

Goldenstein Floor Material List						
Mark	Material	Width	Depth	Quantity	Cut Length	Total Length
Blocking						
BL1	RFPI 20	1 3/4	11 7/8	l/f	r/l	102'
					Subtotal	102'
Hangers						
H1	USP TFL23118			6		
Joists						
J1	RFPI 70	2 5/16	11 7/8	54	36'	1944'
J2	2-Ply RFPI 70	2 5/16	11 7/8	8	17'	136'
J3	RFPI 70	2 5/16	11 7/8	40	17'	680'
J4	RFPI 70	2 5/16	11 7/8	2	13'	26'
J5	RFPI 70	2 5/16	11 7/8	2	3'	6'
					Subtotal	2792'
RIMs						
R1	1.3E RigidRim LVL	1 1/2	11 7/8	14	24'	336'
					Subtotal	336'

RFPI Joist Placement Diagram

FLOOR LOADS

LIVE LOAD	40	#	PSF
DEAD LOAD	15	#	PSF
TOTAL LOAD	55	#	PSF

FLOOR LOADS

LIVELOAD	40	#	PSF
TILE LOAD	27	#	PSF
TOTAL LOAD	67	#	PSF

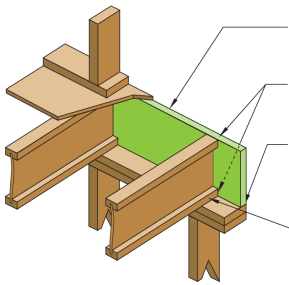
CEILING LOADS

LIVE LOAD	10	#	PSF
DEAD LOAD	10	#	PSF

ROOF LOADS

SNOW LOAD	20	#	PSF
DEAD LOAD	15	#	PSF
TOTAL LOAD	35	#	PSF

1b RigidRim® RIMBOARD

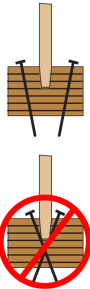


RigidRim® Rimboard
(see Roseburg EWP Design Guide for design properties)

One 8d nail at top and bottom flange

Attach RigidRim® Rimboard to top plate using 8d box toenails @ 6" o.c. (when used for lateral shear transfer, nail to bearing plate with same nailing as required for decking)

Attach RFPI-Joist to top plate with **one 8d nail each side** of the flange at bearing. To avoid splitting flange, install nails a minimum of 1 1/2" from end of I-joist. Nails may be driven at an angle to avoid splitting of bearing plate.



BACKER BLOCK AND HEADER DETAIL

Backer block required for face-mount hangers (both sides of I-joist) & where top mount hanger load exceeds 250 lbs. See charts for backer block thickness & depth. Install backer block tight to the top flange.

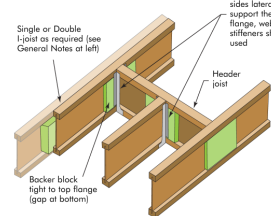
Verify I-joist capacity to support concentrated load from "header joist" in addition to all other loads. Attach backer block to web with 16 - 10d common nails, clinched. See chart for maximum capacity for this detail. Backer block must be wide enough to permit required nailing without splitting (min. width of 1 1/2" recommended).

GENERAL NOTES:
For hanger capacity see hanger manufacturer recommendations. Verify I-joist capacity to support concentrated load from "header joist" in addition to all other loads. If a double I-joist is required to support "header joist" load, refer to Roseburg EWP Design Guide or Installation Guide for double I-joist connection guidelines. Before installing a backer block to a double I-joist, drive 4 additional 10d nails from both sides of double I-joist through the webs and filler block at backer block location. Clinch nails.

I-Joist Flange Width	Backer block Material Thickness Required ^(a)	Max. load capacity using 16-10d com. nails
1-3/4"	2 1/2"	975 lbs
2-1/16"	7/8"	1135 lbs
2-5/16"	1"	1250 lbs
2-1/2"	1-1/8"	1250 lbs
3-1/2"	1-1/2"	1250 lbs

(a) Minimum grade for backer material shall be Utility grade SP or better for solid sawn lumber and Rated Sheathing grade for wood structural panels.
(b) Glue 2-ply backer blocks together with construction grade adhesive (ASTM D-3498)

1p

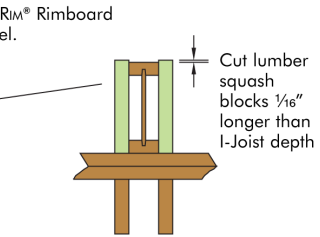
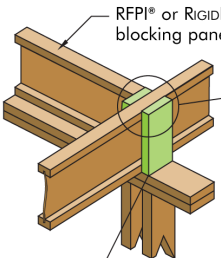


Single or Double I-joist as required (see General Notes at left)

Top or Face-mounted hanger. Note: Unless face-mounted hanger sides laterally support the top flange, web stiffeners shall be used

Joist Depth	Backer Block Depth			
	9-1/2"	11-7/8"	14"	16"
Top Mount Hangers - Min. Backer Block Depth	5-1/2"	5-1/2"	7-1/4"	7-1/4"
Face Mount Hangers - Req'd Backer Block Depth	6-1/4"	8-5/8"	10-3/4"	12-3/4"

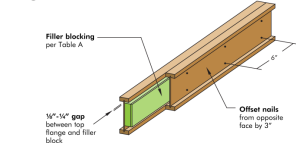
1d SQUASH BLOCK DETAIL



Squash block
Provide lateral bracing as required.

Pair of Squash Blocks	Maximum vertical load per pair of squash blocks (lb)	
	3-1/2" wide	5-1/2" wide
2x lumber	3800	5900
1-1/8" APA Rim Board, Rim Board Plus, or Rated Sturd-I-Floor 48 oc	2600	4000
1" APA Rim Board or Rated Sturd-I-Floor 32 oc	1900	3000

10 DOUBLE RFPI-JOIST CONSTRUCTION

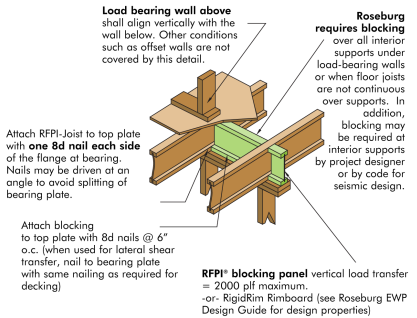


- Notes:**
- Double I-joists may be required to frame openings, support concentrated loads, support partitions parallel to floor joists, or support any other loads which would exceed the capacity of a single I-joist. Install double I-joists when noted in the building drawings.
 - Filler blocks do not function as web stiffeners. Install web stiffeners as required.
 - Support back of I-joist web during nailing to prevent damage to web/flange connection.
 - Leave a 1/4" gap between top of filler block and bottom of top I-joist flange.
 - For side-loaded conditions or cantilever reinforcement, filler block is required between joists for full length of double member.
 - Nail joist together with two rows of 10d nails on 6 inches o.c. (staggered) on each side of the double I-joist. Total of 8 nails per foot required.
 - Filler block thickness may be achieved by using multiple layers of structural wood panels.
 - The maximum load that may be applied to one side of the double joist using this detail is 600 lbs/ft.

**TABLE A
FILLER BLOCK REQUIREMENTS FOR DOUBLE RFPI-JOIST CONSTRUCTION**

Flange Width	Joist Depth	Joist Designation	Net Filler Block Size
1-3/4"	9-1/2"	20	1-3/8" x 8"
	11-7/8"	20	1-3/8" x 10"
	14"	20	1-3/8" x 12"
2-1/16"	9-1/2"	400	1-3/4" x 6"
	11-7/8"	400	1-3/4" x 8"
	14"	400	1-3/4" x 10"
2-5/16"	9-1/2"	400	1-3/4" x 12"
	11-7/8"	40, 70	2" x 6"
	14"	40, 70	2" x 8"
3-1/2"	9-1/2"	40, 70	2" x 10"
	11-7/8"	40, 70	2" x 12"
	14"	40, 70	2" x 12"
2-1/2"	9-1/2"	405, 405	3-1/8" x 6"
	11-7/8"	405, 405	2-1/8" x 10"
	14"	405, 405	2-1/8" x 12"
3-1/2"	11-7/8"	805, 90	3" x 8"
	14"	805, 90	3" x 10"
	14"	805, 90	3" x 12"

19 RFPI BLOCKING PANELS AT INTERIOR SUPPORT



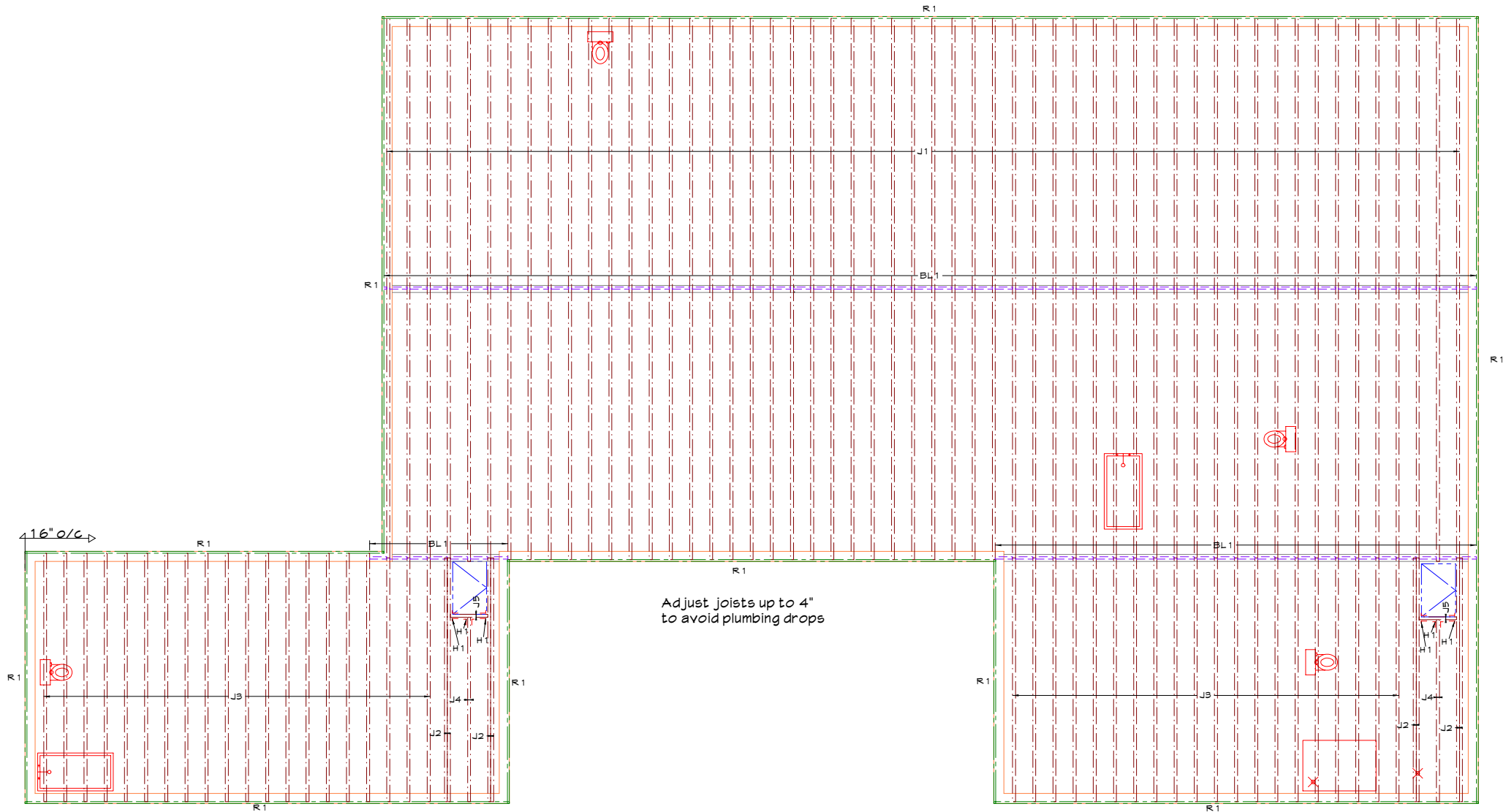
Load bearing wall above shall align vertically with the wall below. Other conditions such as offset walls are not covered by this detail.

Roseburg requires blocking over all interior supports under load-bearing walls or when floor joists are not continuous over supports. In addition, blocking may be required of interior supports by project designer or by code for seismic design.

Attach RFPI-Joist to top plate with **one 8d nail each side** of the flange at bearing. Nails may be driven at an angle to avoid splitting of bearing plate.

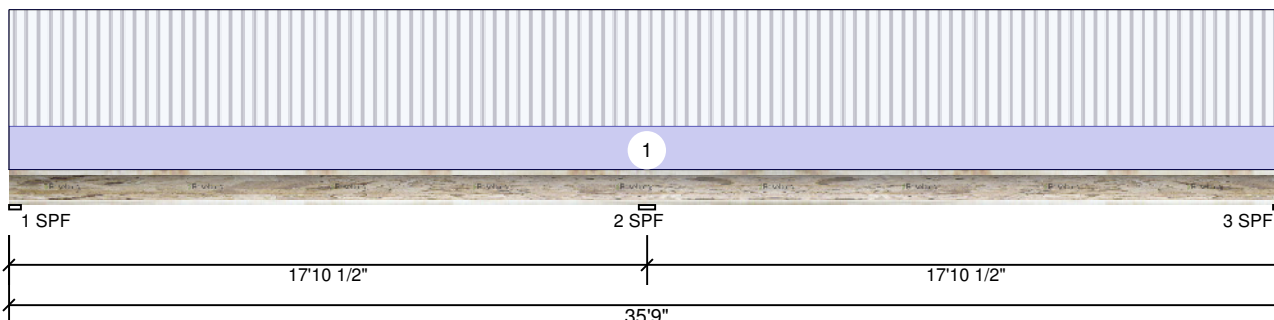
Attach blocking to top plate with 8d nails @ 6" o.c. (when used for lateral shear transfer, nail to bearing plate with same nailing as required for decking)

RFPI® blocking panel vertical load transfer = 2000 plf maximum.
-or- RigidRim Rimboard (see Roseburg EWP Design Guide for design properties)



J1 RFPI 70 11.875" - PASSED

Level: Floor



Member Information

Type:	Joist	Application:	Floor
Spacing:	16" o.c.	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	23/32 APA Rated Sturd-I-FloorOSB Nailed and Glued
Importance:	Normal		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		
Snow:	20 PSF		
Construction:	20 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	372	139	0	0	0
2	1163	436	0	0	0
3	372	139	0	0	0

Bearings

Bearing	Length	Cap. React	D/L lb	Total Ld.	Case	Ld. Comb.
1 - SPF	4.000"	37%	139 / 427	567	L_	D+L
2 - SPF	5.500"	60%	437 / 1165	1601	LL	D+L
3 - SPF	4.000"	37%	139 / 427	567	_L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-2733 ft-lb	17'10 1/2"	6645 ft-lb	0.411 (41%)	D+L	LL
Unbraced	-1739 ft-lb	17'10 1/2"	1739 ft-lb	1.000 (100%)	D+L	_L
Pos Moment	2038 ft-lb	7'8 11/16"	6645 ft-lb	0.307 (31%)	D+L	L_
Shear	801 lb	17'10 1/2"	1550 lb	0.517 (52%)	D+L	LL
LL Defl inch	0.186 (L/1134)	8'8 1/8"	0.440 (L/480)	0.420 (42%)	L	L_
TL Defl inch	0.233 (L/905)	8'6 3/8"	0.587 (L/360)	0.400 (40%)	D+L	L_

Design Notes

- 1 Bottom flange must be laterally braced at a maximum of 6'9" o.c.

ID	Load Type	Location	Trib Width	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-4-0	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

- 1. Dry service conditions, unless noted otherwise
- 2. Joist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length= 3.5 inches
7. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

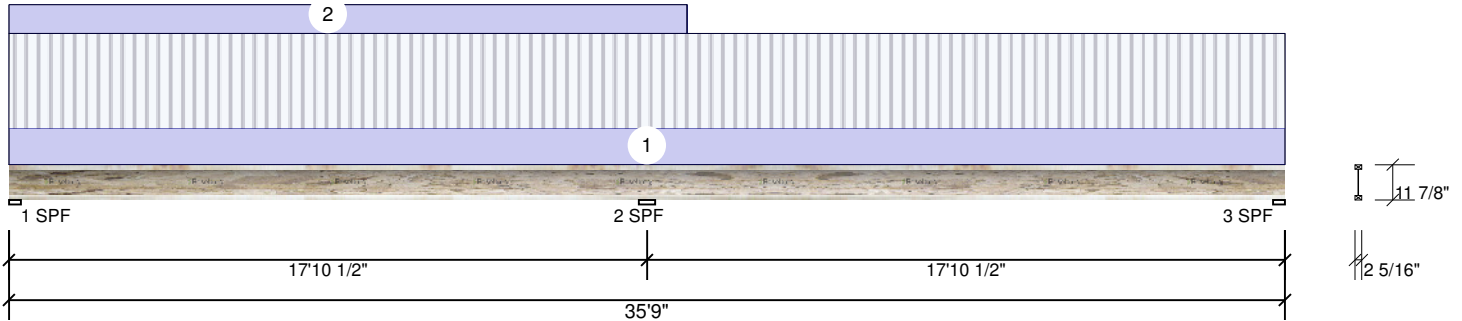
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33 N. 45th Ave , AZ
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J1a RFPI 70 11.875" - PASSED

Level: Floor



Member Information

Type:	Joist	Application:	Floor
Spacing:	16" o.c.	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	23/32 APA Rated Sturd-I-FloorOSB Nailed and Glued
Importance:	Normal		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		
Snow:	20 PSF		
Construction:	20 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	372	267	0	0	0
2	1163	629	0	0	0
3	372	123	0	0	0

Bearings

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.000"	45%	267 / 427	695	L_	D+L
2 - SPF	5.500"	67%	629 / 1165	1794	LL	D+L
3 - SPF	4.000"	35%	123 / 427	550	_L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-3035 ft-lb	17'10 1/2"	6645 ft-lb	0.457 (46%)	D+L	LL
Unbraced	-2042 ft-lb	17'10 1/2"	2051 ft-lb	0.995 (100%)	D+L	L_
Pos Moment	2515 ft-lb	7'9 5/16"	6645 ft-lb	0.378 (38%)	D+L	L_
Shear	959 lb	17'10 1/2"	1550 lb	0.619 (62%)	D+L	LL
LL Defl inch	0.186 (L/1134)	8'8 1/8"	0.440 (L/480)	0.420 (42%)	L	L_
TL Defl inch	0.289 (L/731)	8'6 3/4"	0.587 (L/360)	0.490 (49%)	D+L	L_

Design Notes

- 1 Bottom flange must be laterally braced at a maximum of 6'3" o.c.

ID	Load Type	Location	Trib Width	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-4-0	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 19-0-0		12 PSF	0 PSF	0 PSF	0 PSF	0 PSF	Tile at Kitchen / Utility

Notes

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Lumber

- 1. Dry service conditions, unless noted otherwise
- 2. Joist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length= 3.5 inches
7. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

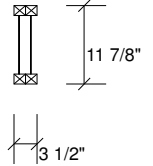
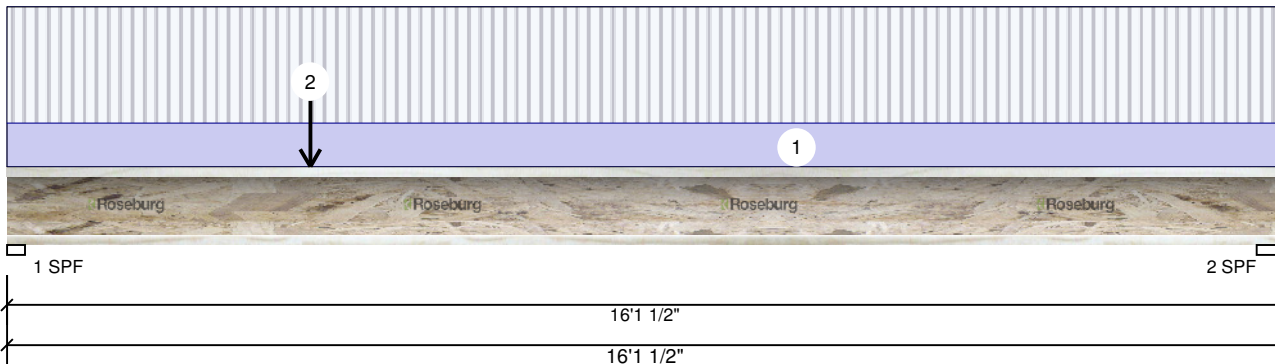
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J2 RFPI 20 11.875" 2-Ply - PASSED

Level: Floor



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		
Snow:	20 PSF		
Construction:	20 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	734	275	0	0	0
2	526	197	0	0	0

Bearings

Bearing	Length	Cap. React	D/L lb	Total Ld.	Case	Ld. Comb.
1 - SPF	2.750"	44%	275 / 734	1009	L	D+L
2 - SPF	4.000"	25%	197 / 526	724	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3377 ft-lb	6'3 1/8"	7280 ft-lb	0.464 (46%)	D+L	L
Unbraced	3377 ft-lb	6'3 1/8"	3387 ft-lb	0.997 (100%)	D+L	L
Shear	997 lb	2"	2840 lb	0.351 (35%)	D+L	L
LL Defl inch	0.211 (L/891)	7'7 7/16"	0.392 (L/480)	0.540 (54%)	L	L
TL Defl inch	0.291 (L/648)	7'7 7/16"	0.523 (L/360)	0.560 (56%)	D+L	L

Design Notes

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top flange must be laterally braced at a maximum of 7'5" o.c.
- Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-4-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Point	3-10-0		Top	150 lb	400 lb	0 lb	0 lb	0 lb	J5

Notes

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Lumber

- Dry service conditions, unless noted otherwise
- Joist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

- Joist flanges must not be cut or drilled
- Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
- Damaged Joists must not be used
- Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

- Provide lateral support at bearing points to avoid lateral displacement and rotation
- Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
- For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

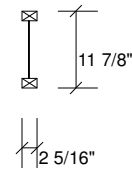
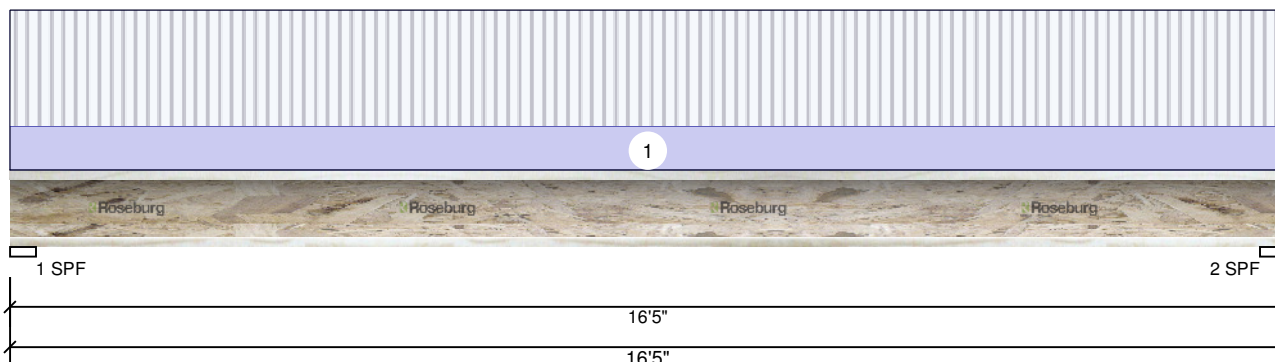
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J3 RFPI 70 11.875" - PASSED

Level: Floor



Member Information

Type:	Joist	Application:	Floor
Spacing:	16" o.c.	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	23/32 APA Rated Sturd-I-FloorOSB Nailed and Glued
Importance:	Normal		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		
Snow:	20 PSF		
Construction:	20 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	438	164	0	0	0
2	438	164	0	0	0

Bearings

Bearing	Length	Cap. React	D/L lb	Total Ld.	Case	Ld. Comb.
1 - SPF	4.000"	39%	164 / 438	602	L	D+L
2 - SPF	4.000"	39%	164 / 438	602	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2310 ft-lb	8'2 1/2"	6645 ft-lb	0.348 (35%)	D+L	L
Shear	582 lb	3 1/4"	1550 lb	0.376 (38%)	D+L	L
LL Defl inch	0.169 (L/1130)	8'2 9/16"	0.397 (L/480)	0.420 (42%)	L	L
TL Defl inch	0.232 (L/822)	8'2 9/16"	0.529 (L/360)	0.440 (44%)	D+L	L

Design Notes

- 1 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-4-0	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	

Notes

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Lumber

- 1. Dry service conditions, unless noted otherwise
- 2. Joist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
7. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

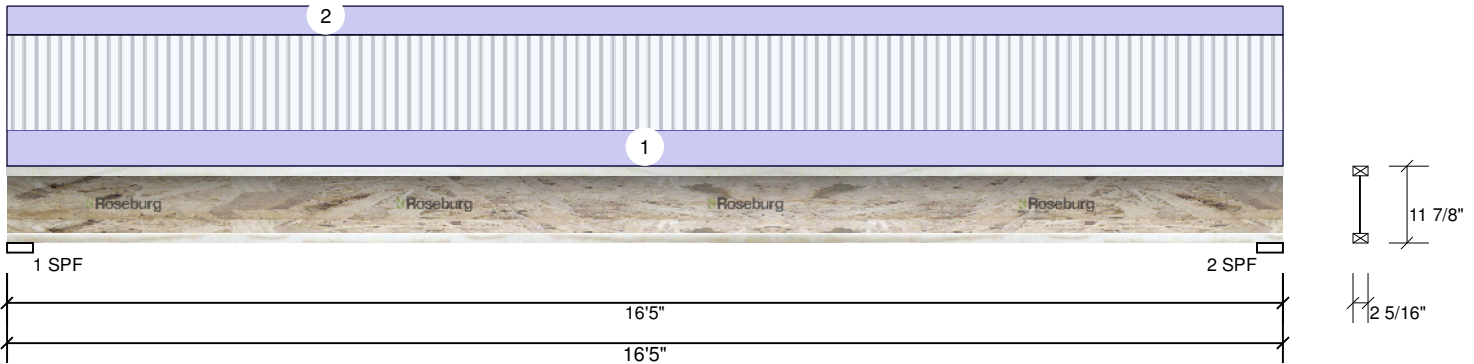
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J3a RFPI 70 11.875" - PASSED

Level: Floor



Member Information

Type:	Joist	Application:	Floor
Spacing:	16" o.c.	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	23/32 APA Rated Sturd-I-FloorOSB Nailed and Glued
Importance:	Normal		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		
Snow:	20 PSF		
Construction:	20 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	438	296	0	0	0
2	438	296	0	0	0

Bearings

Bearing	Length	Cap. React	D/L lb	Total Ld.	Case	Ld. Comb.
1 - SPF	4.000"	47%	296 / 438	733	L	D+L
2 - SPF	4.000"	47%	296 / 438	733	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2814 ft-lb	8'2 1/2"	6645 ft-lb	0.424 (42%)	D+L	L
Shear	709 lb	3 1/4"	1550 lb	0.457 (46%)	D+L	L
LL Defl inch	0.169 (L/1130)	8'2 9/16"	0.397 (L/480)	0.420 (42%)	L	L
TL Defl inch	0.282 (L/674)	8'2 9/16"	0.529 (L/360)	0.530 (53%)	D+L	L

Design Notes

- 1 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-4-0	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Uniform		1-4-0	12 PSF	0 PSF	0 PSF	0 PSF	0 PSF	Tile ar Master Bath

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

- 1. Dry service conditions, unless noted otherwise
- 2. Joist not to be treated with fire retardant or corrosive chemicals

chemicals

Handling & Installation

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length= 3.5 inches
7. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

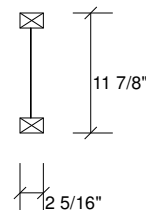
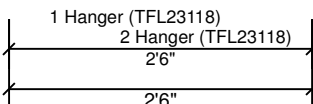
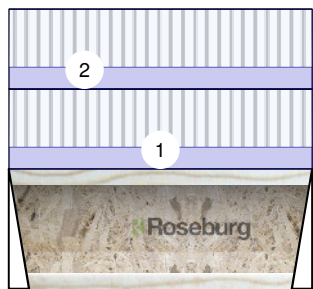
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APA: PR-L259, ICC-ES: ESR-1251

Capital
33 N. 45th Ave , AZ
85043
602-269-6225



J5 RFPI 70 11.875" - PASSED

Level: Floor



Member Information

Type:	Girder
Plies:	1
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal
Temperature:	Temp <= 100°F
General Load	
Floor Live:	40 PSF
Dead:	15 PSF
Snow:	20 PSF
Construction:	20 PSF

Application:	Floor
Design Method:	ASD
Building Code:	IBC/IRC 2015
Load Sharing:	No
Deck:	Not Checked

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	400	150	0	0	0
2	400	150	0	0	0

Bearings

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	44%	150 / 400	550	L	D+L
2 - Hanger	2.000"	44%	150 / 400	550	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	289 ft-lb	1'3"	6645 ft-lb	0.043 (4%)	D+L	L
Unbraced	289 ft-lb	1'3"	6236 ft-lb	0.046 (5%)	D+L	L
Shear	504 lb	1 1/4"	1550 lb	0.325 (33%)	D+L	L
LL Defl inch	0.004 (L/7433)	1'3"	0.057 (L/480)	0.060 (6%)	L	L
TL Defl inch	0.005 (L/5406)	1'3"	0.076 (L/360)	0.070 (7%)	D+L	L

Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top flange unbraced.
- 4 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		6-0-0	Far Face	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	
2	Uniform		2-0-0	Near Face	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. Joist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length= 3.5 inches
7. For flat roofs provide proper drainage to prevent ponding

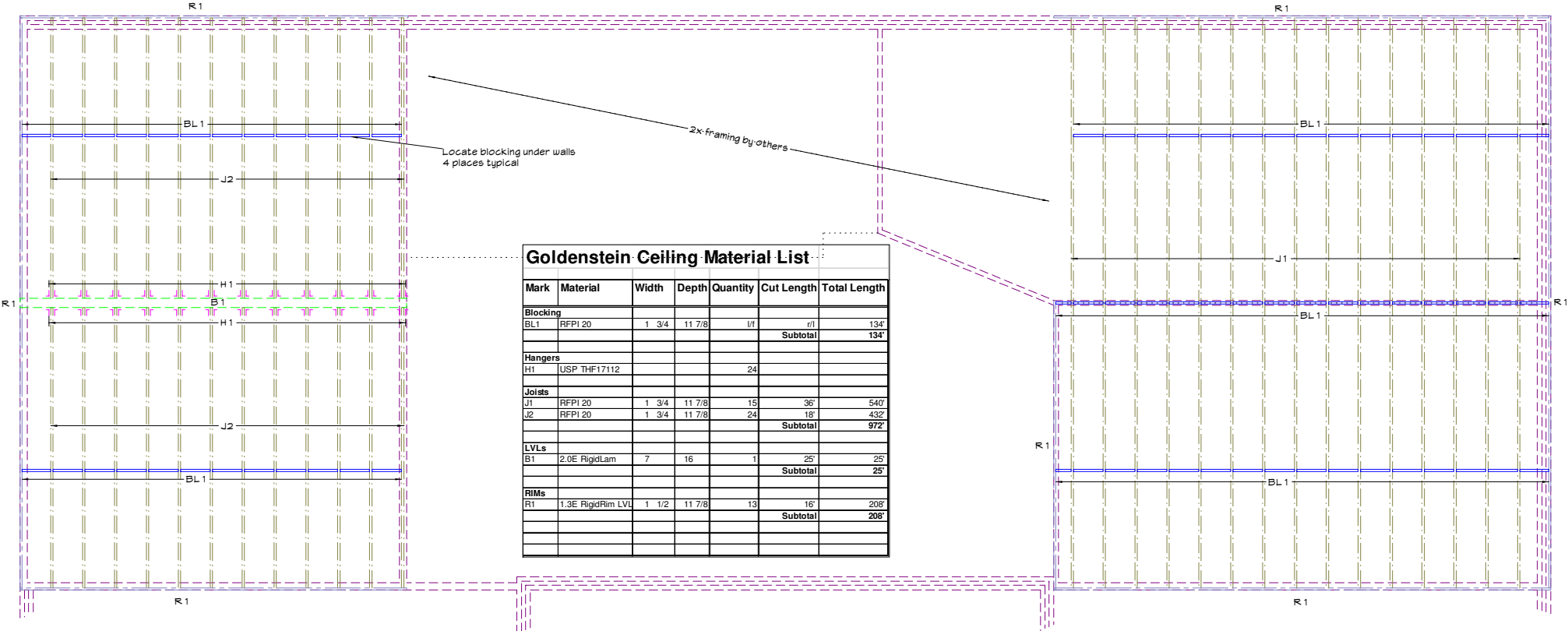
Manufacturer Info

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Ceiling joist not designed for living or storage space

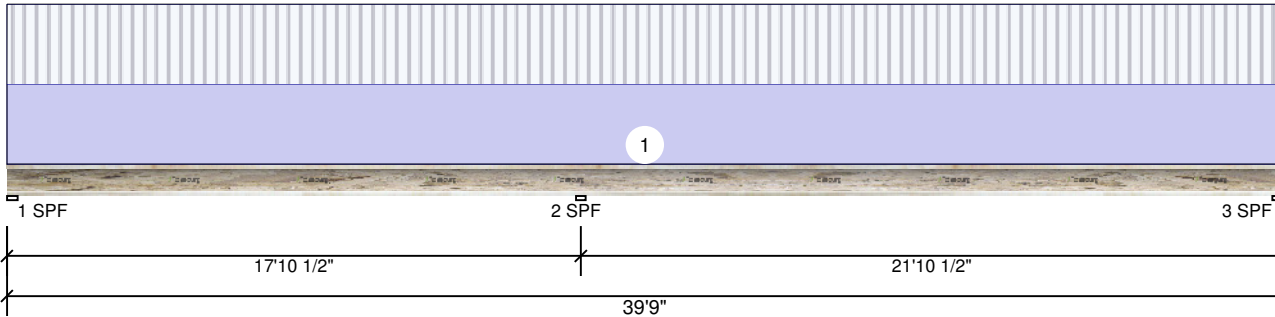


Goldenstein Ceiling Material List

Mark	Material	Width	Depth	Quantity	Cut Length	Total Length
Blocking						
BL1	RFP120	1 3/4	11 7/8	1/1	r/l	134'
					Subtotal	134'
Hangers						
H1	USP THF17112			24		
Joists						
J1	RFP120	1 3/4	11 7/8	15	36'	540'
J2	RFP120	1 3/4	11 7/8	24	18'	432'
					Subtotal	972'
LVLs						
B1	2.0E RigidLam	7	16	1	25'	25'
					Subtotal	25'
RIMs						
R1	1.3E RigidRim LVL	1 1/2	11 7/8	13	16'	208'
					Subtotal	208'

J1 RFPI 20 11.875" - PASSED

Level: Ceiling



Member Information

Type:	Joist
Spacing:	24" o.c.
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
Temperature:	Temp <= 100°F
General Load	
Floor Live:	40 PSF
Dead:	15 PSF
Snow:	20 PSF
Construction:	20 PSF

Application:	Roof
Slope:	0/12
Design Method:	ASD
Building Code:	IBC/IRC 2015
Load Sharing:	No
Deck:	Not Checked
Ceiling:	Gypsum 5/8"

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	126	126	0	0	0
2	492	492	0	0	0
3	176	176	0	0	0

Bearings

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.000"	20%	126 / 162	288	L_	D+L
2 - SPF	3.500"	51%	492 / 492	984	LL	D+L
3 - SPF	4.000"	26%	176 / 192	369	_L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-1943 ft-lb	17'10 1/2"	3640 ft-lb	0.534 (53%)	D+L	LL
Pos Moment	1602 ft-lb	30'6 3/8"	3640 ft-lb	0.440 (44%)	D+L	_L
Unbraced	1602 ft-lb	30'6 3/8"	1621 ft-lb	0.988 (99%)	D+L	_L
Shear	522 lb	17'10 1/2"	1420 lb	0.368 (37%)	D+L	LL
LL Defl inch	0.253 (L/1023)	29'3 9/16"	0.720 (L/360)	0.350 (35%)	L	_L
TL Defl inch	0.448 (L/579)	29'6 1/2"	1.080 (L/240)	0.410 (41%)	D+L	_L

Design Notes

- 1 Top flange must be laterally braced at a maximum of 3'10" o.c.

ID	Load Type	Location	Trib Width	Dead	Live	Snow	Wind	Const.	Comments
1	Uniform		2-0-0	10 PSF	10 PSF	0 PSF	0 PSF	0 PSF	

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. Joist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length= 3.5 inches
7. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

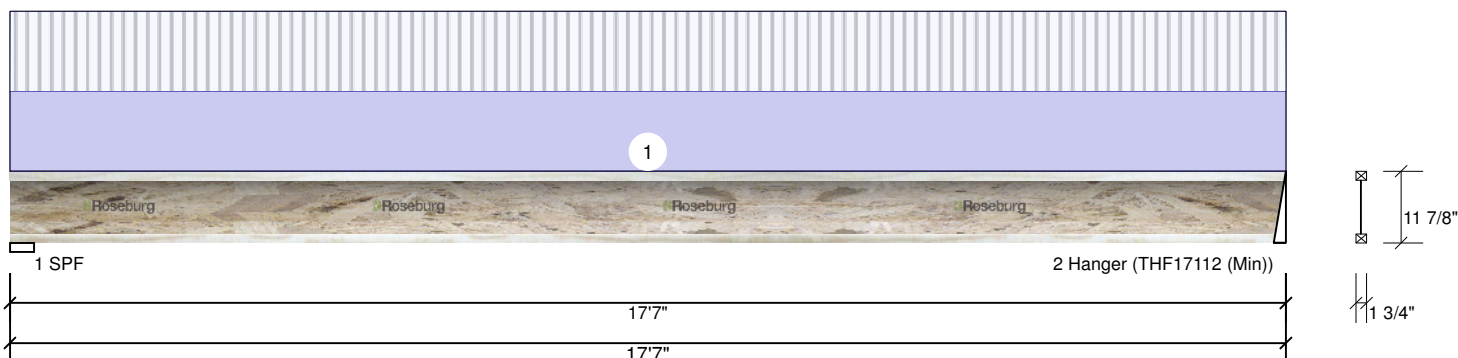
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Capital
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85043
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J2 RFPI 20 11.875" - PASSED

Level: Ceiling



Member Information

Type:	Joist	Application:	Floor
Spacing:	24" o.c.	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Ceiling:	Gypsum 5/8"
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		
Snow:	20 PSF		
Construction:	20 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	178	178	0	0	0
2	174	174	0	0	0

Bearings

Bearing	Length	Cap. React	D/L lb	Total Ld.	Case	Ld. Comb.
1 - SPF	4.000"	25%	178 / 178	355	L	D+L
2 - Hanger	2.000"	35%	174 / 174	348	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1481 ft-lb	8'10 1/2"	3640 ft-lb	0.407 (41%)	D+L	L
Unbraced	1481 ft-lb	8'10 1/2"	1488 ft-lb	0.995 (100%)	D+L	L
Shear	344 lb	3 1/4"	1420 lb	0.242 (24%)	D+L	L
LL Defl inch	0.151 (L/1368)	8'10 9/16"	0.574 (L/360)	0.260 (26%)	L	L
TL Defl inch	0.302 (L/684)	8'10 9/16"	0.860 (L/240)	0.350 (35%)	D+L	L

Design Notes

- 1 Fill all hanger nailing holes.
- 2 Top flange must be laterally braced at a maximum of 4' o.c.

ID	Load Type	Location	Trib Width	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		2-0-0	10 PSF	10 PSF	0 PSF	0 PSF	0 PSF	

Notes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber
1. Dry service conditions, unless noted otherwise
2. Joist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length= 3.5 inches
7. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

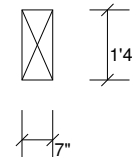
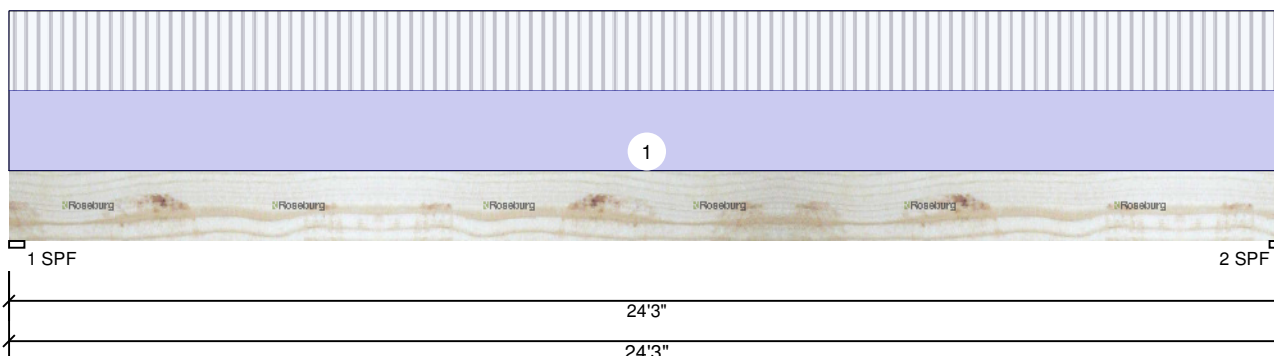
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B1 2.0E Rigidlam LVL 7.000" X 16.000" - PASSED

Level: Ceiling



Member Information

Type:	Girder	Application:	Floor
Plies:	1	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		
Snow:	20 PSF		
Construction:	20 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	2110	2468	0	0	0
2	2110	2468	0	0	0

Bearings

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	44%	2468 / 2110	4578	L	D+L
2 - SPF	3.500"	44%	2468 / 2110	4578	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	26714 ft-lb	12'1 1/2"	74430 ft-lb	0.359 (36%)	D+L	L
Unbraced	26714 ft-lb	12'1 1/2"	72108 ft-lb	0.370 (37%)	D+L	L
Shear	3988 lb	1'6 3/4"	21653 lb	0.184 (18%)	D+L	L
LL Defl inch	0.262 (L/1088)	12'1 9/16"	0.793 (L/360)	0.330 (33%)	L	L
TL Defl inch	0.570 (L/501)	12'1 9/16"	1.190 (L/240)	0.480 (48%)	D+L	L

Design Notes

- Girders are designed to be supported on the bottom edge only.
- Top braced at bearings.
- Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	174 PLF	174 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				30 PLF					

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

- Dry service conditions, unless noted otherwise
- LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

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APA: PR-L289, PR-L270, ICC-ES:
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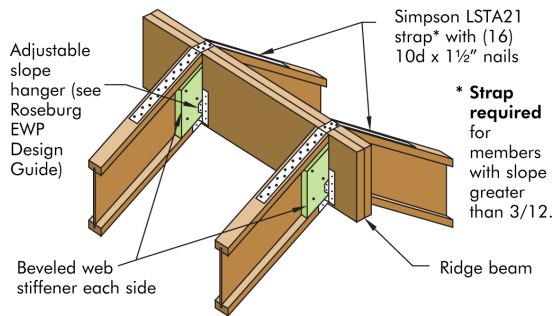
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Goldenstein Roof Material List

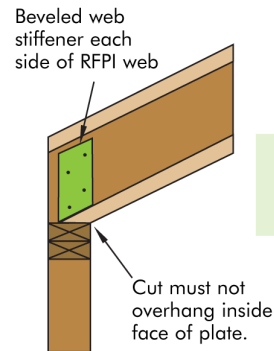
Mark	Material	Width	Depth	Quantity	Cut Length	Total Length
Blocking						
BL1	RFPI 20	1 3/4	9 1/2	l/f	r/l	8'
					Subtotal	8'
BL2	RFPI 400	2 1/16	16	l/f	r/l	200'
					Subtotal	200'
Hangers						
H1	USP HDQ412IF_SK24R_SL34D*			1		
H2	USP HDQ412IF_SK24L_SL34D*			1		
H3	USP LSSH20			100		
H4	USP THF17925_SK66R_SL34U*			5		
H5	USP THF17925_SK66L_SL34U*			5		
H6	USP LSSH179			14		
Joists						
J1	RFPI 20	1 3/4	9 1/2	6	21'	126'
J2	RFPI 20	1 3/4	9 1/2	2	17'	34'
J3	RFPI 20	1 3/4	9 1/2	2	13'	26'
J4	RFPI 20	1 3/4	9 1/2	2	10'	20'
J5	RFPI 20	1 3/4	9 1/2	2	6'	12'
					Subtotal	218'
J6	RFPI 400	2 1/16	16	30	25'	750'
J7	RFPI 400	2 1/16	16	30	23'	690'
J8	RFPI 400	2 1/16	16	2	21'	42'
J9	RFPI 400	2 1/16	16	8	20'	160'
J10	RFPI 400	2 1/16	16	8	18'	144'
J11	RFPI 400	2 1/16	16	4	16'	64'
J12	RFPI 400	2 1/16	16	4	15'	60'
J13	RFPI 400	2 1/16	16	8	13'	104'
J14	RFPI 400	2 1/16	16	8	11'	88'
J15	RFPI 400	2 1/16	16	8	8'	64'
J16	RFPI 400	2 1/16	16	8	6'	48'
J17	RFPI 400	2 1/16	16	4	4'	16'
J18	RFPI 400	2 1/16	16	4	3'	12'
					Subtotal	2242'
Beams						
B1	2.0E RigidLam	3 1/2	11 7/8	2	23'	46'
					Subtotal	46'
B2	2.0E RigidLam	3 1/2	16	1	30'	30'
B3	2.0E RigidLam	3 1/2	16	1	18'	18'
					Subtotal	48'
B4	2.0E RigidLam	5 1/4	16	4	30'	120'
					Subtotal	120'
B5	24F V4 GLB	5 1/8	24	1	31'	31'
B6	24F V4 GLB	5 1/8	24	1	25'	25'
					Subtotal	56'
B7	24F V4 GLB	6 3/4	24	1	31'	31'
B8	24F V4 GLB	6 3/4	24	1	12'	12'
					Subtotal	43'

2a RIDGE JOIST CONNECTION – 12/12 MAXIMUM SLOPE



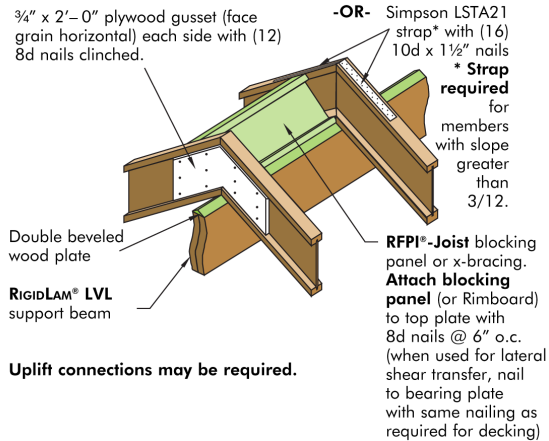
Uplift connections may be required.

2d sim. BIRDSMOUTH CUT, NO OVERHANG - LOW END OF RFPI®-JOIST ONLY



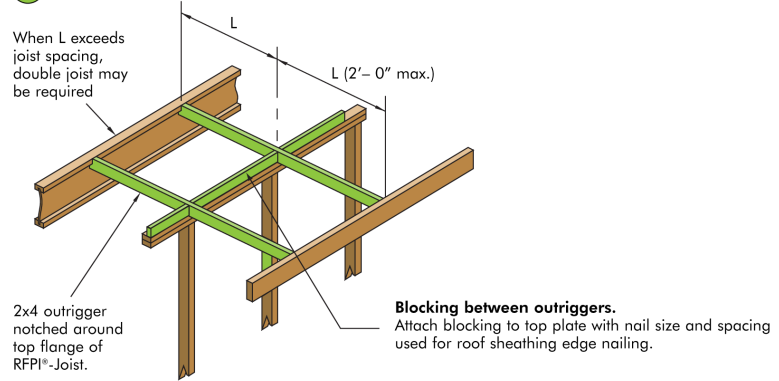
Note:
Blocking panel not shown for clarity

2c RFPI®-JOISTS ABOVE RIDGE SUPPORT BEAM



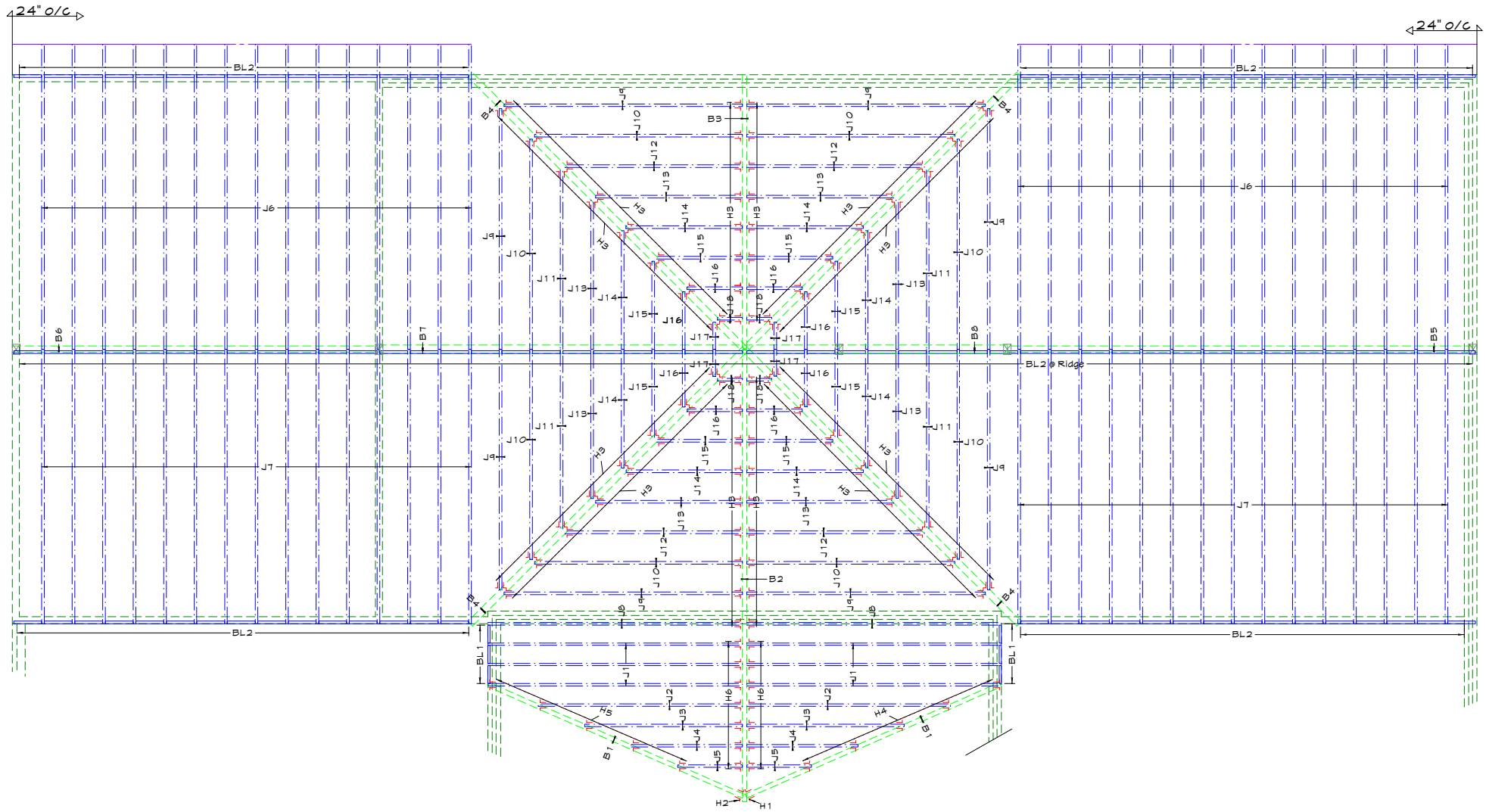
Uplift connections may be required.

2m OVERHANG PARALLEL TO RFPI®-JOIST



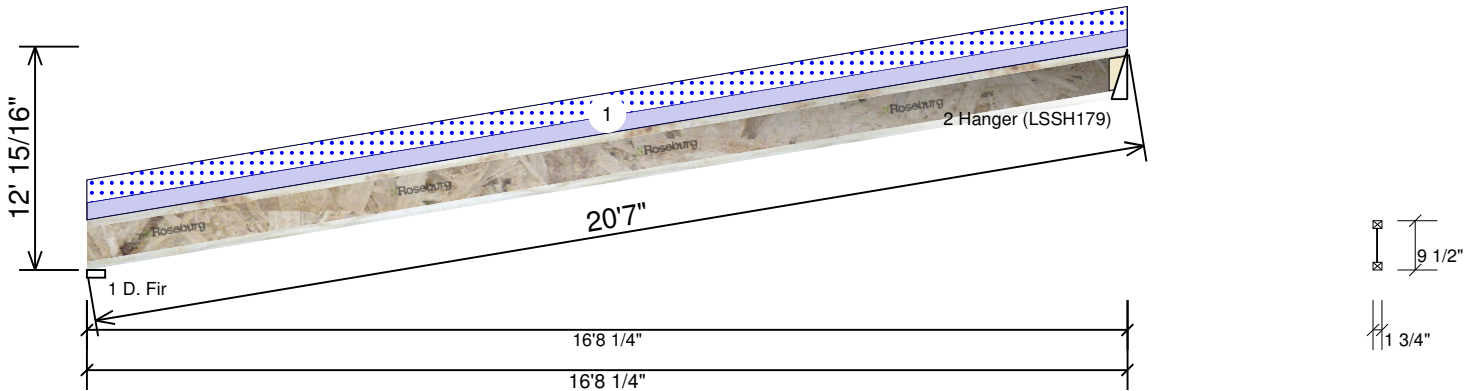
Uplift connections may be required.

RFPI Joist Placement Plan



J1 RFPI 20 9.500" - PASSED

Level: Roof



Member Information

Type:	Joist	Application:	Roof
Spacing:	16" o.c.	Slope:	8/12
Moisture Condition:	Dry	Design Method:	ASD
Deflection LL:	360	Building Code:	IBC/IRC 2015
Deflection TL:	240	Load Sharing:	No
Importance:	Normal	Deck:	15/32 APA Rated Sheathing OSB Nailed and Glued
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		
Snow:	20 PSF		
Construction:	20 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	200	223	0	0
2	0	199	222	0	0

Bearings

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - D. Fir	3.500"	32% 200 / 223	423 L	D+S
2 - Hanger	3.000"	31% 199 / 222	421 L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1678 ft-lb	8'4 3/8"	3243 ft-lb	0.517 (52%)	D+S	L
Shear	343 lb	2 3/4"	1403 lb	0.245 (24%)	D+S	L
LL Defl inch	0.385 (L/609)	8'4 7/16"	0.652 (L/360)	0.590 (59%)	S	L
TL Defl inch	0.733 (L/320)	8'4 7/16"	0.978 (L/240)	0.750 (75%)	D+S	L

Design Notes

- 1 Fill all hanger nailing holes.
- 2 Use solid wedge bearings or metal variable pitch connector at each bearing.
- 3 Attach with enough nails to prevent sliding between the joist and the sloped bearing wedge at each support.
- 4 No composite deck properties were used to calculate deflection.
- 5 Bottom flange braced at bearings.
- 6 Web stiffeners required at Bearing 2.

ID	Load Type	Location	Trib Width	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-4-0	15 PSF	0 PSF	20 PSF	0 PSF	0 PSF	
	Moving Concentrated				300 lb.	Moved in	2'6"	steps	Moving load check is non-concurrent with any other live loads

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. Joist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length= 3.5 inches
7. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

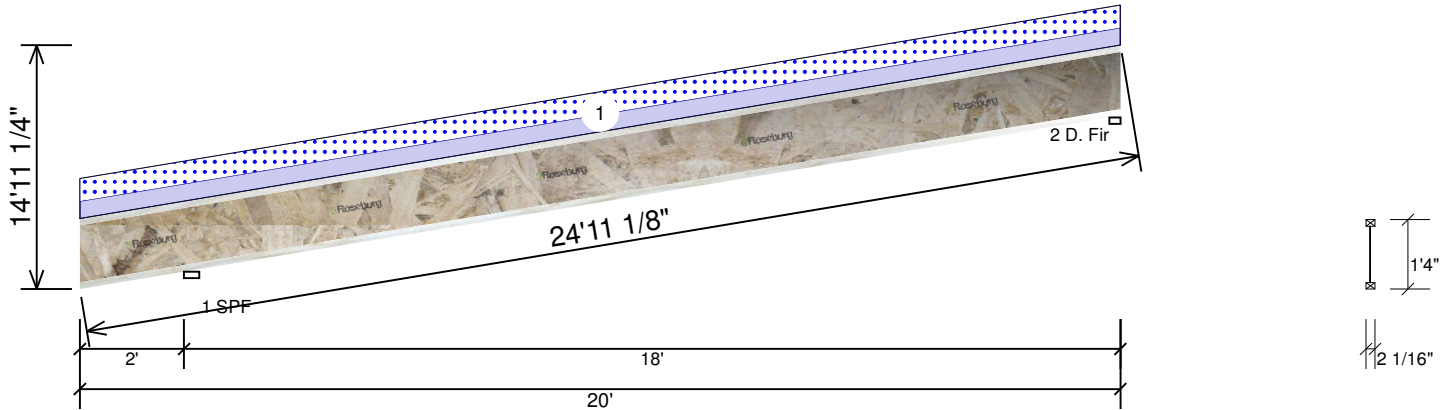
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(541) 784-4005
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APA: PR-L259, ICC-ES: ESR-1251

Capital
33 N. 45th Ave , AZ
85043
602-269-6225



J6 RFPI 400 16.000" - PASSED

Level: Roof



Member Information

Type:	Joist	Application:	Roof
Spacing:	24" o.c.	Slope:	8/12
Moisture Condition:	Dry	Design Method:	ASD
Deflection LL:	360	Building Code:	IBC/IRC 2015
Deflection TL:	240	Load Sharing:	No
Importance:	Normal	Deck:	15/32 APA Rated Sheathing OSB Nailed and Glued
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		
Snow:	20 PSF		
Construction:	20 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	399	443	0	0
2	0	321	357	0	0

Bearings

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	33%	399 / 443	842	LL	D+S
2 - D. Fir	2.563"	48%	321 / 358	679	_L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-152 ft-lb	2'	6762 ft-lb	0.022 (2%)	D+S	L_
Unbraced	-152 ft-lb	2'	6711 ft-lb	0.023 (2%)	D+S	L_
Pos Moment	2927 ft-lb	11'1"	6762 ft-lb	0.433 (43%)	D+S	_L
Shear	568 lb	2'1 3/4"	2266 lb	0.251 (25%)	D+S	LL
LL Defl inch	0.208 (L/1230)	11'1/4"	0.710 (L/360)	0.290 (29%)	S	_L
TL Defl inch	0.392 (L/652)	11'5/16"	1.064 (L/240)	0.370 (37%)	D+S	_L
LL Cant	-0.067 (2L/860)	Lt Cant	0.200 (2L/360)	0.336 (34%)	S	_L
TL Cant	-0.125 (2L/460)	Lt Cant	0.300 (2L/240)	0.418 (42%)	D+S	_L

Design Notes

- 1 Use solid wedge bearings or metal variable pitch connector at each bearing.
- 2 Attach with enough nails to prevent sliding between the joist and the sloped bearing wedge at each support.
- 3 No composite deck properties were used to calculate deflection.
- 4 Bottom flange must be laterally braced at a maximum of 8'7" o.c. along the slope.

ID	Load Type	Location	Trib Width	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		2-0-0	15 PSF	0 PSF	20 PSF	0 PSF	0 PSF	

Notes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber
1. Dry service conditions, unless noted otherwise
2. Joist not to be treated with fire retardant or corrosive chemicals

Handling & Installation
1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

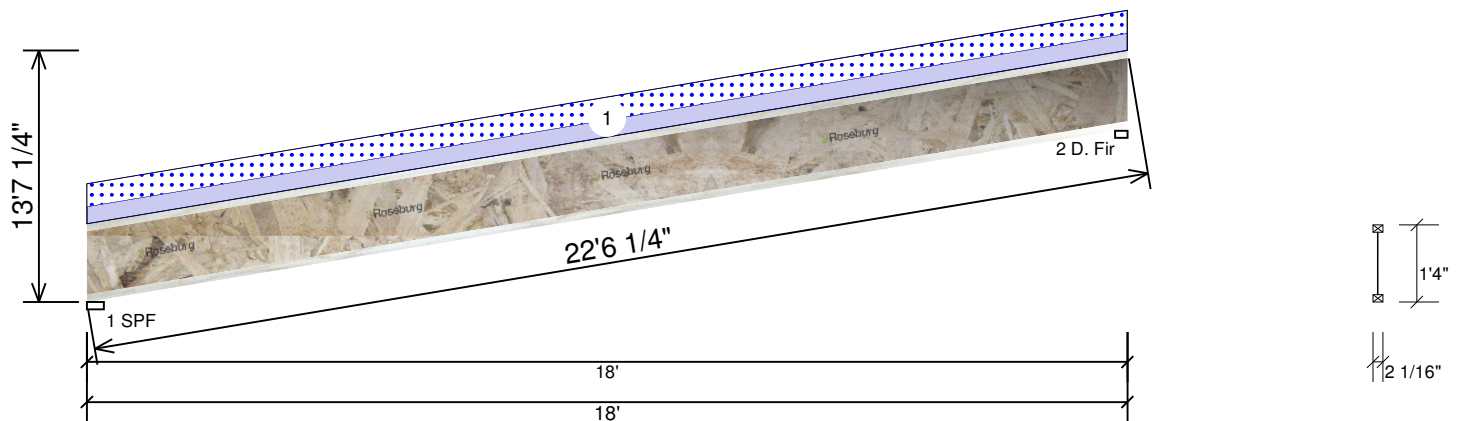
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length= 3.5 inches
7. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info
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Capital
33 N. 45th Ave , AZ
85043
602-269-6225

J7 RFPI 400 16.000" - PASSED

Level: Roof



Member Information

Type:	Joist	Application:	Roof
Spacing:	24" o.c.	Slope:	8/12
Moisture Condition:	Dry	Design Method:	ASD
Deflection LL:	360	Building Code:	IBC/IRC 2015
Deflection TL:	240	Load Sharing:	No
Importance:	Normal	Deck:	15/32 APA Rated Sheathing OSB Nailed and Glued
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		
Snow:	20 PSF		
Construction:	20 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	325	362	0	0
2	0	322	358	0	0

Bearings

Bearing	Length	Cap. React	D/L lb	Total Ld.	Case	Ld. Comb.
1 - SPF	3.500"	41%	325 / 362	686	L	D+S
2 - D. Fir	2.563"	48%	322 / 358	681	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2958 ft-lb	9' 1/2"	6762 ft-lb	0.438 (44%)	D+S	L
Shear	558 lb	21'5 1/16"	2266 lb	0.246 (25%)	D+S	L
LL Defl inch	0.207 (L/1227)	9' 1/2"	0.707 (L/360)	0.290 (29%)	S	L
TL Defl inch	0.394 (L/646)	9' 1/2"	1.060 (L/240)	0.370 (37%)	D+S	L

Design Notes

- 1 Use solid wedge bearings or metal variable pitch connector at each bearing.
- 2 Attach with enough nails to prevent sliding between the joist and the sloped bearing wedge at each support.
- 3 No composite deck properties were used to calculate deflection.
- 4 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		2-0-0	15 PSF	0 PSF	20 PSF	0 PSF	0 PSF	

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. Joist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length= 3.5 inches
7. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

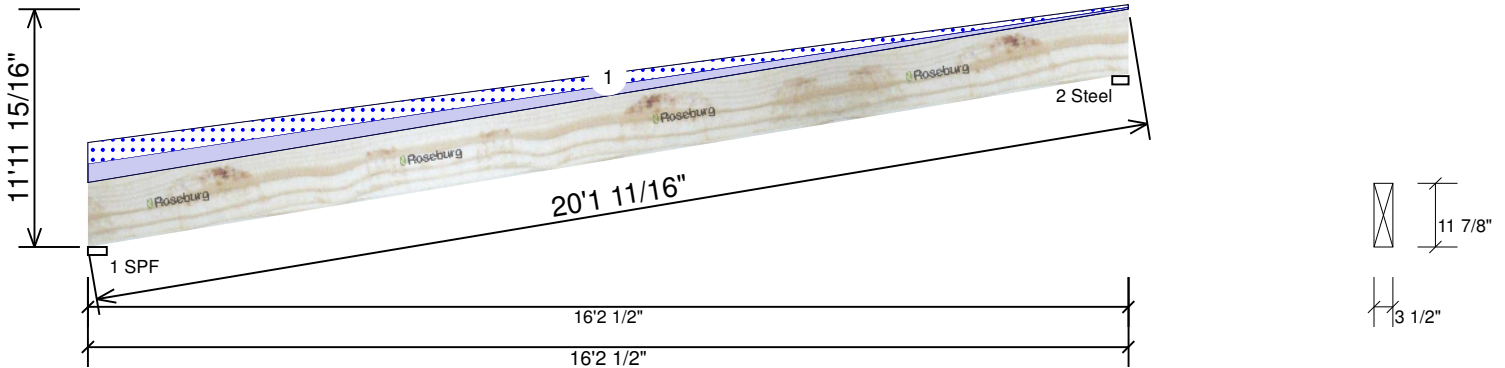
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Capital
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B1 2.0E Rigidlam LVL 3.500" X 11.875" - PASSED

Level: Roof



Member Information

Type:	Girder	Application:	Roof
Plies:	1	Slope:	8/12
Moisture Condition:	Dry	Design Method:	ASD
Deflection LL:	360	Building Code:	IBC/IRC 2015
Deflection TL:	240	Load Sharing:	No
Importance:	Normal	Deck:	Not Checked
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		
Snow:	20 PSF		
Construction:	20 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	1124	980	0	0
2	0	679	560	0	0

Bearings

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	3.500"	40%	1124 / 980	2103 L D+S
2 - Steel	3.000"	16%	679 / 560	1239 L D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6525 ft-lb	7'2 3/8"	24470 ft-lb	0.267 (27%)	D+S	L
Unbraced	6525 ft-lb	7'2 3/8"	20476 ft-lb	0.319 (32%)	D+S	L
Shear	1494 lb	1'2 5/8"	9241 lb	0.162 (16%)	D+S	L
LL Defl inch	0.196 (L/1160)	7'10 5/8"	0.633 (L/360)	0.310 (31%)	S	L
TL Defl inch	0.427 (L/533)	7'10 13/16"	0.949 (L/240)	0.450 (45%)	D+S	L

Design Notes

- 1 Refer to manufacturer's literature for sloped bearing detail.
- 2 Attach with enough nails to prevent sliding between the joist and the sloped bearing wedge at each support.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top braced at bearings.
- 5 Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Tapered Start	0-0-0		Far Face	149 PLF	0 PLF	170 PLF	0 PLF	0 PLF	
	End	16-2-8			15 PLF	0 PLF	20 PLF	0 PLF	0 PLF	
	Self Weight				11 PLF					

Notes

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Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

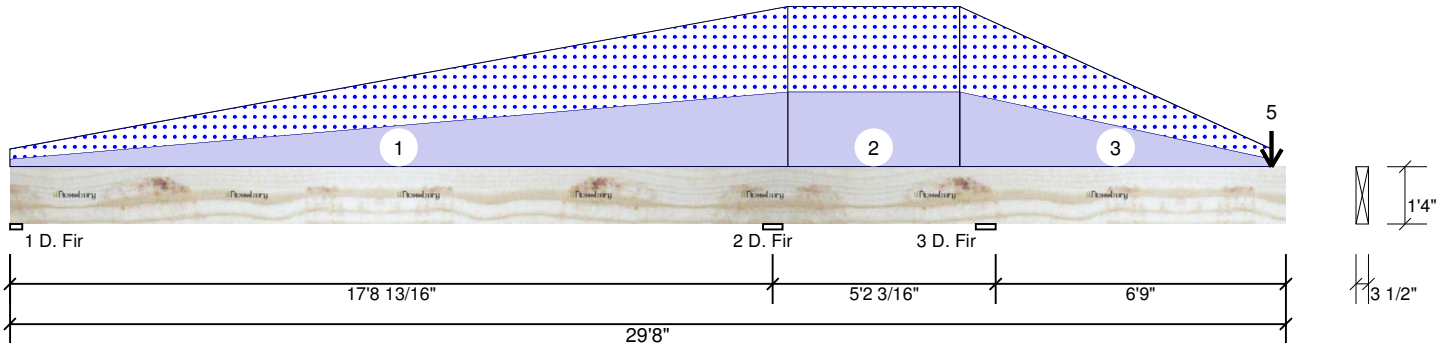
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B2 2.0E Rigidlam LVL 3.500" X 16.000" - PASSED

Level: Roof



Member Information

Type:	Girder
Plies:	1
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
Temperature:	Temp <= 100°F
General Load	
Floor Live:	40 PSF
Dead:	15 PSF
Snow:	20 PSF
Construction:	20 PSF

Application:	Roof
Slope:	0/12
Design Method:	ASD
Building Code:	IBC/IRC 2015
Load Sharing:	No
Deck:	Not Checked

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	930	950	0	0
2	0	1585	2235	0	0
3	0	4628	4109	0	0

Bearings

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - D. Fir	3.375"	26%	930 / 956	1886	L_L	D+S
2 - D. Fir	5.500"	41%	1585 / 3376	4961	LL_	D+S
3 - D. Fir	5.500"	78%	4628 / 4708	9336	_LL	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-21283 ft-lb	22'11"	42797 ft-lb	0.497 (50%)	D+S	LLL
Unbraced	-21283 ft-lb	22'11"	40275 ft-lb	0.528 (53%)	D+S	_LL
Pos Moment	9345 ft-lb	8'7 1/16"	42797 ft-lb	0.218 (22%)	D+S	L_L
Unbraced	9345 ft-lb	8'7 1/16"	31192 ft-lb	0.300 (30%)	D+S	L_L
Shear	3926 lb	24'3"	12451 lb	0.315 (32%)	D+S	LLL
LL Defl inch	0.099 (L/2126)	8'7 7/16"	0.584 (L/360)	0.170 (17%)	S	L_L
TL Defl inch	0.194 (L/1084)	8'7 7/16"	0.876 (L/240)	0.220 (22%)	D+S	L_L
LL Cant	0.192 (2L/845)	Rt Cant	0.450 (2L/360)	0.430 (43%)	S	L_L
TL Cant	0.407 (2L/398)	Rt Cant	0.675 (2L/240)	0.600 (60%)	D+S	L_L

Design Notes

- Warning Note: right cant exceeds 1/3 of back span, wind uplift may need to be checked.
- Girders are designed to be supported on the bottom edge only.
- Top braced at bearings.
- Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Tapered Start	0-0-0		Top	30 PLF	0 PLF	40 PLF	0 PLF	0 PLF	
	End	18-1-0			298 PLF	0 PLF	340 PLF	0 PLF	0 PLF	
2	Part. Uniform	18-1-0 to 22-1-0		Top	298 PLF	0 PLF	340 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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Lumber

- Dry service conditions, unless noted otherwise
- LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

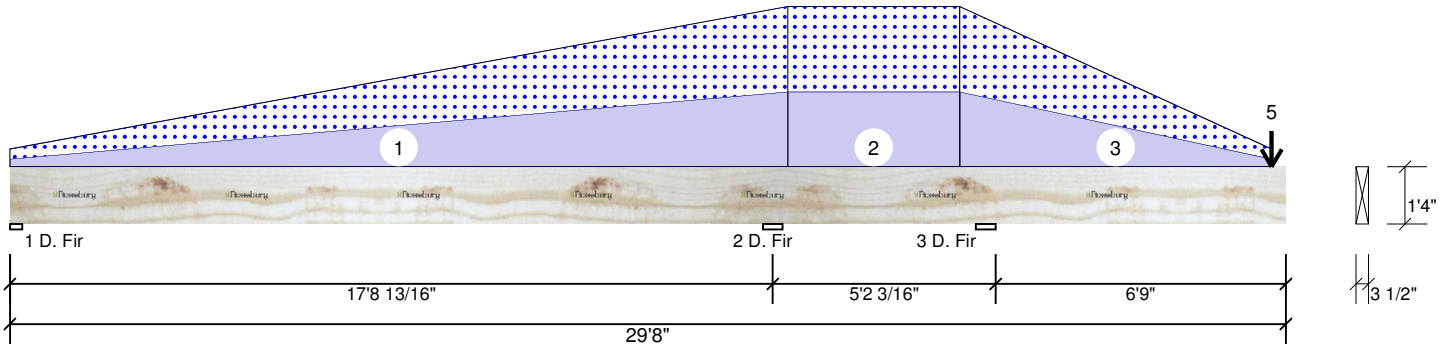
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B2 2.0E Rigidlam LVL 3.500" X 16.000" - PASSED

Level: Roof



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
3	Tapered Start	22-1-0		Top	298 PLF	0 PLF	340 PLF	0 PLF	0 PLF	
	End	29-4-0			30 PLF	0 PLF	40 PLF	0 PLF	0 PLF	
4	Point	29-4-0		Near Face	679 lb	0 lb	560 lb	0 lb	0 lb	
5	Point	29-4-0		Far Face	679 lb	0 lb	560 lb	0 lb	0 lb	
	Self Weight				15 PLF					

Notes

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Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

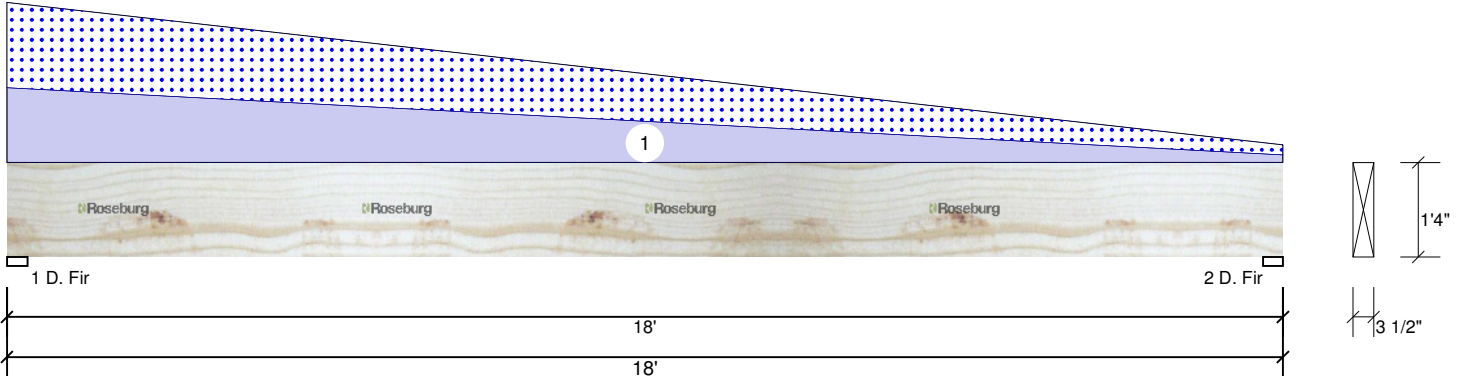
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B3 2.0E Rigidlam LVL 3.500" X 16.000" - PASSED

Level: Roof



Member Information

Type:	Girder	Application:	Roof
Plies:	1	Slope:	0/12
Moisture Condition:	Dry	Design Method:	ASD
Deflection LL:	360	Building Code:	IBC/IRC 2015
Deflection TL:	240	Load Sharing:	No
Importance:	Normal	Deck:	Not Checked
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		
Snow:	20 PSF		
Construction:	20 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	2022	2172	0	0
2	0	1196	1248	0	0

Bearings

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - D. Fir 3.500"		55% 2022 / 2172	4194 L	D+S
2 - D. Fir 3.375"		33% 1196 / 1248	2444 L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	14411 ft-lb	7'11 7/16"	42797 ft-lb	0.337 (34%)	D+S	L
Unbraced	14411 ft-lb	7'11 7/16"	28170 ft-lb	0.512 (51%)	D+S	L
Shear	3212 lb	1'6 3/4"	12451 lb	0.258 (26%)	D+S	L
LL Defl inch	0.170 (L/1240)	8'8 7/8"	0.585 (L/360)	0.290 (29%)	S	L
TL Defl inch	0.330 (L/639)	8'9"	0.878 (L/240)	0.380 (38%)	D+S	L

Design Notes

- Girders are designed to be supported on the bottom edge only.
- Top braced at bearings.
- Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Tapered Start	0-0-0		Top	298 PLF	0 PLF	340 PLF	0 PLF	0 PLF	
	End	18-0-0			30 PLF	0 PLF	40 PLF	0 PLF	0 PLF	
	Self Weight				15 PLF					

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

- Dry service conditions, unless noted otherwise
- LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

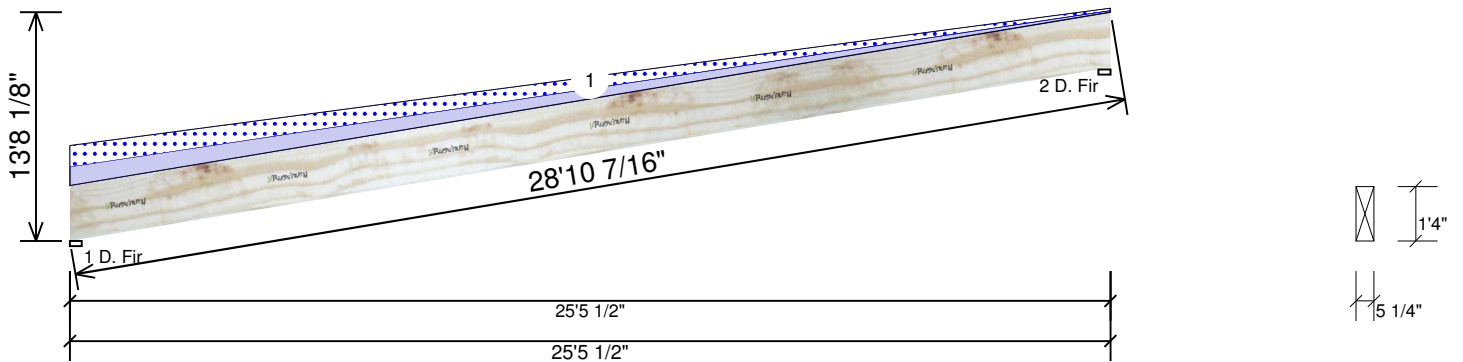
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B4 2.0E Rigidlam LVL 5.250" X 16.000" - PASSED

Level: Roof



Member Information

Type:	Girder	Application:	Roof
Plies:	1	Slope:	5.75/12
Moisture Condition:	Dry	Design Method:	ASD
Deflection LL:	360	Building Code:	IBC/IRC 2015
Deflection TL:	240	Load Sharing:	No
Importance:	Normal	Deck:	Not Checked
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		
Snow:	20 PSF		
Construction:	20 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	3488	3237	0	0
2	0	2097	1855	0	0

Bearings

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - D. Fir	3.500"	59% 3488 / 3237	6725 L	D+S
2 - D. Fir	3.500"	34% 2097 / 1855	3951 L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	33294 ft-lb	11'2 3/4"	64196 ft-lb	0.519 (52%)	D+S	L
Unbraced	33294 ft-lb	11'2 3/4"	55682 ft-lb	0.598 (60%)	D+S	L
Shear	5138 lb	1'6 3/4"	18676 lb	0.275 (28%)	D+S	L
LL Defl inch	0.604 (L/551)	12'4 1/4"	0.924 (L/360)	0.650 (65%)	S	L
TL Defl inch	1.267 (L/263)	12'4 3/8"	1.386 (L/240)	0.910 (91%)	D+S	L

Design Notes

- 1 Refer to manufacturer's literature for sloped bearing detail.
- 2 Attach with enough nails to prevent sliding between the joist and the sloped bearing wedge at each support.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top braced at bearings.
- 5 Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Tapered Start	0-0-0		Top	322 PLF	0 PLF	360 PLF	0 PLF	0 PLF	
	End	25-5-8			30 PLF	0 PLF	40 PLF	0 PLF	0 PLF	
	Self Weight				22 PLF					

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

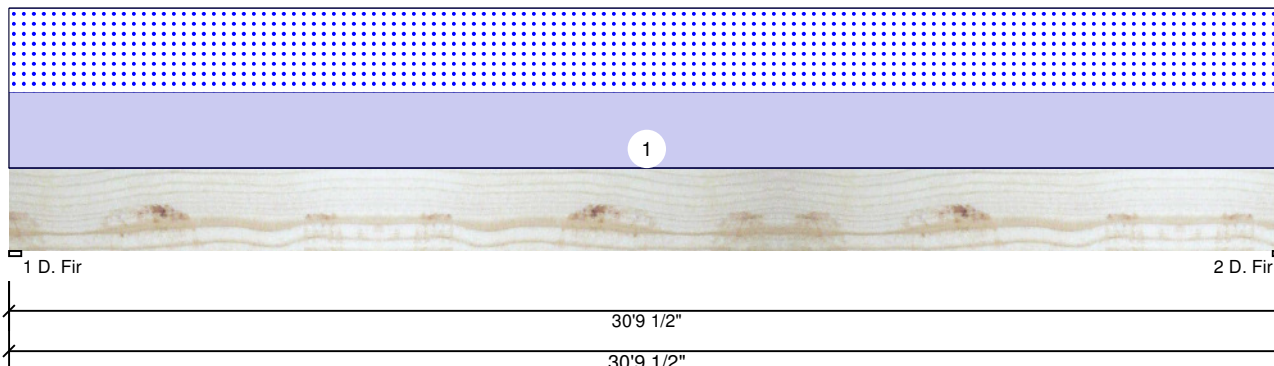
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Capital
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85043
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B5 24F V4-1.8E DF 5.125" X 24.000" - PASSED

Level: Roof



Member Information

Type:	Girder	Application:	Roof
Moisture Condition:	Dry	Slope:	0/12
Deflection LL:	360	Design Method:	ASD
Deflection TL:	240	Building Code:	IBC/IRC 2015
Importance:	Normal	Load Sharing:	No
Temperature:	Temp <= 100°F	Wet Use:	No
General Load		Deck:	Not Checked
Floor Live:	40 PSF		
Dead:	15 PSF		
Snow:	20 PSF		
Construction:	20 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	5431	5512	0	0
2	0	5431	5512	0	0

Bearings

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - D. Fir	3.500"	98% 5431 / 5512	10943 L	D+S
2 - D. Fir	3.500"	98% 5431 / 5512	10943 L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	81858 ft-lb	15'4 3/4"	101763 ft-lb	0.804 (80%)	D+S	L
Unbraced	81858 ft-lb	15'4 3/4"	84483 ft-lb	0.969 (97%)	D+S	L
Shear	9366 lb	2'2 5/8"	24990 lb	0.375 (37%)	D+S	L
LL Defl inch	0.643 (L/566)	15'4 13/16"	1.012 (L/360)	0.640 (64%)	S	L
TL Defl inch	1.277 (L/285)	15'4 13/16"	1.518 (L/240)	0.840 (84%)	D+S	L

Design Notes

- Girders are designed to be supported on the bottom edge only.
- Top braced at bearings.
- Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	322 PLF	0 PLF	358 PLF	0 PLF	0 PLF	
	Self Weight				31 PLF					

Manufacturer Info

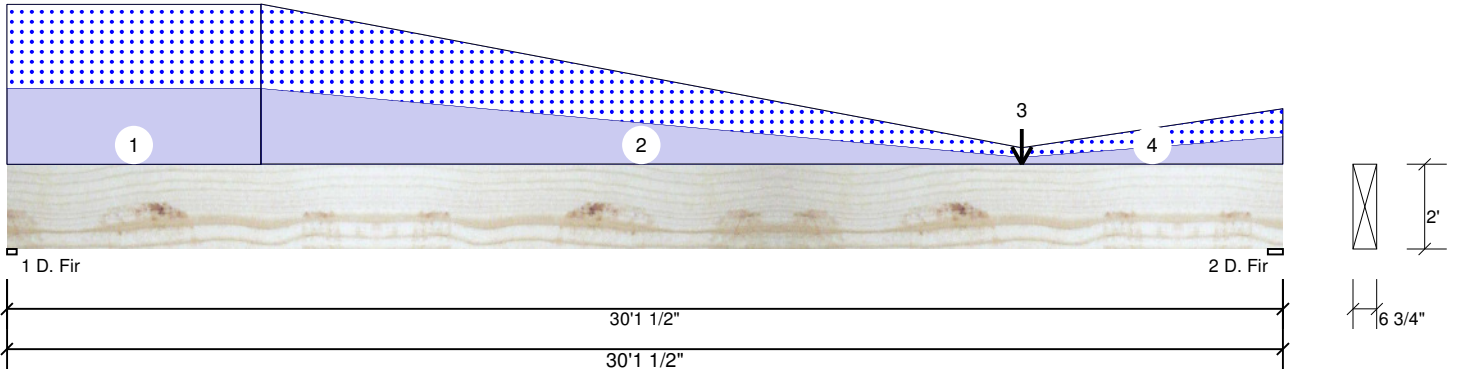
Common

Capital
33 N. 45th Ave , AZ
85043
602-269-6225



B7 24F V4-1.8E DF 6.750" X 24.000" - PASSED

Level: Roof



Member Information

Type:	Girder	Application:	Floor
Moisture Condition:	Dry	Design Method:	ASD
Deflection LL:	480	Building Code:	IBC/IRC 2015
Deflection TL:	240	Load Sharing:	No
Importance:	Normal	Wet Use:	No
Temperature:	Temp <= 100°F	Deck:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		
Snow:	20 PSF		
Construction:	20 PSF		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	5930	5596	0	0
2	0	9272	8219	0	0

Bearings

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - D. Fir	2.750"	99%	5930 / 5596	11526	L	D+S
2 - D. Fir	4.250"	98%	9272 / 8219	17491	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	99197 ft-lb	21'6 3/4"	130678 ft-lb	0.759 (76%)	D+S	L
Unbraced	99197 ft-lb	21'6 3/4"	130678 ft-lb	0.759 (76%)	D+S	L
Shear	16927 lb	27'10 1/8"	32913 lb	0.514 (51%)	D+S	L
LL Defl inch	0.541 (L/659)	15'8 7/16"	0.742 (L/480)	0.730 (73%)	S	L
TL Defl inch	1.136 (L/314)	15'8 13/16"	1.484 (L/240)	0.770 (77%)	D+S	L

Design Notes

- Girders are designed to be supported on the bottom edge only.
- Top braced at bearings.
- Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Part. Uniform	0-0-0 to 6-0-0		Top	325 PLF	0 PLF	362 PLF	0 PLF	0 PLF	
2	Tapered Start	6-0-0		Top	325 PLF	0 PLF	362 PLF	0 PLF	0 PLF	
	End	23-11-8			30 PLF	0 PLF	40 PLF	0 PLF	0 PLF	
3	Point	23-11-8		Top	8388 lb	0 lb	7540 lb	0 lb	0 lb	
4	Tapered Start	23-11-8		Top	30 PLF	0 PLF	40 PLF	0 PLF	0 PLF	
	End	30-1-8			118 PLF	0 PLF	120 PLF	0 PLF	0 PLF	
	Self Weight				41 PLF					

Manufacturer Info	Capital 33 N. 45th Ave , AZ 85043 602-269-6225
Common	