TABLE 2308.9.5
GIRDER SPANS[a] AND HEADER SPANS[a] FOR EXTERIOR BEARING WALLS
(Maximum spans for Douglas fir-larch, hem-fir,southern pine and spruce-pine-fir[b] and required number of jack studs)

GIRDERS AND HEADERS SUPPORTING	SIZE	SIZE GROUND[e] SNOW LOAD (psf) 50					
		Building Width[c] (feet)					
		20		28		36	
		Span	NJ[d]	Span	NJ[d]	Span	NJ[d]
Roof and ceiling	2-2x4	3-2	1	2-9	1	2-6	1
	2-2x6	4-8	1	4-1	1	3-8	2
	2-2x8	5-11	2	5-2	2	4-7	2
	2-2x10	7-3	2	6-3	2	5-7	2
	2-2x12	8-5	2	7-3	2	6-6	2
	3-2x8	7-5	1	6-5	2	5-9	2
	3-2x10	9-1	2	7-10	2	7-0	2
	3-2x12	10-7	2	9-2	2	8-2	2
	4-2x8	8-4	1	7-5	1	6-8	1
	4-2x10	10-6	1	9-1	2	8-2	2
	4-2x12	12-2	2	10-7	2	9-5	2
Roof, ceiling and over center-bearing floor	2-2x4	2-9	1	2-5	1	2-2	1
	2-2x6	4-1	1	3-7	2	3-3	2
	2-2x8	5-2	2	4-6	2	4-1	2
	2-2x10	6-4	2	5-6	2	5-0	2
	2-2x12	7-4	2	6-5	2	5-9	3
	3-2x8	6-5	2	5-8	2	5-1	2
	3-2x10	7-11	2	6-11	2	6-3	2
	3-2x12	9-2	2	8-0	2	7-3	2
	4-2x8	7-5	1	6-6	1	5-11	2
	4-2x10	9-7	2	8-0	2	7-2	2
	4-2x12	10-7	2	9-3	2	8-4	2
Roof, ceiling and one clear span floor	2-2x4	2-7	1	2-3	1	2-0	1
	2-2x6	3-10	2	3-4	2	3-0	2
	2-2x8	4-10	2	4-2	2	3-9	2
	2-2x10	5-11	2	5-1	2	4-7	3
	2-2x12	6-10	2	5-11	3	5-4	3
	3-2x8	6-1	2	5-3	2	4-8	2
	3-2x10	7-5	2	6-5	2	5-9	2
	3-2x12	8-7	2	7-5	2	6-8	2
	4-2x8	7-0	1	6-1	2	5-5	2
	4-2x10	8-7	2	7-5	2	6-7	2
	4-2x12	9-11	2	8-7	2	7-8	2
Roof, ceiling and two center-bearing floor	2-2x4	2-6	1	2-2	1	1-11	1
	2-2x6	3-8	2	3-2	2	2-10	2
	2-2x8	4-7	2	4-0	2	3-8	2
	2-2x10	5-8	2	4-11	2	4-5	3
	2-2x12	6-6	2	5-9	3	5-2	3
	3-2x8	5-9	2	5-1	2	4-7	2
	3-2x10	7-1	2	6-2	2	5-7	2
	3-2x12	8-2	2	7-2	2	6-5	3
	4-2x8	6-8	1	5-10	2	5-3	2
	4-2x10	8-2	2	7-2	2	6-5	2
	4-2x12	9-5	2	8-3	2	7-5	2
Roof, ceiling and two clear span floor	2-2x4	2-0	1	1-8	1	1-5	2
	2-2x6	3-0	2	2-7	2	2-3	2
	2-2x8	3-10	2	3-4	2	2-11	3
	2-2x10	4-8	2	4-0	3	3-7	3
	2-2x12	5-5	3	4-8	3	4-2	3
	3-2x8	4-9	2	4-1	2	3-8	2
	3-2x10	5-10	2	5-0	2	4-6	3
	3-2x12	6-9	2	5-10	3	5-3	3
	4-2x8	5-6	2	4-9	2	4-3	2
	4-2x10	6-9	2	5-10	2	5-2	2
	4-2x12	7-9	2	6-9	2	6-0	3

For SI: 1 inch=25.4mm, 1 pound per square foot=0.0479kN/m^2

a. Spans are given in feet and inches.

b. Tabulated values assume #2 grade lumber.

c. Building width is measured perpendicular to the ridge. For widths between those shown, spans are permitted to be interpolated.

d. NJ-Number of jack studs required to support each end. Where the number of required jack studs equals one, the header is permitted to be supported by an approved framing anchor attached to the full-height wall stud and to the header.

2009 INTERNATIONAL BUILDING CODE	
USE GROUP CLASSIFICATION	RESIDENTIAL "R-2"
TYPE OF CONSTRUCTION	TYPE V-B (COMBUSTIBLE, UNPROTECTED)
FIRE SEPARATION	1 HR RATED FIRE PARTITION (IBC 420.2/709)
GENERAL NOTES	BUILDINGS WILL BE SPRIKLERED IN ACCORDANCE WITH NFPA. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE SEALED WITH PROPER, APPROVED MATERIALS.

TABLE 2308.9.6
GIRDER SPANS[a] AND HEADER SPANS[a] FOR INTERIOR BEARING WALLS
(Maximum spans for Douglas fir-larch, hem-fir, southern pine and spruce-pine-fir[b] and required number of jack studs)

HEADERS AND GIRDERS SUPPORTING	SIZE	Building Width[c] (feet)					
		20		28		36	
		Span	NJ[d]	Span	NJ[d]	Span	NJ[d]
One floor only	2-2x4	3-1	1	2-8	1	2-5	1
	2-2x6	4-6	1	3-11	1	3-6	1
	2-2x8	5-9	1	5-0	2	4-5	2
	2-2x10	7-0	2	6-1	2	5-5	2
	2-2x12	8-1	2	7-0	2	6-3	2
	3-2x8	7-2	1	6-3	1	5-7	2
	3-2x10	8-9	1	7-7	2	6-9	2
	3-2x12	10-2	2	8-10	2	7-10	2
	4-2x8	5-10	1	5-1	2	4-6	2
	4-2x10	10-1	1	8-9	1	7-10	2
	4-2x12	11-9	1	10-2	2	9-1	2
TWO floor only	2-2x4	2-2	1	1-10	1	1-7	1
	2-2x6	3-2	2	2-9	2	2-5	2
	2-2x8	4-1	2	3-6	2	3-2	2
	2-2x10	4-11	2	4-3	2	3-10	3
	2-2x12	5-9	2	5-0	3	4-5	3
	3-2x8	5-1	2	4-5	2	3-11	2
	3-2x10	6-2	2	5-4	2	4-10	2
	3-2x12	7-2	2	6-3	2	5-7	3
	4-2x8	4-2	2	3-7	2	3-2	2
	4-2x10	7-2	2	6-2	2	5-6	2
	4-2x12	8-4	2	7-2	2	6-5	2

BASIS OF DESIGN

BUILDING CODE ..... 2009 INTERNATIONAL BUILDING CODE

DESIGN LOADS:
- ROOF DEAD LOAD ..... 15 PSF
- ROOF LIVE LOAD ..... SNOW LOAD GOVERNS
- FLOOR LIVE LOAD ..... 40 PSF
  30 PSF AT SLEEPING ROOMS

ROOF SNOW LOAD
- GROUND SNOW LOAD, Pg ..... 50 PSF
- SNOW EXPOSURE FACTOR, Ce 1.0
- SNOW LOAD IMPORTANCE FACTOR, I 1.0
- SNOW LOAD THERMAL FACTOR, Ct 1.1

WIND LOAD:
- WIND SPEED ..... 100 MPH
- EXPOSURE ..... B

EARTHQUAKE DESIGN DATA
- SEISMIC IMPORTANCE FACTOR 1.0
- OCCUPANCY CATEGORY II
- MAPPED SPECTRAL RESPONSE, Ss 0.342
- MAPPED SPECTRAL RESPONSE, S1 ..... 0.078
- SITE CLASS ..... D
- SPECTRAL RESPONSE COEFFICENT, Sds 0.348
- SPECTRAL RESPONSE COEFFICENT, Sd1 ..... 0.125
- SEISMIC DESIGN CATEGORY C
- BASIC SEISMIC-FORCE RESISTING SYSTEM ..... LIGHT FRAMED WALLS WITH SHEAR PANELS

RESPONSE MODIFICATION FACTOR, R 2

SEISMIC RESPONSE COEFFICIENT, Cs 0.174

General Notes:

1. Unless noted otherwise the buildings shall be constructed in accordance with the 2009 International Building Code Section 2308 – Conventional Light-Frame Construction.
2. Walls separating units shall be considered braced wall lines and constructed in accordance with the 2009 IBC Section 2308.9.3.5.
3. 2x8, 2x10 and 2x12 dimension lumber shall be Spruce Pine Fir No. 1/No.2 as graded by NLGA, U.N.O.
4. 2x4 and 2x6 dimension lumber shall be Spruce Pine Fir No. 2 or better as graded by NeLMA.
5. All fastening shall comply with the "recommended fastening schedule" in the 2009 international building code (Table 2304.9.1) unless noted otherwise.
6. Frame double joist headers at ceiling openings frame rigidly into joists.
7. Double members over openings over 24 inches wide. Space short studs above and below opening matching stud spacing.
8. Post and columns from headers and beams shall bear continuously to the concrete foundations, including blocking in interstitial floor and roof spaces. Blocking shall be of the size and shape to carry the required loading.
9. All wood in contact with concrete shall be pressure treated.

FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENER [b, c, d, e]	SPACING OF FASTENERS: Edges (inches) [i]	SPACING OF FASTENERS: Intermediate support [c, e] (inches)
wood structural panels, subfloor, roof and wall sheathing to framing, and particaleboard wall sheathing to framing			
5/16" – 1/2"	6d common nail (subfloor, wall) 8d common nail (roof) [f]	6	12 [g]
19/32" – 1"	8d common nail	6	12 [g]
1-1/8" – 1-1/4"	10d common nail or 8d deformed nail	6	12
Other wall sheathing [H]			
1/2" regular cellulosic fiberboard sheathing	1-1/2" galvanized roofing nail 6d common nail staple 16ga., 1-1/2" long	3	6
1/2" regular cellulosic fiberboard sheathing	1-3/4" galvanized roofing nail 8d common nail staple 16ga., 1-3/4" long	3	6
25/32" structural cellulosic fiberboard sheathing	1-1/2" galvanized roofing nail: 6d common nail; staple galvanized, 1-1/2" long 1-1/4" screws, type W or S	3	6
1/2" gypsum sheathing	1-1/2" galvanized roofing nail 6d common nail staple 16ga., 1-1/2" long	4	8
5/8" gypsum sheathing	1-1/2" galvanized roofing nail 6d common nail staple 16ga., 1-1/2" long	4	8
wood structural panels, combination subfloor underlayment to framing			
3/4" and less	6d deformed nail or 8d common nail	6	12
7/8" – 1"	8d common nail or 8d deformed nail	6	12
1-1/8" – 1-1/4"	10d common nail or 8d deformed nail	6	12

For SI: 1inch = 25.4mm, 1foot = 304.8mm, 1mile per hour = 1.609km/h.

a. All nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80ksi (551 MPa) for shank diameter of .192inch (20d common nail), 90ksi (620 MPa) for shank diameters larger than 0.142inch but not larger than 1.177inch, and 100ksi (689 MPa)for shank diameters of 0.142inch less.

b. Staples are 16 gage wire and have a minimum 7/16-inch on diameter crown width.

c. Nails shall be spaced at not more than 6inches on center at all supports where spans are 48inches or greater.

d. Four-foot- by-8-foot or 4-foot-by-9-foot panels shall be applied vertically.

e. Spacing of fasteners not included in this table shall be based on table R6023(1).

f. For regions having basic wind speed of 110mph or greater, 8d deformed nails shall be used for attaching plywood and wood structural panel roof sheathing to
framing within minimum 48-inch distance from gable end walls, if mean roof height is more than 25feet, up to 35feet maximum.

g. For regions having basic wind speed of 100mph or less, nails for attaching wood structural panel roof sheathing to gable end wall framing shall be spaced 6inches on center. When basic wind speed is greater than 100mph, nails for attaching panel roof sheathing to intermediate supports shall be spaced 6inches on center for minimum 48-inch distance from ridges, eves and gable end walls; and 4inches on center to gable end wall framing.

h. Gypsum sheathing shall conform to ASTM C79 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to either AHA 194.1 or ASTM C 208.

i. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and at all floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and at all roof plane perimeters. Blocking of roof or floor sheathing panel edges perpendicular to the framing members shall not be required except at intersection of adjacent roof planes. Floor and roof perimeter shall be supported by framing members or solid blocking.

HANCOCK CLASSIC WINDOWS NFRC CERTIFIED UNIT PERFORMANCE

HANCOCK WINDOWS PRODUCT TYPE;		WITHOUT GRILLS HP LOW-E:
CASEMENT	U-FACTOR R-VALUE	0.31 0.31
STANDARD DOUBLE- HUNG	U-FACTOR R-VALUE	0.35 0.35
PREMIUM DOUBLE-HUNG	U-FACTOR R-VALUE	0.46 0.46
TRANSOM	U-FACTOR R-VALUE	0.34 0.34
AWNING	U-FACTOR R-VALUE	0.31 0.31
GLIDER	U-FACTOR R-VALUE	0.33 0.33

*MATHEW BROTHERS NFRC CERTIFIED CENTER UNIT PERFORMANCE

HANCOCK LUMBER Est.1848

SCHEDULES
WAYNE HYMER
369 CAPISIC ST. PORTLAND, ME.

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