

RESIDENTIAL ENERGY (EXISTING BUILDINGS) PLAN REVIEW CHECKLIST

Identify the project scope and refer to the appropriate checklist.

<input type="checkbox"/>	Historical Building Alterations
<input type="checkbox"/>	Addition to an Existing Building
<input type="checkbox"/>	Alterations to an Existing Building

HISTORICAL BUILDINGS

<input type="checkbox"/> Complies	C501.6 Historical Buildings. If the applicant is taking an energy code exemption, a report, signed by a registered design professional, or a representative of the Philadelphia Historical Commission, demonstrating that compliance with that provision would threaten, degrade or destroy the historic form, fabric or function of the building. Otherwise, refer to the ALTERATIONS section of this checklist.
<input type="checkbox"/> Does not comply	
<input type="checkbox"/> N/A	

ADDITIONS

R502.1 Additions to an existing building, building system or portion thereof must be treated like new construction for envelope, mechanical, service hot water, and electric power & lighting, except for the fenestration requirements below. Use the [IECC Residential Plan Review Checklist](#) with the following exceptions.

Converting Unconditioned Spaces to Conditioned Spaces

R502.1.1.1 **Total UA Alternative Option Exception:** Where unconditioned space is converted to conditioned space, the building envelope UA complies when the existing building (including any alterations) plus the newly conditioned space is \leq the UA of the existing building prior to the addition. (UA existing building + addition \leq UA existing building)

R502.1.2 **Simulated Performance Alternative Option:** Exception: Where unconditioned space is converted to conditioned space, the addition complies when the annual energy cost or use of the existing building (including any alterations) plus the newly conditioned space is \leq the energy cost or use of the existing building prior to the addition when modeled per R405. (Energy use of existing building + addition \leq energy use of existing building)

Heating and Cooling Systems

<input type="checkbox"/> Complies	R503.1.2 New heating, cooling, and duct systems that are a part of the alteration comply as they would for new construction (R403). Refer to the IECC Residential Plan Review Checklist . Exception: Where ducts from an existing heating and cooling system are extended to an addition, duct leakage testing is not required, provided the new ducts have <40 linear feet in unconditioned spaces.
<input type="checkbox"/> Does not comply	
<input type="checkbox"/> N/A	

ALTERATIONS

General

<input type="checkbox"/> Complies	R503.1 The alteration or alterations do not make the existing structure less energy efficient.
<input type="checkbox"/> Does not comply	
<input type="checkbox"/> N/A	

Converting Unconditioned Spaces to Conditioned Spaces

R503.2 Unconditioned spaces or low-energy spaces converted to conditioned space are brought into full compliance with the energy code for new construction. Refer to the [IECC Residential Plan Review Checklist](#).

Exception: When using the simulated performance option (R405), the annual energy cost of the proposed design is permitted to be up to 110% the energy cost of the reference design.

Building Thermal Envelope

R503.1.1 **New thermal building envelope components** that are part of the alteration comply as they would for new construction. Refer to the [IECC Residential Plan Review Checklist](#).

Complies

Does not comply

N/A

R503.1.1 **Existing ceiling, wall, and floor cavities** exposed during construction are filled with insulation. (Existing cavities do not need to meet the R-value requirements for new construction. Cavities that are not exposed during construction do not need to be insulated.)

Roof Recovers and Replacements

Exempt from energy requirements

R503.1.1 Alterations to roofs comprised of installing an additional covering over an existing roof without removing the existing covering

Heating and Cooling Systems

R503.1.2 New heating, cooling, and duct systems that are a part of the alteration comply as they would for new construction (R403). Refer to the [IECC Residential Plan Review Checklist](#).

Exception: Where ducts from an existing heating and cooling system are extended to an addition, duct leakage testing is not required, provided the new ducts have <40 linear feet in unconditioned spaces.

Service Hot Water Systems

R503.1.3 New service hot water systems that are a part of the alteration comply as they would for new construction (403.5). Refer to the [IECC Residential Plan Review Checklist](#).

Lighting Systems

R503.1.4 New lighting systems that are part of the alteration comply as they would for new construction (R503.1.4). Refer to the [IECC Residential Plan Review Checklist](#).

Exception: Alterations replacing <50% of luminaires are exempt, provide they do not increase the demand for energy.