisions of this chapter. However, the existing building is not required to comply with the provisions of this chapter.
- Buildings or portions of a building that do not enclose a conditioned space

Air Leakage

All seams, penetrations & joints (especially those between window or door assemblies and their respective jambs and framing), and other areas of air leakage (infiltration and exfiltration) through the thermal envelope must be sealed (caulked, gasketed, weather-stripped, wrapped, taped)

Recessed Lighting Fixtures (one of the methods listed above must be used)

- Type IC fixtures with no penetrations and sealed to prevent air leakage
- Type IC or non-IC installed in a sealed box made of ½" gypsum wallboard or other manufactured airtight assembly installed to meet required clearances
- Type IC airtight & tested to not allow more than 2.0 cfm of airflow from the conditioned space into the ceiling cavity



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Mass Walls

Mass walls shall be permitted to meet the Mass Wall criteria listed in Table PA401.1, based on the insulation position.

MASS WALL PRESPECTIVE BUILDING ENVELOPE REQUIREMENTS FOR ZONE S (PA401.2.3)	
Minimum mass wall assembly added R-value for walls without external or integral insulation	
South	Central
R-10	R-13

- For walls with exterior insulation, the effective mass shall be internal to the insulation layer. For walls in which the insulation is integral, either the insulation and the mass materials shall be well mixed (e.g. wood logs); or there shall be substantially equal amounts of mass material on each side of the insulation (e.g. concrete masonry units with insulated cores or masonry cavity walls).

Basements

Conditioned environment (mechanically conditioned air) R-10 continuous or R-13 cavity at exterior walls

Non-conditioned environment requires R-10 continuous or R-13 cavity on exterior walls or R-30 in the floor above.

Crawlspaces

Un-vented to outside – requirements are the same

As for basements, mechanical ventilation is required

If crawlspace is vented to the outside, the floor above should be insulated with R-30

Trade-offs

Qualifying buildings shall be permitted to apply the high efficiency equipment trade-off (PA501 & PA 502)

Any one of the tradeoffs to reduce thermal envelope requirements may be used instead of the related requirements in Section PA400 if the dwelling meets or exceeds the following minimum equipment efficiency:

(see table next page)