

Project: Address:

Weaver Homes

12/2/2021

Marshall Naylor

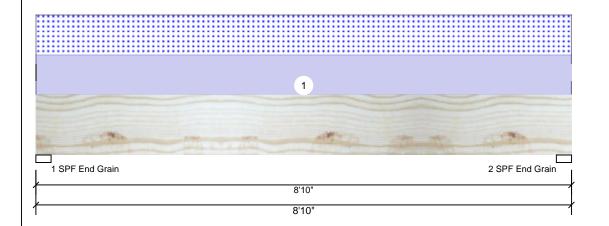
Job Name: Gaston II (181035B) Project #:

Date:

Input by:

Kerto-S LVL 1.750" X 11.875" GDH-2 2-Ply - PASSED

Level: Level



Floor

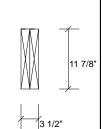
ASD

No

IBC 2012

Not Checked

Gaston II (181035B)



Page 1 of 1

Member Inform	nation
Type:	Girder
Plies:	2
Madatona Osmalitiana	D

Moisture Condition: Dry Deflection LL: 480 Deflection TL: 360

Importance: Normal - II Temperature: Temp <= 100°F

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1145	1104	0	0
2	Vertical	0	1145	1104	0	0

Bearings

Grain

Bearing Length Dir. Cap. React D/L lb Total Ld. Case Ld. Comb. 1 - SPF 3.000" 1145 / 1104 D+S Vert 2249 L End Grain 2 - SPF 3.000" 1145 / 1104 2249 L D+S Vert End

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4554 ft-lb	4'5"	22897 ft-lb	0.199 (20%)	D+S	L
Unbraced	4554 ft-lb	4'5"	10675 ft-lb	0.427 (43%)	D+S	L
Shear	1627 lb	1'2 7/8"	10197 lb	0.160 (16%)	D+S	L
LL Defl inch	0.036 (L/2845)	4'5 1/16"	0.211 (L/480)	0.169 (17%)	S	L
TL Defl inch	0.073 (L/1397)	4'5 1/16"	0.282 (L/360)	0.258 (26%)	D+S	L

Application:

Design Method:

Building Code:

Load Sharing:

Deck:

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at end bearings.
- 6 Bottom must be laterally braced at end bearings.
- 7 Lateral slenderness ratio based on single ply width.

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	250 PLF	0 PLF	250 PLF	0 PLF	0 PLF	G2

Self Weight 9 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.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- 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
- This design is valid until 11/3/2024

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us







Weaver Homes

Project:

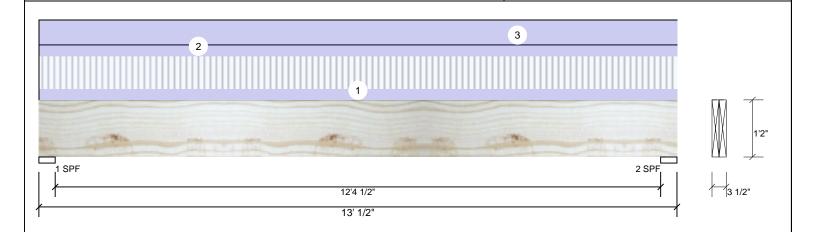
Address: Gaston II (181035B) Date: 12/2/2021

Input by: Marshall Naylor Job Name: Gaston II (181035B) Page 1 of 1

Project #:

1.750" X 14.000" 2-Ply - PASSED **Kerto-S LVL GCO**

Level: Level



Member Information **Reactions UNPATTERNED Ib (Uplift)** Type: Girder Application: Floor Brg Snow Wind Const Direction Live Dead Plies: 2 Design Method: ASD Vertical 2374 3468 0 0 0 1 Moisture Condition: Dry **Building Code:** IBC 2012 2374 3468 O O 2 Vertical 0 Deflection LL: 480 Load Sharing: No Deflection TL: 240 Deck: Not Checked Importance: Normal - II Temperature: Temp <= 100°F Bearings Bearing Length Dir. Cap. React D/L lb Total Ld. Case Ld. Comb. 1 - SPF 4.000" D+L Vert 3468 / 2374 5842 L 2 - SPF 4.000" Vert 98% 3468 / 2374 5842 L D+I

Analysis Results

_						
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	17498 ft-lb	6'6 1/4"	26999 ft-lb	0.648 (65%)	D+L	L
Unbraced	17498 ft-lb	6'6 1/4"	17512 ft-lb	0.999 (100%)	D+L	L
Shear	4511 lb	1'6"	10453 lb	0.432 (43%)	D+L	L
LL Defl inch	0.142 (L/1059)	6'6 1/4"	0.312 (L/480)	0.453 (45%)	L	L
TL Defl inch	0.349 (L/430)	6'6 1/4"	0.625 (L/240)	0.558 (56%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at a maximum of 5'7 3/8" o.c.
- 6 Bottom must be laterally braced at end bearings.
- 7 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Тор	122 PLF	364 PLF	0 PLF	0 PLF	0 PLF	F01
2	Uniform			Тор	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall
3	Uniform			Тор	274 PLF	0 PLF	0 PLF	0 PLF	0 PLF	A1
	Self Weight				11 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.

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

This design is valid until 11/3/2024

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us

Manufacturer Info







Client: Weaver Homes

Project: Address:

Gaston II (181035B)

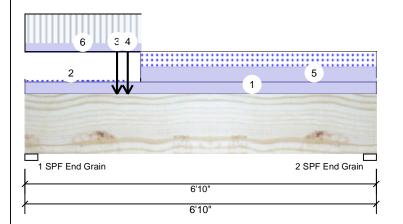
Date: 12/2/2021

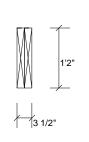
Input by: Marshall Naylor Job Name: Gaston II (181035B)

Project #:

Window Hdr. Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED

Level: Level





Page 1 of 2

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal - II

Temp <= 100°F

Member Information

Application: Floor Design Method: ASD **Building Code:** IBC 2012 Load Sharing: No Deck: Not Checked

Rea	ctions UNP	ATTERNED	lb (Uplift))		
Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	2861	3387	1990	0	0
2	Vertical	873	1906	1168	0	0

Analysis Results

Temperature:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11172 ft-lb	2'	31049 ft-lb	0.360 (36%)	D+0.75(L+S)	L
Unbraced	11172 ft-lb	2'	15767 ft-lb	0.709 (71%)	D+0.75(L+S)	L
Shear	6407 lb	1'5"	12021 lb	0.533 (53%)	D+0.75(L+S)	L
LL Defl inch	0.033 (L/2343)	2'7 5/8"	0.161 (L/480)	0.205 (20%)	0.75(L+S)	L
TL Defl inch	0.067 (L/1165)	2'8 7/8"	0.215 (L/360)	0.309 (31%)	D+0.75(L+S)	L

Bearings

Grain

Bearing	Length	Dir.	Cap. I	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	80%	3387 / 3638	7025	L	D+0.75(L+S)
2 - SPF End	3.000"	Vert	39%	1906 / 1531	3437	L	D+0.75(L+S)

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at end bearings.
- 6 Bottom must be laterally braced at end bearings.
- 7 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments	
1	Uniform			Тор	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL	
2	Tie-In	0-0-0 to 2-0-0	1-0-0	Тор	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	2' ROOF	
3	Point	1-9-8		Тор	1040 lb	3115 lb	0 lb	0 lb	0 lb	F08	
	Bearing Length	0-3-8									
4	Point	2-0-0		Тор	2385 lb	0 lb	2385 lb	0 lb	0 lb	C3	
	Bearing Length	0-3-8									

Continued on page 2...

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.

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

 1. IVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastering 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

This design is valid until 11/3/2024

Manufacturer Info Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us







Weaver Homes

Project:

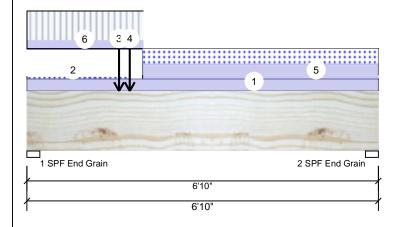
Address: Gaston II (181035B) Date: 12/2/2021

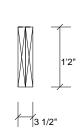
Input by: Marshall Naylor Job Name: Gaston II (181035B)

Project #:

Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED Window Hdr.

Level: Level





Page 2 of 2

Continued	from	2000	4
Continued	HOIII	page	- 1

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments	
5	Part. Uniform	2-3-0 to 6-10-0		Тор	160 PLF	0 PLF	160 PLF	0 PLF	0 PLF	C2	
6	Part. Uniform	2-3-0 to 0-0-0		Тор	97 PLF	300 PLF	0 PLF	0 PLF	0 PLF	F07	
	Self Weight				11 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.

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

Handling & Installation

- Handling & Installation

 1. IVI 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

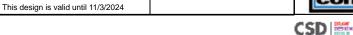
 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us

Manufacturer Info







Address:

Project:

Weaver Homes

Gaston II (181035B)

Date: 12/2/2021

Input by: Marshall Naylor Job Name: Gaston II (181035B)

Live

Dir.

Vert

Vert

0

O

Dead

1619

1720

Cap. React D/L lb

1619 / 952

1720 / 1052

Snow

952

1052

Direction

Vertical

Vertical

Bearing Length

1 - SPF 3.000"

End Grain 2 - SPF 3.000"

End Grain Page 1 of 1

Wind

Total Ld. Case

2772 L

0

O

Const

Ld. Comb. D+S

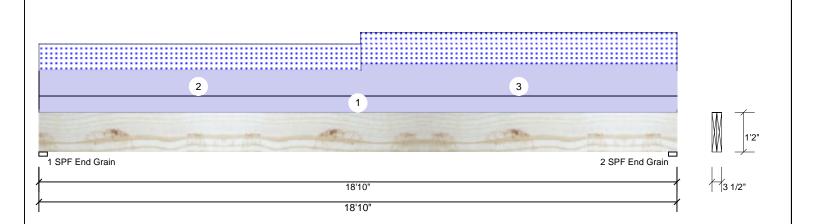
D+S

0

0

Project #:

Kerto-S LVL 1.750" X 14.000" Front GDH 2-Ply - PASSED Level: Level



Member Information **Reactions UNPATTERNED Ib (Uplift)** Type: Girder Application: Floor Brg Plies: 2 Design Method: ASD 1 Moisture Condition: Dry **Building Code:** IBC 2012 2 Deflection LL: 480 Load Sharing: No Deflection TL: 360 Deck: Not Checked Importance: Normal - II Temperature: Temp <= 100°F Bearings

ľ	Analysis Results												
I	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case						
	Moment	12090 ft-lb	9'8 7/8"	31049 ft-lb	0.389 (39%)	D+S	L						
	Unbraced	12090 ft-lb	9'8 7/8"	12128 ft-lb	0.997 (100%)	D+S	L						
ı	01	2252 16	47151	40004 Ib	0.400 (000()	D . O							

0.196 (20%) D+S Shear 2353 lb 17'5" 12021 lb LL Defl inch 0.184 (L/1202) 9'6 3/16" 0.461 (L/480) 0.399 (40%) S ī. TL Defl inch 0.491 (L/451) 9'5 13/16" 0.615 (L/360) 0.798 (80%) D+S

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at a maximum of 8'7 13/16" o.c.
- 6 Bottom must be laterally braced at end bearings.
- 7 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments	
1	Uniform			Тор	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	wall	
2	Part. Uniform	0-0-0 to 9-6-0		Тор	96 PLF	0 PLF	96 PLF	0 PLF	0 PLF	M2	
3	Part. Uniform	9-6-0 to 18-10-0		Тор	117 PLF	0 PLF	117 PLF	0 PLF	0 PLF	M3	
	Self Weight				11 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.

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

This design is valid until 11/3/2024

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us

Manufacturer Info







Project: Address:

Gaston II (181035B)

Weaver Homes

Date: 12/2/2021

Marshall Naylor Job Name: Gaston II (181035B)

Project #:

Input by:

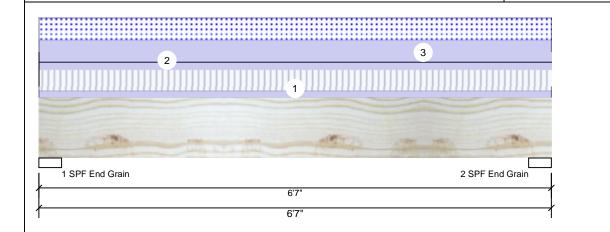
6/0 SLIDER **Kerto-S LVL**

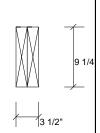
1.750" X 9.250"

2-Ply - PASSED

Level: Level

Reactions UNPATTERNED Ib (Uplift)





Page 1 of 1

N/	-	h	er	l _m	٠.	_	-	-	٠i	_	-
IV		U	51	ш		v	ш	a	u	v	

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal - II

Application: Floor Design Method: ASD **Building Code:** IBC 2012 Load Sharing: No Deck: Not Checked

_			• •	4		
Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	1060	1887	1113	0	0
2	Vertical	1060	1887	1113	0	0

Analysis Results

Temperature:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5009 ft-lb	3'3 1/2"	14423 ft-lb	0.347 (35%)	D+0.75(L+S)	L
Unbraced	5009 ft-lb	3'3 1/2"	10451 ft-lb	0.479 (48%)	D+0.75(L+S)	L
Shear	2387 lb	1' 3/4"	7943 lb	0.300 (30%)	D+0.75(L+S)	L
LL Defl inch	0.042 (L/1741)	3'3 1/2"	0.153 (L/480)	0.276 (28%)	0.75(L+S)	L
TL Defl inch	0.091 (L/807)	3'3 1/2"	0.204 (L/360)	0.446 (45%)	D+0.75(L+S)	L

Bearings

Grain

Bearing	Length	DIr.	Сар. г	React D/L ID	iotai	La. Case	La. Comb.
1 - SPF End Grain	3.500"	Vert	34%	1887 / 1629	3516	L	D+0.75(L+S)
2 - SPF End	3.500"	Vert	34%	1887 / 1629	3516	L	D+0.75(L+S)

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.

Temp <= 100°F

- 5 Top must be laterally braced at end bearings.
- 6 Bottom must be laterally braced at end bearings.
- 7 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Тор	108 PLF	322 PLF	0 PLF	0 PLF	0 PLF	F4
2	Uniform			Тор	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL

Uniform Тор 338 PLF Self Weight 7 PLF

Notes

3

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.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- Influing & 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

This design is valid until 11/3/2024

0 PLF

338 PLF

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us

Manufacturer Info

0 PLF

Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS





0 PLF A4



Project: Address: Weaver Homes

Gaston II (181035B)

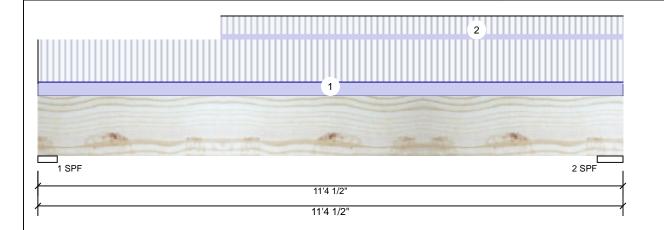
Date: 12/2/2021

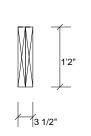
Input by: Marshall Naylor Job Name: Gaston II (181035B)

Project #:

1.750" X 14.000" 2-Ply - PASSED **Kerto-S LVL** FB1

Level: Level





Page 1 of 1

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480

Temp <= 100°F

Deflection TL: 360 Importance: Normal - II

Member Information

Application: Floor Design Method: ASD **Building Code:** IBC 2012 Load Sharing: No Deck: Not Checked **Reactions UNPATTERNED Ib (Uplift)** Snow Wind Const Brg Direction Live Dead Vertical 2129 771 0 0 0 1 2523 904 O O 2 Vertical 0

Bearings

Bearing Length Dir. Cap. React D/L lb Total Ld. Case Ld. Comb. D+L 1 - SPF 4.500" Vert 771 / 2129 2899 L 2 - SPF 6.000" Vert 38% 904 / 2523 3426 L D+I

Analysis Results

Temperature:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8168 ft-lb	5'9 3/16"	26999 ft-lb	0.303 (30%)	D+L	L
Unbraced	8168 ft-lb	5'9 3/16"	10268 ft-lb	0.795 (80%)	D+L	L
Shear	2421 lb	9'8 1/2"	10453 lb	0.232 (23%)	D+L	L
LL Defl inch	0.090 (L/1419)	5'8 3/16"	0.266 (L/480)	0.338 (34%)	L	L
TL Defl inch	0.122 (L/1044)	5'8 3/16"	0.354 (L/360)	0.345 (34%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at end bearings.
- 6 Bottom must be laterally braced at end bearings.
- 7 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Тор	106 PLF	318 PLF	0 PLF	0 PLF	0 PLF	F5
2	Part. Uniform	3-6-8 to 11-4-8		Тор	44 PLF	132 PLF	0 PLF	0 PLF	0 PLF	F9
	Self Weight				11 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.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- 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
 - This design is valid until 11/3/2024

6. For flat roofs provide proper drainage to prevent ponding

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us

Manufacturer Info







Weaver Homes

Project:

Address: Gaston II (181035B) Date: 12/2/2021

Input by: Marshall Naylor Job Name: Gaston II (181035B) Page 1 of 2

0

0

Ld. Comb. D+S

D+S

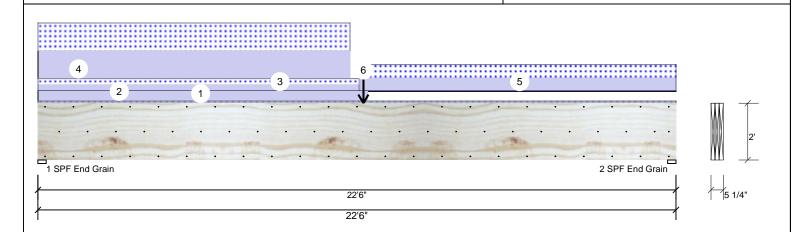
Project #:

Kerto-S LVL FB₂

1.750" X 24.000"

3-Ply - PASSED

evel: Level



Reactions UNPATTERNED Ib (Uplift) Type: Girder Application: Floor Wind Brg Direction Live Dead Snow Const Plies: 3 Design Method: ASD Vertical 225 6536 5095 0 1 Moisture Condition: Dry **Building Code:** IBC 2012 225 2 Vertical 4429 3676 0 Deflection LL: 480 Load Sharing: Yes Deflection TL: 360 Deck: Not Checked Importance: Normal - II Temperature: Temp <= 100°F Bearings

Bearing Length

1 - SPF 3.500"

2 - SPF 3.500"

End Grain

End Grain Dir.

Vert

Vert

Cap. React D/L lb

6536 / 5095

4429 / 3676

Analysis Results

Member Information

•						
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	65477 ft-lb	11'5 3/4"	131295 ft-lb	0.499 (50%)	D+S	L
Unbraced	65477 ft-lb	11'5 3/4"	65512 ft-lb	0.999 (100%)	D+S	L
Shear	10076 lb	2'3 1/2"	30912 lb	0.326 (33%)	D+S	L
LL Defl inch	0.226 (L/1171)	11'1 11/16"	0.552 (L/480)	0.410 (41%)	S	L
TL Defl inch	0.501 (L/528)	11' 7/8"	0.735 (L/360)	0.682 (68%)	D+S	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at a maximum of 4' 3/8" o.c.
- 7 Rottom must be laterally braced at end bearings

7 Dollotti filasi be laterally braced at eria bearings.										
8 Lateral slenderness ratio based on single ply width.										
ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Tie-In	0-0-0 to 22-6-0	0-6-0	Far Face	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	1' Floor
2	Part. Uniform	0-0-0 to 11-7-8		Тор	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall
3	Part. Uniform	0-0-0 to 11-4-0		Near Face	79 PLF	0 PLF	79 PLF	0 PLF	0 PLF	M2
4	Part. Uniform	0-0-0 to 11-0-0		Тор	341 PLF	0 PLF	341 PLF	0 PLF	0 PLF	A2

Continued on page 2...

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.

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

This design is valid until 11/3/2024

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us

Manufacturer Info

Comtech, Inc. Comtech, Inc. 1001 S. Reilly Road, Suite #639 Fayetteville, NC USA 28314 910-864-TRUS

Total Ld. Case

11631 L

8104 L







Weaver Homes

Project:

Address: Gaston II (181035B) Date: 12/2/2021

Input by: Marshall Naylor Job Name: Gaston II (181035B) Page 2 of 2

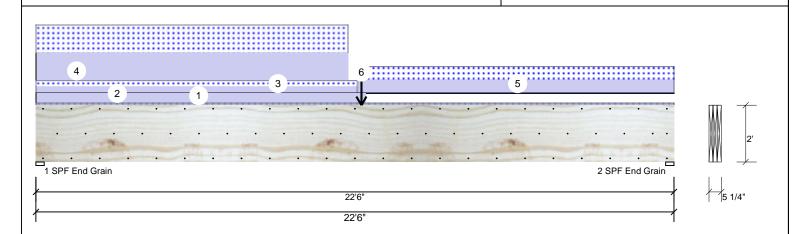
Project #:

Kerto-S LVL FB₂

1.750" X 24.000"

3-Ply - PASSED

Level: Level



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
5	Part. Uniform	11-4-0 to 22-6-0		Near Face	164 PLF	0 PLF	164 PLF	0 PLF	0 PLF	M3
6	Point	11-5-12		Тор	2293 lb	0 lb	2293 lb	0 lb	0 lb	B2
	Bearing Length	0-3-8								
	Self Weight				28 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.

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

Handling & Installation

Handling & Installation

1. IVI beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastering 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

This design is valid until 11/3/2024

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us

Manufacturer Info



