

SWI-Joists

T-SERIES



SUPERIOR
WOOD
SYSTEMS^{INC}

Specifications and Application Guide for Floors and Roofs

- **Environmentally Efficient**
- **Easy Handling**
- **Dimensionally Stable**
- **Time Saving**
- **Less Waste**
- **Easy Nailing**

A SUPERIOR FLOOR AND ROOF SYSTEM

SWI-T Series Joists are pre-engineered to provide a floor or roof system that is superior to dimensional lumber. SWI-T Series Joists are stronger, lighter, straighter and more stable than equivalent size conventional lumber. SWI-T Series Joists have code acceptance by ICBO, BOCA, and the State of Wisconsin. SWI-T Series Joists are manufactured to strict quality control standards with PFS Corporation acting as the qualified third party inspecting agency.

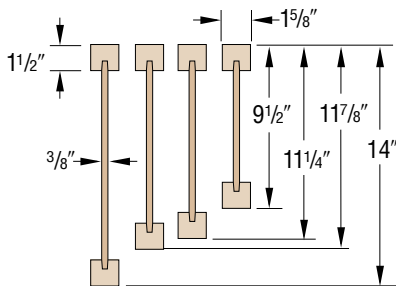
ADVANTAGES OF THE SUPERIOR WOOD SYSTEM

- Every SWI-T Series Joist is constructed with high quality 2100F machine stress rated (MSR) lumber flanges with a $\frac{3}{8}$ " oriented strand board (OSB) web with a tapered joint for added strength.
- Dimensionally Stable – Solid lumber can shrink after installation causing nail pops and squeaky floors. SWI-T Series Joists are much more stable and consistent which means you will have fewer call-backs to repair bouncy squeaky floors.
- Light Weight – The SWI-T Series Joist is approximately one half the weight of solid lumber which makes it considerably easier to handle the longer lengths. LIGHTER JOISTS GO UP QUICKER!
- Greater load carrying capacity allows farther on-center spacing compared to dimensional joists.
- SWI-T Series Joists are built with no crown so the carpenter does not have to examine each piece and place the crown up as with solid lumber, resulting in time savings.
- Larger holes can be cut more easily for electrical, plumbing and heating in the $\frac{3}{8}$ " web as compared to dimensional joists. (See hole chart page 14.)
- SWI-T Series Joists are available in lengths up to 48 feet giving multi-span capability which eliminates overlapping at intermediate bearing walls as with solid lumber. This also eliminates off-setting the sheathing and provides a wider straight nailing path. There are fewer pieces to cut and that means less waste.
- Easier nailing through the flange into a bearing plate as compared to toe-nailing into solid lumber.

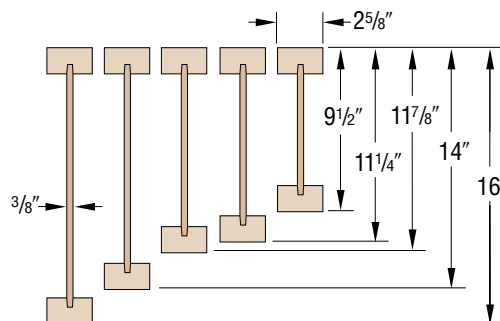
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THE T-SERIES

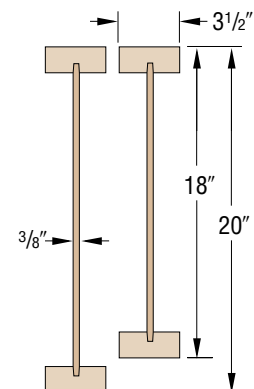
SWI-24



SWI-34

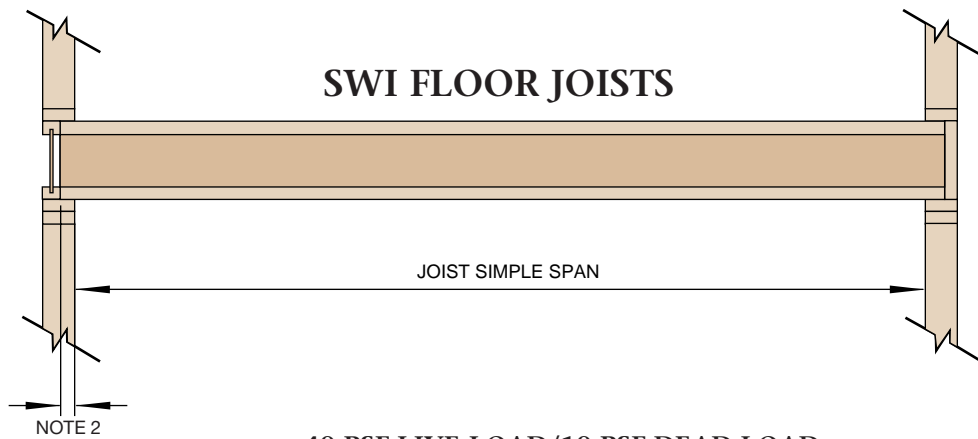


SWI-44



JOIST SERIES and WEIGHT (Lbs per Linear Foot)										
SWI-24				SWI-34					SWI-44	
9 1/2"	11 1/4"	11 7/8"	14"	9 1/2"	11 1/4"	11 7/8"	14"	16"	18"	20"
1.9	2.1	2.2	2.3	2.6	2.8	2.9	3.0	3.2	4.1	4.3

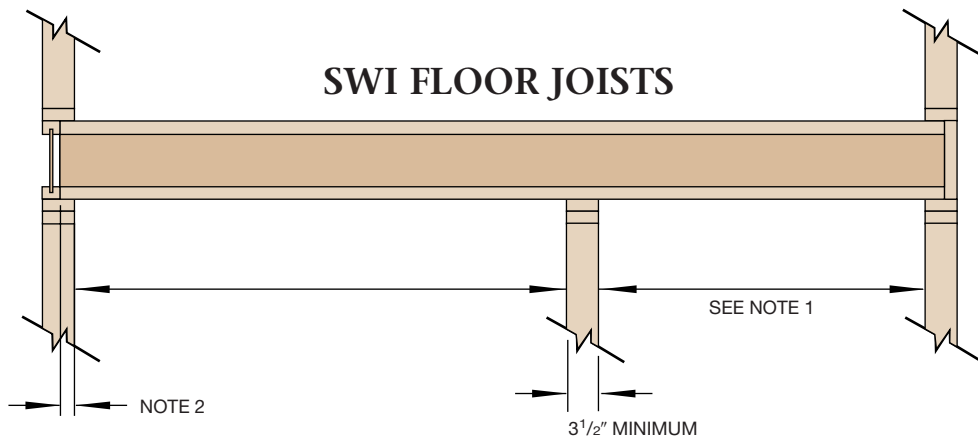
MAXIMUM SIMPLE FLOOR SPANS



40 PSF LIVE LOAD/10 PSF DEAD LOAD

	O. C. SPACING (inches)	JOIST SERIES AND DEPTH (inches)										
		SWI-24				SWI-34					SWI-44	
		9½"	11¼"	11⅞"	14"	9½"	11¼"	11⅞"	14"	16"	18"	20"
LL DEFL. L/360	12"	16'-10"	19'-8"	20'-6"	23'-2"	19'-6"	22'-10"	23'-9"	27'-0"	29'-10"	35'-8"	38'-7"
	16"	15'-2"	17'-9"	18'-6"	20'-6"	17'-7"	20'-7"	21'-6"	24'-5"	27'-0"	32'-3"	34'-11"
	19.2"	14'-3"	16'-3"	16'-10"	18'-8"	16'-6"	19'-4"	20'-2"	22'-11"	25'-4"	30'-3"	32'-9"
	24"	12'-9"	14'-7"	15'-0"	16'-8"	15'-2"	17'-10"	18'-7"	21'-2"	21'-9"	28'-0"	30'-3"
LL DEFL. L/480	12"	15'-2"	17'-9"	18'-6"	21'-0"	17'-7"	20'-7"	21'-6"	24'-5"	27'-0"	32'-3"	34'-11"
	16"	13'-8"	16'-1"	16'-8"	18'-11"	15'-10"	18'-7"	19'-5"	22'-0"	24'-5"	29'-2"	31'-6"
	19.2"	12'-10"	15'-1"	15'-8"	17'-9"	14'-10"	17'-5"	18'-2"	20'-8"	22'-10"	27'-4"	29'-7"
	24"	11'-10"	13'-11"	14'-5"	16'-5"	13'-8"	16'-1"	16'-9"	19'-1"	21'-1"	25'-3"	27'-3"

MAXIMUM MULTIPLE FLOOR SPANS



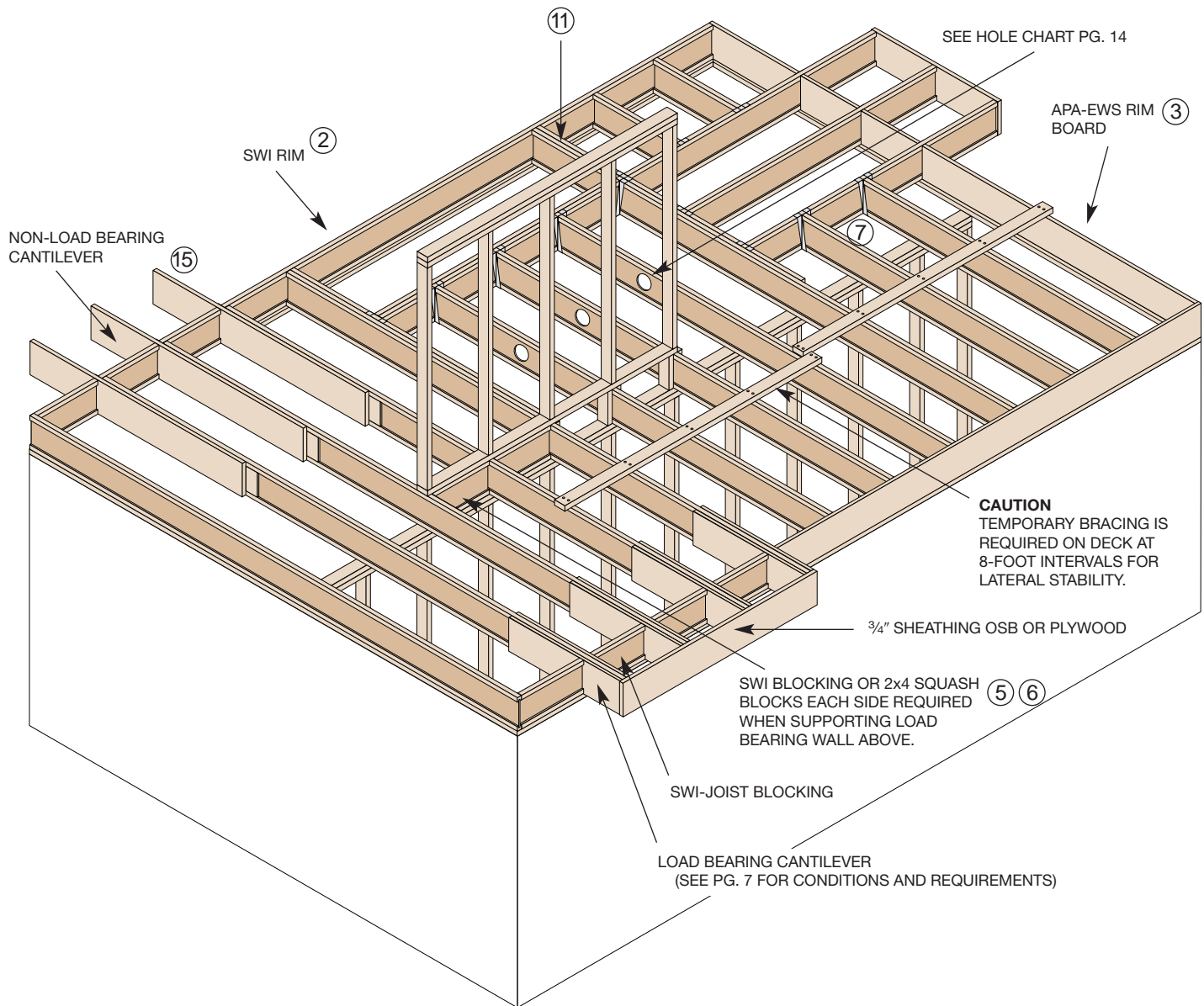
40 PSF LIVE LOAD/10 PSF DEAD LOAD

	O. C. SPACING (inches)	JOIST SERIES AND DEPTH (inches)										
		SWI-24				SWI-34						
		9½"	11¼"	11⅞"	14"	9½"	11¼"	11⅞"	14"	16"	18"	
LL DEFL. L/480	12"	17'-6"	19'-8"	20'-5"	22'-10"	19'-4"	22'-9"	23'-10"	26'-11"	29'-4"		
	16"	16'-0"	18'-0"	18'-9"	20'-10"	17'-11"	20'-6"	21'-7"	24'-3"	26'-8"		
	19.2"	15'-1"	17'-1"	17'-10"	19'-8"	16'-10"	19'-3"	20'-4"	22'-10"	24'-0"		
	24"	13'-8"	15'-1"	15'-2"	16'-10"	15'-6"	18'-0"	18'-6"	20'-10"	21'-10"		

NOTES:

1. Shorter span must measure at least 50% of longest span. Otherwise use simple span chart.
2. Minimum end bearing 24 Series - 2", 34-44 Series - 2½" (3½" minimum intermediate bearing).
3. L/360 deflection is minimum by code. L/480 is recommended for stiffer system.
4. Span charts based on composite action (glued and nailed ¾" sheathing).
5. For loading conditions not shown, use the Uniform Floor Load Table (pg. 8) or call your SWI-Joist distributor.

FLOOR FRAMING LAYOUT



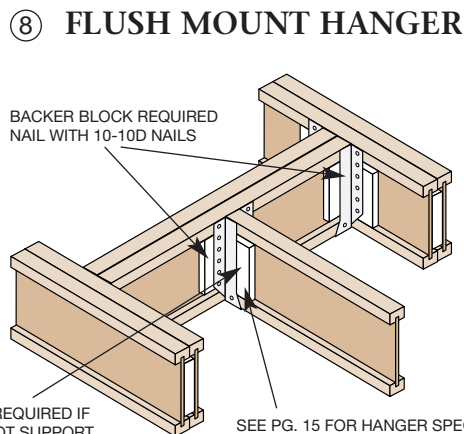
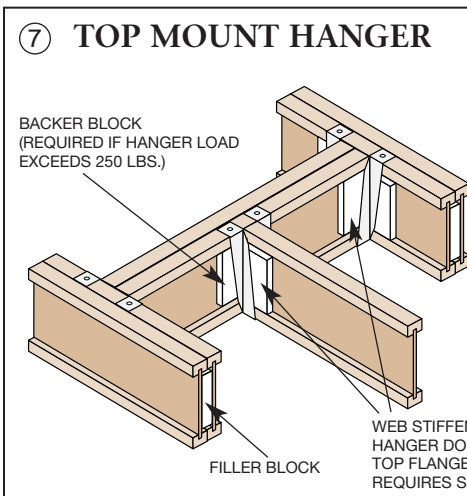
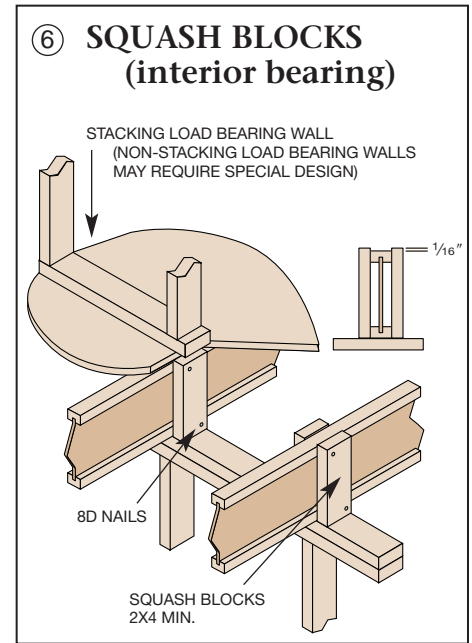
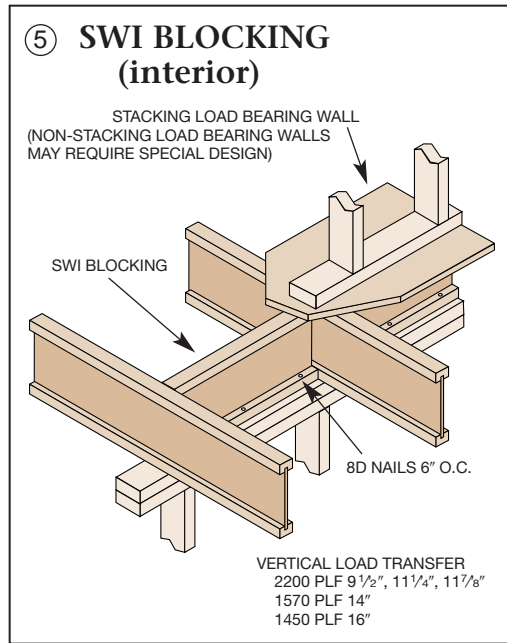
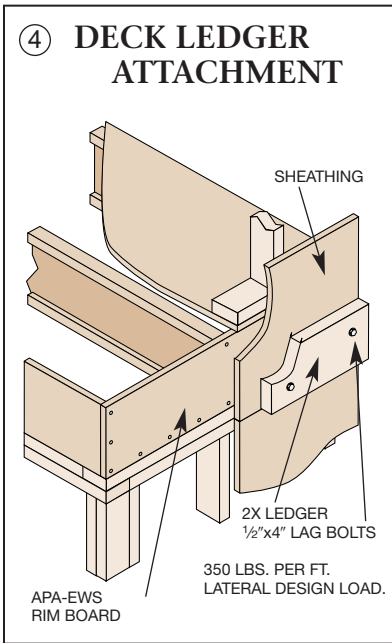
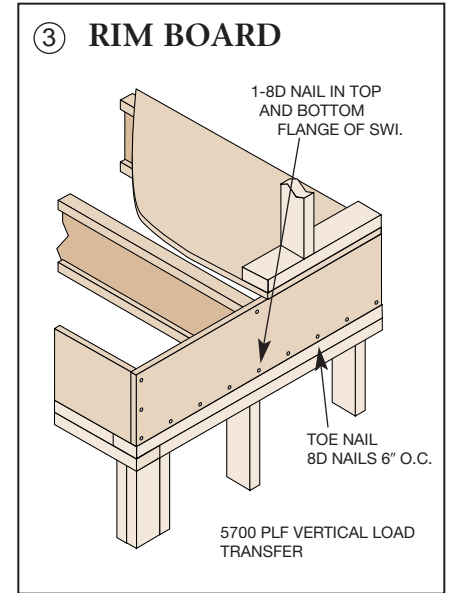
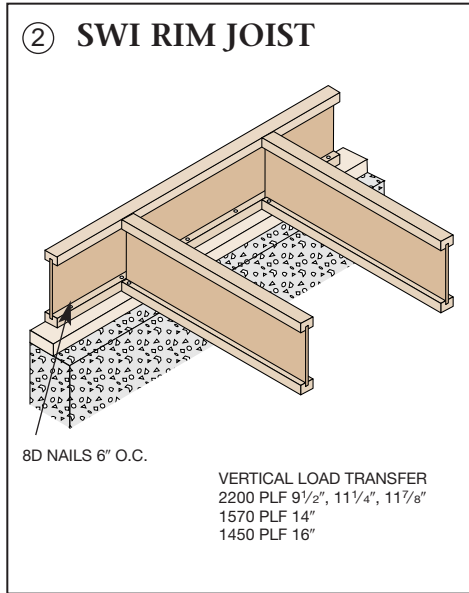
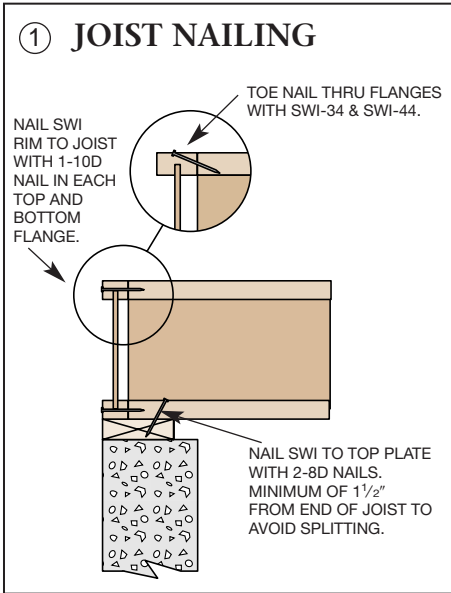
Layout Guide 19.2" O.C. Joist Spacing

1	19 ³ / ₁₆ "
2	38 ³ / ₈ "
3	57 ⁵ / ₈ "
4	76 ¹³ / ₁₆ "
5	96" (8')
6	115 ³ / ₁₆ "
7	134 ³ / ₈ "
8	153 ⁵ / ₈ "
9	172 ¹³ / ₁₆ "
10	192" (16')
11	211 ³ / ₁₆ "
12	230 ³ / ₈ "
13	249 ⁵ / ₈ "
14	268 ¹³ / ₁₆ "
15	288" (24')
16	307 ³ / ₁₆ "

GENERAL NOTES:

- Minimum bearing length for SWI-24 - 2"; SWI-34 and 44 - 2¹/₂" at ends and 3¹/₂" at intermediate points.
- Stiffeners are required on 18" and 20" SWI-Joists at ends and at intermediate bearing points.
- No mid-span bridging is required for SWI-Joists, however, vibration will be lessened and overall floor performance can be enhanced with a direct applied ceiling or continuous bottom cord bracing. Floor performance will also improve with deeper joists, reducing on-center spacing or increasing the thickness of the floor sheathing.
- Temporary bracing is required at 8 foot intervals for lateral stability. Use at least 1 x 4 members nailed to each joist with two 8d nails. Lap ends for continuous support.
- HANDLING AND STORAGE
 - Proper handling and storage of SWI-Joists is necessary to prevent damage to the product.
 - I-Joists should remain stored in strapped bundles until used. Care should be taken when opening bundles to prevent personal injury and damage to the product.
 - Handle and support the SWI-Joist to minimize lateral bending during cutting and placement procedures.
 - Store SWI-Joists on the job site in a level vertical position on dry support surfaces and cover with waterproof material.
- DO NOT** cut into flanges.

FLOOR FRAMING DETAILS



BACKER BLOCK REQUIREMENTS

- SWI-24 - 5/8"
- SWI-34 - 1 1/8"
- SWI-44 - 1 9/16"

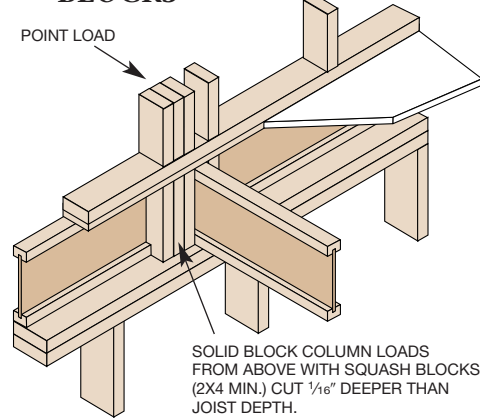
Install backer tight to top flange with min. 1/8" gap at bottom.
Backers are required on both sides of a single joist.
Backer must be wide enough to permit required nailing without splitting.

FLOOR FRAMING DETAILS

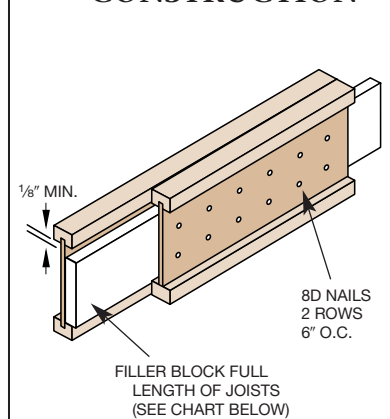
⑨ BEVEL CUT JOIST



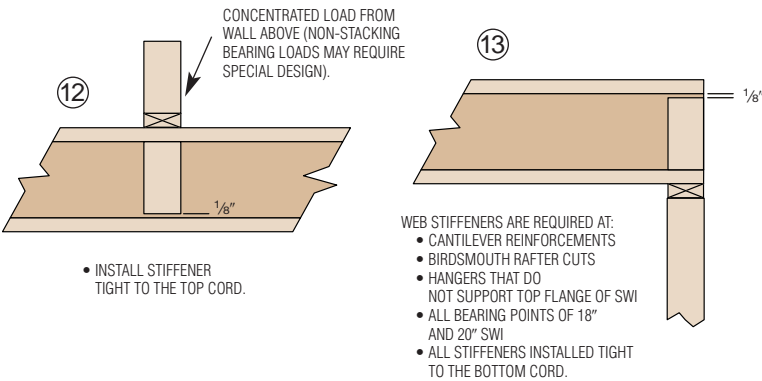
⑩ COLUMN LOAD/SQUASH BLOCKS



⑪ DOUBLE JOIST CONSTRUCTION



WEB STIFFENERS



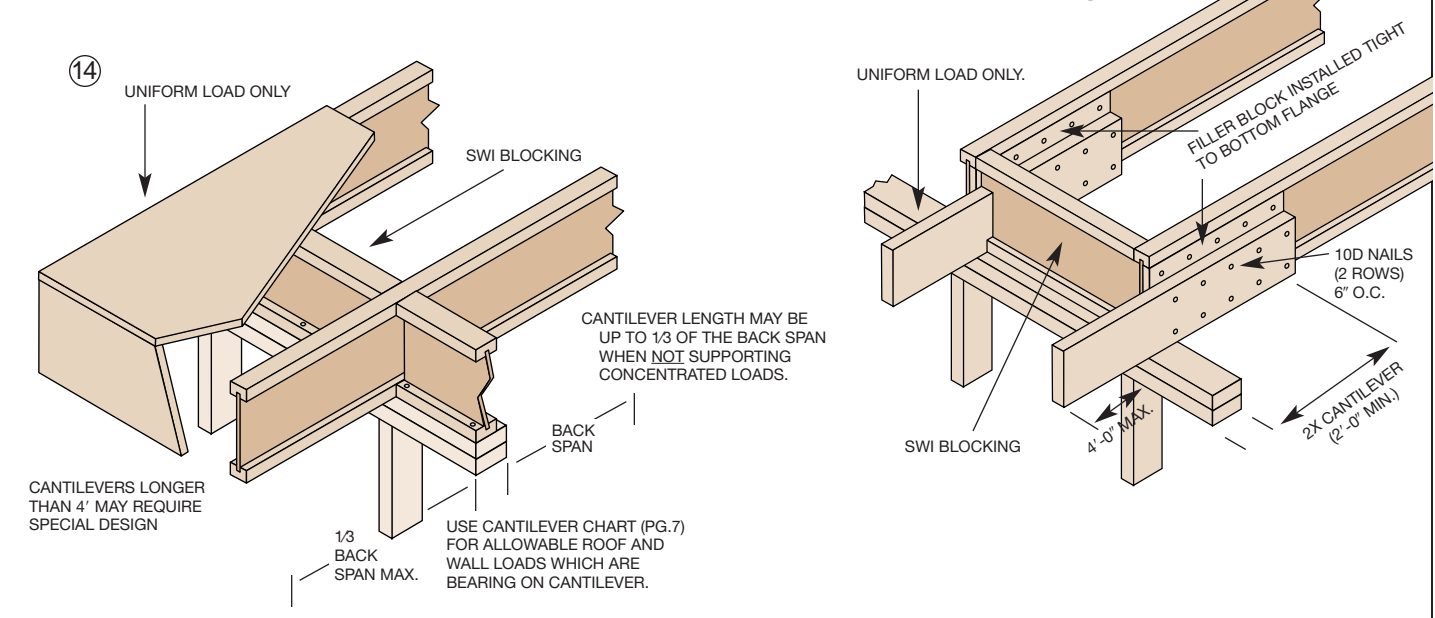
- WEB STIFFENERS ARE REQUIRED AT:
- CANTILEVER REINFORCEMENTS
 - BIRDSMOUTH RAFTER CUTS
 - HANGERS THAT DO NOT SUPPORT TOP FLANGE OF SWI
 - ALL BEARING POINTS OF 18" AND 20" SWI
 - ALL STIFFENERS INSTALLED TIGHT TO THE BOTTOM CORD.

WEB STIFFENER AND DOUBLE JOIST REQUIREMENTS FOR SWI-JOISTS

Series	Joist Depth (in.)	Stiffener Depth (in.) ¹	Thickness (in.)	Width (in.) min. ²	Double Joist Filler Blocks
SWI-24	9 1/2"	6"	1/2"	3 1/2"	2 x 6 or 2-5/8" Plywood
	11 1/4"	8"	1/2"	3 1/2"	2 x 8 or 2-5/8" Plywood
	11 7/8"	8 3/4"	1/2"	3 1/2"	2 x 8 or 2-5/8" Plywood
	14"	10 3/4"	1/2"	3 1/2"	2 x 10 or 2-5/8" Plywood
SWI-34	9 1/2"	6"	1/2"	3 1/2"	2 x 6 + 3/4" Plywood
	11 1/4"	8"	1/2"	3 1/2"	2 x 8 + 3/4" Plywood
	11 7/8"	8 3/4"	1/2"	3 1/2"	2 x 8 + 3/4" Plywood
	14"	10 3/4"	1/2"	3 1/2"	2 x 10 + 3/4" Plywood
	16"	12 3/4"	1/2"	3 1/2"	2 x 12 + 3/4" Plywood
SWI-44	18"	14 3/4"	1 1/2"	3 1/2"	2 - 2 x 12
	20"	16 3/4"	1 1/2"	3 1/2"	2 - 2 x 12

¹ Stiffener and filler material is plywood or OSB.
² Stiffener width 3 1/2" min. or to match bearing width.

NON-LOAD BEARING CANTILEVERS



MAXIMUM UNIFORM FLOOR LOAD POUNDS PER LINEAL FOOT (PLF)

SPAN (FT)	9 1/2" SWI-24			11 1/4" SWI-24			11 7/8" SWI-24			14" SWI-24			9 1/2" SWI-34			11 1/4" SWI-34			11 7/8" SWI-34			14" SWI-34			16" SWI-34			18" SWI-44			20" SWI-44								
	LIVE	LOAD	TOTAL	LIVE	LOAD	TOTAL	LIVE	LOAD	TOTAL	LIVE	LOAD	TOTAL	LIVE	LOAD	TOTAL	LIVE	LOAD	TOTAL	LIVE	LOAD	TOTAL	LIVE	LOAD	TOTAL	LIVE	LOAD	TOTAL	LIVE	LOAD	TOTAL	LIVE	LOAD	TOTAL	LIVE	LOAD	TOTAL			
	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/	L/			
	360	480	240	360	480	240	360	480	240	360	480	240	360	480	240	360	480	240	360	480	240	360	480	240	360	480	240	360	480	240	360	480	240	360	480	240	360	480	240
6			292			324			322			322			322			387			387			387			354			612			677						
7			251			279			277			277			277			333			333			333			305			527			642						
8		213	220			245			244			244			244			292			292			292			268			463			611						
9		158	196			218			217			217			217			261			261			261			239			413			583						
10	160	120	163		184	197			196			196		176	196			235			235			235			216			372			557						
11	124	93	135		143	175		159	178			178		138	178		210	214			214			214			196			339			533						
12	98	73	114		113	147		126	157			164	147	110	164		168	197			197			197			180			311			512						
13	78	59	97	121	91	126		101	134		144	151	119	89	151		136	182			182			182			167			288			456						
14	64	48	84	99	74	109	110	83	116		118	141	97	73	135	150	112	169	167	126	169			169			155			267			411						
15	52	39	73	82	61	95	91	68	101		97	124	81	61	117	124	93	152	139	104	158		148	158			145			250			375						
16	44	33	64	68	51	83	76	57	89	109	81	109	68	51	103	104	78	134	117	88	144		125	148			136			234			344						
17	37	28	57	57	43	74	64	48	79		92	69	97	57	43	92		88	66	119		99	74	127		106	139			128			318						
18	31	23	51	49	37	66	55	41	70		78	59	87	49	37	82		75	57	106		85	63	114	121	91	132		120	121		221	296						
19	27	20	46	42	31	59	47	35	63		67	50	78	42	31	74		65	49	95		73	55	102		103	115		169	198		208	276						
20	23	17	41	36	27	54	40	30	57		58	43	70	36	27	67		56	42	86		63	47	92		90	109		90	109		147	188	182	259				
21	-	-	-	31	24	49	35	26	52		50	38	64	31	24	60		49	37	78		55	41	84		79	59	103		78	104	172	129	179	160	244			
22	-	-	-	27	21	44	31	23	47		44	33	58	28	21	55		43	32	71		48	36	77		69	52	94	92	69	99	152	114	170	188	141	231		
23	-	-	-	24	18	41	27	20	43		39	29	53	24	18	50		38	28	65		43	32	70		61	46	86	81	61	95	135	101	155	167	125	219		
24	-	-	-	-	-	-	24	18	40		34	26	49	-	-	-		34	25	60		38	28	64		54	41	79	72	54	91	120	90	143	149	111	208		
25	-	-	-	-	-	-	-	-	-		31	23	45	-	-	-		30	22	55		34	25	59		48	36	73	64	48	86	107	80	132	133	100	198		
26	-	-	-	-	-	-	-	-	-		27	20	42	-	-	-		27	20	51		30	22	55		43	32	67	57	43	79	96	72	122	119	89	189		
27	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-		-	-	-		27	20	51		39	29	63	52	39	74	86	65	113	107	81	176		
28	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-		-	-	-		-	-	-		35	26	58	46	35	69	78	58	105	97	73	161		
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38	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-		-	-	-		-	-	-		-	-	-	-	-	-	33	24	57	41	31	81		
39	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-		-	-	-		-	-	-		-	-	-	-	-	-	30	23	54	38	28	76		

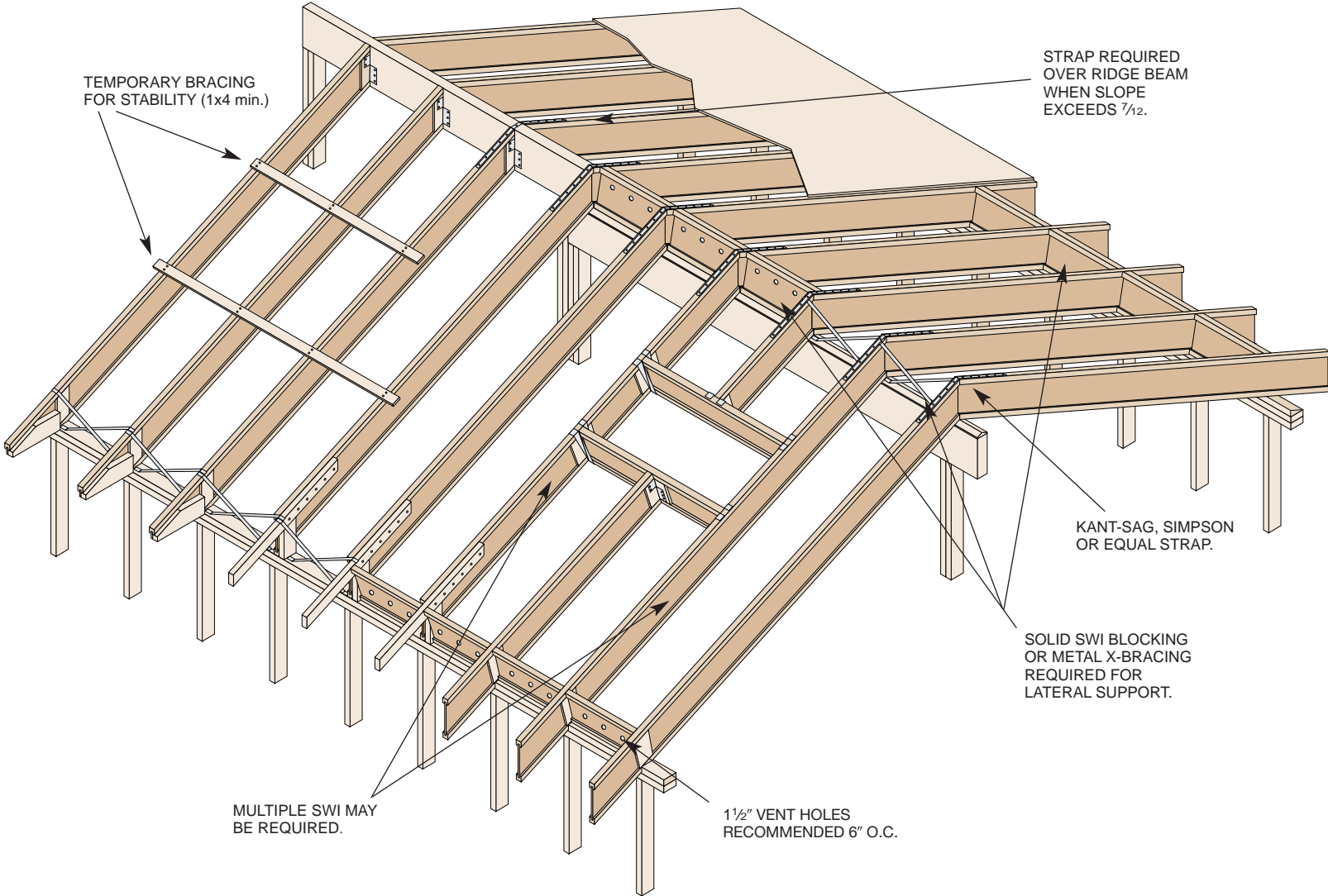
PSF TO PLF CONVERSION TABLE	O.C. Spacing (in.)	LOAD (PSF)										
		20	25	30	35	40	45	50	55	60	65	
	12"	20	25	30	35	40	45	50	55	60	65	
	16"	27	34	40	47	54	60	67	74	80	87	
	19.2"	32	40	48	56	64	72	80	88	96	104	
24"	40	50	60	70	80	90	100	110	120	130		

NOTES:

1. Spans are based on clear span distance between bearing.
2. When sizing joists both live load and total load must be checked. When no load is shown in the live load column, total load will govern.
3. Loads shown above apply to both simple span or multiple span applications.
4. Load table assumes no composite action from glued and nailed sheathing.
5. Web stiffeners are only required for 18" and 20" joist for above loadings. Web stiffeners are not required for 9 1/2", 11 1/4", 11 7/8", 14" or 16" joists. Web stiffeners are required with hangers that do not laterally support the SWI top flange.

ROOF FRAMING LAYOUT

(SOME DETAILS LEFT OUT FOR CLARITY.)



CAUTION

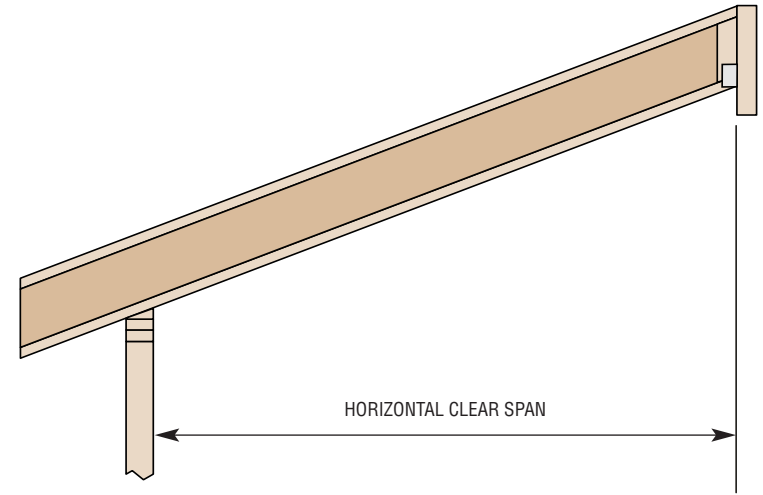
TEMPORARY BRACING IS REQUIRED ON ROOF JOISTS AT 8 FOOT INTERVALS FOR LATERAL STABILITY.

UP-THE-SLOPE MEASUREMENT TABLE

SLOPE	3:12	4:12	5:12	6:12	7:12	8:12	9:12	10:12	11:12	12:12
FACTOR	1.03	1.05	1.08	1.12	1.16	1.20	1.25	1.30	1.36	1.41

MAXIMUM ROOF JOIST CLEAR SPANS

O.C. SPACING (inches)	DURATION OF LOAD	LL/DL PSF	9 1/2" SWI-24				11 1/4" SWI-24				11 7/8" SWI-24				14" SWI-24			
			SLOPE				SLOPE				SLOPE				SLOPE			
			4:12	6:12	8:12	12:12	4:12	6:12	8:12	12:12	4:12	6:12	8:12	12:12	4:12	6:12	8:12	12:12
12" O.C.	125% Non-Snow	20-10	22'-9"	22'-3"	21'-9"	20'-6"	26'-6"	26'-0"	25'-4"	24'-0"	27'-7"	27'-1"	26'-5"	24'-11"	31'-3"	30'-8"	29'-11"	28'-3"
		20-15	21'-6"	21'-1"	20'-7"	19'-6"	25'-2"	24'-8"	24'-1"	22'-9"	26'-2"	25'-8"	25'-0"	23'-8"	29'-8"	29'-1"	28'-4"	26'-8"
	115% Snow	25-15	20'-7"	20'-2"	19'-8"	18'-3"	24'-0"	23'-6"	22'-7"	20'-10"	25'-0"	24'-3"	23'-5"	21'-7"	27'-9"	26'-11"	25'-11"	23'-11"
		25-20	19'-9"	19'-4"	18'-8"	17'-3"	22'-9"	22'-1"	21'-4"	19'-8"	23'-7"	22'-10"	22'-0"	20'-4"	26'-2"	25'-4"	24'-5"	22'-6"
		30-15	19'-9"	19'-4"	18'-8"	17'-3"	22'-9"	22'-1"	21'-4"	19'-8"	23'-7"	22'-10"	22'-0"	20'-4"	26'-2"	25'-4"	24'-5"	22'-6"
		30-20	18'-11"	18'-5"	17'-9"	16'-4"	21'-7"	21'-0"	20'-3"	18'-7"	22'-4"	21'-8"	20'-11"	19'-3"	24'-9"	24'-1"	23'-2"	21'-4"
		40-15	17'-10"	17'-6"	16'-11"	15'-7"	20'-7"	20'-0"	19'-3"	17'-9"	21'-3"	20'-8"	19'-11"	18'-4"	23'-7"	22'-11"	22'-1"	20'-4"
		40-20	17'-3"	16'-9"	16'-2"	14'-11"	19'-8"	19'-1"	18'-5"	17'-0"	20'-4"	19'-9"	19'-1"	17'-7"	22'-7"	21'-11"	21'-2"	19'-6"
		50-15	16'-7"	16'-1"	15'-6"	14'-4"	18'-11"	18'-4"	17'-8"	16'-4"	19'-7"	19'-0"	18'-4"	16'-10"	21'-8"	21'-1"	20'-4"	18'-8"
		50-20	16'-7"	16'-1"	15'-6"	14'-4"	18'-11"	18'-4"	17'-8"	16'-4"	19'-7"	19'-0"	18'-4"	16'-10"	21'-8"	21'-1"	20'-4"	18'-8"
16" O.C.	125% Non-Snow	20-10	20'-7"	20'-2"	19'-8"	18'-7"	24'-0"	23'-7"	23'-0"	21'-9"	25'-0"	24'-6"	23'-11"	22'-6"	28'-4"	27'-9"	27'-1"	24'-11"
		20-15	19'-6"	19'-1"	18'-8"	17'-7"	22'-9"	22'-4"	21'-9"	20'-1"	23'-9"	23'-3"	22'-7"	20'-9"	26'-9"	26'-0"	25'-0"	23'-1"
	115% Snow	25-15	18'-4"	17'-10"	17'-2"	15'-10"	20'-11"	20'-3"	19'-7"	18'-0"	21'-7"	21'-0"	20'-3"	18'-7"	24'-0"	23'-3"	22'-5"	20'-8"
		25-20	17'-3"	16'-9"	16'-2"	14'-11"	19'-8"	19'-1"	18'-5"	17'-0"	20'-4"	19'-9"	19'-1"	17'-7"	22'-7"	21'-11"	21'-2"	19'-6"
		30-15	17'-3"	16'-9"	16'-2"	14'-11"	19'-8"	19'-1"	18'-5"	17'-0"	20'-4"	19'-9"	19'-1"	17'-7"	22'-7"	21'-11"	21'-2"	19'-6"
		30-20	16'-4"	15'-11"	15'-4"	14'-1"	18'-8"	18'-1"	17'-6"	16'-1"	19'-4"	18'-9"	18'-1"	16'-8"	21'-5"	20'-9"	20'-1"	18'-6"
		40-15	15'-7"	15'-2"	14'-7"	13'-5"	17'-9"	17'-3"	16'-8"	15'-4"	18'-5"	17'-10"	17'-3"	15'-10"	20'-5"	19'-10"	19'-1"	17'-7"
		40-20	14'-11"	14'-6"	14'-0"	12'-10"	17'-0"	16'-6"	15'-11"	14'-8"	17'-7"	17'-1"	16'-6"	15'-2"	19'-6"	18'-11"	18'-3"	16'-10"
		50-15	14'-4"	13'-11"	13'-5"	12'-4"	16'-4"	15'-10"	15'-4"	14'-1"	16'-11"	16'-5"	15'-10"	14'-7"	18'-9"	18'-2"	17'-7"	16'-2"
		50-20	14'-4"	13'-11"	13'-5"	12'-4"	16'-4"	15'-10"	15'-4"	14'-1"	16'-11"	16'-5"	15'-10"	14'-7"	18'-9"	18'-2"	17'-7"	16'-2"
19.2" O.C.	125% Non-Snow	20-10	19'-4"	18'-11"	18'-5"	17'-5"	22'-7"	22'-1"	21'-6"	19'-10"	23'-6"	23'-0"	22'-3"	20'-6"	26'-5"	25'-7"	24'-8"	22'-9"
		20-15	18'-4"	17'-11"	17'-6"	16'-1"	21'-3"	20'-8"	19'-11"	18'-4"	22'-0"	21'-4"	20'-7"	18'-11"	24'-5"	23'-8"	22'-10"	21'-0"
	115% Snow	25-15	16'-9"	16'-3"	15'-8"	14'-5"	19'-1"	18'-6"	17'-10"	16'-5"	19'-8"	19'-2"	18'-5"	17'-0"	21'-10"	21'-3"	20'-6"	18'-10"
		25-20	15'-9"	15'-4"	14'-9"	13'-7"	18'-0"	17'-5"	16'-10"	15'-6"	18'-7"	18'-0"	17'-4"	16'-0"	20'-7"	20'-0"	19'-3"	17'-9"
		30-15	15'-9"	15'-4"	14'-9"	13'-7"	18'-0"	17'-5"	16'-10"	15'-6"	18'-7"	18'-0"	17'-4"	16'-0"	20'-7"	20'-0"	19'-3"	17'-9"
		30-20	14'-11"	14'-6"	14'-0"	12'-10"	17'-0"	16'-6"	15'-11"	14'-8"	17'-7"	17'-1"	16'-6"	15'-2"	19'-6"	18'-11"	18'-3"	16'-10"
		40-15	14'-3"	13'-10"	13'-4"	12'-3"	16'-3"	15'-9"	15'-2"	14'-0"	16'-9"	16'-3"	15'-8"	14'-5"	18'-7"	18'-1"	17'-5"	16'-0"
		40-20	13'-7"	13'-3"	12'-9"	11'-9"	15'-6"	15'-1"	14'-6"	13'-5"	16'-1"	15'-7"	15'-0"	13'-10"	17'-10"	17'-3"	16'-8"	15'-4"
		50-15	13'-1"	12'-8"	12'-3"	11'-3"	14'-11"	14'-6"	13'-11"	12'-10"	15'-5"	14'-11"	14'-5"	13'-3"	17'-1"	16'-7"	16'-0"	14'-9"
		50-20	13'-1"	12'-8"	12'-3"	11'-3"	14'-11"	14'-6"	13'-11"	12'-10"	15'-5"	14'-11"	14'-5"	13'-3"	17'-1"	16'-7"	16'-0"	14'-9"
24" O.C.	125% Non-Snow	20-10	17'-10"	17'-6"	16'-10"	15'-6"	20'-6"	19'-11"	19'-3"	17'-9"	21'-3"	20'-7"	19'-10"	18'-4"	23'-7"	22'-10"	22'-1"	20'-4"
		20-15	16'-8"	16'-2"	15'-7"	14'-4"	19'-0"	18'-5"	17'-9"	16'-4"	19'-8"	19'-1"	18'-5"	16'-11"	21'-10"	21'-2"	20'-5"	18'-9"
	115% Snow	25-15	14'-11"	14'-6"	14'-0"	12'-10"	17'-0"	16'-6"	15'-11"	14'-8"	17'-7"	17'-1"	16'-6"	15'-2"	19'-6"	18'-11"	18'-3"	16'-10"
		25-20	14'-1"	13'-8"	13'-2"	12'-1"	16'-0"	15'-7"	15'-0"	13'-10"	16'-7"	16'-1"	15'-6"	14'-3"	18'-5"	17'-10"	17'-3"	15'-10"
		30-15	14'-1"	13'-8"	13'-2"	12'-1"	16'-0"	15'-7"	15'-0"	13'-10"	16'-7"	16'-1"	15'-6"	14'-3"	18'-5"	17'-10"	17'-3"	15'-10"
		30-20	13'-4"	12'-11"	12'-6"	11'-6"	15'-3"	14'-9"	14'-3"	13'-1"	15'-9"	15'-3"	14'-8"	13'-6"	17'-5"	16'-11"	16'-4"	15'-0"
		40-15	12'-8"	12'-4"	11'-11"	10'-11"	14'-6"	14'-1"	13'-7"	12'-6"	15'-0"	14'-6"	14'-0"	12'-11"	16'-7"	16'-3"	15'-6"	14'-4"
		40-20	12'-2"	11'-10"	11'-4"	10'-6"	13'-10"	13'-6"	13'-0"	11'-11"	14'-4"	13'-11"	13'-5"	12'-4"	15'-11"	15'-5"	14'-10"	13'-4"
		50-15	11'-8"	11'-4"	10'-11"	10'-1"	13'-4"	12'-11"	12'-5"	11'-6"	13'-9"	13'-4"	12'-10"	11'-10"	15'-3"	14'-10"	14'-3"	12'-3"
		50-20	11'-8"	11'-4"	10'-11"	10'-1"	13'-4"	12'-11"	12'-5"	11'-6"	13'-9"	13'-4"	12'-10"	11'-10"	15'-3"	14'-10"	14'-3"	12'-3"



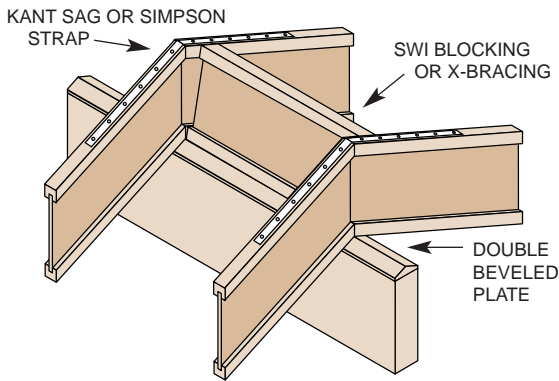
NOTES:

1. Maximum deflection is limited to L/180 at total load and L/240 at live load.
2. Roof systems should be sloped a minimum 1/4" per 12" to create positive drainage.
3. Spans shown are horizontal clear spans.
4. Spans shown assume plywood (or equal) sheathing nailed to top flange of joist.
5. Maximum slope 12/12. Contact Superior Wood Systems for slopes exceeding 12/12.
6. Use uniform load table for on-center spacing or loadings not listed below.
7. Spans may be used for both simple and multiple spans.

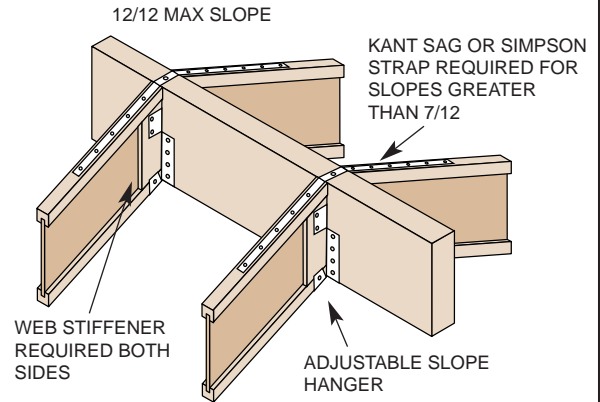
O.C. SPACING (inches)	DURATION OF LOAD	LL/DL PSF	9 1/2" SWI-34				11 1/4" SWI-34				11 7/8" SWI-34				14" SWI-34				16" SWI-34				18" SWI-44				20" SWI-44				
			SLOPE				SLOPE				SLOPE				SLOPE				SLOPE				SLOPE				SLOPE				
			4:12	6:12	8:12	12:12	4:12	6:12	8:12	12:12	4:12	6:12	8:12	12:12	4:12	6:12	8:12	12:12	4:12	6:12	8:12	12:12	4:12	6:12	8:12	12:12	4:12	6:12	8:12	12:12	4:12
12" O.C.	125% Non-Snow	20-10	26'-8"	26'-1"	25'-5"	24'-1"	31'-1"	30'-6"	29'-9"	28'-1"	32'-4"	31'-9"	30'-11"	29'-3"	36'-9"	36'-0"	35'-1"	33'-2"	40'-7"	39'-9"	38'-9"	36'-8"	48'-8"	47'-9"	46'-7"	44'-0"	52'-7"	51'-6"	50'-3"	47'-7"	
		20-15	25'-3"	24'-9"	24'-2"	22'-10"	29'-6"	28'-11"	28'-2"	26'-8"	30'-8"	30'-1"	29'-4"	27'-9"	34'-10"	34'-1"	33'-3"	31'-6"	38'-6"	37'-9"	36'-9"	34'-9"	46'-2"	45'-3"	44'-2"	41'-9"	49'-11"	48'-11"	47'-8"	45'-1"	
	115% Snow	25-15	24'-1"	23'-7"	23'-0"	21'-9"	28'-2"	27'-7"	26'-11"	25'-5"	29'-4"	28'-9"	28'-0"	26'-6"	33'-3"	32'-7"	31'-9"	30'-1"	36'-9"	36'-0"	35'-1"	33'-0"	44'-1"	43'-3"	42'-2"	39'-10"	47'-8"	46'-8"	45'-7"	43'-1"	
		25-20	23'-2"	22'-8"	22'-1"	20'-11"	27'-0"	26'-6"	25'-10"	24'-5"	28'-2"	27'-7"	26'-11"	25'-5"	31'-11"	31'-4"	30'-6"	28'-8"	35'-3"	34'-7"	33'-9"	31'-2"	42'-4"	41'-6"	40'-6"	38'-3"	45'-9"	44'-10"	43'-9"	41'-1"	
		30-15	23'-2"	22'-8"	22'-1"	20'-11"	27'-0"	26'-6"	25'-10"	24'-5"	28'-2"	27'-7"	26'-11"	25'-5"	31'-11"	31'-4"	30'-6"	28'-8"	35'-3"	34'-7"	33'-9"	31'-2"	42'-4"	41'-6"	40'-6"	38'-3"	45'-9"	44'-10"	43'-9"	41'-1"	
		30-20	22'-4"	21'-10"	21'-4"	20'-1"	26'-1"	25'-6"	24'-11"	23'-6"	27'-2"	26'-7"	25'-11"	24'-6"	30'-10"	30'-2"	29'-5"	27'-2"	34'-0"	33'-3"	32'-0"	29'-6"	40'-10"	40'-0"	39'-1"	36'-7"	44'-2"	43'-3"	42'-2"	39'-0"	
		40-15	20'-11"	20'-5"	19'-11"	18'-10"	24'-5"	23'-11"	23'-4"	22'-0"	25'-5"	24'-11"	24'-3"	22'-11"	28'-10"	28'-3"	27'-7"	25'-11"	31'-11"	31'-3"	30'-6"	28'-2"	38'-3"	37'-6"	36'-7"	34'-7"	41'-4"	40'-6"	39'-6"	37'-2"	
		40-20	20'-3"	19'-10"	19'-4"	18'-3"	23'-8"	23'-2"	22'-7"	21'-4"	24'-8"	24'-2"	23'-7"	22'-3"	28'-0"	27'-5"	26'-9"	24'-10"	30'-11"	30'-4"	29'-3"	26'-11"	37'-2"	36'-5"	35'-6"	33'-5"	40'-1"	39'-4"	38'-4"	35'-6"	
50-15	20'-2"	19'-9"	19'-3"	18'-2"	23'-7"	23'-1"	22'-6"	20'-9"	24'-7"	24'-1"	23'-4"	21'-6"	27'-8"	26'-10"	25'-10"	23'-10"	30'-0"	29'-1"	28'-1"	25'-10"	37'-0"	36'-1"	34'-10"	32'-1"	39'-7"	38'-5"	37'-1"	34'-2"			
16" O.C.	125% Non-Snow	20-10	24'-1"	23'-7"	23'-0"	21'-9"	28'-2"	27'-7"	26'-11"	25'-5"	29'-4"	28'-9"	28'-0"	26'-6"	33'-3"	32'-7"	31'-9"	30'-1"	36'-9"	36'-0"	35'-1"	33'-3"	44'-1"	43'-3"	42'-2"	39'-10"	47'-8"	46'-8"	45'-7"	43'-1"	
		20-15	22'-10"	22'-5"	21'-10"	20'-7"	26'-8"	26'-2"	25'-6"	24'-1"	27'-10"	27'-3"	26'-7"	25'-1"	31'-6"	30'-11"	30'-2"	28'-6"	34'-10"	34'-2"	33'-4"	31'-6"	41'-10"	41'-0"	40'-0"	37'-10"	45'-2"	44'-3"	43'-2"	40'-10"	
	115% Snow	25-15	21'-10"	21'-4"	20'-10"	19'-8"	25'-6"	24'-11"	24'-4"	22'-11"	26'-6"	26'-0"	25'-4"	23'-9"	30'-1"	29'-6"	28'-7"	26'-4"	33'-2"	32'-2"	31'-0"	28'-7"	40'-0"	39'-2"	38'-2"	35'-5"	43'-2"	42'-3"	40'-11"	37'-9"	
		25-20	20'-11"	20'-6"	20'-0"	18'-10"	24'-5"	23'-11"	23'-4"	21'-7"	25'-6"	24'-11"	24'-3"	22'-4"	28'-9"	27'-11"	26'-11"	24'-10"	31'-3"	30'-4"	29'-3"	26'-11"	38'-4"	37'-7"	36'-3"	33'-5"	41'-3"	40'-0"	38'-7"	35'-6"	
		30-15	20'-11"	20'-6"	20'-0"	18'-10"	24'-5"	23'-11"	23'-4"	21'-7"	25'-6"	24'-11"	24'-3"	22'-4"	28'-9"	27'-11"	26'-11"	24'-10"	31'-3"	30'-4"	29'-3"	26'-11"	38'-4"	37'-7"	36'-3"	33'-5"	41'-3"	40'-0"	38'-7"	35'-6"	
		30-20	20'-2"	19'-9"	19'-3"	17'-11"	23'-7"	23'-1"	22'-3"	20'-6"	24'-7"	23'-11"	23'-0"	21'-2"	27'-4"	26'-6"	25'-7"	23'-6"	29'-7"	28'-9"	27'-9"	25'-6"	36'-9"	35'-8"	34'-5"	31'-8"	39'-1"	37'-11"	36'-7"	33'-8"	
		40-15	19'-10"	19'-3"	18'-7"	17'-1"	22'-8"	22'-0"	21'-2"	19'-6"	23'-5"	22'-9"	21'-11"	20'-2"	26'-0"	25'-3"	24'-4"	22'-5"	28'-3"	27'-5"	26'-5"	24'-2"	35'-0"	34'-0"	32'-9"	30'-2"	37'-3"	36'-2"	34'-10"	32'-1"	
		40-20	19'-0"	18'-5"	17'-9"	16'-4"	21'-8"	21'-0"	20'-3"	18'-8"	22'-5"	21'-9"	21'-0"	19'-4"	24'-11"	24'-2"	23'-4"	21'-5"	27'-0"	26'-3"	25'-3"	22'-1"	33'-6"	32'-6"	31'-4"	28'-11"	35'-8"	34'-7"	33'-4"	30'-9"	
50-15	18'-2"	17'-9"	17'-1"	15'-9"	20'-10"	20'-2"	19'-6"	17'-11"	21'-7"	20'-11"	20'-2"	18'-7"	23'-11"	23'-2"	22'-4"	20'-7"	25'-11"	25'-2"	24'-0"	20'-5"	32'-2"	31'-3"	30'-2"	27'-9"	34'-3"	33'-3"	32'-1"	29'-6"			
19.2" O.C.	125% Non-Snow	20-10	22'-8"	22'-2"	21'-7"	20'-5"	26'-5"	25'-11"	25'-3"	23'-10"	27'-6"	27'-0"	26'-4"	24'-10"	31'-3"	30'-7"	29'-10"	28'-2"	34'-6"	33'-10"	33'-0"	31'-2"	41'-5"	40'-7"	39'-7"	37'-5"	44'-9"	43'-10"	42'-9"	40'-5"	
		20-15	21'-5"	21'-0"	20'-6"	19'-4"	25'-1"	24'-6"	23'-11"	22'-7"	26'-1"	25'-7"	24'-11"	23'-6"	29'-7"	29'-0"	28'-4"	26'-9"	32'-9"	32'-1"	31'-3"	29'-1"	39'-3"	38'-6"	37'-7"	35'-6"	42'-5"	41'-7"	40'-7"	38'-4"	
	115% Snow	25-15	20'-5"	20'-0"	19'-6"	18'-4"	23'-11"	23'-5"	22'-8"	20'-11"	24'-11"	24'-5"	23'-6"	21'-8"	27'-10"	27'-1"	26'-1"	24'-0"	30'-3"	29'-4"	28'-4"	26'-1"	37'-6"	36'-5"	35'-1"	32'-4"	39'-11"	38'-9"	37'-4"	34'-5"	
		25-20	19'-7"	19'-3"	18'-9"	17'-3"	22'-10"	22'-2"	21'-5"	19'-8"	23'-8"	23'-0"	22'-2"	20'-5"	26'-3"	25'-6"	24'-7"	22'-8"	28'-6"	27'-8"	26'-8"	24'-7"	35'-4"	34'-4"	33'-1"	30'-6"	37'-7"	36'-6"	35'-2"	32'-5"	
		30-15	19'-7"	19'-3"	18'-9"	17'-3"	22'-10"	22'-2"	21'-5"	19'-8"	23'-8"	23'-0"	22'-2"	20'-5"	26'-3"	25'-6"	24'-7"	22'-8"	28'-6"	27'-8"	26'-8"	24'-7"	35'-4"	34'-4"	33'-1"	30'-6"	37'-7"	36'-6"	35'-2"	32'-5"	
		30-20	18'-11"	18'-5"	17'-9"	16'-4"	21'-8"	21'-0"	20'-3"	18'-8"	22'-5"	21'-9"	21'-0"	19'-4"	24'-11"	24'-2"	23'-4"	21'-5"	27'-0"	26'-3"	25'-3"	22'-1"	33'-6"	32'-6"	31'-4"	28'-11"	35'-8"	34'-7"	33'-4"	30'-9"	
		40-15	18'-1"	17'-7"	16'-11"	15'-7"	20'-8"	20'-0"	19'-4"	17'-9"	21'-5"	20'-9"	20'-0"	18'-5"	23'-9"	23'-0"	22'-2"	20'-5"	25'-9"	25'-0"	23'-8"	20'-1"	31'-11"	31'-0"	29'-11"	27'-7"	34'-0"	33'-0"	31'-10"	29'-4"	
		40-20	17'-4"	16'-10"	16'-3"	14'-11"	19'-9"	19'-2"	18'-6"	17'-0"	20'-5"	19'-10"	19'-2"	17'-8"	22'-8"	22'-0"	21'-3"	19'-7"	24'-8"	23'-4"	21'-8"	18'-5"	30'-7"	29'-8"	28'-7"	26'-4"	32'-6"	31'-7"	30'-5"	28'-1"	
50-15	16'-8"	16'-2"	15'-7"	14'-4"	19'-0"	18'-5"	17'-9"	16'-4"	19'-8"	19'-1"	18'-5"	16'-11"	21'-10"	21'-2"	20'-5"	18'-6"	22'-10"	21'-6"	20'-0"	16'-11"	28'-9"	27'-9"	26'-9"	24'-9"	31'-3"	30'-4"	29'-3"	26'-11"			
24" O.C.	125% Non-Snow	20-10	20'-10"	20'-6"	20'-0"	18'-10"	24'-5"	23'-11"	23'-4"	22'-1"	25'-6"	24'-11"	24'-4"	23'-0"	28'-11"	28'-4"	27'-7"	25'-11"	32'-0"	31'-4"	30'-6"	28'-1"	38'-4"	37'-7"	36'-8"	34'-8"	41'-5"	40'-7"	39'-7"	37'-1"	
		20-15	19'-10"	19'-5"	18'-11"	17'-10"	23'-2"	22'-8"	22'-1"	20'-10"	24'-2"	23'-8"	23'-1"	21'-7"	27'-5"	26'-10"	26'-0"	23'-11"	30'-2"	29'-3"	28'-3"	26'-0"	36'-4"	35'-8"	34'-9"	32'-3"	39'-3"	38'-6"	37'-3"	34'-3"	
	115% Snow	25-15	18'-11"	18'-5"	17'-9"	16'-4"	21'-8"	21'-0"	20'-3"	18'-8"	22'-5"	21'-9"	21'-0"	19'-4"	24'-11"	24'-2"	23'-4"	21'-5"	27'-0"	26'-3"	25'-3"	22'-1"	33'-6"	32'-6"	31'-4"	28'-11"	35'-8"	34'-7"	33'-4"	30'-9"	
		25-20	17'-11"	17'-4"	16'-9"	15'-5"	20'-5"	19'-10"	19'-1"	17'-7"	21'-2"	20'-6"	19'-9"	18'-3"	23'-5"	22'-9"	21'-11"	20'-3"	25'-5"	24'-9"	23'-2"	19'-8"	31'-7"	30'-8"	29'-7"	27'-3"	33'-7"	32'-7"	31'-5"	29'-0"	
		30-15	17'-11"	17'-4"	16'-9"	15'-5"	20'-5"	19'-10"	19'-1"	17'-7"	21'-2"	20'-6"	19'-9"	18'-3"	23'-5"	22'-9"	21'-11"	20'-3"	25'-5"	24'-9"	23'-2"	19'-8"	31'-7"	30'-8"	29'-7"	27'-3"	33'-7"	32'-7"	31'-5"	29'-0"	
		30-20	17'-0"	16'-6"	15'-10"	14'-7"	19'-4"	18'-9"	18'-1"	16'-8"	20'-0"	19'-5"	18'-9"	17'-3"	22'-3"	21'-7"	20'-10"	19'-2"	23'-9"	22'-5"	20'-10"	17'-8"	29'-11"	29'-1"	28'-0"	25'-10"	31'-10"	30'-11"	29'-10"	27'-6"	
		40-15	16'-2"	15'-8"	15'-1"	13'-11"	18'-5"	17'-11"	17'-3"	15'-10"	19'-1"	18'-6"	17'-10"	16'-5"	21'-2"	20'-7"	19'-10"	17'-6"	21'-7"	20'-4"	18'-11"	16'-0"	28'-7"	27'-9"	26'-9"	24'-7"	30'-4"	29'-6"	28'-5"	26'-2"	
		40-20	15'-6"	15'-0"	14'-6"	13'-4"	17'-8"	17'-1"	16'-6"	15'-2"	18'-3"	17'-9"	17'-1"	15'-9"	20'-3"	19'-8"	18'-11"	16'-0"	19'-9"	18'-7"	17'-4"	14'-8"	27'-4"	26'-6"	25'-7"	23'-7"	29'-1"	28'-3"	27'-2"	25'-1"	
50-15	14'-10"	14'-4"	13'-10"	12'-3"	16'-11"	16'-5"	15'-10"	14'-7"	17'-7"	17'-0"	16'-5"	14'-9"	19'-6"	18'-9"	17'-5"	14'-9"	18'-3"	17'-2"	15'-11"	13'-6"	26'-3"	25'-6"	24'-7"	22'-7"	27'-11"	27'-1"	26'-2"	24'-1"			

ROOF FRAMING DETAILS

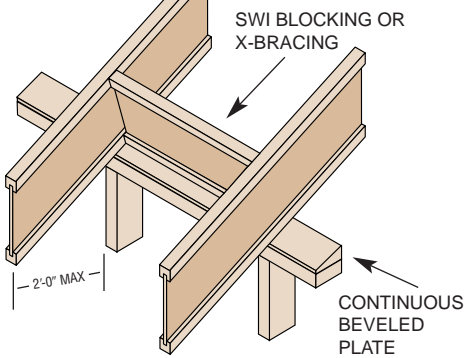
① RAFTER OVER RIDGE BEAM



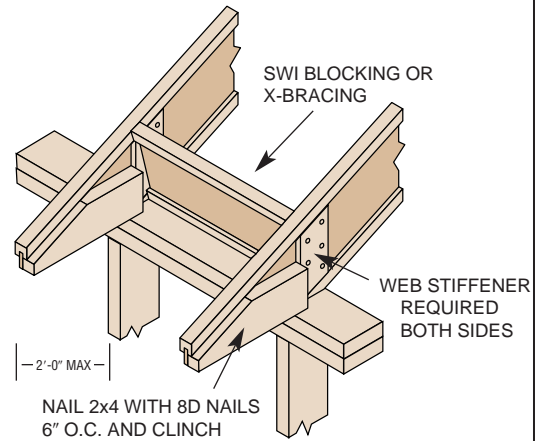
② RIDGE-RAFTER CONNECTION



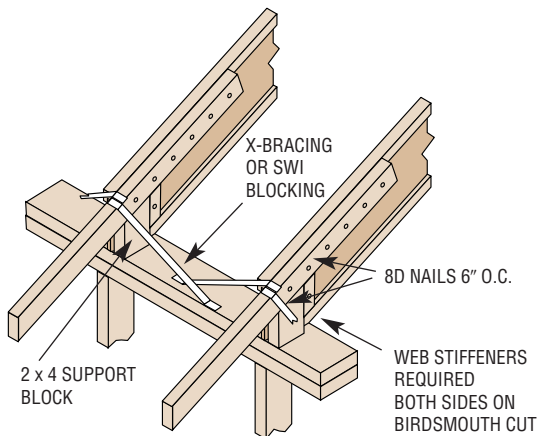
③ RAFTER BEARING ON BEVELED PLATE



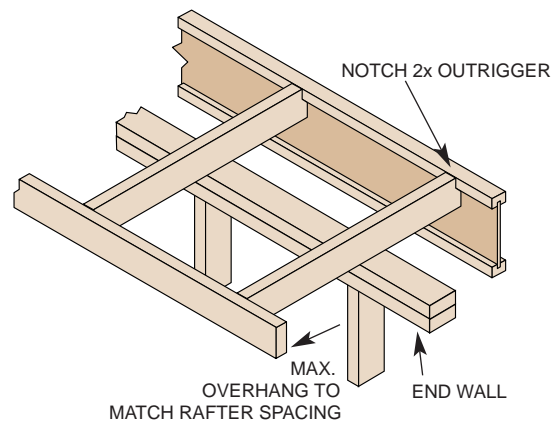
④ RAFTER WITH BIRDSMOUTH CUT



⑤ 2 x OVERHANG



⑥ GABLE END OVERHANG



NOTES:

1. SWI-Joist bottom flange must have full bearing on plate.
2. SWI-Joist bottom flange may be birdsmouth cut at the low end of rafter only.

3. SWI-roof details apply for a maximum 12:12 slope.
4. Minimum 1/4" in 12" slope required to create positive drainage.