

State Maps and Prescriptive Packages

April 2000

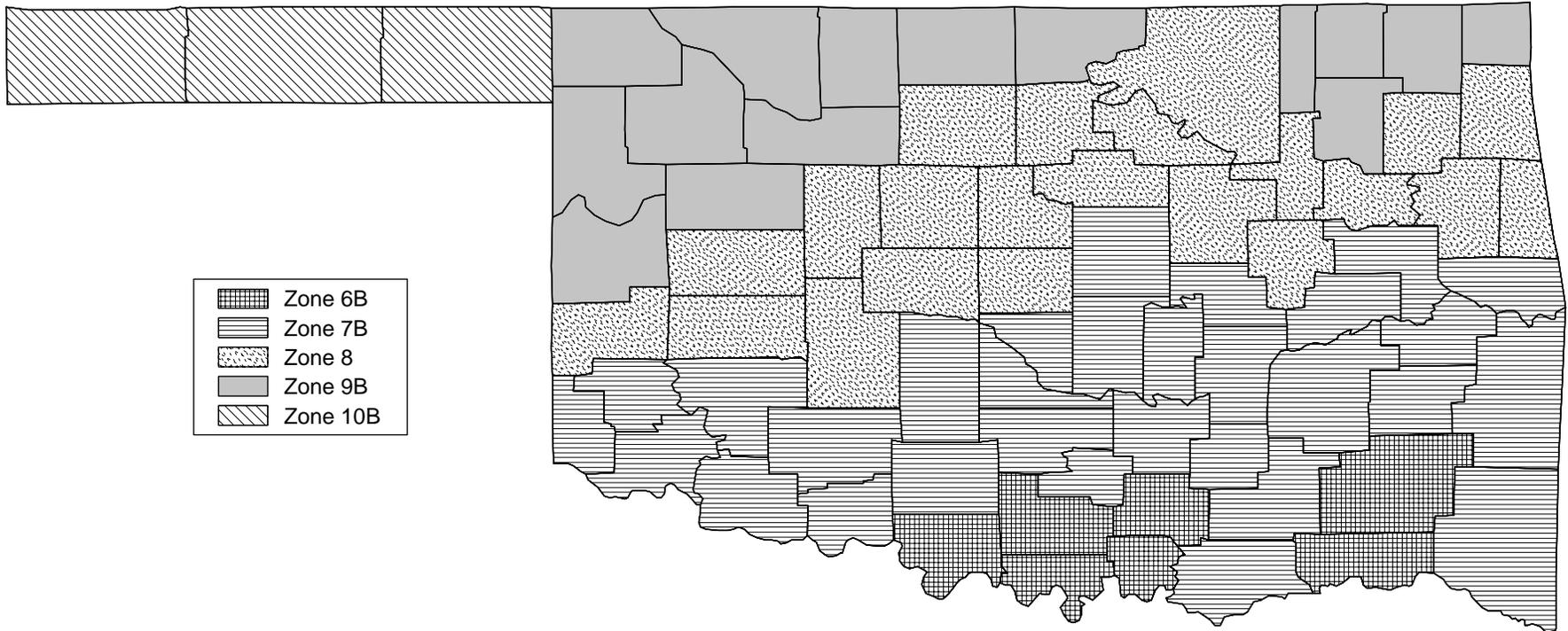
The State Maps and Prescriptive Packages contain supporting materials that are needed when using the Envelope and Mechanical Compliance Guides. Insulation and other building envelope requirements and some mechanical system requirements vary by climate. The State Maps divide the United States into 33 different climate zones at a county level. Zones are numbered from 1 through 19 (consistent with the IECC and MEC*check* climate zones) and have a, b, and c designations to reflect climate differences that affect cooling; e.g., cooling degree days and solar radiation. The climate maps are unchanged from Version 1.

To determine the climate zone to use with your building, locate the map for your state and identify the zone number from the legend or county list.

To determine insulation and other building envelope requirements, find the prescriptive package number corresponding to your climate zone. The *Envelope Compliance Guide* employs a package approach that requires all components in your design to meet or exceed the prescribed efficiency levels contained in the prescriptive package. If you find the prescriptive packages too constraining, consider using the COM*check-EZ* software, which allows tradeoffs among building envelope components.

OKLAHOMA

Zone	County	Zone	County	Zone	County	Zone	County	Zone	County	Zone	County	Zone	County
8	Adair	8	Cherokee	8	Delaware	7B	Haskell	7B	Lincoln	7B	Muskogee	8	Payne
9B	Alfalfa	6B	Choctaw	9B	Dewey	7B	Hughes	8	Logan	8	Noble	7B	Pittsburg
7B	Atoka	10B	Cimarron	9B	Ellis	7B	Jackson	6B	Love	9B	Nowata	7B	Pontotoc
10B	Beaver	7B	Cleveland	8	Garfield	6B	Jefferson	9B	Major	7B	Okfuskee	7B	Pottawatomie
8	Beckham	7B	Coal	7B	Garvin	6B	Johnston	6B	Marshall	8	Oklahoma	6B	Pushmataha
8	Blaine	7B	Comanche	7B	Grady	9B	Kay	8	Mayes	8	Okmulgee	9B	Roger Mills
7B	Bryan	7B	Cotton	9B	Grant	8	Kingfisher	7B	Mcclain	8	Osage	9B	Rogers
8	Caddo	9B	Craig	7B	Greer	7B	Kiowa	7B	Mccurtain	9B	Ottawa	7B	Seminole
8	Canadian	8	Creek	7B	Harmon	7B	Latimer	7B	Mcintosh	8	Pawnee	7B	Sequoyah
6B	Carter	8	Custer	9B	Harper	7B	Le Flore	7B	Murray			7B	Stephens
												10B	Texas
												7B	Tillman
												8	Tulsa
												8	Wagoner
												9B	Washington
												8	Washita
												9B	Woods
												9B	Woodward



COMcheck-EZ™ Prescriptive Packages

Climate Zone 6b

Envelope Component	Low Fenestration Area (0-10% Window-Wall Ratio)			Medium Fenestration Area (10%-25% Window-Wall Ratio)			High Fenestration Area (25%-40% Window-Wall Ratio)			Very High Fenestration Area (40%-50% Window-Wall Ratio)		
	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing
Walls (a)												
Framed Any Spacing <i>Minimum R-Value</i>	NA	11	11	NA	11	11	NA	11	11	NA	11	11
CMU, 8 in. or greater with Integral Insulation(b) <i>Minimum R-Value</i>	0	0	0	0	0	0	0	0	0	0	0	0
All Other Masonry Walls(c) <i>Minimum R-Value</i>	0	0	0	5	11	11	5	11	11	5	11	11
Windows												
<i>Maximum Solar Heat Gain Coefficient</i>	No Projection	^{3.25} Projection	^{3.5} Projection	No Projection	^{3.25} Projection	^{3.5} Projection	No Projection	^{3.25} Projection	^{3.5} Projection	No Projection	^{3.25} Projection	^{3.5} Projection
<i>Maximum U-Factor</i>	Any	Any	Any	0.6	0.7	Any	0.5	0.6	0.7	0.4	0.5	0.7
	Any	Any	Any	Any	Any	Any	0.7	0.7	0.7	0.7	0.7	0.7
Skylight (Limit 3% of Roof Area)												
<i>Maximum U-Factor</i>	1			1			1			1		
Roof	Continuous Insulation or Roof Cavity Insulation			Continuous Insulation or Roof Cavity Insulation			Continuous Insulation or Roof Cavity Insulation			Continuous Insulation or Roof Cavity Insulation		
All-Wood Joist/Truss <i>Minimum R-Value</i>	16		19	16		19	19		25	19		25
Nonwood Joist/Truss <i>Minimum R-Value</i>	17		25	17		25	20		25	20		25
Concrete Slab or Deck <i>Minimum R-Value</i>	16		NA	16		NA	19		NA	19		NA
Metal Purlin with Thermal Break <i>Minimum R-Value</i>	17		25	17		25	20		30	20		30
Metal Purlin without Thermal Break <i>Minimum R-Value</i>	17		X	17		X	20		X	20		38
Floor	Continuous Insulation or Cavity Insulation			Continuous Insulation or Cavity Insulation			Continuous Insulation or Cavity Insulation			Continuous Insulation or Cavity Insulation		
All-Wood Joist/Truss <i>Minimum R-Value</i>	6		11	6		11	6		11	6		11
Nonwood Joist/Truss <i>Minimum R-Value</i>	6		11	6		11	6		11	6		11
Concrete Slab or Deck <i>Minimum R-Value</i>	6		NA	6		NA	6		NA	6		NA
Slab Edge or Basement Walls	Insulation											
<i>Minimum R-Value</i>	0											

Notes:

- (a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.
- (b) Integral insulation in concrete masonry units may be perlite, vermiculite, or other insulating material.
- (c) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft² or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.

- "NA" indicates the category is not applicable.
- A minimum R-value of zero indicates no insulation is required.
- "Any" indicates any available product will comply.
- "X" indicates no complying option exists in the prescriptive packages.

COMcheck-EZ™ Prescriptive Packages

Climate Zone 7b

Envelope Component	Low Fenestration Area (0-10% Window-Wall Ratio)			Medium Fenestration Area (10%-25% Window-Wall Ratio)			High Fenestration Area (25%-40% Window-Wall Ratio)			Very High Fenestration Area (40%-50% Window-Wall Ratio)		
	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing
Walls (a,b)												
Framed <i>Minimum Cavity R-Value (c)</i>	NA	11	11	NA	11	11	NA	13	13	NA	13	13
Any Spacing <i>Minimum Continuous R-Value (d)</i>	NA	0	0	NA	0	0	NA	0	0	NA	3	0
CMU, 8 in. or greater <i>Minimum Cavity R-Value</i>	NA	0	0	NA	11	11	NA	11	11	NA	11	11
with Integral Insulation(e) <i>Minimum Continuous R-Value</i>	0	0	0	5	0	0	5	0	0	5	0	0
All Other <i>Minimum Cavity R-Value</i>	NA	11	11	NA	11	11	NA	13	11	NA	13	11
Masonry Walls(f) <i>Minimum Continuous R-Value</i>	5	0	0	5	0	0	6	0	0	6	0	0
Windows												
<i>Maximum Solar Heat Gain Coefficient</i>	No Projection	^{§.25} Projection	^{§.5} Projection	No Projection	^{§.25} Projection	^{§.5} Projection	No Projection	^{§.25} Projection	^{§.5} Projection	No Projection	^{§.25} Projection	^{§.5} Projection
<i>Maximum U-Factor</i>	Any	Any	Any	0.5	0.6	0.7	0.4	0.5	0.6	0.3	0.4	0.5
	Any	Any	Any	0.7	0.7	0.7	0.7(g)	0.7(g)	0.7(g)	0.7	0.7	0.7
Skylight (Limit 3% of Roof Area)												
<i>Maximum U-Factor</i>	0.8			0.8			0.8			0.8		
Roof	Continuous Insulation or Roof Cavity Insulation			Continuous Insulation or Roof Cavity Insulation			Continuous Insulation or Roof Cavity Insulation			Continuous Insulation or Roof Cavity Insulation		
All-Wood Joist/Truss <i>Minimum R-Value</i>	14		19	19		25	19		25	19		25
Nonwood Joist/Truss <i>Minimum R-Value</i>	15		19	20		25	20		25	20		25
Concrete Slab or Deck <i>Minimum R-Value</i>	14		NA	19		NA	19		NA	19		NA
Metal Purlin with Thermal Break <i>Minimum R-Value</i>	15		25	20		30	20		30	20		30
Metal Purlin without Thermal Break <i>Minimum R-Value</i>	15		X	20		X	20		X	20		38
Floor	Continuous Insulation or Cavity Insulation			Continuous Insulation or Cavity Insulation			Continuous Insulation or Cavity Insulation			Continuous Insulation or Cavity Insulation		
All-Wood Joist/Truss <i>Minimum R-Value</i>	7		11	7		11	7		11	7		11
Nonwood Joist/Truss <i>Minimum R-Value</i>	8		11	8		11	8		11	8		11
Concrete Slab or Deck <i>Minimum R-Value</i>	8		NA	8		NA	8		NA	8		NA
Slab Edge or Basement Walls	Insulation											
<i>Minimum R-Value</i>	0			0			0			0		

Notes:

- (a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.
- (b) Where values are shown for both cavity and continuous insulation, both requirements must be met.
- (c) Cavity insulation is insulation between framing members or furring strips and does not refer to integral insulation in CMUs.
- (d) Continuous insulation is insulation that is continuous across structural members, and its effectiveness is undiminished by compression or bridging.
- (e) Integral insulation in concrete masonry units may be perlite, vermiculite, or other insulating material. Minimum R-values are in addition to insulation in CMU voids.

- (f) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft² or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.
- (g) For buildings over 3 stories in height, the maximum U-factor shall be 0.60.
 - "NA" indicates the category is not applicable.
 - A minimum R-value of zero indicates no insulation is required.
 - "Any" indicates any available product will comply.
 - "X" indicates no complying option exists in the prescriptive packages.

COMcheck-EZ™ Prescriptive Packages

Climate Zone 8

Envelope Component	Low Fenestration Area (0-10% Window-Wall Ratio)	Medium Fenestration Area (10%-25% Window-Wall Ratio)	High Fenestration Area (25%-40% Window-Wall Ratio)	Very High Fenestration Area (40%-50% Window-Wall Ratio)
	No Framing or Metal Framing or Wood Framing	No Framing or Metal Framing or Wood Framing	No Framing or Metal Framing or Wood Framing	No Framing or Metal Framing or Wood Framing
Walls (a)				
Framed Any Spacing <i>Minimum R-Value</i>	NA 11 11	NA 13 11	NA 13 11	NA 13 11
CMU, 8 in. or greater with Integral Insulation(b) <i>Minimum R-Value</i>	5 11 11	5 11 11	5 11 11	5 11 11
All Other Masonry Walls(c) <i>Minimum R-Value</i>	5 11 11	6 13 11	6 13 11	6 13 11
Windows	No Projection ^{s,25} Projection ^{s,5} Projection			
<i>Maximum Solar Heat Gain Coefficient</i>	Any Any Any	0.5 0.6 0.7	0.4 0.5 0.6	0.3 0.4 0.5
<i>Maximum U-Factor</i>	Any Any Any	0.7 0.7 0.7	0.5 0.5 0.5	0.5 0.5 0.5
Skylight (Limit 3% of Roof Area)				
<i>Maximum U-Factor</i>	0.8	0.8	0.8	0.8
Roof	Continuous Insulation or Roof Cavity Insulation			
All-Wood Joist/Truss <i>Minimum R-Value</i>	14 19	19 25	19 25	19 25
Nonwood Joist/Truss <i>Minimum R-Value</i>	15 19	20 25	20 25	20 25
Concrete Slab or Deck <i>Minimum R-Value</i>	14 NA	19 NA	19 NA	19 NA
Metal Purlin with Thermal Break <i>Minimum R-Value</i>	15 25	20 30	20 30	20 30
Metal Purlin without Thermal Break <i>Minimum R-Value</i>	15 X	20 X	20 X	20 38
Floor	Continuous Insulation or Cavity Insulation			
All-Wood Joist/Truss <i>Minimum R-Value</i>	9 11	9 11	9 11	9 11
Nonwood Joist/Truss <i>Minimum R-Value</i>	10 11	10 11	10 11	10 11
Concrete Slab or Deck <i>Minimum R-Value</i>	9 NA	9 NA	9 NA	9 NA
Slab Edge or Basement Walls	Insulation	Insulation	Insulation	Insulation
<i>Minimum R-Value</i>	0	0	0	0

Notes:

- (a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.
- (b) Integral insulation in concrete masonry units may be perlite, vermiculite, or other insulating material. Minimum R-values are in addition to insulation in CMU voids.
- (c) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft2 or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.

- "NA" indicates the category is not applicable.
- A minimum R-value of zero indicates no insulation is required.
- "Any" indicates any available product will comply.
- "X" indicates no complying option exists in the prescriptive packages.

COMcheck-EZ™ Prescriptive Packages

Climate Zone 9b

Envelope Component	Low Fenestration Area (0-10% Window-Wall Ratio)			Medium Fenestration Area (10%-25% Window-Wall Ratio)			High Fenestration Area (25%-40% Window-Wall Ratio)			Very High Fenestration Area (40%-50% Window-Wall Ratio)		
	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing
Walls (a,b)												
Framed <i>Minimum Cavity R-Value (c)</i>	NA	11	11	NA	11	11	NA	13	11	NA	13	13
Any Spacing <i>Minimum Continuous R-Value (d)</i>	NA	0	0	NA	0	0	NA	0	0	NA	5	3
CMU, 8 in. or greater <i>Minimum Cavity R-Value</i>	NA	11	11	NA	11	11	NA	11	11	NA	11	11
with Integral Insulation(e) <i>Minimum Continuous R-Value</i>	5	0	0	5	0	0	5	0	0	5	0	0
All Other <i>Minimum Cavity R-Value</i>	NA	11	11	NA	11	11	NA	13	11	NA	13	11
Masonry Walls(f) <i>Minimum Continuous R-Value</i>	5	0	0	5	0	0	6	0	0	6	0	0
Windows												
<i>Maximum Solar Heat Gain Coefficient</i>	No Projection	^{§.25} Projection	^{§.5} Projection	No Projection	^{§.25} Projection	^{§.5} Projection	No Projection	^{§.25} Projection	^{§.5} Projection	No Projection	^{§.25} Projection	^{§.5} Projection
<i>Maximum U-Factor</i>	Any	Any	Any	0.5	0.6	0.7	0.4	0.5	0.6	0.3	0.4	0.5
	Any	Any	Any	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Skylight (Limit 3% of Roof Area)												
<i>Maximum U-Factor</i>	0.8			0.8			0.8			0.8		
Roof												
All-Wood Joist/Truss <i>Minimum R-Value</i>	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation
Nonwood Joist/Truss <i>Minimum R-Value</i>	15		19	19		25	19		25	19		25
Concrete Slab or Deck <i>Minimum R-Value</i>	16		19	20		25	20		25	20		25
Metal Purlin with Thermal Break <i>Minimum R-Value</i>	15		NA	19		NA	19		NA	19		NA
Metal Purlin without Thermal Break <i>Minimum R-Value</i>	16		25	20		30	20		30	20		30
	16		X	20		X	20		X	20		38
Floor												
All-Wood Joist/Truss <i>Minimum R-Value</i>	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation
Nonwood Joist/Truss <i>Minimum R-Value</i>	11		13	11		13	11		13	11		13
Concrete Slab or Deck <i>Minimum R-Value</i>	12		13	12		13	12		13	12		13
	12		NA	12		NA	12		NA	12		NA
Slab Edge or Basement Walls												
<i>Minimum R-Value</i>	Insulation			Insulation			Insulation			Insulation		
	0			0			0			0		

Notes:

- (a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.
- (b) Where values are shown for both cavity and continuous insulation, both requirements must be met.
- (c) Cavity insulation is insulation between framing members or furring strips and does not refer to integral insulation in CMUs.
- (d) Continuous insulation is insulation that is continuous across structural members, and its effectiveness is undiminished by compression or bridging.
- (e) Integral insulation in concrete masonry units may be perlite, vermiculite, or other insulating material. Minimum R-values are in addition to insulation in CMU voids.

- (f) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft2 or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.

- "NA" indicates the category is not applicable.
- A minimum R-value of zero indicates no insulation is required.
- "Any" indicates any available product will comply.
- "X" indicates no complying option exists in the prescriptive packages.

COMcheck-EZ™ Prescriptive Packages

Climate Zone 10b

Envelope Component	Low Fenestration Area (0-10% Window-Wall Ratio)			Medium Fenestration Area (10%-25% Window-Wall Ratio)			High Fenestration Area (25%-40% Window-Wall Ratio)			Very High Fenestration Area (40%-50% Window-Wall Ratio)		
	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing
Walls (a)												
Framed Any Spacing <i>Minimum R-Value</i>	NA	11	11	NA	11	11	NA	11	11	NA	11	11
CMU, 8 in. or greater with Integral Insulation(b) <i>Minimum R-Value</i>	5	11	11	5	11	11	5	11	11	5	11	11
All Other Masonry Walls(c) <i>Minimum R-Value</i>	5	11	11	5	11	11	5	11	11	5	11	11
Windows												
<i>Maximum Solar Heat Gain Coefficient</i>	No Projection	^{§.25} Projection	^{§.5} Projection	No Projection	^{§.25} Projection	^{§.5} Projection	No Projection	^{§.25} Projection	^{§.5} Projection	No Projection	^{§.25} Projection	^{§.5} Projection
<i>Maximum U-Factor</i>	Any	Any	Any	0.5	0.6	0.7	0.4	0.5	0.6	0.3	0.4	0.5
	Any	Any	Any	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5
Skylight (Limit 3% of Roof Area)												
<i>Maximum U-Factor</i>	0.8			0.8			0.8			0.8		
Roof	Continuous Insulation or Roof Cavity Insulation			Continuous Insulation or Roof Cavity Insulation			Continuous Insulation or Roof Cavity Insulation			Continuous Insulation or Roof Cavity Insulation		
All-Wood Joist/Truss <i>Minimum R-Value</i>	17		19	19		25	19		25	19		25
Nonwood Joist/Truss <i>Minimum R-Value</i>	18		25	20		25	20		25	20		25
Concrete Slab or Deck <i>Minimum R-Value</i>	17		NA	19		NA	19		NA	19		NA
Metal Purlin with Thermal Break <i>Minimum R-Value</i>	18		30	20		30	20		30	20		30
Metal Purlin without Thermal Break <i>Minimum R-Value</i>	18		X	20		X	20		X	20		30
Floor	Continuous Insulation or Cavity Insulation			Continuous Insulation or Cavity Insulation			Continuous Insulation or Cavity Insulation			Continuous Insulation or Cavity Insulation		
All-Wood Joist/Truss <i>Minimum R-Value</i>	12		19	12		19	12		19	12		19
Nonwood Joist/Truss <i>Minimum R-Value</i>	13		19	13		19	13		19	13		19
Concrete Slab or Deck <i>Minimum R-Value</i>	13		NA	13		NA	13		NA	13		NA
Slab Edge or Basement Walls	Insulation											
<i>Minimum R-Value</i>	0											

Notes:

- (a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.
- (b) Integral insulation in concrete masonry units may be perlite, vermiculite, or other insulating material. Minimum R-values are in addition to insulation in CMU voids.
- (c) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft2 or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.

- "NA" indicates the category is not applicable.
- A minimum R-value of zero indicates no insulation is required.
- "Any" indicates any available product will comply.
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