Weights of Building Construction Assemblies

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B06.4 — Complex Beam Load Analysis & Beam Size Calculation Software

Date: Aug 14 2007 **Firm:** Architect, Builder or Engineer
Job: Light Frame Building **By:** AAA

WEIGHT OF TYPICAL CONSTRUCTION ASSEMBLIES

ROOF	1	>4/12	2	>4/12
Live Load	20	16	20	16
Snow/Wind*				
Load Factor Mult.	0		0	
Dead Load				
Roofing	3			
Sheathing	1.5			
Framing	2.5			
Insulation	0.5			
Ceiling	2.5			
Other				
Load Factor Mult.	0		0	
Total	30.0	26.0	20.0	16.0
%LL	67	62	100	100
%DL	33	0	0	0

FLOOR	1	2	Deck/Bal**
Live Load	40	40	40
Snow/Wind*			
Load Factor	0	0	0
Dead Load			
Flooring	2.4		4.7
Sheathing	2.3		2.3
Framing	3		3
Insulation	0.3		
Ceil Below	2		
Other			
Load Factor	0	0	0
Total	50.0	40.0	50.0
%LL	80	100	80
%DL	20	0	20

WALL	1	2	3
Dead Load			
Veneer			
Ext. Finish	3		
Siding			
Sheathing	1.5		
Framing	3	3	
Insulation	0.5		
Gyp. Bd.	2	4	
Int. Finish			
Other			
Other			
Load Factor	0		
Total	10.0	7.0	0.0

LIVE LOADS: Residential Use (lbs/sf)		Living Area	Sleeping Area	Hall	Deck**	Balcony**	Roof	Roof over 4/12	over 12/12
IBC 2003	Tbl 1607.1	40	40	40	40 *	61 *	20*	16*	12*
UBC 97 / 01CBC	Tbl 16-A	40	40	40	40 *	60 *	20*	16*	12*

* Add Wind Loads and Snow Loads (including drifting snow loads) as required by Building Code and local Building Department.
* * A Balcony is defined as a cantilevered structure. A deck is defined as supported at all corners by post, or footings.

DEAD LOADS: Weights of Typical Residential Building Materials (lbs/sf)

Roofing		Flooring		Sheathing		Framing		Ceiling		Wall	
Sheet Metal	2.5	Vinyl Tile/Sht	2	1/2" ply	1.5	2x8 / lf	3	1/2" Drywall	2	1/4 Glass	4
Comp Shingle	3	Carpet	3	3/4" ply	2.3	2x8 / lf @ 24	1.5	5/8" Drywall	2.5	2" Stone	13
Cedar Shingle	3	3/4 Hardwood	4	2x Deck	4	2x12 / lf	4	Acoustic Tile	1.5	Tile/thickset	14
Cedar Shake	4	1" Mortar bed	10			4x12 / lf	9.5	3/4 Pine Bds	1.5	7/8" Stucco	10
Tar & Cap Sht	7	3/8" tile	2.5	**Insulation**		6x12 / lf	15	Plaster	8	1 x Boards	2
Conc tile	8	3/4" stone	10	Ceiling R-38	0.6	3-1/8"x12 GL/lf	15			Window Unit	8
Clay tile	10	1" Gyp.Crete	6	Floor R-19	0.3	5-1/8"X12 GL/lf	18			2x4 Stuc@16	1
Spanish Tile	18	1" Conc.	12	Wall R-13	0.2	6-3/4"x12 GL/lf	24			2x6 Stud@16	1.5
Slate	10	1" Soil	10	Ridged Foam/in	0.2					2x8 Stud@16	2

See "Architectural Graphic Standards" or Manufacturer's data for additional material weights.

For Customer Service call (800) 958-ARCH or Fax (800) 968-ARCH

Beam Name, Span and Load Data

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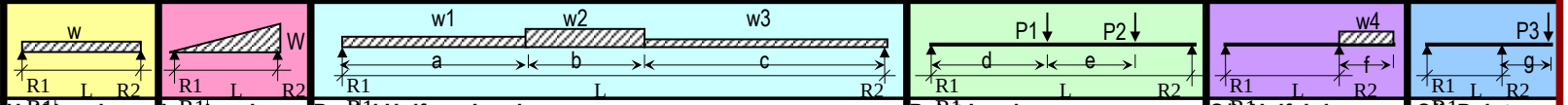
BEAM LOAD ELEMENTS

R1 & R2 based on est Bm wt



Enter: pitch X/12 to>DL at sloped Rafters ., Ld (load), tA (trib Area) under appropriate diagram. Adjust Est. bwt± added to w & w4, as req to = bwt.

Beam I.D.			D L %	Bldg. Part Load	Unif.Load tA	Ld	w	Incr.Load tA	Ld	W	Partial Uniform Loads tA	Ld	w1	tA	Ld	w2	tA	Ld	w3	a	b	c	Point Loads ref	P1	ref	P2	d	e	O/h Unif. Ld. tA	Ld	w4	f	O/h Point ref	P3	g
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Jst	1	24	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	Rl	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
8	563	938	20	1st Fl	2	75	150		0	0		0	0		0	0		0	0	0	0	0					0	0	2	75	150	2			0
Comment:			20	Total	0	pitch	150	0	bwt±	0	1	mult	0	1.2	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	150	2		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	Rl	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
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Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	Rl	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
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Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
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0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	Rl	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	Rl	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	Rl	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		LF?	0	0		0	0

Beam Name, Span and Load Data

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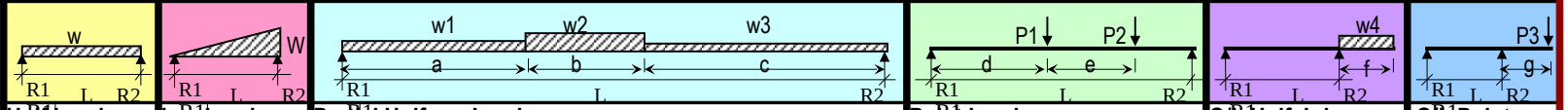
R1 & R2 based on est Bm wt



Beam I.D.			D L %	Bldg. Part Load	Unif.Load tA	Ld	w	Incr.Load tA	Ld	W	Partial Uniform Loads tA	Ld	w1	tA	Ld	w2	tA	Ld	w3	a	b	c	Point Loads ref	P1	ref	P2	d	e	O/h Unif. Ld. tA	Ld	w4	f	O/h Point ref	P3	g
					Enter: pitch X/12 to>DL at sloped Rafters ., Ld (load), tA (trib Area) under appropriate diagram. Adjust Est. bwt± added to w & w4, as req to = bwt.																															
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
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Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
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Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		LF?	0	0		0	0

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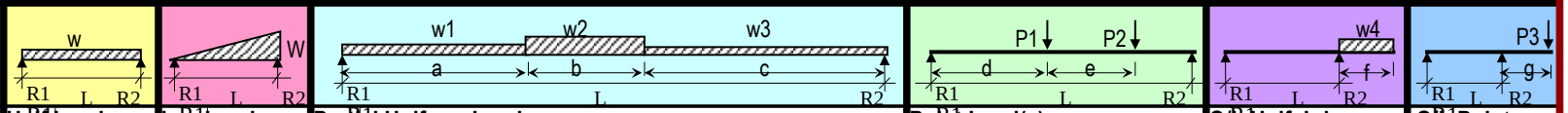

Beam I.D.: Type, No., o.c.; Span: RI, R2

Unif. Load: Enter: pitch X/12 to>DL at sloped Rafters ., Ld (load), tA (trib Area) under appropriate diagram. Adjust Est. bwt± added to w & w4, as req to = bwt.

Type	No.	o.c.	D L %	Bldg. Part Load	Unif. Load tA	Ld	w	Incr. Load tA	Ld	W	Partial Uniform Loads tA	Ld	w1	tA	Ld	w2	tA	Ld	w3	a	b	c	Point Load(s) ref	P1	ref	P2	d	e	O/h Unif. Ld. tA	Ld	w4	f	O/h Point ref	P3	g
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		LF?	0	0		0	0

Beam Name, Span and Load Data

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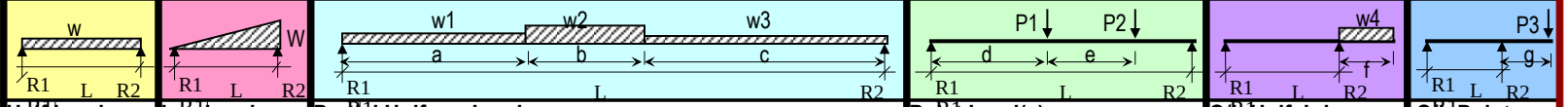
Complex Beam Load Analysis & Beam Size Calculation Software

Date: Aug 14 2007 **Firm:** Architect, Builder or Engineer
Job: Light Frame Building **By:** AAA

BEAM LOAD ELEMENTS
R1 & R2 based on est Bm wt



Enter: pitch X/12 to>DL at sloped Rafters ., Ld (load), tA (trib Area) under appropriate diagram. Adjust Est. bwt± added to w & w4, as req to = bwt.

Beam I.D.			DL %	Bldg. Part Load	Unif.Load tA	Ld	w	Incr.Load tA	Ld	W	Partial Uniform Loads tA	Ld	w1	tA	Ld	w2	tA	Ld	w3	a	b	c	Point Load(s) ref	P1	ref	P2	d	e	O/h Unif. Ld. tA	Ld	w4	f	O/h Point ref	P3	g
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		LF?	0	0		0	0

Beam Name, Span and Load Data

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Date: Aug 14 2007 Firm: Architect, Builder or Engineer

Job: Light Frame Building By: AAA

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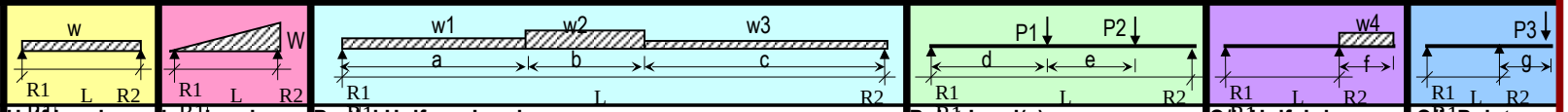
Complex Beam Load Analysis & Beam Size Calculation Software

BEAM LOAD ELEMENTS

R1 & R2 based on est Bm wt



Beam I.D.			D L %	Bldg. Part Load	Unif.Load tA	Ld	w	Incr.Load tA	Ld	W	Partial Uniform Loads tA	Ld	w1	tA	Ld	w2	tA	Ld	w3	a	b	c	Point Load(s) ref	P1	ref	P2	d	e	O/h Unif. Ld. tA	Ld	w4	f	O/h Point ref	P3	g
					Enter: pitch X/12 to>DL at sloped Rafters ., Ld (load), tA (trib Area) under appropriate diagram. Adjust Est. bwt± added to w & w4, as req to = bwt.																															
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		L F?	0	0		0	0
Type	No.	o.c.	0	Roof	0	0	0	0	0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
	0	0	0	Wall	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Span	RI	R2	0	2nd F/R		0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
0	0	0	0	1st Fl	0	0	0		0	0		0	0		0	0		0	0	0	0	0					0	0		0	0	0			0
Comment:			0	Total	0	pitch	0	0	bwt±	0	0	mult	0	0	M	0	0	b wt	0	0	0	0		0		0	0	0		LF?	0	0		0	0

Calculated Span and Load Properties

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Complex Beam Load Analysis & Beam Size Calculation Software

B06.4

Date: Aug 14 2007 Firm: Architect, Builder or Engineer

Job: Light Frame Building By: AAA

BEAM I.D.	REACTION R1 w/ final bm wt lbs	REACTION R2 lbs	SHEAR V max lbs	SHEAR Neut Axis at L ft	MOMENT M at X ft/lbs	MOMENT M at R2 ft/lbs	DEFLECTION Code limit: FL- L/240 Roof- L/180 % DL L/limit	Defl x at L Floor 360 0.75	Defl x at L Roof 240 1.00	Act Def in	DL Def x1.5	Camber Radius ft. DL	x at>f or g Floor 240 0.50	x at>f or g Roof 180 0.75	Act Def in	DL Def x1.5	BEAM PROPERTIES CHECK actual > required? Area Aact bxh	Area Areq 3V 2fv	Section Modulus Sact bh^2 6	Section Modulus Sreq X Mx12 fb	Section Modulus Sreq R Mx12 fb	Moment of Inertia Iact bxh^3 12	Moment of Inertia Ireq X Sum I E def x	Moment of Inertia Ireq>f/g Sum I E def f
Jst 1 @ 24	563	938	638	4	1195	-300	20	0.27	0.40	0.18	0.05	0	0.10	0.13	0.04	0.01	11	9	13	12	-3	48	32	21
0 0 0 0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0
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0 0 0 0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0
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0 0 0 0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0
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0 0 0 0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0
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0 0 0 0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0

Beam Selection and Design Properties Check

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B06.4

Complex Beam Load Analysis & Beam Size Calculation Software

Date: Aug 14 2007 Firm: Architect, Builder or Engineer

Job: Light Frame Building By: AAA

BEAM I.D.	BEAM USE				MATERIAL SELECTION				SIZE ESTIMATE		FINAL SIZE SELECTION			SIZE TEST	DESIGN PROPERTIES			PERCENTAGE OF BEAM CAPACITY				
	Load Dur P,S,C Q,I,?	Wet W? Hot H,V?	Rep Use Y?	Roof Mbr Y?	Type Default Mat Selection WD	Mat DF	Grade 2	Cust Mat See Lib.	b Based on Est Bm Wt	h	Net dimensions Qty Overwrite as Req'd w/ Actual Bm Weight	b	h	AS&I req?	Adjusted Base Design Properties see (pg5) fv'	fb'	E'	>100% exceeds Beam Capacity Area A R1,R2	Section Modulus Sx Span	R2	Moment of Inertia Ix Span	R2
Jst 1 @ 24	0		Y	0	WD	DF	2	0	0	0	1	1.5	7.25	OK	95	1,208	1.6	79%	90%	23%	68%	43%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%
0 0 0 0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0%	0%	0%	0%	0%

Wood Stress Adjustment Factors

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Complex Beam Load Analysis & Beam Size Calculation Software

B06.4

Date: Aug 14 2007 **Firm:** Architect, Builder or Engineer

Job: Light Frame Building **By:** AAA

Stress Adjustment Factors

NDS Part II 2.3, UBC Table 23-1-A-6 & IBC Ch. 23.

Base Values

NDS/UBC Tables for WD, GL & MW

BEAM I.D.	Ld Dur Cd All	Ld Factor when Ω All	Wet or Hot Cm Ct fb	Cm Ct fv	Cm Ct E	Size Factors (fb) Cf For.	Cf Tbl.	Cv fb	Cfu fb	Rep Use Cr fb	Crk Exist Ch fv	Sum C Factors fv'	fb'	E'	fv	fb	E 10^6
Jst 1 @ 24	1.00	1.00	1.00	1.00	1.00	1.00	1.20	1.00	1.00	1.15	1.00	1.00	1.38	1.00	95	875	1.6
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0
0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0.0

Beam Post Sizing and End Support

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Complex Beam Load Analysis & Beam Size Calculation Software

B06.4

Date: Aug 14 2007 Firm: Architect, Builder or Engineer

Job: Light Frame Building By: AAA

BEAM I.D.	HEIGHT & DEPTH		POST MATERIAL			POST END CONDITIONS				POST DESIGN PROPERTIES										POST REQUIREMENTS				
	HT L ft	wl dpth min d 3x to 8x	Type Defaults	Mat	Built-up or Solid?	End Rest Cond	Beam Hang Type	Post Base ?	Post Cap ?	Le L*ke	Le d	Fc w/ adj	E'	FcE KcE E' le/d	Cp	F'c Cp*Fc	Pmax R1 or R2	P Added lbs.	A req P F'c	Min Post Size	Min End Sup in.	Min. Hanger	Post Base	Post Cap
	8	3.5	WD	DF	B	PP	N	N	N															
Jst 1 @ 24	8	3.5	WD	DF	B	PP	N	N	N	8	27	625	1.6	638	0.42	262	938	0	3.5814	2x4 wl	1.5	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0	0

Beam Schedule

MaxBeam

Date: Aug 14 2007 **Firm:** Architect, Builder or Engineer

Job: Light Frame Building **By:** AAA

BEAM I.D.	DIMENSIONS			MATERIAL				SUPPORT				HARDWARE			COMMENT
	Qty	Width (shape)	Height (weight)	Mfg	Type	Mat	Grade	Min Post Size	Note 6 Type	Mat	Min End Sup in.	Min Hanger Size Note 5	Min Post Base	Min Post Cap	Comments ? Notes
		nominal dimension													
Jst 1 @ 24	1	2 x	8	0	WD	DF	2	2x4 wl	0	0	1.5	0	0	0	0 8
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
0 0 0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0

Notes

1 All Beams and Posts Calculated As Req'd by the1997 NDS and Specific Mfg'd Products Design Criteria.
2 Spike together Double Beams w/ 16d at 2 ft. oc. Three or More Gang w/ Staggered 5/8" Bolts at 2ft. oc.
3 Verify and Comply with all I-Joist Manufacturers Installation and Assembly Requirements and Details.
4 Provide Shear Blocking Between I-Joist Over and Under All Bearing Walls, and as Req'd by Manufacturer.
5 Hdwr: Simpson, or Equal. Use Hdwr of Type Listed Sized for Member. Install All Nails As Spec'd by Mfg.
6 Provide End Bearing Spec'd at All Beams, Pocket Bms at Walls Btwn Studs, and Cont. Rim Jst. at FlJst.
7 Nail All Members at Min. per the Conventional Framing Requirements of Chapter 23 of Bldg Code.
8 Provide Solid Blocking at 8ft. o.c. Between Rafters & Joists with Height to Width Ratio greater than 3.

Foundation Size Calculation

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Archforms Ltd.
Complex Beam Load Analysis & Beam Size Calculation Software

Date: Aug 14 2007
Job: Light Frame Building
Firm: Architect, Builder or Engineer
By: AAA

SOIL BEARING: 1,000 psf.

Beam I.D.		Ftg. ? 0 Y/N	Post Load P lbs.	Ftg. Area P/SB sq.ft.	SQ. Size $A^{0.5}$ in.	Rectangular Size wdth in.	x	lgth in.
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0
0	0	0	0	0	0	0	#	0

CONTINUOUS FOOTINGS

	Assembly 1 Bldg. Part	Trib. Area ft.	Wt./ ft. lbs/sf	Ext Load w lbs/lf.	Assembly 2 Bldg. Part	Trib. Area ft.	Wt./ ft. lbs/sf	Ext Load w lbs/lf.	Assembly 3 Bldg. Part	Trib. Area ft.	Wt./ ft. lbs/sf	Ext Load w lbs/lf.	Assembly 4 Bldg. Part	Trib. Area ft.	Wt./ ft. lbs/sf	Int Load w lbs/lf.	Assembly 5 Bldg. Part	Trib. Area ft.	Wt./ ft. lbs/sf	Int Load w lbs/lf.
	Roof	0	0	0	Roof	0	0	0	Roof	0	0	0	Roof	0	0	0	Roof	0	0	0
	Wall		0	0	Wall		0	0	Wall		0	0	Wall		0	0	Wall		0	0
	3rd Fl		0	0	3rd Fl		0	0	3rd Fl		0	0	3rd Fl		0	0	3rd Fl		0	0
	Wall		0	0	Wall		0	0	Wall		0	0	Wall		0	0	Wall		0	0
	2nd Fl		0	0	2nd Fl		0	0	2nd Fl		0	0	2nd Fl		0	0	2nd Fl		0	0
	Wall	8	10	80	Wall	8	10	80	Wall	8	10	80	Wall	8	7	56	Wall	8	7	56
	1st Fl	4	50	200	1st Fl	4	50	200	1st Fl	4	50	200	1st Fl	8	50	400	1st Fl	8	50	400
	Pony		0	0	Pony		0	0	Pony		0	0	Pony		0	0	Pony		0	0
	Other			0	Other			0	Other			0	Other			0	Other			0
	Total Load / ft.			280	Total Load / ft.			280	Total Load / ft.			280	Total Load / ft.			456	Total Load / ft.			456

	Foundation 1 Min. Wdth Limit in.	Min Calc. Wdth Ld/ft. SB in.	Design Width > Limit or Calc in.	Foundation 2 Min. Wdth Limit in.	Min Calc. Wdth Ld/ft. SB in.	Design Width > Limit or Calc in.	Foundation 3 Min. Wdth Limit in.	Min Calc. Wdth Ld/ft. SB in.	Design Width > Limit or Calc in.	Foundation 4 Min. Wdth Limit in.	Min Calc. Wdth Ld/ft. SB in.	Design Width > Limit or Calc in.	Foundation 5 Min. Wdth Limit in.	Min Calc. Wdth Ld/ft. SB in.	Design Width > Limit or Calc in.
	12	3.36	12	12	3.36	12	12	3.36	12	12	5.472	12	12	5.472	12
	% Soil Capacity		28	% Soil Capacity		28	% Soil Capacity		28	% Soil Capacity		45.6	% Soil Capacity		45.6

WD Sawn Lumber (Wood) Base Value Table

Custom Wood species can be entered in the two rose shaded groups labeled with CW1 & CW2 abbreviations below.
New abbreviations for Custom Wood Species are entered by overwriting the pink abbreviation below CW1 & CW2, these will show on the Size
Wood species and values in green or pink can be entered or overwritten with differing Species, Grades and load values.
Enter values for lumber sizes over 5" thick and 5"wide in fv>5, fb>5 and E>5, and other values for sizes less than 5"in any dimension.
Lumber grades must be the same for all wood species, grades can be changed under DF heading but must be in alphabetic and numerically i

DF	Default Beam Material Type on Size page
DF	Default Post Material Type on Post page

Sawn Lumber (Wood)

Species	CW1	Custom Wood 1				CW2	Custom Wood 2				DF					DFS
Custom Ab	EWP	Eastern White Pine				RW	California Redwood				DF	Douglas Fir, Western Larch				DFS
Grade	DK	1	2	3	SS	DK	1	2	3	SS	DK	1	2	3	SS	DK
fv	70	70	70	70	70	80	80	80	80	80	95	95	95	95	95	90
fv>5	65	65	65		65	80	95	95	95	135	85	85	85	95	85	85
fb	1100	775	575	350	1250	1350	975	925	525	1100	1600	1000	875	500	1450	1600
fb>5	1300	900	575		1050	1700	1400	1200	975	1850	2000	1350	875	500	1600	1900
E	1.1	1.1	1.1	0.9	1.2	1.0	1.3	1.2	1.1	1.1	1.7	1.7	1.6	1.4	1.9	1.3
E>5	1.2	1.4	1.0		1.4	1.1	1.3	1.3	1.1	1.3	1.8	1.6	1.3	1.4	1.6	1.4
		2	350	30	1.75		2	650	30	1.75		2	625	30	1.80	
		default	fc	wt/cf	$		default	fc	wt/cf	$		default	fc	wt/cf	$	

0 0 0

MaxBeam

B06.4

e Page and Beam Schedule.

increasing order.

Douglas Fir grown in AZ, CO, NV, NM & UT				HF HF Western Hemlock, Nobel California Red, Grand, Pacific Silver & White Fir					SP SP Southern Pine					SPF SPF Western species include Engelmann Spruce, Sitka Spruce & Lodgepole Pine				
1	2	3	SS	DK	1	2	3	SS	DK	1	2	3	SS	DK	1	2	3	SS
90	90	90	90	75	75	75	75	75	90	90	90		90	70	70	70	70	70
85	85		85	70	70	70		70						65	65	65		65
900	835	475	1300	1350	950	850	500	1400	1400	1300	1050		2050	1150	850	750	425	1300
1300	825		1550	1600	1050	675		1300						1400	900	600		1100
1.3	1.2	1.1	1.4	1.4	1.5	1.3	1.2	1.6	1.6	1.7	1.6		1.8	1.3	1.2	1.1	1.0	1.3
1.2	1.0		1.2	1.5	1.3	1.1		1.3						1.5	1.3	1.0		1.3
2	520	30	1.80		2	405	30	1.75		2	565	28	1.75		2	335	30	1.75
default	fc	wt/cf	$		default	fc	wt/cf	$		default	fc	wt/cf	$		default	fc	wt/cf	$

Height		SP Southern Pine NDS: 4B, 4D & UBC: 23-1-A-2				
		DK	1	2	3	SS
4	fv	90	100	90	90	100
	fb	1400	1850	1500	850	2850
	E	1.6	1.7	1.6	1.4	1.8
6	fv		90	90	90	90
	fb		1650	1250	750	2550
	E		1.7	1.6	1.4	1.8
8	fv		90	90		90
	fb		1500	1200		2300
	E		1.7	1.6		1.8
10	fv		90	90		90
	fb		1300	1050		2050
	E		1.7	1.6		1.8
12	fv		90	90		90
	fb		1250	975		1900
	E		1.7	1.6		1.8

WC					WW				
WC	Incense , Western Red, Port Oxford & Alaska Cedar				WW	Alpine Fir, Ponderosa, Sugar & Idaho White Pine & Mountain Hemlock			
DK	1	2	3	SS	DK	1	2	3	SS
75	75	75	75	75	70	70	70	70	70
70	70	70		70		65	65		65
1200	725	700	400	1000	1300	650	650	375	875
1450	975	625		1150		900	575		1050
1.0	1.0	1.0	0.9	1.1	1.2	1.1	1.0	0.9	1.2
1.1	1.0	0.8		1.0		1.1	0.9		1.1
	1	425	30	1.75		1	324	30	1.75
	default	fc	wt/cf	$		default	fc	wt/cf	$

0

GL Glue Laminated Wood Beam Base Values Table

Custom Glue-Lam species can be entered in the two rose shaded groups labeled with GL1 & GL2 abbreviations below.
New abbreviations for Custom Species are entered by overwriting the pink abbreviation below GL1 & GL2, these will show on the Size Page and
Glue-Lam species and values in green or pink can be entered or overwritten with differing Species, Grades and load values,
Enter +M is for positive moment Grades & values of **fb**, -M is for Grade designed for negative moments at overhangs.
If no cantilever grade for **fb** value: enter +M grade in lower row and enter 50% of +M **fb** at cantilevers of -M.
Enter or modify the default grade for +M & -M for each species: this grade will automatically be entered on the Size page when Species is select

DF	Default Beam Material Selection (automatically entered Glue Lam Type is entered on Size page)
DF	Default Post Material Selection (automatically entered when Glue Lam Type is entered on Post page)

Glue Laminated Beams

Species	DF					DFS					ES		
Cust. Ab.	DF	Douglas Fir, Western Larch				DFS	Douglas Fir, Intermountain Area				ES	Eastern Spruce	
Grade if +M	**16F-V3**	**20F-E3**	**20F-V4**	**24F-E4**	**24F-V4**	**16F-V8**	**20F-V11**					**20F-E8**	
Grade if -M	**16F-V6**	**20F-E6**	**20F-V8**	**24F-E13**	**24F-V8**	**16F-V8**	**20F-V11**					**20F-E8**	
fv	165	165	165	165	190	165	165					155	
fb@+M	1600	2000	2000	2400	2400	1600	2000					2000	
fb@-M	1600	2000	2000	2400	2400	800	1000					1000	
E	1.5	1.7	1.6	1.8	1.8	1.3	1.3					1.5	
fc	560	560	560	560	560	500	500					450	
default grade		24F-V4	24F-V8	30	1.8		20F-V11	20F-V11	30	1.8		20F-E8	20F-E8
		default +M	-M	wt	$		default +M	-M	wt	$		default +M	-M

MaxBeam

B06.4

I Beam Schedule.

ed.

		GL1	Custom Glue Lam 1				GL2	Custom Glue Lam 2				HF		
		D/HF	DF outer plys/HF inner plys				RW	Redwood				HF	Hem- Fir	
			20F-V10	24F-V5			16F-V1					16F-V2	20F-E2	20F-V2
			20F-V10	24F-V10			16F-V1					16F-V7	20F-E7	24F-V9
			155	155			125					155	155	155
			2000	2400			1600					1600	2000	2000
			1000	2400			800					1600	2000	2000
			1.6	1.8			1.1					1.4	1.6	1.5
			560	560			315					375	375	375
30	1.8		24F-V5	24F-V10	30	1.8		16F-V1	16F-V1	30	1.8		24F-V2	24F-V9
wt	$		default +M	-M	wt	$		default +M	-M	wt	$		default +M	-M

		SP					WW				
		SP	Southern Pine				WW	Western Woods			
24F-E2	24F-V2	16F-V2	20F-E1	20F-V2	24F-E1	24F-V2	16F-E1	20F-E1			
24F-E11	24F-V9	16F-V5	20F-E3	20F-V5	24F-E3	24F-V10	16F-E1	20F-E1			
144	155	200	200	200	200	200	140	140			
2400	2400	1600	2000	2000	2400	2400	1600	2000			
2400	2400	1600	2000	2000	2400	2400	800	1000			
1.7	1.5	1.4	1.7	1.6	1.8	1.7	1.3	1.6			
375	375	560	560	560	560	560	255	225			
30	1.8		24F-V2	24F-V10	30	1.8		20F-E1	20F-E1	30	1.8
wt	$		default +M	-M	wt	$		default +M	-M	wt	$

MW Manufactured Wood Rectangular Beam Base Value Table

Custom Mfg Wood Products can be entered in the two rose shaded boxes labeled MW1 & MW2 abbreviations below.
New abbreviations for Custom Brands are entered by overwriting the pink abbreviation below MW1 & MW2, these will show on the Size Page and Mfg Wood values in green or pink can be entered or overwritten with differing varieties and load values.
New Mfg. abbreviations entered by overwriting the pink Mfg. abbreviation, will show on the Beam Schedule.
In the rose shaded cells enter the default Product Abbreviation and Grade below for automatic entry on the Size page.

LSL	Default Beam Material Selection (automatically entered when Manufactured Wood Type is entered on Size page)
LSL	Default Post Material Selection (automatically entered when Manufactured Wood Type is entered on Post page)

Manufactured Wood Beams

				Custom Mfg Wood Materials			
Material	GLW	LSL	LVL	MW1	MW2		PSL
Mfg	LA-P	T-J	T-J	ANT	GA-P		T-J
	Louisiana-Pacific	Trus Joist MacMillan	Trus Joist MacMillan	Anthony	Georgia-Pacific		Trus Joist MacMillan
Name	Gang-Lam	TimberStrand	Microlam		G-P Lam		Parallam
Custom Mat.	GLW	LSL	LVL	LSL	LVL		PSL
Grade 1	1.8E	1.3E	1.9E	28F-E2	1.8E		2.0E
Grade 2	2.0E	1.5E		30F-E2	2.0E		
fv 1	290	285	285	290	285		290
fv 2	290	285		290	285		
fb 1	2650	1700	2600	2800	2600		2900
fb 2	2950	2250		3000	2850		
E1	1.8	1.3	1.9	2.1	1.8		2.0
E2	2.0	1.5		2.1	2.0		
fc 1	900	650	750	740	750		650
fc 2	1020	650		740	750		
(12/d)^	0.143	0.092	0.136	0.050	0.111	(21/L)^	0.111
default Grade	2.0E	1.5E	1.9E	30F-E3	2.0E		2.0E
wt	40	40	40	40	38		40
$	1.20	1.20	1.20	1.4	1.4		1.20
Available Widths	1.75	1.75	1.75	1.75	1.75		
	3.5	3.5					3.5
							4.375
							5.25
							7

MaxBeam

B06.4

Beam Schedule.

VL B-C Boise Cascade Versa-Lam VL	WPSL T-J Trus Joist MacMillan Wolmanized PSL WPSL
2.0E	1.74E
285 2800 2.0 900 0.111	175 2090 1.74 385 0.111
2.0E 40 1.20	1.74E 40 1.20
1.75 3.5 7	 3.5 4.375 5.25 7

IJ Manufactured Wood I-Joists Load Value Table

Custom I-Joist Products can be entered in the rose shaded boxes labeled with the IJ1 abbreviation below.
New abbreviations for Custom Brands are entered by overwriting the pink abbreviation below IJ1, these will show on the Size Page and Beam Schedule.
I-Joist values in green or pink can be entered or overwritten with differing varieties and load capacity values.
In the rose shaded cells enter the default Product Abbreviation and Grade below for automatic entry on the Size page.
In the green shaded box change the I-Joist default grade for each I-Joist Material to be automatically entered on the Size Page.

BCI	Default Beam I Joist Material Selection (automatically entered when this beam Type is entered on Size page)
N	Provide Shear Blocking (Y or N?)

Boise Cascade Wood I Joist 600

Always Verify Sizing with Mfg before Ordering!
800 232-0788

BC BCI Series	h	Vmax	Vmax w/o Stiffeners	EI	M max	K	Δ 1/EI+1/k	bf	fc	Jst wt		Ref No.
400	0	0	0		0							
	9.5	1275	950	145	2158	5.1	2.51E-006	1.5	362	1.8	1.98E-006	1
	11.875	1475	950	246	2853	6.34	1.98E-006	1.5		2.1		2
	14	1725	1025	363	3480	7.45	1.67E-006	1.5		2.3		3
	99											9
450		0	0		0							
	9.5	1275	950	168	2537	5.16	2.46E-006	1.75	310	1.9	1.95E-006	11
	11.875	1475	950	284	3356	6.41	1.95E-006	1.75		2.2		12
	14	1725	1025	417	4094	7.53	1.65E-006	1.75		2.5		13
	16	1975	1025	569	4791	8.58	1.44E-006	1.75		2.7		14
	99											19
600		0	0		0							
	11.875	1475	950	385	4806	6.52	1.90E-006	2.3125	235	2.6	1.90E-006	22
	14	1725	1025	562	5864	7.65	1.61E-006	2.3125		2.8		23
	16	1975	1025	763	6864	8.72	1.41E-006	2.3125		3.0		24
	18	2175	0	997	7867	9.78	1.25E-006	2.3125		3.3		25
	20	2250	0	1266	8870	10.8	1.13E-006	2.3125		3.5		26
	99											29
90XL		0	0	228.3	0	5.622	2.23E-006				2.23E-006	
	11.875	1950	1425	632	8224	6.69	1.83E-006	3.5	233	3.7	1.83E-006	32
	14	2150	1450	924	10095	7.83	1.56E-006	3.5		3.9		33
	16	2350	1475	1251	11865	8.91	1.36E-006	3.5		4.2		34
	18	2550	0	1631	13639	9.99	1.21E-006	3.5		4.4		35
	20	2650	0	2066	15417	11.07	1.09E-006	3.5		4.6		36
	99											39

Georgia-Pacific Wood I Joist 25

Always Verify Sizing with Mfg before Ordering!
800

GP GPI Series	h	Vmax	Vmax w/o Stiffeners	EI	M max	C	Δ 1/EI+ 1/C	bf		Jst wt		
15		0	0		0							
	9.5	1120	945	161	2800	0.412	2.57E-006	1.5	360	2.1	2.02E-006	41
	11.875	1420	945	280	3715	0.515	2.02E-006	1.5		2.4		42
	99											49
25		0	0		0							
	9.5	1120	1015	186	3290	0.412	2.55E-006	1.75	331	2.3	2.01E-006	51
	11.875	1420	1015	322	4375	0.515	2.01E-006	1.75		2.6		52
	14	1710	1015	480	5350	0.607	1.69E-006	1.75		2.8		53
	16	1970	1015	663	6270	0.693	1.48E-006	1.75		3.1		54
	99											59
35		0	0		0							
	14	1710	1160	613	7120	0.607	1.68E-006	2.3125	287	3.3	1.68E-006	63
	16	1970	1160	841	8350	0.693	1.47E-006	2.3125		3.8		64
	99											69

WIF Series	h	Vmax	Vmax w/o Stiffeners	EI 33	M max	C	1/EI+ 1/C	bf	fc	Jst wt		
30		0	0		0							
	9.5	1080	1080	193	2100	0.412	2.54E-006	2.5	247	2.8	2.01E-006	71
	11.875	1380	1200	330	2810	0.515	2.01E-006	2.5		3.1		72
	99											79
33		0	0		0							
	9.5	1080	1080	231	3245	0.412	2.52E-006	2.5	247	2.8	2.00E-006	81

	11.875	1380	1200	396	4335		0.515	2.00E-006	2.5		3.2		82
	14	1710	1200	584	5320		0.607	1.69E-006	2.5		3.4		83
	16	1970	1200	799	6250		0.693	1.47E-006	2.5		3.7		84
	99												89
43		0	0		0								
	11.875	1380	1280	547	6130		0.515	1.98E-006	3.5	209	3.9	1.98E-006	92
	14	1710	1280	802	7525		0.607	1.68E-006	3.5		4.2		93
	16	1970	1280	1092	8845		0.693	1.46E-006	3.5		4.5		94
	99												99

Louisiana-Pacific Wood I Joist **30a**

Always Verify Sizing with Mfg before Ordering! For Technical support:
East 800 999-9105 West 800 223-5647

LP LPI Series	h	Vmax	Vmax w/o Stiffeners	EI	M max	K	Av	1/EI+ K/8AvG G=160,000	bf	fc	Jst wt		
26a		0	0		0								
	9.5	960	960	165	2937	2.01	6.93	2.86E-006	1.5	366	2.0	2.32E-006	101
	11.875	1255	1000	286	3935	1.86	7.79	2.32E-006	1.5		2.5		102
	99												109
30a		0	0		0								
	9.5	965	960	199	3305	2.01	7.56	2.61E-006	1.75	313	2.0	2.28E-006	111
	11.875	1265	1000	334	4590	2.02	8.54	2.28E-006	1.75		2.0		112
	14	1520	1000	484	5640	1.88	9.53	1.90E-006	1.75		2.9		113
	16	1710	1000	650	6634	1.79	10.28	1.67E-006	1.75		3.3		114
	99												119
36a		0	0		0								
	11.875	1616	1200	429	5980	2.33	10.23	2.19E-006	2.25	305	3.3	2.19E-006	122
	14	1830	1200	622	7250	2.14	11.03	1.86E-006	2.25		3.5		123
	16	2020	1200	836	8530	2.01	11.78	1.63E-006	2.25		3.8		124
	99												129
56a		0	0		0								
	11.875	1879	1700	668	9184	2.79	14.38	1.85E-006	3.5	278	4.7	1.85E-006	132
	14	2241	1700	968	11284	2.55	15.31	1.58E-006	3.5		5.0		133
	16	2581	1700	1301	13269	2.37	16.18	1.39E-006	3.5		5.3		134
	99				0								139
20		0	0		0			1/IE+1/K					
	9.5	950	1230	176	2600	2.56		4.82E-006	2.5	281	2.6	3.83E-006	141
	11.875	1025	1350	300	3406	3.2		3.83E-006	2.5		3.6		142
	99												149
32		0	0		0								
	9.5	950	1250	406	3195	2.56		4.74E-006	2.5	286	2.9	3.81E-006	151
	11.875	1025	1350	406	4275	3.2		3.81E-006	2.5		3.6		152
	14	1100	1350	589	5255	2.75		4.40E-006	2.5		4.3		153
	16	1200	1800	791	6180	4.3		2.82E-006	2.5		4.8		154
	99												159

Trus Joist MacMillan Wood I Joist **250**

Always Verify Sizing with Mfg before Ordering! For Technical Support:
800 628-3997 or www.tjm.com

TJ TJI Pro Series	h	Vmax	Vmax w/o Stiffeners	EI	M max			Δ 1/EI+ 2.67/dx10^5	bf	fc	Jst wt		
150		0	0		0								
	9.5	1120	945	160	2730			2.95E-006	1.5	360	2.2	2.33E-006	161
	11.875	1420	945	275	3620			2.33E-006	1.5		2.5		162
	99												169
250		0	0		0								
	9.5	1120	1015	185	3210			2.93E-006	1.75	331	2.4	2.32E-006	171
	11.875	1420	1015	319	4260			2.32E-006	1.75		2.7		172
	14	1710	1015	474	5210			1.95E-006	1.75		2.9		173
	16	1970	1015	653	6075			1.70E-006	1.75		3.3		174
	99												179
350		0	0		0								
	11.875	1420	1160	395	5000			2.31E-006	2.3125	287	3.3	2.31E-006	182
	14	1710	1160	584	6135			1.95E-006	2.3125		3.5		183
	16	1970	1160	801	7205			1.70E-006	2.3125		3.8		184
	99												189
550		0	0		0			2.29					
	11.875	1925	1400	593	7675			1.97E-006	3.5	229	4.7	1.97E-006	192
	14	2125	1400	874	9420			1.66E-006	3.5		5.0		193
	16	2330	1400	1192	11065			1.45E-006	3.5		5.3		194
	99												199

Custom I-Joist

I Joist-1 **Willamett Industries** SJ-32 Always Verify Sizing with Mfg before Ordering! For Technical Support:

IJ1 **WIL** Δ 800 942-9927

WLI Series	h	Vmax	Vmax w/o Stiffeners	EI	M max	K	Av	1/IE+ 1/K	bf	fc	Jst wt		
SJ-15		0	0		0								
	9.5	2440	1950	176	2770	4.94		2.56E-006	1.5	743	1.9	2.02E-006	201
	11.875	2440	1950	304	3710	6.18		2.02E-006	1.5		2.1		202
	99												209
SJ-25		0	0		0								
	9.5	2570	2120	204	3260	4.94		2.54E-006	1.75	692	2.1	2.01E-006	211
	11.875	2570	2120	350	4360	6.18		2.01E-006	1.75		2.4		212
	14	2570	2120	520	5360	7.28		1.69E-006	1.75		2.6		213
	16	2570	2120	716	6300	8.32		1.47E-006	1.75		2.8		214
	99												219
SJ-32		0	0		0								
	9.5	3000	1090	215	2471	4.94		2.53E-006	2.5	249	2.5	2.00E-006	221
	11.875	3000	1200	366	3300	6.18		2.00E-006	2.5		2.9		222
	14	3000	1200	648	5990	7.28		1.68E-006	2.5		3.1		223
	16	3000	1200	886	7040	8.32		1.47E-006	2.5		3.3		224
	99												229
SJ-35		0	0		0								
	11.875	2950	2500	452	5810	6.18		1.99E-006	2.3125	618	2.9	1.99E-006	232
	14	2950	2500	667	7130	7.28		1.68E-006	2.3125		3.1		233
	16	2950	2500	913	8390	8.32		1.47E-006	2.3125		3.3		234
	99												239
SJ-42		0	0		0								
	9.5	3400	1125	357	5150	4.94		2.49E-006	3.5	184	3.4	1.98E-006	241
	11.875	3400	1280	605	6890	6.18		1.98E-006	3.5		3.7		242
	14	3400	1280	889	8470	7.28		1.67E-006	3.5		3.9		243
	16	3400	1280	1209	9960	8.32		1.46E-006	3.5		4.1		244
	99												249
SJ-55		0	0		0								
	11.875	3850	1400	673	8870	8.19		1.50E-006	3.5	229	4.0	1.50E-006	252
	14	3850	1400	987	10900	9.66		1.27E-006	3.5		4.3		253
	16	3850	1400	1343	12820	11.04		1.10E-006	3.5		4.6		254
	99												259

MaxBeam

B06.4

ST Manufactured Steel Shapes & Flitch Plate Load Value Table

Custom Steel Shape Products can be entered in the rose shaded boxes labeled with theST1 abbreviation below.
New abbreviations for Custom Shape are entered by overwriting the pink abbreviation below ST1, these will show on the Size Page and Beam Schedule.
All values in green or pink can be entered or overwritten with differing weights or thickness and load capacity values but the depth for each row must remair
In the rose shaded cells enter the default Shape Abbreviation below for automatic entry on the Size page.
In the green shaded box at each shape change the Steel Shape default Steel grade to be automatically entered on the Size Page.

W	Default Beam Steel Shape Selection (automatically entered when Steel Type is entered on Size page)
P	Default Column Steel Shape Selection (automatically entered when Steel Type is entered on Post page)
2.50	Price per pound

Design Values for Steel Grades

	36	46	50
fb	21,600	27,600	30,000
fv	14,400	18,400	20,000
E	29.0	29.0	29.0

All Tables use A36 Steel, grade adjustments made in Sizing

Channels

default grade 36

C	ht	Wt	A	V max	Sx	M max	Ix	bf		Ref No.
	0			0		0	0			
	C3	6	1.76	16,896	1.38	2,484	2.07	1.59	6	1
	C4	7.25	2.2	21,120	3.29	5,922	4.59	1.75	7.25	2
	C6	8.2	2.4	23,040	3.38	6,084	13.1	1.88	8.2	3
	C6	13	3.38	32,448	5.8	10,440	17.4	2.16	13	4
	C8	11.5	3.38	32,448	8.14	14,652	32.6	2.25	11.5	5
	C8	18.75	5.51	52,896	11	19,800	44	2.53	18.75	6
	C9	15	4.41	42,336	11.3	20,340	51	2.49	15	7
	C9	20	5.88	56,448	13.5	24,300	60.9	2.65	20	8
	C10	15.3	4.49	43,104	13.5	24,300	67.4	2.63	15.3	9
	C10	20	5.88	56,448	15.8	28,440	78.9	2.75	20	10
	C10	25	7.35	70,560	18.2	32,760	91.2	2.89	25	11
	C10	30	8.82	84,672	20.7	37,260	103	3.03	30	12
	C12	20.7	6.09	58,464	21.5	38,700	129	3.00	20.7	13
	C12	25	7.35	70,560	24.1	43,380	144	3.00	25	14
	C12	30	8.82	84,672	27	48,600	162	3.13	30	15
	C15	33.9	9.96	95,616	42	75,600	315	3.38	33.9	16
	C15	40	11.8	113,280	45.5	81,900	349	3.50	40	17
	C15	50	14.7	141,120	53.8	96,840	404	3.72	50	18
										19

Flitch Plate

assumes 12 height — default grade 36

FP	Item	ht	A	V max	Sx	M max	Ix	bf	wt/ft	
				0		0	0	th		
1/8	0.125	12	1.5	14,400	3	5,400	18	0.125	5.1	21
1/8	0.1875	12	2.25	21,600	4.5	8,100	27	0.1875	7.7	22
1/4	0.25	12	3	28,800	6	10,800	36	0.25	10.2	23
1/4	0.3125	12	3.75	36,000	7.5	13,500	45	0.3125	12.8	24
3/8	0.375	12	4.5	43,200	9	16,200	54	0.375	15.3	25
1/2	0.5	12	6	57,600	12	21,600	72	0.5	20.4	26
										29

Steel Flitch Plate Enter on Pag
Enter **ST** under **Type** of MATERI
Enter **FP** under **Mat** of MATERIA
Enter **36** or **50** for ksi capacity u
Enter **1,2,3**, etc. under **Qty** In FIN
Enter width **b** (0.125 for 1/8", 0.25
MaxBeam will select **Height** h, or

Angles

default grade 36

L	Dpth	th	A	V max	Sx	M max	Ix	bf	wt	
				0	0	0	0			
	L1x1	0.125	0.234	2,246	0.031	56	0.022	1.00	0.80	31
	L1x1	0.25	0.438	4,205	1.056	1,901	0.037	1.00	1.49	32
	L2x2	0.125	0.484	4,646	0.131	236	0.19	2.00	1.65	33
	L2x2	0.25	0.938	9,005	0.247	445	0.348	2.00	3.19	34

L2x2	0.375	1.36	13,056	0.351	632	0.479	2.00	4.70	35
L3x2	0.25	1.19	11,424	0.542	976	1.09	2.00	4.10	36
L3x2	0.375	1.73	16,608	0.781	1,406	1.53	2.00	5.90	37
L3x2	0.5	2.25	21,600	1	1,800	1.92	2.00	7.70	38
L3x3	0.25	1.44	13,824	0.577	1,039	1.24	3.00	4.90	39
L3x3	0.375	2.11	20,256	0.833	1,499	1.76	3.00	7.20	40
L3x3	0.5	2.75	26,400	1.07	1,926	2.22	3.00	9.40	41
L4x3	0.25	1.68	16,128	1	1,800	2.77	3.00	5.80	42
L4x3	0.375	2.48	23,808	1.46	2,628	3.96	3.00	8.50	43
L4x3	0.5	3.25	31,200	1.89	3,402	5.05	3.00	11.10	44
L4x4	0.25	1.94	18,624	1.05	1,890	3.04	4.00	6.60	45
L4x4	0.375	2.86	27,456	1.52	2,736	4.36	4.00	9.80	46
L4x4	0.5	3.75	36,000	1.97	3,546	5.56	4.00	12.80	47
L6x4	0.25	2.44	23,424	2.26	4,068	9.27	4.00	8.30	48
L6x4	0.375	3.61	34,656	3.32	5,976	13.5	4.00	12.30	49
L6x4	0.5	4.75	45,600	4.33	7,794	17.4	4.00	16.20	50
L6x6	0.375	4.36	41,856	3.53	6,354	15.4	6.00	14.90	51
L6x6	0.5	5.75	55,200	4.61	8,298	19.9	6.00	19.60	52
L6x6	0.625	7.11	68,256	5.66	10,188	24.2	6.00	24.20	53
									59

Standard Pipe Colum

ht	Load Capa
0	3.0"dia
6	38,000
7	36,000
8	34,000
9	31,000
10	28,000
11	25,000
12	22,000
13	19,000
14	16,000
15	14,000
16	12,000
17	11,000
18	10,000
19	9,000
20	0
22	
24	
26	
28	
30	

Standard Pipe default grade **36**

P	Dia	th	A	V max	Sx	M max	Ix	bf	wt	
				0		0	0			
P2	0.154	1.07	10,272	0.561	1,010	0.666	2.00	3.36		61
P3	0.216	2.23	21,408	1.72	3,096	3.02	3.00	7.58		62
P3.5	0.226	2.68	25,728	2.39	4,302	4.79	3.50	9.11		63
P4	0.237	3.17	30,432	3.21	5,778	7.23	4.00	10.79		64
P5	0.258	4.3	41,280	5.45	9,810	15.2	5.00	14.62		65
P6	0.28	5.56	53,376	8.5	15,300	28.1	6.00	18.97		66
										69

Custom Steel Shape **Z** default grade **36**

ST1	Dpth	Wt	A	V max	Sx	M max	Ix	bf	wt	
				0		0	0			
Z24	55		16	153,600	100	180,000	900	5.08	6.08	70
			16	153,600	100	180,000	900			71
			16	153,600	100	180,000	900			72
			16	153,600	100	180,000	900			73
			16	153,600	100	180,000	900			74
										79

Enter beams from top to bottom in order of increasing depth, weight, Sx, etc. If all rows are not used fill largest beam values.

Tube default grade **36**

T	Dpth	Wt	A	V max	Sx	M max	Ix	bf	wt	
				0		0	0			
T2x2	0.1875	1.27	12,192	0.668	1,202	0.766	2.00	4.31		80
T2x2	0.25	1.59	15,264	0.766	1,379	0.799	2.00	5.40		81
T3x2	0.1875	1.64	15,744	1.24	2,232	1.86	2.00	5.59		82
T3x2	0.25	2.09	20,064	1.47	2,646	2.21	2.00	7.10		83
T3x3	0.1875	2.02	19,392	1.73	3,114	2.6	3.00	6.86		84
T3x3	0.25	2.59	24,864	2.1	3,780	3.16	3.00	8.80		85
T3.5	0.1875	2.39	22,944	2.45	4,410	4.29	3.50	8.14		86
T3.5	0.25	3.09	29,664	3.02	5,436	5.29	3.50	3.36		87
T4x3	0.1875	2.39	22,944	2.26	4,068	5.23	3.00	8.14		88
T4x3	0.25	3.09	29,664	3.23	5,814	6.45	3.00	10.50		89
T4x4	0.25	3.54	33,984	4	7,200	8.00	4.00	12.02		90
T4x4	0.3125	4.27	40,992	4.61	8,298	9.61	4.00	14.52		91
T6x2	0.25	3.54	33,984	4.41	7,938	13.30	2.00	12.02		92
T6x2	0.3125	4.27	40,992	5.08	9,144	15.30	2.00	14.52		93

Square Tube Column

ht	Load Capa
0	4x4x1/4
6	38,000
7	36,000
8	34,000
9	31,000
10	28,000
11	25,000
12	22,000
13	19,000
14	16,000
15	14,000
16	12,000
17	11,000
18	10,000
19	9,000

T6x3	0.25	4.04	38,784	5.82	10,476	17.40	3.00	13.72	94	20	0
T6x3	0.3125	4.09	39,264	6.77	12,186	20.30	3.00	16.65	95	22	
T6x4	0.25	4.54	43,584	7.19	12,942	21.60	4.00	15.42	96	24	
T6x4	0.3125	5.52	52,992	8.46	15,228	25.40	4.00	18.77	97	26	
T6x6	0.25	5.54	53,184	9.95	17,910	29.90	6.00	18.82	98	28	
T6x6	0.3125	6.77	64,992	11.8	21,240	35.50	6.00	23.02	99	30	
									109		

Wide Flange

default grade **36**

ht Lookup

W	**Dpth**	**Wt**	**A**	**V** max	**Sx**	**M** max	**Ix**	**bf**	**wt**		V
				0		0	0				0
	W6	9	2.68	25,728	5.56	10,008	16.4	3.94	9	110	25,728
	W6	12	3.55	34,080	7.31	13,158	22.1	4.00	12	111	28,416
	W6	16	4.74	45,504	10.2	18,360	32.1	4.03	16	112	33,984
	W6	20	5.87	56,352	13.4	24,120	41.4	6.02	20	113	39,936
	W6	25	7.34	70,464	16.7	30,060	53.4	6.08	25	114	62,304
				0		0	0				73,728
	W8	10	2.96	28,416	7.81	14,058	30.8	3.94	10	115	98,880
	W8	13	3.84	36,864	9.91	17,838	39.6	4.00	13	116	124,800
	W8	15	4.44	42,624	11.8	21,240	48	4.02	15	117	155,520
	W8	21	8.28	79,488	18.2	32,760	75.3	5.27	21	118	
	W8	28	8.06	77,376	24.3	43,740	98	6.54	28	119	
	W8	35	10.3	98,880	31.2	56,160	127	8.02	35	120	
	W8	48	14.1	135,360	43.3	77,940	184	8.11	48	121	
	W8	67	19.7	189,120	60.4	108,720	272	8.28	67	122	
				0		0	0				
	W10	12	3.54	33,984	10.9	19,620	53.8	3.96	12	123	
	W10	15	4.41	42,336	13.8	24,840	68.9	4.00	15	124	
	W10	19	5.62	53,952	18.8	33,840	96.3	4.02	19	125	
	W10	26	7.61	73,056	27.9	50,220	144	5.77	26	126	
	W10	33	9.71	93,216	35	63,000	170	7.96	33	127	
	W10	45	13.3	127,680	49.1	88,380	248	8.02	45	128	
	W10	68	20	192,000	75.7	136,260	394	10.13	68	129	
	W10	88	25.9	248,640	98.5	177,300	434	10.27	88	130	
	W10	112	32.9	315,840	126	226,800	716	10.42	112	131	
				0		0	0				
	W12	14	4.16	39,936	14.9	26,820	88.6	3.97	14	132	
	W12	19	5.57	53,472	21.3	38,340	130	4.01	19	133	
	W12	22	6.48	62,208	25.4	45,720	156	4.03	22	134	
	W12	26	7.65	73,440	33.4	60,120	204	6.49	26	135	
	W12	35	10.3	98,880	45.6	82,080	285	6.56	35	136	
	W12	45	13.2	126,720	58.1	104,580	350	8.05	45	137	
	W12	58	17	163,200	78	140,400	475	10.01	58	138	
	W12	79	23.2	222,720	107	192,600	662	12.08	79	139	
	W12	106	32.2	309,120	145	261,000	933	12.22	106	140	
				0		0	0				
	W14	22	6.49	62,304	29	52,200	199	5.00	22	141	
	W14	26	7.69	73,824	35.3	63,540	245	5.03	26	142	
	W14	30	8.85	84,960	42	75,600	291	6.73	30	143	
	W14	38	11.2	107,520	54.6	98,280	385	6.77	38	144	
	W14	48	14.1	135,360	70.3	126,540	485	8.03	48	145	
	W14	61	17.9	171,840	92.2	165,960	640	10.00	61	146	
	W14	82	24.1	231,360	123	221,400	882	10.13	82	147	
	W14	99	29.1	279,360	257	462,600	1110	14.57	99	148	
	W14	120	35.3	338,880	190	342,000	1380	14.67	120	149	
				0		0	0				
	W16	26	7.68	73,728	38.4	69,120	301	5.50	26	150	
	W16	31	9.12	87,552	47.2	84,960	375	5.53	31	151	
	W16	40	11.8	113,280	64.7	116,460	518	7.00	40	152	
	W16	57	16.8	161,280	92.2	165,960	758	7.12	57	153	

W16	67	19.7	189,120	134	241,200	1110	10.24	67	154	
W16	100	29.4	282,240	175	315,000	1490	10.43	100	155	
			0		0	0				
W18	35	10.3	98,880	57.6	103,680	510	6.00	35	156	
W18	46	13.5	129,600	78.8	141,840	712	6.60	46	157	
W18	55	16.2	155,520	98.3	176,940	890	7.53	55	158	
W18	71	20.8	199,680	127	228,600	1170	7.64	71	159	
W18	106	31.1	298,560	204	367,200	1919	11.20	106	160	
W18	130	38.2	366,720	256	460,800	2460	11.16	130	161	
			0		0	0				
W21	44	13	124,800	81.6	146,880	843	6.50	44	162	
W21	68	20	192,000	140	252,000	1480	8.27	68	163	
W21	93	27.3	262,080	192	345,600	2070	8.42	93	164	
W21	147	43.2	414,720	329	592,200	3630	12.51	147	165	
			0		0	0				0
W24	55	16.2	155,520	114	205,200	1350	7.01	55	166	
W24	76	22.4	215,040	176	316,800	2100	8.99	76	167	
W24	104	30.6	293,760	258	464,400	3100	12.75	104	168	
W24	162	47.7	457,920	414	745,200	5170	12.96	162	169	
									179	

MaxBeam

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ı as is.

ht Lookup	V	M	Ix	min	max
	0	0	0	ref	ref
	16,896	2,484	2	1	1
	21,120	5,922	5	2	2
	23,040	6,084	13	3	4
	32,448	14,652	33	5	6
	42,336	20,340	51	7	8
	43,104	24,300	67	9	12
	58,464	38,700	129	13	15
	95,616	75,600	315	16	18
	141,120	96,840	404	18	18
				19	

ge 4a (Size) Tab
AL SELECTION
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nder **Grade**
IAL SIZE SELECTION
5 for 1/4", up to 0.5 for 1/2")
r Enter **h** to verify computation

ht Lookup	V	M	Ix	min	max
	0	0	0	ref	ref
	2,246	56	0	31	32
	4,646	236	0	33	35
	11,424	976	1	36	38
	13,824	1,039	1	39	41

16,128	1,800	3	42	44
18,624	1,890	3	45	47
23,424	4,068	9	48	50
41,856	6,354	15	51	53
			59	

ıns

city

3.5"dia	4"dia	5"dia
48,000	59,000	83,000
46,000	57,000	81,000
44,000	54,000	78,000
41,000	52,000	76,000
38,000	49,000	73,000
35,000	46,000	71,000
32,000	43,000	68,000
29,000	40,000	65,000
25,000	36,000	61,000
22,000	33,000	58,000
19,000	29,000	55,000
17,000	26,000	51,000
15,000	23,000	47,000
14,000	21,000	43,000
12,000	19,000	39,000
10,000	15,000	32,000
0	13,000	27,000
	0	23,000
		20,000
		17,000
		??

ıs

city

4x4x3/8	5x5x1/4	5x5x3/8
48,000	59,000	83,000
46,000	57,000	81,000
44,000	54,000	78,000
41,000	52,000	76,000
38,000	49,000	73,000
35,000	46,000	71,000
32,000	43,000	68,000
29,000	40,000	65,000
25,000	36,000	61,000
22,000	33,000	58,000
19,000	29,000	55,000
17,000	26,000	51,000
15,000	23,000	47,000
14,000	21,000	43,000

ht Lookup	V	M	Ix	min	max
	0	0	0	ref	ref
	12,192	1,202	1	80	81
	15,744	2,232	2	82	83
	19,392	3,114	3	84	85
	22,944	4,410	4	86	87
	22,944	4,068	5	88	89
	33,984	7,200	8	90	91
	33,984	7,938	13	92	93
	38,784	10,476	17	94	95
	43,584	12,942	22	96	97
	53,184	17,910	30	98	99
				109	

12,000	19,000	39,000
10,000	15,000	32,000
0	13,000	27,000
	0	23,000
		20,000
		17,000
		??

M	Ix	min
0	0	ref
10,008	16	110
14,058	31	115
19,620	54	123
26,820	89	132
52,200	199	141
69,120	301	150
103,680	510	156
146,880	843	162
205,200	1,350	166
		179

ht Lookup

	V		M
	0		0
	25729	110	10008
	28416	115	13050
	33984	123	14058
	33994	111	17820
	36768	116	18360
	39552	132	19620
	42336	124	21240
	42528	117	24120
	45312	112	24840
0	53664	133	26640
	53856	125	30060
	56448	113	30600
	56544	118	33840
	62112	134	38340
	62304	141	43740
	70560	114	45540
	70656	126	47700
	73623	142	52020
	73728	150	55980
	76320	135	61740
	79008	119	63000
	84768	143	63180
	87552	151	69120
	93216	127	75420
	98880	120	77760
	98880	156	82800
	101760	136	84960
	107520	144	88380
	113280	157	98460
	124800	162	103680
	126720	128	104760
	126720	137	108720
	126720	158	116280
	133280	152	120360
	135360	121	123120
	135360	145	132660
	141120	153	140580
	155520	166	142200
	164160	138	145440
	164160	159	146880
	171840	146	165960
	180480	154	175500
	186240	129	179460
	189,120	122	187200
	192000	163	194400
	203520	139	203400
	209280	147	205200
	215040	167	225600
	217920	160	226800

220800	155	230400
237120	148	235800
251520	130	243000
271680	164	252000
279360	140	316800
313920	149	316800
315840	131	356400
321600	161	396000
339840	168	540000
401280	165	570600
452160	169	745200
	179	

0	0	0

	Ix	ID
	0	0
110	16.4	110
111	21.7	111
115	30.8	115
116	31.7	112
112	39.6	116
123	41.5	113
117	48.1	117
113	53.3	114
124	53.8	123
132	68.9	124
114	69.4	118
118	88	132
125	96.3	125
133	97.8	119
119	126	120
134	130	133
126	133	126
141	156	134
120	171	127
135	184	121
127	198	141
142	204	135
150	244	142
143	249	128
121	272	122
136	281	136
151	290	143
128	301	150
144	351	137
156	375	151
137	382	129
122	386	144
152	476	138
145	485	145
157	510	156
129	517	152
138	542	130
158	597	139
153	612	157
162	641	146
146	657	153
139	706	158
130	719	131
154	797	147
159	834	162
147	836	154
166	859	140
160	928	148
131	968	159

155	1050	155
148	1270	149
140	1290	160
163	1340	166
149	1480	163
167	2040	161
164	2100	164
161	2100	167
168	3410	165
165	3650	168
169	5120	169
179		179

HARDWARE LOOKUP OPTIONS

Revise Hardware Load Capacity and Hardware Type to Meet Special Hardware Requirements by overwriting Data in Green F

Simpson Hangers

WD-Face Hanger Table

1-	2x		col1	col2	col1	col2	
ht	4	0	445	640	LU	LUS	?
	6	0	665	830	LU	LUS	?
	8	0	890	1055	LU	LUS	?
	10	0	1110	1275	LU	LUS	?
	12	0	1340	3775	HU	HUS	?
	14	0	1595	1610	U	HU	?
	16	0	1595	1610	U	HU	?

2-	2x		
ht	4	765	LUS-2
	6	1610	HU-2
	8	1875	HU-2
	10	2410	HU-2
	12	2950	HU-2
	14	3215	HU-2
	16	3485	HU-2

3-	2x		
ht	4		
	6	1610	HU-3
	8	1266	LUS-3
	10	2410	HU-3
	12	2950	HU-3
	14	3215	HU-3
	16	3485	HU-3

1-	3x		
ht	4	535	HU
	6	1070	HU
	8	1340	HU
	10	1875	HU
	12	2145	HU
	14	2410	HU
	16	2680	HU

1-	4x	6x	8x
ht	4	765	LUS
	6	1610	HU
	8	1875	HU
	10	2410	HU
	12	2950	HU
	14	3215	HU
	16	3485	HU

GL-Face Hanger Table

3-1/8			5-1/8
ht	5.5		ht 5.5
	6		6
	7.25		7.25
	7.5		7.5
	9		9
	9.25		9.25
	10.5	2950 HU3.25	10.5
	11.25	2950 HU3.25	11.25
	12	3215 HU3.25	12
	13.25	3215 HU3.25	13.25
	13.5	3215 HU3.25	13.5
	15		15
	16.5		16.5
	18		18
	19.5		19.5
	21		21
	22.5		22.5
	24		24
	25.5		25.5
	27		27
	28.5		28.5
	30		30
	31.5		31.5
	33		33
	34.5		34.5
	36		36
	37.5		37.5
	39		39

Hardware Selection Table

WD-FH					GL-FH				MW-FH				WD-TH		
2x	2x	2x	1-3x	1>4x	sum	3.125	5.125	6.75	sum	1.75	2.75	3.5	sum	2x	2x	3x
1	2	3												1	2	
LUS	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	LB	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0

0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0
0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0

:onts.

									MW-Face Hanger Table					**WD-Top Hanger Table**			
					6-3/4				**1-3/4**				**1-**	**2x**			**1-**
					ht	5.5			ht	7.25	4900	HUS1.81	ht	4	955	PF	ht
						6				7.5	4900	HUS1.81		6	1040	LB	
						7.25				9.25	4900	HUS1.81		8	1270	LB	
						7.5				9.5	4900	HUS1.81		10	1550	LB	
						9	7890	HGUS		11.25	4900	HUS1.81		12	1580	LB	
						9.25	7890	HGUS		11.875	4900	HUS1.81		14	1600	LB	
2950	HU5.125					10.5	9535	HGUS		14	4900	HUS1.81		16	1525	LB	
3485	HU5.125					11.25	9535	HGUS		16	4900	HUS1.81					
3485	HU51.25					12	9535	HGUS									
7890	HGUS					13.25	11180	HGUS	**2-11/16**				**2-**	**2x**			**1-**
9535	HGUS					13.5	11180	HGUS	ht	7.25			ht	4	735	F	ht
						15				7.5				6	3255	WNP	
						16.5				9.25	7890	HGUS2.75		8	3255	WNP	
						18				9.5	7890	HGUS2.75		10	3255	WNP	
						19.5				11.25	9205	HGUS2.75		12	4175	WM	
						21				11.875	9205	HGUS2.75		14	4175	WM	
						22.5				14	9605	HGUS2.75		16	4175	WM	
						24				16	9605	HGUS2.75					
						25.5											
						27			**3-1/2 or 2-1-3/4**								**1-**
						28.5			ht	7.25	1875	HU					ht
						30				7.5	1875	HU					
						31.5				9.25	2410	HU					
						33				9.5	2410	HU					
						34.5				11.25	2950	HU					
						36				11.875	2950	HU					
						37.5				14	3215	HU					
						39				16	3485	HU					

			WD-RH&HH	**Base**	**Cap**
4x-6x	8x	sum	sum		
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0

0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0
0	0	**Err:508**	0	0	0

No Face Nails

3x		
4	650	F
6	2200	W
8	2200	W
10	4100	WM
12	4100	WM
14	4100	WM
16	4100	WM

4x	6x	
4		
6	4175	WM
8	4175	WM
10	4175	WM
12	4330	HB
14	4330	HB
16	6235	HHB

8x		
4		
6	5285	HW
8	5285	HW
10	5285	HW
12	6235	HHB
14	6235	HHB
16	6235	HHB

WD-Ridge Rafter Hangers

1-	2x		
ht	4		
	6	415	RR
	8	415	RR
	10	415	RR
	12		
	14		
	16		

WD-Hip Hangers

1-			
wd	1.5	900	HRC22
	1.75	900	HRC1.81
	3.5	1775	HRC44
2-	2	1775	HRC44

Post Base

4x4	CB44
4x6	CB46
4x8	CB48
6x6	CB66
6x8	CB68
8x8	CB88

Post Cap

4x4	AC 4
4x6	AC 4
4x8	AC 4
6x6	AC 6
6x8	AC 6
8x8	

STRUCTURAL CALCULATIONS

Light Frame Building

Architect, Builder or Engineer

Aug 14 2007