

Client: Project:

Address:

Weaver Development Poplar Plan Poplar Plan

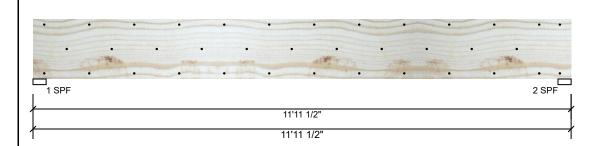
Date: 8/5/2020 Input by:

Christine Shivy Job Name: Poplar

Project #:

1.750" X 16.000" 3-Ply - PASSED **Kerto-S LVL** BM₁

Level: Level



ASD

Yes

IBC/IRC 2015

Not Checked

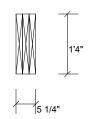
Application:

Design Method:

Building Code:

Load Sharing:

Deck:



Page 1 of 14

Member Information

Type: Plies: 3 Moisture Condition: Dry Deflection LL: 480 Deflection TL: 360 Importance: Normal Temperature: Temp <= 100°F

Reactions UNPATTERNED Ib (Uplift) Floor

Brg	Live	Dead	Snow	Wind	Const
1	1046	3287	2350	0	0
2	1046	3287	2350	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	75%	3287 / 2547	5834	L	D+0.75(L+S)
2 - SPF	3.500"	75%	3287 / 2547	5834	L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	16187 ft-lb	5'11 3/4"	62010 ft-lb	0.261 (26%)	D+0.75(L+S)	L
Unbraced	16187 ft-lb	5'11 3/4"	16274 ft-lb	0.995 (99%)	D+0.75(L+S)	L
Shear	4898 lb	1'6 5/8"	20608 lb	0.238 (24%)	D+0.75(L+S)	L
LL Defl inch	0.057 (L/2434)	5'11 3/4"	0.288 (L/480)	0.200 (20%)	0.75(L+S)	L
TL Defl inch	0.130 (L/1063)	5'11 3/4"	0.384 (L/360)	0.340 (34%)	D+0.75(L+S)	L

Design Notes

- 1 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on single ply width

7 Edicial cicildo	inoco ratio bacca cir cingio	pry Widtii.								
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	80 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Load
2	Uniform			Тор	253 PLF	0 PLF	253 PLF	0 PLF	0 PLF	B1
3	Uniform			Near Face	140 PLF	0 PLF	140 PLF	0 PLF	0 PLF	M1
4	Uniform			Far Face	58 PLF	175 PLF	0 PLF	0 PLF	0 PLF	F4
	Self Weight				19 PLF					
	ID 1 2 3	ID Load Type 1 Uniform 2 Uniform 3 Uniform 4 Uniform	1 Uniform 2 Uniform 3 Uniform 4 Uniform	ID Load Type Location Trib Width 1 Uniform 2 Uniform 3 Uniform 4 Uniform	ID Load Type Location Trib Width Side 1 Uniform Top 2 Uniform Top 3 Uniform Near Face 4 Uniform Far Face	ID Load Type Location Trib Width Side Dead 0.9 1 Uniform Top 80 PLF 2 Uniform Top 253 PLF 3 Uniform Near Face 140 PLF 4 Uniform Far Face 58 PLF	ID Load Type Location Trib Width Side Dead 0.9 Live 1 1 Uniform Top 80 PLF 0 PLF 2 Uniform Top 253 PLF 0 PLF 3 Uniform Near Face 140 PLF 0 PLF 4 Uniform Far Face 58 PLF 175 PLF	ID Load Type Location Trib Width Side Dead 0.9 Live 1 Snow 1.15 1 Uniform Top 80 PLF 0 PLF 0 PLF 0 PLF 2 Uniform Top 253 PLF 0 PLF 253 PLF 3 Uniform Near Face 140 PLF 0 PLF 140 PLF 4 Uniform Far Face 58 PLF 175 PLF 0 PLF	ID Load Type Location Trib Width Side Dead 0.9 Live 1 Snow 1.15 Wind 1.6 1 Uniform Top 80 PLF 0 PLF 0 PLF 0 PLF 0 PLF 2 Uniform Top 253 PLF 0 PLF 253 PLF 0 PLF 3 Uniform Near Face 140 PLF 0 PLF 140 PLF 0 PLF 4 Uniform Far Face 58 PLF 175 PLF 0 PLF 0 PLF	ID Load Type Location Trib Width Side Dead 0.9 Live 1 Snow 1.15 Wind 1.6 Const. 1.25 1 Uniform Top 80 PLF 0 PL

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

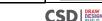
For flat roofs provide proper drainage to prevent ponding

This design is valid until 1/8/2023

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info







Weaver Development Poplar Plan Poplar Plan

Date: 8/5/2020 Input by: Christine Shivy

Job Name: Poplar

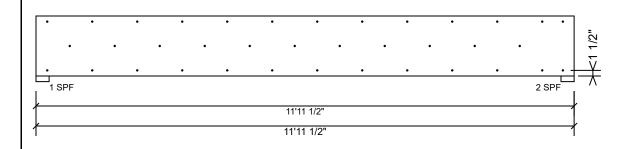
Project #:

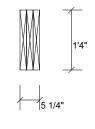
Kerto-S LVL BM₁

1.750" X 16.000"

3-Ply - PASSED

Level: Level





Page 2 of 14

Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Nail from both sides. Maximum end distance not to exceed

Capacity	66.1 %	
Load	186.7 PLF	
Yield Limit per Foot	282.4 PLF	
Yield Limit per Fastener	94.1 lb.	
Yield Mode	IV	
Edge Distance	1 1/2"	
Min. End Distance	3"	
Load Combination	D+S	
Duration Factor	1.15	

Notes

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

Handling & Installation

- Informing & Installation

 I. VIL 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

 Design assumes top edge is laterally restrained is provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

This design is valid until 1/8/2023

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Manufacturer Info





Weaver Development

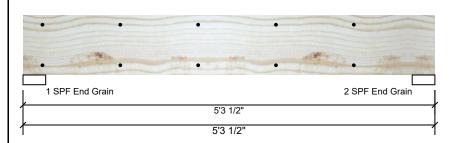
Poplar Plan Poplar Plan Date: 8/5/2020

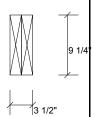
Input by: Christine Shivy Job Name: Poplar

Project #:

Kerto-S LVL 2-Ply - PASSED 1.750" X 9.250" BM₂

Level: Level





Page 3 of 14

Member Information

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal
Temperature:	Temp <= 100°F

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

Reactions UNPATTERNED Ib (Uplift) Dead Snow Wind Const Brg Live 2500 852 0 0 0 1 2 2500 852 0 0 0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3700 ft-lb	2'7 3/4"	12542 ft-lb	0.295 (30%)	D+L	L
Unbraced	3700 ft-lb	2'7 3/4"	10922 ft-lb	0.339 (34%)	D+L	L
Shear	2086 lb	4'3 1/2"	6907 lb	0.302 (30%)	D+L	L
LL Defl inch	0.035 (L/1659)	2'7 3/4"	0.121 (L/480)	0.290 (29%)	L	L
TL Defl inch	0.047 (L/1237)	2'7 3/4"	0.161 (L/360)	0.290 (29%)	D+L	L

Bearings

Bearing Length	Cap. F	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF 3.500" End Grain	31%	852 / 2500	3353	L	D+L
2 - SPF 3.500" End Grain	31%	852 / 2500	3353	L	D+L

Design Notes

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on single ply width.

ID Load Type Trib Width Side Dead 0.9 Wind 1.6 Const. 1.25 Comments Location Live 1 Snow 1.15 1 Uniform Top 315 PLF 945 PLF 0 PLF 0 PLF 0 PLF

> Self Weight 7 PLF

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- 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

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 ICC-ES: ESR-3633

Manufacturer Info

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





Client: Weaver Development Project:

Address:

Poplar Plan Poplar Plan Date: 8/5/2020 Input by: Christine Shivy Job Name: Poplar

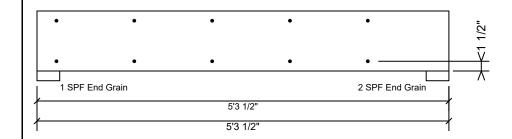
Project #:

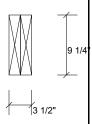
Kerto-S LVL BM₂

1.750" X 9.250"

2-Ply - PASSED

Level: Level





Page 4 of 14

Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

rasterrain pries asing E ro	vis or roa box mans (. 120x5) at
Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

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

Handling & Installation

- Handling & Installation

 1. UVI 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

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Manufacturer Info

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Client: Weaver Development Project:

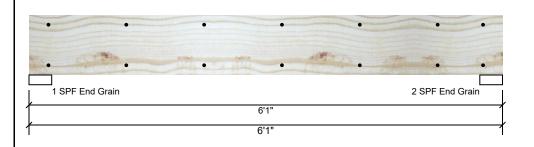
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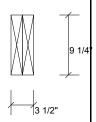
Poplar Plan Poplar Plan Date: 8/5/2020 Input by: Christine Shivy

> Job Name: Poplar Project #:

F. Room W. Hdr. Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED

Level: Level





Page 5 of 14

Member Information

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

Temperature: Temp <= 100°F

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

Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	1736	1523	33	0	0
2	1410	1871	707	0	0

Bearings

Grain

Bearing Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF 3.500" End Grain	31% 1523 / 1736	3259 L	D+L
2 - SPF 3.500"	32% 1871 / 1588	3459 L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4166 ft-lb	3'	12542 ft-lb	0.332 (33%)	D+L	L
Unbraced	4166 ft-lb	3'	10300 ft-lb	0.404 (40%)	D+L	L
Shear	2222 lb	5'1"	6907 lb	0.322 (32%)	D+L	L
LL Defl inch	0.035 (L/1946)	3' 3/16"	0.141 (L/480)	0.250 (25%)	L	L
TL Defl inch	0.066 (L/1023)	3' 1/4"	0.188 (L/360)	0.350 (35%)	D+L	L

Design Notes

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on single ply width.

Γ	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	107 PLF	320 PLF	0 PLF	0 PLF	0 PLF	F4
	2	Uniform			Тор	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Load
	3	Part. Uniform	0-0-0 to 4-6-8		Тор	264 PLF	264 PLF	0 PLF	0 PLF	0 PLF	B1
	4	Point	5-7-4		Тор	740 lb	0 lb	740 lb	0 lb	0 lb	A1SE
		Self Weight				7 PLF					

NOtes
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- 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

 2 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
- For flat roofs provide proper drainage to prevent ponding

This design is valid until 1/8/2023

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info





Client: Project: Address: Weaver Development Poplar Plan Poplar Plan

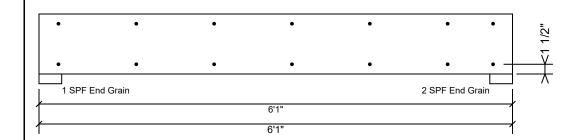
Date: 8/5/2020 Input by: Christine Shivy

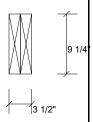
Job Name: Poplar Project #:

F. Room W. Hdr. Kerto-S LVL 1.750" X 9.250"

2-Ply - PASSED

Level: Level





Page 6 of 14

Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

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. UVI 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

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

Manufacturer Info

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





Weaver Development Poplar Plan

Poplar Plan

Date: 8/5/2020

Input by: Christine Shivy Job Name: Poplar

Project #:

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

Application:

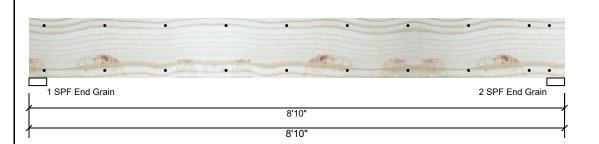
Design Method:

Building Code:

Load Sharing:

Deck:

Level: Level



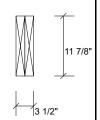
Floor

ASD

No

IBC/IRC 2015

Not Checked



Page 7 of 14

Member Information

Type: Plies: 2 Moisture Condition: Dry Deflection LL: 480 Deflection TL: 360 Importance: Normal Temperature: Temp <= 100°F

Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	827	521	0	0
2	0	827	521	0	0

Bearings

Bearing Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF 3.500" End Grain	13% 827 / 521	1348 L	D+S
2 - SPF 3.500" End Grain	13% 827 / 521	1348 L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2676 ft-lb	4'5"	22897 ft-lb	0.117 (12%)	D+S	L
Unbraced	2676 ft-lb	4'5"	10756 ft-lb	0.249 (25%)	D+S	L
Shear	976 lb	1'2 5/8"	10197 lb	0.096 (10%)	D+S	L
LL Defl inch	0.016 (L/6189)	4'5 1/16"	0.209 (L/480)	0.080 (8%)	S	L
TL Defl inch	0.042 (L/2392)	4'5 1/16"	0.279 (L/360)	0.150 (15%)	D+S	L

Design Notes

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at 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	118 PLF	0 PLF	118 PLF	0 PLF	0 PLF	M1
2	Uniform			Тор	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Loads
	Self Weight				9 PLF					

Notes

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- 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
- For flat roofs provide proper drainage to prevent ponding

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Client: Project: Weaver Development Poplar Plan

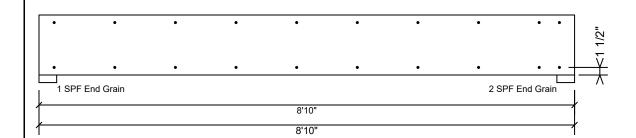
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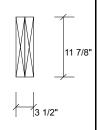
Job Name: Poplar Project #:

Address: Poplar Plan

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

Level: Level





Page 8 of 14

Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

p	
Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

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. UVI 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
- This design is valid until 1/8/2023

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 ICC-ES: ESR-3633

Manufacturer Info







Weaver Development Poplar Plan

Poplar Plan

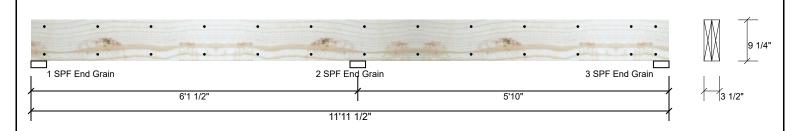
Date: 8/5/2020

Input by: Christine Shivy Job Name: Poplar

Project #:

1.750" X 9.250" 2-Ply - PASSED Kerto-S LVL PB₁

Level: Level



End Grain 2 - SPF 3.500"

End Grain 3 - SPF 3.500"

End Grain

Member Info	rmation		Reaction	Reactions UNPATTERNED lb (Uplift)					
Type:	Girder	Application:	Floor	Brg	Live	Dead	Snow	Wind	
Plies:	2	Design Method:	ASD	1	238	1352	936	0	
Moisture Condition	on: Dry	Building Code:	IBC/IRC 2015	2	665	3780	2618	0	
Deflection LL:	480	Load Sharing:	No	3	221	1256	870	0	
Deflection TL:	360	Deck:	Not Checked						
Importance:	Normal								
Temperature:	Temp <= 100°F								
•	·			Bearings	S				
				Bearing	Length	Cap. Rea	ct D/L lb	Total Ld. Case	
				1 - SPF	3.500"	22% 1	322 / 976	2298 L_	

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-3744 ft-lb	6'1 1/2"	14423 ft-lb	0.260 (26%)	D+S	LL
Unbraced	-3744 ft-lb	6'1 1/2"	10676 ft-lb	0.351 (35%)	D+S	LL
Pos Moment	2417 ft-lb	2'6 1/2"	14423 ft-lb	0.168 (17%)	D+S	L_
Unbraced	2417 ft-lb	2'6 1/2"	10676 ft-lb	0.226 (23%)	D+S	L_
Shear	2604 lb	5'4 1/4"	7943 lb	0.328 (33%)	D+S	LL
LL Defl inch	0.019 (L/3767)	2'11 7/8"	0.147 (L/480)	0.130 (13%)	S	L_
TL Defl inch	0.042 (L/1677)	2'11 5/16"	0.197 (L/360)	0.210 (21%)	D+S	L_

Design Notes

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at 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	32 PLF	94 PLF	0 PLF	0 PLF	0 PLF	F1, F2 & F5
2	Uniform			Тор	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Load
3	Uniform			Тор	370 PLF	0 PLF	370 PLF	0 PLF	0 PLF	A2
	Self Weight				7 PLF					

Notes

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
- Informing & Installation

 I. VIL 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

 Design assumes top edge is laterally restrained is provide lateral support at bearing points to avoid lateral displacement and rotation

- For flat roofs provide proper drainage to prevent ponding

This design is valid until 1/8/2023

Manufacturer Info Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851

(800) 622-5850 www.metsawood.com/us ICC-ES: ESR-3633

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Page 9 of 14



6502 LL

2146 _L

3841 / 2661

1225 / 922

20%

Const 0

0

0

Ld. Comb.

D+S

D+S

D+S

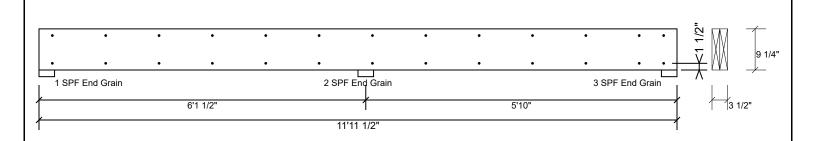
Client: Project: Address: Weaver Development Poplar Plan Poplar Plan

Date: 8/5/2020 Input by: Christine Shivy

Job Name: Poplar Project #:

1.750" X 9.250" PB₁ **Kerto-S LVL** 2-Ply - PASSED

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

		`	,
Capacity	0.0 %		
Load	0.0 PLF		
Yield Limit per Foot	163.7 PLF		
Yield Limit per Fastener	81.9 lb.		
Yield Mode	IV		
Edge Distance	1 1/2"		
Min. End Distance	3"		
Load Combination			
Duration Factor	1.00		

Notes

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. UVI 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

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Manufacturer Info

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Page 10 of 14



Weaver Development Poplar Plan Poplar Plan

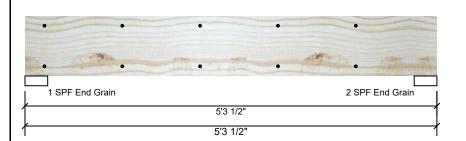
Date: 8/5/2020

Input by: Christine Shivy Job Name: Poplar

Project #:

Kerto-S LVL 2-Ply - PASSED PB₂ 1.750" X 9.250"

Level: Level



Design Method:

Building Code:

Load Sharing:

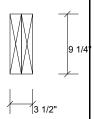
Deck:

ASD

No

IBC/IRC 2015

Not Checked



Page 11 of 14

Member Information

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal
Temperature:	Temp <= 10

Temp <= 100°F

Reactions UNPATTERNED Ib (Uplift) Application: Floor

Brg	Live	Dead	Snow	Wind	Const
1	0	614	0	0	0
2	0	614	0	0	0

Bearings

I	Bearing	Length	Cap. Reac	t D/L lb	Total	Ld. Case	Ld. Comb.
	1 - SPF End Grain	3.500"	6%	614 / 0	614	Uniform	D
	2 - SPF End Grain	3.500"	6%	614 / 0	614	Uniform	D

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	678 ft-lb	2'7 3/4"	11288 ft-lb	0.060 (6%)	D	Uniform
Unbraced	678 ft-lb	2'7 3/4"	10138 ft-lb	0.067 (7%)	D	Uniform
Shear	382 lb	4'3 1/2"	6216 lb	0.061 (6%)	D	Uniform
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.009 (L/6753)	2'7 3/4"	0.161 (L/360)	0.050 (5%)	D	Uniform

Design Notes

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on single ply width.

		F-)								
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	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Load
2	Uniform			Тор	50 PLF	0 PLF	0 PLF	0 PLF	0 PLF	A1GE
3	Uniform			Тор	50 PLF	0 PLF	0 PLF	0 PLF	0 PLF	KW5
	Self Weight				7 PLF					

Notes

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

2 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
- For flat roofs provide proper drainage to prevent ponding

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Manufacturer Info

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



Client: Project:

Address:

Weaver Development Poplar Plan Poplar Plan

Date: 8/5/2020 Input by: Christine Shivy

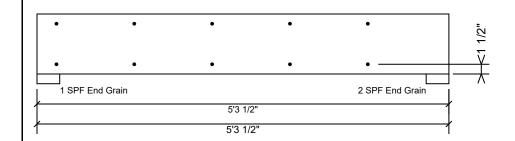
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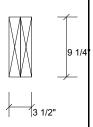
Kerto-S LVL PB₂

1.750" X 9.250"

2-Ply - PASSED

Level: Level





Page 12 of 14

Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

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. UVI 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

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Manufacturer Info

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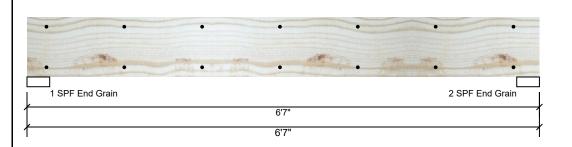
Client: Project: Address: Weaver Development Poplar Plan Poplar Plan

Date: 8/5/2020 Input by: Christine Shivy

Job Name: Poplar Project #:

Kerto-S LVL 1.750" X 9.250" **Sliding Door Hdr.** 2-Ply - PASSED

Level: Level



ASD

No

IBC/IRC 2015

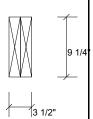
Not Checked

Application: Design Method:

Building Code:

Load Sharing:

Deck:



Page 13 of 14

Member Information

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

Temperature: Temp <= 100°F

Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	2051	708	0	0	0
2	2051	708	0	0	0

Bearings

Bearing Ler	ngth Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF 3.50 End Grain	26%	708 / 2051	2759	L	D+L
2 - SPF 3.50 End Grain	26%	708 / 2051	2759	L	D+L

Analysis Results

L							
	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	3931 ft-lb	3'3 1/2"	12542 ft-lb	0.313 (31%)	D+L	L
	Unbraced	3931 ft-lb	3'3 1/2"	9934 ft-lb	0.396 (40%)	D+L	L
	Shear	1921 lb	1'	6907 lb	0.278 (28%)	D+L	L
	LL Defl inch	0.053 (L/1383)	3'3 1/2"	0.153 (L/480)	0.350 (35%)	L	L
	TL Defl inch	0.071 (L/1028)	3'3 1/2"	0.204 (L/360)	0.350 (35%)	D+L	L

Design Notes

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at 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
	Uniform			Тор	208 PLF	623 PLF	0 PLF	0 PLF	0 PLF	F1 & F2
	Self Weight				7 PLF					

Notes

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

2 Damaged Beams must not be used

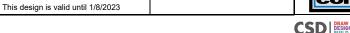
Design assumes top edge is laterally restrained
Provide lateral support at bearing points to avoid
lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

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Manufacturer Info

Client: Project: Address: Weaver Development Poplar Plan Poplar Plan

Date: 8/5/2020 Input by: Christine Shivy

Job Name: Poplar

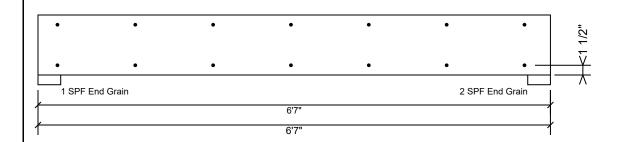
Project #:

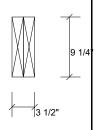
Kerto-S LVL Sliding Door Hdr.

1.750" X 9.250"

2-Ply - PASSED

Level: Level





Page 14 of 14

Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6"

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

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. UVI 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

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