



		8th Edition (IBC)(IRC)		
		12"oc	16"oc	24"oc
1st Floor (#2 Btr KD SPF. 1.4E) (Based on 40/10) L/360	2x6	10' 3"	9' 4"	8' 1"
	2x8	13' 6"	12' 3"	10' 3"
	2x10	17' 3"	15' 5"	12' 7"
	2x12	20' 7"	17' 10"	14' 7"
2nd Floor and Attic (#2 BTR KD SPF. 1.4E) (Based on 30/10) L/360	2x6	11' 3"	10' 3"	8' 11"
	2x8	14' 11"	13' 6"	11' 6"
	2x10	19' 0"	17' 2"	14' 1"
	2x12	23' 0"	19' 11"	16' 3"
Rafters - (#2 BTR KD SPF. 1.4E) (Based on 55/10) L/240	2x6	10' 7"	9' 4"	7' 8"
	2x8	13' 8"	11' 10"	9' 8"
	2x10	16' 9"	14' 6"	11' 10"
	2x12	19' 5"	16' 9"	13' 8"
Exterior Decks (Treated #2 Btr SYP. 1.44E) (Based on 60/10) L/360	2x6	8' 8"	7' 10"	6' 10"
	2x8	11' 5"	10' 4"	8' 11"
	2x10	14' 7"	12' 11"	10' 7"
	2x12	17' 8"	15' 4"	12' 6"

Material Weights:	
Floors	
3/4" Plywood	2.5 psf
3/4" OSB	2.7 psf
Roofing	
Asphalt Shingles	2.5 psf
Floor Finishes	
Hardwood	4.0 psf
Carpet and Pad	1.0 psf
3/4" Ceramic Tile	10.0 psf
Ceilings	
1/2" Gypsum	2.2 psf
5/8" Gypsum	2.8 psf
For Soaking Tubs:	
Water	8.0#/gal

Note: Additional loading may be required for alternative roofing from standard shingles

Insulation Requirements*	Energy Star Zone 5 (MA)	Energy Star Zone 6 (NH)
Walls	R-20 (or R-13+5)	R-20 (or R-13+5)
Basement	R-15 or R-19 Cavity	R-10 or R-13
Floors	R-30	R-30
Ceilings	R-49	R-38
Window	U 0.32 or less	U 0.32 or less

While every effort has been made to insure the accuracy of the information presented, Doyle Lumber Co., Inc. or its agents, does not assume any responsibility for any particular design prepared from this chart. Those using this chart assume all liability from its use.

Egress window Requirements:

Minimum 20x24 opening and 5.7 sq/ft. Only 3.3sf if a double hung.

Maximum sill height above floor: 44"

Minimum window sill height: 24" above floor if window is > 72" of the outside finished grade.

Minimum attic access: 30x22

780 CMR 51.00 - Goes into effect 7/1/2014

IRC 2009

R501.3 Fire protection of floors. Floor assemblies not using dimension lumber or structural composite lumber equal to or greater than 2-inch nominal dimension, shall be provided with a ½ inch gypsum wallboard membrane, 5/8 inch wood structural panel membrane, or equivalent on the underside of the floor framing member unless required elsewhere in this code to be fire resistance rated.

Exceptions:

1. Other approved floor assemblies demonstrating equivalent fire performance.
2. Floor assemblies located directly over a space protected by an automatic sprinkler system in accordance with Section P2904-NFPA13D, or other approved equivalent sprinkler system.
3. Floor assemblies located directly over a crawl space not intended for storage or fuel-fired appliances.
4. One room or alcove per story not exceeding 80 square feet, when supported between structural walls.

Abington	45	110	Carlisle	55	100	Franklin	55	100	Leicester	55	100	New Bedford	45	110	Rockland	45	110	Tyngsborough	55	100
Acton	55	100	Carver	45	110	Freetown	45	110	Lenox	65	90	New Braintree	55	100	Rockport	45	110	Tyringham	65	90
Acushnet	45	110	Charlemont	65	100	Gardner	65	100	Leominster	65	100	New Marlboro	65	90	Rowe	65	100	Upton	55	100
Adams	65	90	Charlton	55	100	Gay Head (A	35	120	Leverett	65	100	New Salem	65	100	Rowley	55	110	Uxbridge	55	100
Agawam	55	100	Chatham	35	120	Georgetown	55	110	Lexington	55	105	Newbury	55	110	Royalston	65	100	Wakefield	45	105
Alford	65	90	Chelmsford	55	100	Gill	65	100	Leyden	65	100	Newburyport	55	110	Russell	65	100	Wales	55	100
Amesbury	55	110	Chelsea	45	105	Gloucester	45	110	Lincoln	55	100	Newton	55	105	Rutland	55	100	Walpole	55	100
Amherst	55	100	Cheshire	65	90	Goshen	65	100	Littleton	55	100	Norfolk	55	100	Salem	45	110	Waltham	55	105
Andover	55	110	Chester	65	100	Grafton	55	100	Longmeadow	55	100	N. Adams	65	90	Salisbury	55	110	Ware	55	100
Arlington	45	105	Chesterfield	65	100	Gosnold	35	120	Lowell	55	100	N. Andover	55	110	Sandisfield	65	60	Wareham	45	110
Ashburnham	65	100	Chicopee	55	100	Granby	55	100	Ludlow	55	100	N. Attleboro	55	110	Sandwich	35	120	Warren	55	100
Ashby	65	100	Chilmark	35	120	Granville	65	100	Lunenburg	65	100	N. Brookfield	55	100	Saugus	45	110	Warwick	65	100
Ashfield	65	100	Clarksburg	65	90	Great Barrin	65	90	Lynn	45	110	N. Reading	55	105	Savoy	65	90	Washington	65	90
Ashland	55	100	Clinton	55	100	Greenfield	65	100	Lynnfield	45	110	Northampton	55	100	Scituate	45	110	Watertown	45	105
Athol	65	100	Cohasset	45	110	Groton	65	100	Malden	45	105	Northborough	55	100	Seekonk	55	110	Wayland	55	100
Attleboro	55	110	Colrain	65	100	Groveland	55	110	Manchester	45	110	Northbridge	55	100	Sharon	55	100	Webster	55	100
Auburn	55	100	Concord	55	100	Hadley	55	100	Mansfield	55	110	Northfield	65	100	Sheffield	65	90	Wellesley	55	100
Avon	55	100	Conway	65	100	Halifax	45	110	Marblehead	45	110	Norton	55	110	Shelburne	65	100	Wellfleet	35	120
Ayer	65	100	Cummington	65	100	Hamilton	45	110	Marion	45	110	Norwell	45	110	Sherborn	55	100	Wendell	65	100
Barnstable	35	120	Dalton	65	90	Hampden	55	100	Marlborough	55	100	Norwood	55	100	Shirley	65	100	Wenham	45	110
Barre	55	100	Danvers	45	110	Hancock	65	90	Marshfield	45	110	Oak Bluffs	35	120	Shrewsbury	55	100	W. Boylston	55	100
Becket	65	90	Dartmouth	45	110	Hanover	45	110	Mashpee	35	120	Oakham	55	100	Shutesbury	65	110	W. Bridgewater	45	110
Bedford	55	100	Dedham	55	100	Hanson	45	110	Mattapoisett	45	110	Orange	65	100	Somerset	55	105	W. Brookfield	55	100
Belchertown	55	100	Deerfield	65	100	Hardwick	55	100	Maynard	55	100	Orleans	35	120	Somerville	45	100	W. Newbury	55	110
Bellingham	55	100	Dennis	35	120	Harvard	55	100	Medfield	55	100	Otis	65	90	South Hadley	55	100	W. Springfield	55	100
Belmont	45	105	Dighton	55	110	Harwich	35	120	Medford	45	105	Oxford	55	100	Southampton	55	100	W. Stockbridge	65	90
Berkley	55	110	Douglas	55	100	Hatfield	55	100	Medway	55	100	Palmer	55	100	Southborough	55	100	W. Tisbury	35	120
Berlin	55	100	Dover	55	100	Haverhill	55	110	Melrose	45	105	Paxton	55	100	Southbridge	55	100	Westborough	55	100
Bernardston	65	100	Dracut	55	100	Hawley	65	100	Mendon	55	100	Peabody	45	110	Southwick	55	100	Westfield	55	100
Beverly	65	100	Dudley	55	100	Heath	65	100	Merrimac	55	110	Pelham	55	100	Spencer	55	100	Westford	55	100
Billerica	45	100	Dunstable	65	100	Hingham	45	110	Methuen	55	110	Pembroke	45	110	Springfield	55	100	Westhampton	65	100
Blackstone	55	100	Duxbury	45	110	Hinsdale	65	90	Middleborough	45	110	Pepperell	65	100	Sterling	55	100	Westminster	65	100
Blandford	65	100	E. Bridgewater	45	110	Holbrook	45	105	Middlefield	65	100	Peru	65	90	Stockbridge	65	90	Weston	55	100
Bolton	55	100	E. Brookfield	55	100	Holden	55	100	Middleton	45	110	Petersham	65	100	Stoneham	45	105	Westport	45	110
Boston	45	105	E. Longmead	55	100	Holland	55	100	Milford	55	100	Phillipston	65	100	Stoughton	55	100	Westwood	55	100
Bourne	35	120	Eastham	35	120	Holliston	55	100	Millbury	55	100	Pittsfield	65	90	Stow	55	100	Weymouth	45	105
Boxborough	55	100	Easthampton	55	100	Holyoke	55	100	Millis	55	100	Plainfield	65	100	Southampton	55	100	Whately	65	100
Boxford	100	Easton	55	110	Hopedale	55	100	Millville	55	100	Plainville	55	100	Sudbury	55	100	Whitman	45	110	
Boylston	55	100	Edgartown	35	120	Hopkinton	55	100	Milton	45	105	Plymouth	45	110	Sunderland	65	100	Wilbraham	55	100
Braintree	45	105	Egremont	65	90	Hubbardston	65	100	Monroe	65	100	Pympton	45	110	Sutton	55	100	Williamsburg	65	100
Brewster	35	120	Erving	65	100	Hudson	55	100	Monson	55	100	Princeton 6	65	100	Swampscott	45	110	Williamstown	65	90
Bridgewater	45	110	Essex	45	110	Hull	45	110	Montague	65	100	Provincetown	35	120	Swansea	55	110	Wilmington	55	105
Brimfield	55	100	Everett	45	105	Huntington	65	100	Monterey	65	90	Quincy	45	105	Taunton	55	110	Winchendon	65	100
Brockton	45	110	Fairhaven	45	110	Ipswich	45	110	Montgomery	65	100	Randolph	45	105	Templeton	65	100	Winchester	55	105
Brookfield	55	100	Fall River	45	110	Kingston	45	110	Mt Washin	65	90	Raynham	55	110	Tewksbury	55	100	Windsor	65	90
Brookline	45	105	Falmouth	35	120	Lakeville	45	110	Nahant	45	110	Reading	55	105	Tisbury	35	120	Winthrop	45	105
Buckland	65	100	Fitchburg	65	100	Lancaster	55	100	Nantucket	35	120	Rehoboth	55	110	Tolland	65	100	Woburn	55	105
Burlington	55	105	Florida	65	90	Lanesborough	65	90	Natick	55	100	Revere	45	105	Topsfield	45	110	Worcester	55	100
Cambridge	45	105	Foxborough	55	100	Lawrence	55	110	Needham	55	100	Richmond	65	90	Townsend	65	100	Worthington	65	100
Canton	55	100	Framingham	55	100	Lee	65	90	New Ashford	65	90	Rochester	45	110	Truro	35	120	Wrentham	55	100
																		Yarmouth	35	120

		8th Edition (IBC)(IRC)		
		12"oc	16"oc	24"oc
Ceiling Joists (#2 Btr KD SPF. 1.4E)	2x6	14-9	13-5	9-Nov
	2x8	19-6	17-9	15-6
	2x10	24-10	22-7	19-9

(Based on 20/10)

L/240



Maximum Span Chart

		6th Edition (BOCA)			7th & 8th Edition (IBC)		
		12"oc	16"oc	24"oc	12"oc	16"oc	24"oc
1st Floor (40/10)(#2 Btr KD SPF)	2x6	9' 9"	8' 10"	7' 9"	10' 3"	9' 4"	8' 1"
	L/360 2x8	12' 10"	11' 8"	10' 2"	13' 6"	12' 3"	10' 3"
	2x10	15' 11"	14' 6"	12' 8"	17' 3"	15' 5"	12' 7"
	2x12	18' 9"	17' 0"	14' 11"	20' 7"	17' 10"	14' 7"
2nd Floor and Attic (30/10)(#2 BTR KD SPF)	2x6	10' 9"	9' 9"	8' 6"	11' 3"	10' 3"	8' 11"
	L/360 2x8	14' 2"	12' 10"	11' 3"	14' 11"	13' 6"	11' 6"
	2x10	17' 6"	15' 11"	13' 11"	19' 0"	17' 2"	14' 1"
	2x12	20' 8"	18' 9"	16' 5"	23' 0"	19' 11"	16' 3"
Rafters - No Ceiling Joist Attached (#2 BTR KD SPF) (30/10; 6th edition. 38.5/10, 7th edition)	2x6	12' 4"	10' 8"	8' 8"	12' 6"	10' 10"	8' 10"
	L/180 2x8	16' 3"	14' 1"	11' 6"	15' 10"	13' 9"	11' 2"
	2x10	19' 11"	17' 2"	14' 0"	19' 4"	16' 9"	13' 8"
	2x12	22' 11"	19' 11"	16' 3"	22' 5"	19' 5"	15' 10"
Rafters - With Ceiling Joist Attached (#2 BTR KD SPF) (30/10; 6th edition. 38.5/10, 7th edition)	2x6	12' 4"	10' 8"	8' 8"	11' 11"	10' 10"	8' 10"
	L/240 2x8	16' 3"	14' 1"	11' 6"	15' 8"	13' 9"	11' 2"
	2x10	19' 11"	17' 2"	14' 0"	19' 4"	16' 9"	13' 8"
	2x12	22' 11"	19' 11"	16' 3"	22' 5"	19' 5"	15' 10"
Exterior Decks (40#/LL)(Fb 1260 #2 btr SYP)	2x6	8' 11"	8' 2"	7' 1"	9' 11"	9' 0"	7' 10"
	L/360 2x8	11' 10"	10' 9"	9' 4"	13' 1"	11' 10"	10' 4"
	2x10	15' 1"	13' 8"	11' 11"	16' 8"	15' 2"	12' 6"
	2x12	18' 4"	16' 8"	14' 7"	20' 3"	18' 1"	14' 9"
Exterior Balconies (60#/LL)(Fb 1260 #2 btr SYP)	2x6	8' 11"	8' 2"	7' 1"	8' 8"	7' 10"	6' 10"
	L/360 2x8	11' 10"	10' 9"	9' 4"	11' 5"	10' 4"	8' 11"
	2x10	15' 1"	13' 8"	11' 11"	14' 7"	12' 11"	10' 7"
	2x12	18' 4"	16' 8"	14' 7"	17' 8"	15' 4"	12' 6"

Note: Additional loading may be required for alternative roofing from standard shingles
 38.5# roof snow load is only good if A) the building is not deemed "essential" or roof pitch 3/12 or greater
 This chart for discussion purposes only. Please see structural engineer for confirmation

Ground Snow		Ground Snow		Ground Snow		Ground Snow		Ground Snow	
Abington	35	Bridgewater	30	East Longmead	35	Hingham	35	Mashpee	30
Acton	50	Brimfield	40	Easthampton	40	Hinsdale	50	Mattapoisett	30
Acushnet	30	Brockton	35	Easton	35	Holbrook	35	Maynard	50
Adams	50	Brookfield	40	Egremont	40	Holden	50	Medfield	40
Agawam	35	Brookline	40	Erving	50	Holland	40	Medford	40
Alford	40	Buckland	50	Essex	50	Holliston	40	Medway	40
Amesbury	50	Burlington	50	Everett	40	Holyoke	35	Melrose	40
Amherst	35	Cambridge	40	Fairhaven	30	Hopedale	40	Mendon	40
Andover	50	Canton	40	Fall River	30	Hopkington	40	Merrimac	50
Arlington	40	Carlisle	50	Falmouth	30	Hubbardston	50	Methuen	50
Ashburnham	50	Carver	25	Fitchburg	50	Hudson	50	Middleborough	30
Ashby	50	Charlemont	50	Florida	50	Hull	35	Middlefield	50
Ashfield	50	Charlton	40	Foxborough	35	Huntington	50	Middleton	40
Ashland	40	Chatham	25	Framingham	40	Ipswich	50	Milford	40
Athol	50	Chelmsford	50	Franklin	40	Kingston	30	Millbury	50
Attleboro	30	Chelsea	40	Freetown	30	Lakeville	30	Millis	40
Auburn	50	Cheshire	50	Gardner	50	Lancaster	50	Millville	40
Avon	35	Chester	50	Georgetown	50	Lanesborough	50	Milton	40
Ayer	50	Chesterfield	50	Gill	50	Lawrence	50	Monroe	50
Barnstable	30	Chicopee	35	Goshen	50	Lee	50	Monson	35
Barre	50	Clarksburg	50	Gosnold	30	Leicester	50	Montague	50
Bastham	25	Clinton	50	Grafton	40	Lenox	50	Monterey	50
Becket	50	Cohasset	35	Granby	35	Leominster	50	Montgomery	40
Bedford	50	Colrain	50	Granville	40	Leverett	40	Mount Washing	40
Belchertown	35	Concord	50	Great Barringt	40	Lexington	40	Nahant	40
Bellington	40	Conway	50	Greenfield	50	Leyden	50	Nantucket	25
Belmont	40	Cummington	50	Groton	50	Lincoln	40	Natick	40
Berkley	30	Dalton	50	Groveland	50	Littleton	50	Needham	40
Berlin	50	Danvers	50	Hadley	35	Longmeadow	35	New Ashford	50
Bernardston	50	Dartmouth	30	Halifax	30	Lowell	50	New Bedford	30
Beverly	40	Dedham	40	Hamilton	50	Ludlow	35	New Braintree	40
Billerica	50	Deerfield	50	Hampden	35	Lunenburg	50	New Marlborou	40
Blackstone	40	Dennis	30	Hancock	50	Lynn	40	New Salem	40
Blandford	40	Dighton	30	Handover	30	Lynnfield	40	Newbury	50
Bolton	50	Douglas	40	Hanson	30	Malden	40	Newburyport	50
Boston	40	Dover	40	Hardwick	40	Manchester	40	Newton	40
Bourne	30	Dracut	50	Harvard	50	Mansfield	35	Norfolk	40
Boxborough	50	Dudley	40	Harwich	25	Marblehead	40	North Adams	50
Boxford	50	Dunstable	50	Hatfield	40	Marion	30	North Andover	50
Boylston	50	Duxbury	30	Haverhill	50	Marlborough	40	North Attleboro	35
Braintree	35	East Bridgewat	30	Hawley	50	Marshfield	30	North Brookfiel	40
Brewster	25	East Brookfield	40	Heath	50	Martha's Viney	25	North Reading	50

Northampton	40	Rutland	50	Truro	25	Wilmington	50
Northborough	50	Salem	40	Tyngsborough	50	Winchendon	50
Northbridge	40	Salisbury	50	Tyringham	50	Winchester	40
Northfield	50	Sandisfield	50	Upton	40	Windsor	50
Norton	30	Sandwich	30	Uxbridge	40	Winthrop	40
Norwell	35	Saugus	40	Wakefield	40	Woburn	40
Norwood	40	Savoy	50	Wales	40	Worcester	40
Oakham	50	Scituate	35	Walpole	40	Worcester	50
Orange	50	Seekonk	30	Waltham	40	Worthington	50
Orleans	25	Sharon	35	Wareham	25	Wrentham	40
Otis	50	Sheffield	40	Wareham	40		
Oxford	50	Shelburne	50	Warren	40		
Palmer	35	Sherborn	40	Warwick	50		
Paxton	50	Shirley	50	Washington	40		
Peabody	40	Shrewsbury	50	Washington	50		
Pelham	40	Shutesbury	40	Watertown	40		
Pembroke	30	Somerset	30	Wayland	40		
Pepperell	50	Somerville	40	Webster	40		
Peru	50	South Hadley	35	Wellesley	40		
Petersham	50	Southborough	40	Wellfleet	25		
Phillipston	50	Southbridge	40	Wendell	50		
Pittsfield	50	Southampton	40	Wenham	50		
Plainfield	50	Southwick	35	West Boylston	50		
Plainville	35	Spencer	50	West Bridgewa	30		
Plymouth	25	Springfield	35	West Brookfiel	40		
Plympton	30	Sterling	50	West Newbury	50		
Princeton	50	Stockbridge	50	West Springfiel	35		
Provincetown	25	Stoneham	40	West Stockbrid	50		
Quincy	40	Stoughton	35	Westborough	40		
Randolph	35	Stow	50	Westfield	35		
Raynham	30	Sturbridge	40	Westford	50		
Reading	50	Sudbury	40	Westhampton	40		
Rehoboth	30	Sunderland	40	Westminster	50		
Revere	40	Sutton	40	Weston	40		
Richmond	50	Swampscott	40	Westport	30		
Rochester	30	Swansea	30	Westwood	40		
Rockland	35	Taunton	30	Weymouth	35		
Rockport	50	Templeton	50	Whately	40		
Rolyaston	50	Tewksbury	50	Whitman	30		
Rowe	50	Tolland	40	Wilbraham	35		
Rowley	50	Topsfield	50	Williamsburg	50		
Russell	40	Townsend	50	Williamstown	50		



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	L/360 2x10	17' 3"	15' 5"	12' 7"
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	2x12	17' 8"	15' 4"	12' 6"

Material Weights:

Floors	
3/4" Plywood	2.5 psf
3/4" OSB	2.7 psf
Roofing	
Asphalt Shingles	2.5 psf
Floor Finishes	
Hardwood	4.0 psf
Carpet and Pad	1.0 psf
3/4" Ceramic Tile	10.0 psf
Ceilings	
1/2" Gypsum	2.2 psf
5/8" Gypsum	2.8 psf

Note: Additional loading may be required for alternative roofing from standard shingles

Insulation Requirements*	2009 IECC	Energy Star Zone 5 ("MA")	Energy Star Zone 6 ("NH/ME")
Walls	R-20 (or R-13 + R5)	R-20 (or R-13 + R5)	R-20 (or R-13 + R5)
Basement Walls		R-19	R-19
Floors	R-30	R-30	R-30
Ceilings	R-38	R-38	R-49
Windows	U .35 or less	U .35 or less	U .35 or less

Please note that energy codes are ever-changing - and differ on a town-by-town basis. Please check local codes carefully

*This is a brief description only. Please refer to Energy Star website

Re: Stretch Code: "Residential buildings meeting the stretch code through a HERS rating and thermal bypass checklist require independent certification by a HERS rater"

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