## CT or Jurisdiction Logo here

## **Residential Plan Review Checklist**

2018 CT Energy Code/2015 IECC as Amended by CT

Project #: XX.XXXX.XX- Date: Name of Evaluator(s):

Building Contact: Name: Phone: Email:

Building Name & Address:

Subdivision:			Lot #:			Co	onditioned F	loor Area:	ft <sup>2</sup>
Climate Zone	e: County:		Jurisdiction	:					
Compliance	Approach: Prescriptive Tra	de-Off	Performance		Com	pliance	Software	☐ Other	
Compliance	Software Used:			Gre	en Bı	uilding/	Above-Code	Program?	☐ Yes ☐ No
Building Type	e: 1- and 2-Family, Detached:	☐ Single Fa	nmily 🔲 M	lodula	ar	□т	ownhouse		
	Multifamily:	☐ Apartmer	nt 🗆 C	ondo	miniu	m			
Project Type	: New Building Ex	xisting Buildir	ng Addition			xisting	Building Re	novation	
Special Cons	siderations:	istoric Buildin	g			omme	rcial Space		
Provisions I	Highlighted in Blue are Mandatory,	Regardless (	of Compliand	e Pat	th				
IECC		Codo	Verified	С	ompl	ies			
Section #	Pre-Inspection/Plan Review	Code Value	Value	Υ	N	N/A	Com	ments/Assu	ımptions¹
R103.2	Construction drawings and documentation available.								
	Documentation sufficiently demonstrates energy code								
Insulation m	compliance. aterials and their R-values								
Fenestration				H	H				
Area-weighte									
	system design criteria								
Mechanical a	and service water heating system and	equipment ty	pes, sizes						
	nd systems controls			П	П	П			
	, duct and pipe insulation and location	1							
	re schedule with wattage								
Air sealing									
R403.7	Man J&S HVAC calculations: Heating system size(s): Cooling system size(s):		kBtu: kBtu:						
Written State	ement of Compliance from Design Pro	fessional							

<sup>&</sup>lt;sup>1</sup> Use Comments/Assumptions to document code requirements that pass due to exceptions, and specify the exception. Also use Comments/Assumptions to document multiple values observed for a given code requirement, such as multiple equipment efficiencies.

IECC			Verified	C	ompli	es	
Section #	Requirement	Code Value	Value	Υ	N	N/A	Comments/Assumptions
R401.3	Certificate Posting	In furnace/ utility room or approved location	Identify location				
Table R402.1.2	Slab edge insulation R-value.	Unheated: R-10 Heated: R-15	R Unheated Heated				
Table R402.1.2	Slab edge insulation depth/length.	2 ft. Z- 4 & 5 4 ft. Z-6	ft.				
Table R402.1.2	Basement wall insulation R-value <sup>i</sup> .	Continuous: R-10 Z-4 R-15 Z-5, Z-6 Cavity: R-13 Z-4 R-19 Z-5, Z-6	R				
R402.2.9	Basement wall insulation depth.	10 ft. or to basement floor	ft.				
Table R402.1.2 And	Crawl space wall insulation R-value. From floor to finished grade, plus 2' vertical or horizontal	Continuous: R-10 Z-4 R-15 Z-5, Z-6 Cavity: R-13 Z-4	R R				
R402.2.11		R-19 Z-5, Z-6					
R402.2.11	Crawl space continuous vapor retarder	Required Class I					
R303.2.1	Exposed foundation insulation protection.	6" below grade					
R403.9	Snow melt controls.	Automatic controls over 50°F					
Table R402.1.2	Fenestration U-factor <sup>ii</sup>	Max: U-0.35 Z-4 U-0.32 Z5, Z-6	U				
R402.5	Maximum Fenestration U-factor, Area weighted average (trade-offs)	Max: U-0.48 Z-4, Z-5 U-0.40 Z-6	U				
Table R402.1.2	Glazed Fenestration SHGC	Max: 0.40 Z-4 NR Z-5, Z-6	SHGC				
R402.4.3	Glazed fenestration air leakage.	0.3 cfm/ft <sup>2</sup> max	cfm/ ft <sup>2</sup>				
	Window Manufacturer				-		
R402.4.3	Sliding door air leakage.	0.3 cfm/ft <sup>2</sup> max	cfm/ ft <sup>2</sup>				
R402.4.3	Swinging door air leakage	0.5 cfm/ft <sup>2</sup> max	cfm/ ft <sup>2</sup>				
	Door Manufacturer						
Table R402.1.2	Floor insulation R-value.	Wood: R-19 Z-4 R-30 Z- 5 & 6 <sup>iii</sup> Steel: <sup>iv</sup> See footnote	R Wood Steel				
Table R402.1.2	Wall insulation R-value	Wood: Z-4 and Z-5 = R-20 or R-13+5 Z-6 = R-20+5 or 13+10 Steel: <sup>v</sup> See footnote	R				

IECC			Verified	Co	ompli	es	
Section #	Requirement	Code Value	Value	Υ	N	N/A	Comments/Assumptions
Table R402.1.2	Ceiling insulation R-value	Wood: R-49 (All Zones)	R				
N402.1.2		Steel Truss <sup>vi</sup> R-38+5	☐ Wood ☐ Steel				
R402.2.3	Eave Baffle	For air- permeable insulation					
Table R402.1.2	Mass wall insulation R-value.	R-8/13 Z-4 <sup>vii</sup> R-13/17 Z-5 <sup>vii</sup> R-15/20 Z6 <sup>vii</sup>	R				
R402.2.13	Sunroom wall insulation (Enclosing conditioned space)	Per Table R402.1.2	R				
R402.2.13	Sunroom wall insulation (Thermally isolated and conditioned)	R-13 All climate zones	R				
R402.2.13	Sunroom ceiling insulation (Enclosing conditioned space)	Per Table R402.1.2	R				
R402.2.13	Sunroom ceiling insulation (Thermally isolated and conditioned)	R-19 Z-4 R-24 Z-5, Z-6	R				
R402.3.5	Sunroom glazing U-factor (Enclosing conditioned space)	Per Table R402.1.2	U				
R402.3.5	Sunroom glazing U-factor (Thermally isolated and conditioned)	U-0.45 max. (All Zones)	U				
R402.3.5	Sunroom skylight U-factor (Enclosing conditioned space)	Per Table R402.1.2	U				
R402.3.5	Sunroom skylight U-factor (Thermally isolated and conditioned)	U-0.70 max. (All Zones)	U				
	Skylight Manufacturer						
R402.2.4	Attic access hatch and door (insulation)	R-49 (All Zones)	R				
R402.2.4	Attic access hatch and door (weather-stripping)	Wood frame or equivalent insul. retainer					
R402.4.6	Tenant separation walls	R-10 w/ air seal	R				
R402.4	Air Leakage (Building Thermal Envelope)	All building materials installed per Table R402.1.1					
R402.4.1.2	Air Leakage Testing	3 air changes per hour (All zones)	☐ Stated				
		Blower door test	☐ Stated				
R402.4.5	IC-rated recessed lighting fixtures meet infiltration criteria.	2.0 cfm air leakage	☐ Stated				
		Sealed	☐ Stated				
R402.4.4	Rooms containing fuel burning appliances	Outside or enclosed in a room	☐ Meets exceptions				
R402.1.1	Vapor Retarder (IRC R702.7)	Class I or II (Zones 5 and 6 only)					
R403.1.1	Thermostat	Programmable					

IECC			Verified	Complies		es	
Section #	Requirement	Code Value	Value	Υ	N	N/A	Comments/Assumptions
R403.3.1	Duct insulation.	Supply & Return in Attics: R-8 for ≥3" Dia. R-6 for <3" Dia.  Other: R-6 for ≥3" Dia. R-4.2 for <3" Dia.	☐ Inside building thermal envelope exception				
R403.3.2	Duct sealing complies with listed sealing methods.	All joints and seams	☐ Meets exception				
R403.3.3	Duct Testing	0.1 inch w.g. pressure differential	☐ Stated				
		Rough-in test required	☐ Stated				
		Post construction test required	☐ Stated				
			☐ Exception				
R403.3.5	Building cavities NOT used as ducts or plenums	Stated? Shown?					
R403.4	HVAC piping insulation.	R-3 (>105°For <55°F)	R				
R403.5.1	Heated water circulation and temperature maintenance system	Per requirements of Section R403.5.1.1 or R403.5.1.2	☐ Circulation System ☐ Heat Trace System				
R403.5.3	Hot water pipe insulation	R-3 per specified locations					
R404.1	Lighting – Minimum 75% of lamps are high efficacy.						
R402.4.2	Wood burning fireplace	Tight-fitting flue damper or doors					
R403.10	Pool heaters, covers, and automatic or accessible manual controls.	Accessible on/off switch. Time Switch					

ii One side-hinged door up to 24 ft² can be exempted from the prescriptive door U-factor requirements. iii Or insulation sufficient to fill the cavity, R-19 minimum. iv Floor steel frame equivalent: See Table R402.2.6 v Wall steel frame equivalent: See Table R402.2.6

vi Steel truss equivalent: See Table R402.2.6
vii The second R-value applies when more than half the insulation is on the interior of the mass wall.

## Table R402.4.1.1 Air Barrier and Insulation Installation

Component	Air Barrier Criteria	Insulation Installation Criteria
General requirements	A continuous air barrier shall be installed in the building envelope. The exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed.	Air-permeable insulation shall not be used as a sealing material.
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation mid any gaps in the air barrier shall be scaled. Access openings, drop down stairs or knee wall doors to unconditioned attic spaces shall be sealed.	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier.
Walls	The junction of the foundation and sill plate shall be sealed. The junction of the top plate and the top of exterior walls shall be sealed Knee walls shall be sealed.	Cavities within comers and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of R-3 per inch minimum. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.
Windows, skylights and doors	The space between window/door jambs and framing, and skylights and framing shall be sealed.	
Rim Joists	Rim joists shall include the air barrier.	Rim joists shall be insulated.
Floors (including above garage And cantilevered floors)	The air barrier shall be installed at any exposed edge of insulation.	Floor framing cavity insulation shall be installed to maintain permanent contact with (he underside of subfloor decking, or floor framing cavity insulation shall be permitted to be in contact with the top side of sheathing, or continuous insulation installed on the underside of floor framing and extends from the bottom to the top of all perimeter floor framing members.
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.	Where provided instead of floor insulation, insulation shall be permanently attached to the Crawlspace walls.
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.	
Narrow cavities		Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity space.
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.	
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the drywall.	Recessed light fixtures installed in the building thermal envelope shall be air tight and IC rated.
Plumbing and wiring		Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring
Shower/tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubs shall separate them from the showers and tubs.	Exterior walls adjacent to showers and tubs shall Be installed.
Electrical/phone box on exterior wall	The air barrier shall be installed behind electrical or communication boxes or air-sealed boxes shall be installed.	
HVAC register boots	HVAC register boots that penetrate building thermal envelope shall be sealed to the subfloor or drywall.	
Concealed sprinklers	When required to be sealed, concealed fire sprinklers shall only be scaled in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.	

## Residential Inspection Checklist 2018 CT Energy Code/2015 IECC as Amended by CT

Project #: X	X.XXXX.XX- Date:	Na	me of Evaluat	tor(s):			
Building Con	tact: Name:	F	Phone:			Email:	
Building Nan	ne & Address:						
Subdivision:			Lot #:			Co	onditioned Floor Area: ft <sup>2</sup>
Climate Zone	e: County:		Jurisdiction	າ:			
Compliance	Approach: Prescriptive Tra	nde-Off	Performance		] Com	pliance	Software
Compliance	Software Used:			Gre	een B	uilding/	Above-Code Program? ☐ Yes ☐ No
Building Type	e: 1- and 2-Family, Detached:	☐ Single Fa	amily 🔲 N	Modula	ar	□⊤	ownhouse
	Multifamily:	☐ Apartme	nt 🗆 C	Condo	miniu	m	
Project Type	: New Building E	xisting Buildi	ng Addition			Existing	Building Renovation
Special Cons	siderations:	listoric Buildir	ng			Comme	rcial Space
Provisions I	Highlighted in Blue are Mandatory,	Regardless	of Complian	ce Pa	th		
IECC		Codo	Varified	C	lamo	ies	
IECC Section #	Pre-Inspection/Plan Review	Code Value	Verified Value	Y	ompl	ies N/A	Comments/Assumptions <sup>1</sup>
	Construction drawings and documentation available. Documentation sufficiently demonstrates energy code						Comments/Assumptions <sup>1</sup>
Section # R103.2	Construction drawings and documentation available. Documentation sufficiently demonstrates energy code compliance.			Υ	N	N/A	Comments/Assumptions <sup>1</sup>
Section # R103.2	Construction drawings and documentation available. Documentation sufficiently demonstrates energy code compliance. aterials and their R-values			Υ	N	N/A	Comments/Assumptions <sup>1</sup>
Section # R103.2	Construction drawings and documentation available. Documentation sufficiently demonstrates energy code compliance. aterials and their R-values U-factors			Υ	N	N/A	Comments/Assumptions <sup>1</sup>
R103.2  Insulation market Fenestration Area-weighted Mechanical states.	Construction drawings and documentation available. Documentation sufficiently demonstrates energy code compliance. aterials and their R-values U-factors ed U-factor system design criteria	Value	Value	Υ	N	N/A	Comments/Assumptions <sup>1</sup>
R103.2  Insulation market Fenestration Area-weighted Mechanical states.	Construction drawings and documentation available. Documentation sufficiently demonstrates energy code compliance.  aterials and their R-values U-factors ed U-factor system design criteria and service water heating system and	Value	Value	Υ	N	N/A	Comments/Assumptions <sup>1</sup>
Insulation ma Fenestration Area-weighte Mechanical and efficience Equipment a	Construction drawings and documentation available. Documentation sufficiently demonstrates energy code compliance. aterials and their R-values U-factors ed U-factor system design criteria and service water heating system and systems controls	Value	Value	Y	N	N/A	Comments/Assumptions <sup>1</sup>
Insulation ma Fenestration Area-weighte Mechanical and efficience Equipment a Duct sealing	Construction drawings and documentation available. Documentation sufficiently demonstrates energy code compliance. aterials and their R-values U-factors ed U-factor system design criteria and service water heating system and systems controls , duct and pipe insulation and location	Value	Value	Υ	N	N/A	Comments/Assumptions <sup>1</sup>
Insulation ma Fenestration Area-weighted Mechanical of Mechanical of and efficience Equipment a Duct sealing Lighting fixtu	Construction drawings and documentation available. Documentation sufficiently demonstrates energy code compliance. aterials and their R-values U-factors ed U-factor system design criteria and service water heating system and systems controls	Value	Value	Y	N	N/A	Comments/Assumptions <sup>1</sup>
Insulation ma Fenestration Area-weighte Mechanical and efficience Equipment a Duct sealing Lighting fixtu	Construction drawings and documentation available. Documentation sufficiently demonstrates energy code compliance. aterials and their R-values U-factors ed U-factor system design criteria and service water heating system and service water heating system and systems controls , duct and pipe insulation and location re schedule with wattage	Value	Value	Y	N	N/A	Comments/Assumptions <sup>1</sup>
Insulation ma Fenestration Area-weighted Mechanical of Mechanical of and efficience Equipment a Duct sealing Lighting fixtu	Construction drawings and documentation available. Documentation sufficiently demonstrates energy code compliance. aterials and their R-values U-factors ed U-factor system design criteria and service water heating system and ies nd systems controls , duct and pipe insulation and location re schedule with wattage  HVAC loads calculations: Heating system size(s):	Value	ypes, sizes	Y	N	N/A	Comments/Assumptions <sup>1</sup>
Insulation ma Fenestration Area-weighte Mechanical and efficience Equipment a Duct sealing Lighting fixtu Air sealing R403.7	Construction drawings and documentation available. Documentation sufficiently demonstrates energy code compliance. aterials and their R-values U-factors ed U-factor system design criteria and service water heating system and service water heating system and systems controls , duct and pipe insulation and location re schedule with wattage  HVAC loads calculations:	d equipment to	ypes, sizes	Y	N	N/A	Comments/Assumptions <sup>1</sup>

<sup>&</sup>lt;sup>1</sup> Use Comments/Assumptions to document code requirements that pass due to exceptions, and specify the exception. Also use Comments/Assumptions to document multiple values observed for a given code requirement, such as multiple equipment efficiencies.

IECC			Verified	C	ompli	es	
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Table R402.1.2	Slab edge insulation depth/length.	2 ft. Z- 4 & 5 4 ft. Z-6	ft.				
Table R402.1.2	Basement wall insulation R-value <sup>i</sup> .	Continuous: R-10 Z-4 R-15 Z-5, Z-6 Cavity: R-13 Z-4 R-19 Z-5, Z-6	R				
R402.2.9	Basement wall insulation depth.	10 ft. or to basement floor	ft.				
Table R402.1.2 And R402.2.11	Crawl space wall insulation R-value. From floor to finished grade, plus 2' vertical or horizontal	Continuous: R-10 Z-4 R-15 Z-5, Z-6 Cavity: R-13 Z-4 R-19 Z-5, Z-6	R				
R402.2.11	Crawl space continuous vapor retarder	Required Class I					
R303.2.1	Exposed foundation insulation protection.	6" below grade					
R403.9	Snow melt controls.	Automatic controls over 50°F					
Table R402.1.2	Fenestration U-factor ii	Max: U-0.35 Z-4 U-0.32 Z5, Z-6	U				
R402.5	Maximum Fenestration U-factor, Area weighted average (trade-offs)	Max: U-0.48 Z-4, Z-5 U-0.40 Z-6	U				
Table R402.1.2	Glazed Fenestration SHGC	Max: 0.40 Z-4 NR Z-5, Z-6	SHGC				
R402.4.3	Glazed fenestration air leakage.	0.3 cfm/ft <sup>2</sup> max	cfm/ ft <sup>2</sup>				
	Window Manufacturer		1		1		
R402.4.3	Sliding door air leakage.	0.3 cfm/ft <sup>2</sup> max	cfm/ ft <sup>2</sup>				
R402.4.3	Swinging door air leakage	0.5 cfm/ft <sup>2</sup> max	cfm/ ft <sup>2</sup>				
	Door Manufacturer		,		1		
Table R402.1.2	Floor insulation R-value.	Wood: R-19 Z-4 R-30 Z- 5 & 6 <sup>iii</sup> Steel: <sup>iv</sup> See footnote	R Wood Steel				
Table R402.1.2	Wall insulation R-value	Wood: Z-4 and Z-5 = R-20 or R-13+5 Z-6 = R-20+5 or 13+10 Steel: <sup>v</sup> See footnote	R Wood  Steel				

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Section #	Requirement	Code Value	Value	Υ	N	N/A	Comments/Assumptions
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R402.2.3	Eave Baffle	For air- permeable insulation					
Table R402.1.2	Mass wall insulation R-value.	R-8/13 Z-4 <sup>vii</sup> R-13/17 Z-5 <sup>vii</sup> R-15/20 Z6 <sup>vii</sup>	R				
R402.2.13	Sunroom wall insulation (Enclosing conditioned space)	Per Table R402.1.2	R				
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R402.2.13	Sunroom ceiling insulation (Thermally isolated and conditioned)	R-19 Z-4 R-24 Z-5, Z-6	R				
R402.3.5	Sunroom glazing U-factor (Enclosing conditioned space)	Per Table R402.1.2	U				
R402.3.5	Sunroom glazing U-factor (Thermally isolated and conditioned)	U-0.45 max. (All Zones)	U				
R402.3.5	Sunroom skylight U-factor (Enclosing conditioned space)	Per Table R402.1.2	U				
R402.3.5	Sunroom skylight U-factor (Thermally isolated and conditioned)	U-0.70 max. (All Zones)	U				
	Skylight Manufacturer						
R402.2.4	Attic access hatch and door (insulation)	R-49 (All Zones)	R				
R402.2.4	Attic access hatch and door (weather-stripping)	Wood frame or equivalent insul. retainer					
R402.4.6	Tenant separation walls	R-10 w/ air seal	R				
R402.4	Air Leakage (Building Thermal Envelope)	All building materials installed per Table R402.1.1					
R402.4.1.2	Air Leakage Testing	3 air changes per hour (All zones) Blower door test	☐ Stated				
R402.4.5	IC-rated recessed lighting fixtures meet infiltration criteria.	2.0 cfm air leakage	☐ Stated				
		Sealed	☐ Stated				
R402.4.4	Rooms containing fuel burning appliances	Outside or enclosed in a room	☐ Meets exceptions				
R402.1.1	Vapor Retarder (IRC R702.7)	Class I or II (Zones 5 and 6 only)					
R403.1.1	Thermostat	Programmable					

IECC			Verified	Complies		es	
Section #	Requirement	Code Value	Value	Υ	N	N/A	Comments/Assumptions
R403.3.1	Duct insulation.	Supply & Return in Attics: R-8 for ≥3" Dia. R-6 for <3" Dia.  Other: R-6 for ≥3" Dia. R-4.2 for <3" Dia.	☐ Inside building thermal envelope exception				
R403.3.2	Duct sealing complies with listed sealing methods.	All joints and seams	☐ Meets exception				
R403.3.3	Duct Testing	0.1 inch w.g. pressure differential	☐ Stated				
		Rough-in test required	☐ Stated				
		Post construction test required	☐ Stated				
			☐ Exception				
R403.3.5	Building cavities NOT used as ducts or plenums	Stated? Shown?					
R403.4	HVAC piping insulation.	R-3 (>105°For <55°F)	R				
R403.5.1	Heated water circulation and temperature maintenance system	Per requirements of Section R403.5.1.1 or R403.5.1.2	☐ Circulation System ☐ Heat Trace System				
R403.5.3	Hot water pipe insulation	R-3 per specified locations					
R404.1	Lighting – Minimum 75% of lamps are high efficacy.						
R402.4.2	Wood burning fireplace	Tight-fitting flue damper or doors					
R403.10	Pool heaters, covers, and automatic or accessible manual controls.	Accessible on/off switch. Time Switch					

ii One side-hinged door up to 24 ft² can be exempted from the prescriptive door U-factor requirements.
iii Or insulation sufficient to fill the cavity, R-19 minimum.
iv Floor steel frame equivalent: See Table R402.2.6
v Wall steel frame equivalent: See Table R402.2.6
vi Steel truss equivalent: See Table R402.2.6
vil The second R-value applies when more than half the insulation is on the interior of the mass wall.