Engineering Note Page (ENP-2)

REVISION 2009-10-09



Please read all notes prior to installation of the component

DESIGN INFORMATION

This building component is certified as an individual component for the loads and conditions shown on the calculation and drawing page.

The responsibility of the undersigned engineer is <u>only</u> limited to the calculation of this building component for the loads and conditions shown on this drawing.

The responsibility of the undersigned is limited to the verification of the structural capacity of the NASCOR floor joists and LVL beams based on placement as shown on the layout. The loads applied are limited to the gravity effects of the specified loads. The structural integrity of the building and the effect of wind, uplift, seismic, lateral or other forces, calculation of adequate support and anchorage of components, as well as the dimensions and design loads used to calculate components are the responsibility of the overall building designer.

Floor joists and OSB rim board are designed to carry uniformly distributed loads only. Point loads should be transferred through the floor cavity with squash blocks. Structural elements such as walls, posts, connectors, and squash blocks are the responsibility of the overall building designer.

The undersigned engineer disclaims any responsibility for damages as a result of being furnished faulty or incorrect information, specifications and/or designs.

Installation of NASCOR joists is to be carried out in accordance with the current edition of the manufacturer's approved literature available at http://www.nascor.ca.

CODE

This building component is designed in accordance with the National Building Code of Canada, the Ontario Building Code, CCMC and Canadian Standards Association guidelines.

COMPONENT

- 1. The building component used in construction must be the same as indicated on the drawings.
- 2. The building component must be installed and assembled as per specification shown on the drawing and in accordance with the manufacturer's assembly and installation.
- 3. Members consisting of multiple plies must be connected as per the document "Multi-ply Connection Details".
- 4. Pass-thru squash block framing is required at all point loads over bearings.

HANDLING AND INSTALLATION

Do not drill any hole, cut or notch a certified building component without a written preauthorization.



Client: Project:

Address:

GREENPARK

Date:

8/13/2018

Designer: RCO

Job Name: HEMLOCK 3-1

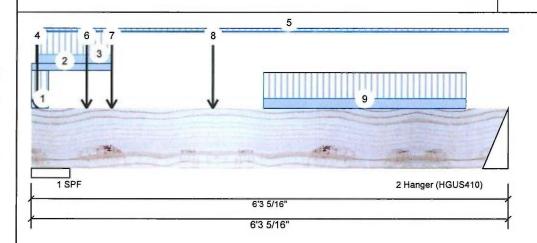
Project #:

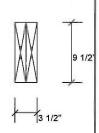
Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Ground Floor





Page 1 of 2

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ı	Member Information							
	Туре:	Girder						
	Plies:	2						
	Moisture Condition:	Dry						
	Deflection LL:	360						
	Deflection TL:	240						
	Importance:	Normal						
	General Load							
	Floor Live:	40 PSF						
	Dead:	15 PSF						

Manchau Information

Application: Floor (Residential) Design Method: **Building Code:** NBCC 2010 / OBC 2012 Load Sharing: No Deck: Not Checked Not Checked Vibration:

Unfacto	red Reactions	S UNPATTER	NED lb (Uplif	t)	
Brg	Live	Dead	Snow	Wind	
1	3689	1601	0	0	
2	916	382	0	0	

F	Analysis Results									
	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case			
	Moment	3107 ft-lb	2'4 5/8"	22724 ft-lb	0.137 (14%)	1.25D+1.5L	L			
	Unbraced	3107 ft-lb	2'4 5/8"	22724 ft-lb	0.137 (14%)	1.25D+1.5L	L			
	Shear	3102 lb	1'2 13/16"	9277 lb	0.334 (33%)	1.25D+1.5L	L			
	Perm Defl in.	0.010 (L/6974)	3' 7/8"	0.185 (L/360)	0.050 (5%)	D	Uniform			
	LL Defl inch	0.023 (L/2957)	3'1 3/16"	0.185 (L/360)	0.120 (12%)	L	L			
	TL Defl inch	0.032 (L/2076)	3'1 1/8"	0.278 (L/240)	0.120 (12%)	D+L	L			

Bearings and Factored Reactions Bearing Length Cap. React D/L lb Total Ld. Case Ld. Comb. 1-SPF 6.078" 58% 2001 / 5534 7535 L 1.25D+1.5L 4.000" 18% 477 / 1375 1852 L 1.25D+1.5L Hanger

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Fill all hanger nailing holes.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Multiple plies must be fastened together as per manufacturer's details.
- 5 Top loads must be supported equally by all plies.
- 6 Top braced at bearings.
- 7 Bottom braced at bearings.
- based on full section width

8 Lateral siend	erness ratio based o	on tuli section wiath.						_	
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 0-2-10		Тор	124 PLF	299 PLF	0 PLF	0 PLF	J7
2	Part. Uniform	0-0-0 to 1-0-10		Тор	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-0-10 to 1-0-10		Тор	98 PLF	253 PLF	0 PLF	0 PLF	J7
4	Point	0-0-14		Near Face	350 lb	893 lb	0 lb	0 lb	F5

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Continued on page 2...

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-phy
fastening details, beam strength values, and code regarding instantation requirements, intuining fastening details, beam strength values, and code approvals Damaged Bearns must not be used Design assumes top adge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

Kott Lumber Company 14 Anderson Blvd, Ontario APA: PR-L318 **L4A 7X4**



T.L. WISE TO0083566

100083566

August 17, 2018



905-642-4400

Version 18.40.162 Powered by iStruct™



Client: Project: Address: GREENPARK

Date:

8/13/2018

Page 2 of 2

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RCO Designer:

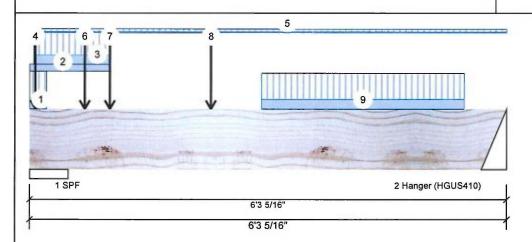
HEMLOCK 3-1 Job Name: Project #:

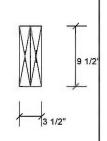
Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Ground Floor





Continued	from page 1			-					
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Tie-In	0-1-12 to 6-3-5	(Span)1-6-2	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
6	Point	0-8-11		Тор	661 lb	1645 lb	0 lb	0 lb	F4 F4 F3 F3
7	Point	1-0-10		Far Face	191 lb	392 lb	0 lb	0 lb	J7
8	Point	2-4-10		Far Face	161 lb	391 lb	0 lb	0 lb	J7
9	Part. Uniform	3-0-10 to 5-8-10		Far Face	110 PLF	293 PLF	0 PLF	0 PLF	
	Self Weight				8 PLF				

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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

- 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 adge 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

This design is valid until 7/10/2021

Manufacturer Info

Forex APA: PR-L318





Client: Project:

Address:

GREENPARK

Date:

8/13/2018

Designer: RCO

Job Name: HEMLOCK 3-1

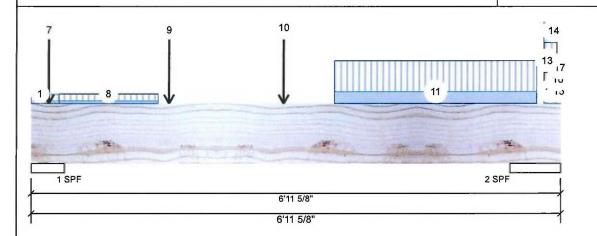
Project #

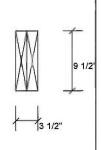
Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Ground Floor





Page 1 of 2

Mem	ber l	Info	rma	tion

Type: Girder Plies: 2 Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance: Normal General Load Floor Live: 40 PSF

15 PSF

Application: Design Method:

Floor (Residential) LSD

NBCC 2010 / OBC 2012 **Building Code:** No

Load Sharing:

Not Checked Deck: Not Checked Vibration:

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1874	847	0	0
2	611	283	0	0
l .				

Bearings and Factored Reactions

Bearing Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF 5.250"	34% 1059 / 2811	3870 L	1.25D+1.5L
2 - SPF 8.000"	7% 353 / 917	1270 L	1.25D+1.5L

Analysis Results

Dead:

ſ	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case	
l	Moment	2502 ft-lb	1'9 3/4"	22724 ft-lb	0.110 (11%)	1.25D+1.5L	L	
l	Unbraced	2502 ft-lb	1'9 3/4"	22015 ft-lb	0.114 (11%)	1.25D+1.5L	L	
ı	Shear	1927 lb	1'2"	9277 lb	0.208 (21%)	1.25D+1.5L	L	
l	Perm Defl in.	0.008 (L/8934)	3'1 3/8"	0.200 (L/360)	0.040 (4%)	D	Uniform	
l	LL Defl inch	0.019 (L/3855)	3'1 7/16"	0.200 (L/360)	0.090 (9%)	L	L	
l	TL Defl inch	0.027 (L/2693)	3'1 7/16"	0.299 (L/240)	0.090 (9%)	D+L	L	

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3), Assumed point load size: beam
- 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 braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slendemess ratio based on full section width.

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August 17, 2018	

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Tie-In	0-0-0 to 0-4-6	(Span)1-3-9	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
2	Point	0-2-12		Тор	17 lb	46 lb	0 lb	0 lb	J5	
3	Point	0-2-12		Тор	6 lb	13 lb	0 lb	0 lb	J2	
4	Point	0-2-12		Тор	20 lb	0 lb	0 lb	0 lb	Wall Self Weight	
5	Point	0-2-12		Тор	401 lb	923 lb	0 lb	0 lb	F11 F11	
Continued or	n page 2									

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 Bearns 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

Manufacturer info

Forex APA: PR-L318

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.







Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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 atherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

Handling & Installation

1. IVL 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 beaning points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400



This design is valid until 7/10/2021

Client:

GREENPARK

Project: Address: Date:

8/13/2018

RCO Designer:

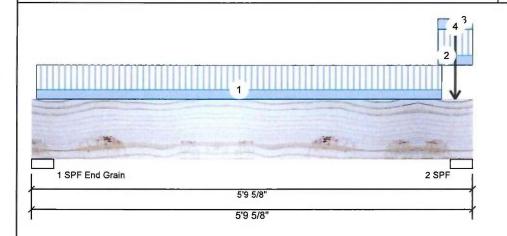
Job Name: HEMLOCK 3-1

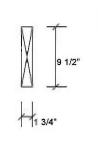
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" - PASSED

Level: Ground Floor





Wind

0

0

435

Page 1 of 1

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viember intorn	lation		
Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Bearings	and	Factored	Reactions
----------	-----	-----------------	-----------

Live

548

573

1

2

Unfactored Reactions UNPATTERNED Ib (Uplift)

Dead

216

495

Dea	Jeanings and ractored reactions									
Bea	aring	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.			
1 - End Gra	t	3.500"	24%	270 / 822	1092	L	1.25D+1.5L			
2 -	SPF	3.500"	45%	619 / 1077	1696	L	1.25D+1.5L			

Wind 0 PLF 0 PLF

0 PLF

J4

Analysis Results

Mambay Information

L	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
l	Moment	1375 ft-lb	2'10 7/8"	11362 ft-lb	0.121 (12%)	1.25D+1.5L	L
l	Unbraced	1375 ft-lb	2'10 7/8"	6976 ft-lb	0.197 (20%)	1.25D+1.5L	L
l	Shear	1022 lb	4'9 3/8"	4638 lb	0.220 (22%)	1.25D+1.5L	L
l	Perm Defl in.	0.007 (L/8569)	2'10 7/8"	0.178 (L/360)	0.040 (4%)	D	Uniform
l	LL Defl inch	0.019 (L/3380)	2'10 13/16"	0.178 (L/360)	0.110 (11%)	L+0.5\$	L
L	TL Defl inch	0.026 (L/2424)	2'10 13/16"	0.267 (L/240)	0.100 (10%)	D+L+0.5S	L

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings

L	4 DOMOIT DIACEC	at bearings.						
ſ	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow
	1	Part. Uniform	0-0-12 to 5-4-12		Near Face	72 PLF	193 PLF	0 PLF
	2	Part. Uniform	5-4-2 to 5-9-10		Тор	75 PLF	200 PLF	0 PLF
	3	Part. Uniform	5-4-2 to 5-9-10		Тор	80 PLF	0 PLF	0 PLF
	4	Point	5-6-14		Тор	234 lb	0 lb	435 lb
		Self Weight				4 PLF		



August 17, 2018

0 lb F14 F14 F14 F14 Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

Wall Self Weight

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 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 adge is laterally restrained
 Provide lateral support at beaming points to avoid lateral displacement and rotation

- For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex APA: PR-L318

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400



This desi



Client:

Address:

GREENPARK

Project:

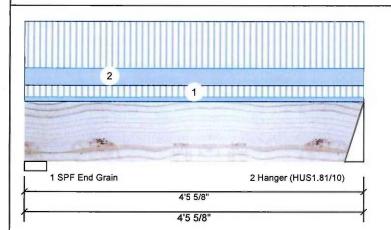
Date:

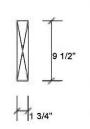
8/13/2018

Designer: RCO Job Name: HEMLOCK 3-1

Project #:

Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED Level: Ground Floor





Wind

1.25D+1.5L

Page 1 of 1

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viember into	rmation		
Туре:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

1	183	77	0	0	
2	179	76	0	0	
-					

Snow

Analysis Results **Analysis** Actual Location Allowed Capacity Comb. Moment 337 ft-lb 2'3 1/16" 11362 ft-lb 0.030 (3%) 1.25D+1.5L L Unbraced 337 ft-lb 2'3 1/16" 8769 ft-lb 0.038 (4%) 1.25D+1.5L L Shear 203 lb 1' 1/4" 4638 lb 0.044 (4%) 1.25D+1.5L L Perm Defl in. 0.001 2'3 1/16" 0.135 (L/360) 0.010 (1%) D Uniform (L/36948) 0.003 2'3 1/16" 0.135 (L/360) 0.020 (2%) L LL Defl inch (L/15591) TL Defl inch 0.004 2'3 1/16" 0.203 (L/240) 0.020 (2%) D+L (L/10965)

Bearings and Factored Reactions Bearing Length Cap. React D/L lb Total Ld. Case Ld. Comb. 1 - SPF 3.500" 8% 96 / 274 371 L 1.25D+1.5L

Unfactored Reactions UNPATTERNED Ib (Uplift)

Dead

Live

End Grain

3.000" 9% 95 / 269 364 L Hanger



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

Manakan Information

4 Bottom braced at bearings.



August 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-5-10	(Span)0-9-14	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 4-5-10	(Span)3-2-13	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				4 PLF				

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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

landling & Installation
. IVL 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 beaming points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

This des

Manufacturer Info Forex APA: PR-L318

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Client:

GREENPARK

Project: Address:

8/13/2018

RCO Designer:

Job Name: HEMLOCK 3-1

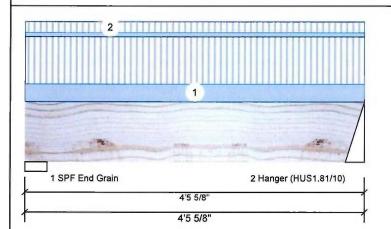
Project #:

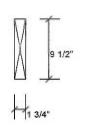
Date:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" - PASSED

Level: Ground Floor





Wind

0

0

Page 1 of 1

Meumer Turour	lation		
Туре:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		
		1	

Bearings	and Fac	tored Re	actions			
Bearing	Length	Cap. F	leact D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	9%	104 / 298	401	L	1.25D+1.5L

83

81

Unfactored Reactions UNPATTERNED Ib (Uplift)

Live

198

195

1 2

End

Analysis Res	Analysis Results							
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case		
Moment	365 ft-lb	2'3 1/16"	11362 ft-lb	0.032 (3%)	1.25D+1.5L	L		
Unbraced	365 ft-lb	2'3 1/16"	8769 ft-lb	0.042 (4%)	1.25D+1.5L	L		
Shear	220 lb	1' 1/4"	4638 lb	0.047 (5%)	1.25D+1.5L	L		
Perm Defl in.	0.001 (L/34346)	2'3 1/16"	0.135 (L/360)	0.010 (1%)	D	Uniform		
LL Defl inch	0.003 (L/14366)	2'3 1/16"	0.135 (L/360)	0.030 (3%)	L	L		
TL Defl inch	0.005 (L/10129)	2'3 1/16"	0.203 (L/240)	0.020 (2%)	D+L	L		

Grain 3.000" 102 / 292 1.25D+1.5L 394 L Hanger



August 17, 2018

Design	Notes	
1 Fill all	hanger nailing	holes

Mombor Information

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-5-10	(Span)3-6-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 4-5-10	(Span)0-9-14	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				4 PLF				

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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

chemicals

Handling & Installation

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. Dasign 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

Manufacturer Info Forex

APA: PR-L318

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED This des IN THE DESIGN OF THIS COMPONENT.





Client: Project:

Address:

GREENPARK

Date:

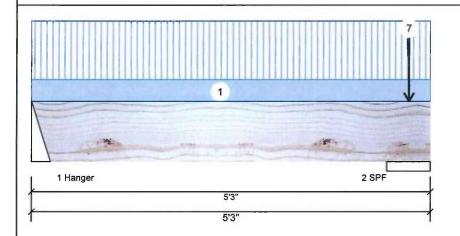
8/13/2018

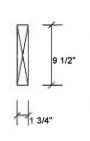
RCO Designer:

Job Name: HEMLOCK 3-1

Project #:

Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED Level: Ground Floor





Page 1 of 2

Member Tutor	mation		
Туре:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Conditio	n: Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfacto	red Reactions	S UNPATTER	NED lb (Uplif	t)	
Brg	Live	Dead	Snow	Wind	
1	37	23	0	0	
2	101	551	678	0	

Analysis Results										
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case				
Moment	89 ft-lb	2'5 9/16"	7840 ft-lb	0.011 (1%)	1.25D+1.5L	L				
Unbraced	89 ft-lb	2'5 9/16"	6764 ft-lb	0.013 (1%)	1.25D+1.5L	L				
Shear	51 lb	11 3/4"	3200 lb	0.016 (2%)	1.25D+1.5L	L				
Perm Defl in	_ 0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)						
LL Defl inch	0.001 (L/64425)	2'5 9/16"	0.152 (L/360)	0.010 (1%)	L+0.5S	L				
TL Defl inch	0.001 (L/39543)	2'5 9/16"	0.228 (L/240)	0.010 (1%)	D+L+0.5S	L				

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - Hanger	3.000"	3%	29 / 55	84	L	1.25D+1.5L	
2 - SPF	6.875"	40%	689 / 1067	1756	L	1.25D+1.5S +0.5L	



- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Fill all hanger nailing holes.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top braced at bearings.

Mombor Information

5 Bottom braced at bearings.



August 17, 2018

5 Doctorii bracce	a at bearings.								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 5-3-0	(Span)0-9-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	4-11-10		Тор	435 lb	0 lb	658 lb	0 lb	F15 F15
3	Point	4-11-10		Тор	2 lb	0 lb	6 lb	0 lb	
4	Point	4-11-10		Тор	6 lb	0 lb	14 lb	0 lb	
5	Point	4-11-10		Тор	30 lb	0 lb	0 lb	0 lb	Wall Self Weight
the Control of the Co									

This desi

Continued on page 2...

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 atherwise
 LVL not to be treated with fire retardant or corrosive
- chemicals
- Handling & Installation
- Handling & Installation

 1. LVL beams must not be cut or drillad

 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 adge 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

Forex APA: PR-L318

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.





Client: Project:

Address:

GREENPARK

Date:

8/13/2018

Page 2 of 2

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Designer: RCO

Job Name: HEMLOCK 3-1

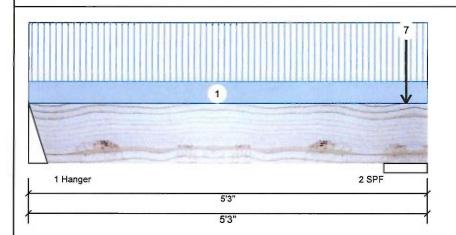
Project #:

Forex 2.0E-3000Fb LVL

...... ===

1.750" X 9.500" - PASSED

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	4-11-10		Тор	22 lb	59 lb	0 lb	0 lb	J7
7	Point	4-11-10		Тор	30 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Self Weight				4 PLF				

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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. 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

- For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Manufacturer Info Forex APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario Canada



Client: Project:

Address:

GREENPARK

8/13/2018

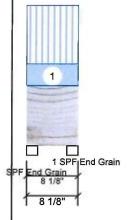
Designer: RCO

Job Name: HEMLOCK 3-1

Project #:

Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Ground Floor



Member Information

Page 1 of 1

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	id tioii		
Туре:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF	1	
Dead:	15 PSF		

Location Allowed

4 1/16" 11362 ft-lb

4 1/16" 11362 ft-lb

-(2 3/8") 4638 lb

Unfactored Reactions UNPATTERNED lb (Uplift)										
Brg	Live	Dead	Snow	Wind						
1	25	11	0	0						
2	25	11	0	0						

Bearings and Factored Reactions

Case Comb. 1.25D+1.5L L 1.25D+1.5L L 1.25D+1.5L L

4 PLF

Ld. Comb. Bearing Length Cap. React D/L lb Total Ld. Case 1 - SPF 1.750" 2% 13 / 37 51 L 1.25D+1.5L End Grain 2 - SPF 1.750" 2% 13 / 37 51 L 1.25D+1.5L End Grain

T.L. WISE 100083566 VCE OF ON

Design Notes

Analysis Results

Actual

5 ft-lb

5 ft-lb

40 lb

Analysis

Moment

Shear

Unbraced

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

Self Weight

Perm Defl in. 0.000 (L/999)

LL Defl inch 0.000 (L/999)

TL Defl inch 0.000 (L/999)

ID Load Type Location Trib Width Side Dead Live Snow Wind 15 PSF 0 PSF 0-0-0 to 0-8-2 (Span)3-8-7 40 PSF 0 PSF 1 Tie-In Top

Capacity

0.000 (0%)

0.000 (0%)

0.009 (1%)

0 999.000 (L/0) 0.000 (0%)

0 999.000 (L/0) 0.000 (0%)

0 999,000 (L/0) 0.000 (0%)

August 17, 2018

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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

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

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

Manufacturer Info Forex APA: PR-L318

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED This desi IN THE DESIGN OF THIS COMPONENT.



. ___ _ Client: GREENPARK Date: 8/13/2018 Page 1 of 1 Project: Designer: RCO isDesign Address: HEMLOCK 3-1 Job Name: Project # Level: Ground Floor Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED 2 3 9 1/2' 2 SPF 1 Hanger 8'1 8'1' Member Information Unfactored Reactions UNPATTERNED lb (Uplift) Girder Application: Type: Floor (Residential) Snow Wind Live Dead Brg Plies: Design Method: LSD 1339 525 0 0 Moisture Condition: Dry NBCC 2010 / OBC 2012 **Building Code:** 2 1160 459 Deflection II: 360 Load Sharing: No Deflection TL: 240 Deck: Not Checked Importance: Normal Vibration: Not Checked General Load **Bearings and Factored Reactions** Floor Live: 40 PSF Dead: 15 PSF Ld. Comb. Bearing Length Cap. React D/L lb Total I.d. Case 1.25D+1.5L 3.000" 656 / 2008 2664 L 68% Hanger **Analysis Results** 2 - SPF 5.500" 39% 574 / 1741 2315 L 1.25D+1.5L **Analysis** Location Allowed Capacity Comb. T.L. WISE 100083566 5089 ft-lb 3'7 3/8" 11362 ft-lb 0.448 (45%) 1.25D+1.5L L Moment 5089 ft-lb 3'7 3/8" 5098 ft-lb 0.998 Unbraced 1.25D+1.5L L (100%)2309 lb 6'10 3/4" 4638 lb Shear 0.498 (50%) 1.25D+1.5L L Perm Defl in. 0.047 (L/1899) 3'10 3/4" 0.250 (L/360) 0.190 (19%) D Uniform 00083566 LL Defi inch 0.120 (L/751) 3'10 5/8" 0.250 (L/360) 0.480 (48%) L L TL Defl inch 0.167 (L/538) 3'10 5/8" 0.375 (L/240) 0.450 (45%) D+L Design Notes 1 Fill all hanger nailing holes. 2 Girders are designed to be supported on the bottom edge only. August 17, 2018 3 Top must be laterally braced at a maximum of 7'3 3/4" o.c. 4 Bottom braced at bearings. ID Side Wind Load Type Location Trib Width Dead Live Snow Comments 90 PLF 0 PLF 0 PLF Part, Uniform 0-1-0 to 3-5-8 240 PLF 1 Top 2 **Point** Far Face 0 lb J2 1-4-6 65 lb 174 lb 0 lb Part. Uniform 46 PLF 0 PLF 0 PLF 3 2-0-6 to 4-8-6 Far Face 123 PLF Point 3-7-6 81 lb 195 lb Near Face 0 lb 0 lb F2 Pass-Thru Framing Squash Block is required at all point loads over bearings 5 **Point** 4-5-4 Near Face 76 lb 179 lb 0 lb 6 Point 5-4-6 Far Face 155 lb 413 lb 0 lb Refer to Multiple Member Connection Point 6-8-6 Far Face 150 lb 400 lb dl 0 Detail for ply to ply nailing or bolting Self Weight 4 PLF requirements Manufacturer Info Kott Lumber Company chemicals For flat roofs provide proper drainage to prevent ponding 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. Handling & Installation



Lumber

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

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

approvals
Damaged Beams must not be used
Design assumes top edge is laterally restrained
Provide Tateral support at bearing points to avoid
lateral displacement and rotation

Forex APA: PR-L318

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED This design IN THE DESIGN OF THIS COMPONENT.

Canada



Client:

GREENPARK

Project: Address: Date:

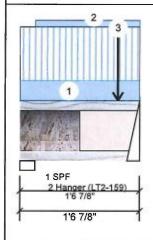
8/13/2018

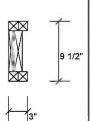
Designer: RCO Job Name: HEMLOCK 3-1

Project #:

2-Ply - PASSED 9.500"

Level: Ground Floor





Wind

Page 1 of 1

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Member Information					
Туре:	Girder				
Plies:	2				
Moisture Condition:	Dry				
Deflection LL:	360				
Deflection TL:	240				
Importance:	Normal				
General Load					
Floor Live:	40 PSF				
Dead:	15 PSF				

Application: Design Method: **Building Code:**

Deck:

Vibration:

Floor (Residential) LSD

NBCC 2010 / OBC 2012

Load Sharing: No

Not Checked Not Checked

Unfactored	Reactions	UNPATTERNED	lb (Uplift)
Brg	Live	Dead	Snow

1	71	34	0	0
1 2	172	85	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	6%	42 / 107	149	L	1.25D+1.5L
2 - Hanger	2.000"	14%	106 / 258	363	L	1.25D+1.5L

Wind

0 PSF

Analysis Results

ı	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	64 ft-lb	1'1 3/16"	7340 ft-lb	0.009 (1%)	1.25D+1.5L	L
	Unbraced	64 ft-lb	1'1 3/16"	6912 ft-lb	0.009 (1%)	1.25D+1.5L	L
	Shear	349 lb	1'5 5/8"	3080 lb	0.113 (11%)	1.25D+1.5L	L
	Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
	LL Defl inch	0.000 (L/45568)	1' 5/8"	0.044 (L/360)	0.010 (1%)	L	L
	TL Defl inch	0.001 (L/30524)	1' 9/16"	0.067 (L/240)	0.010 (1%)	D+L	L

T.L. WISE 100083566 100083566

August 17, 2018

Design Notes

- 1 Fill all hanger nailing holes.
- 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.

Point

5 Top flange br 6 Bottom flange							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow
1	Tie-In	0-0-0 to 1-6-14	(Span)3-3-0	Тор	15 PSF	40 PSF	0 PSF
2	Part. Uniform	0-2-6 to 1-6-14		Тор	8 PLF	0 PLF	0 PLF

Near Face

Pass, Thru Framing Squash Block is required at all point loads over bearings

Comments

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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. Lumber

Dry service conditions unless noted otherwise
 Usest not to be treated with fire retardant or corrosive

chemicals

Handling & Installation

1-3-7

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

This design

69 lb

141 lb

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 ponding

7. READ ALL NOTES ON TI

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

0 lb

Manufacturer Info

Nascor by Kott





Client: Project:

Address:

GREENPARK

Date: 8/13/2018

Designer: RCO

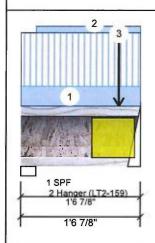
Job Name: HEMLOCK 3-1

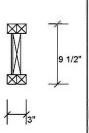
Project #:

2-Ply - PASSED 9.500"

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Level: Ground Floor





Page 1 of 1

Member Inform	nation
Туре:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
General Load	
Floor Live:	40 PSF
Dead:	15 PSF

Application: Design Method:

Building Code:

Load Sharing:

Floor (Residential) LSD

NBCC 2010 / OBC 2012 No

Deck: Not Checked Vibration: Not Checked

Live Dead 60 28 2 98

Unfactored Reactions UNPATTERNED Ib (Uplift)

Wind Snow 0 0

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Bearings and Factored Reactions

Bearing Length Cap. React D/L lb Total Ld. Case Ld. Comb. 125 L 1.25D+1.5L 1 - SPF 2.375" 5% 35 / 90 2.000" 8% 60 / 148 208 L 1.25D+1.5L Hanger

Wind

0 PSF

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	42 ft-lb	11"	7340 ft-lb	0.006 (1%)	1.25D+1.5L	L
Unbraced	42 ft-lb	11"	6912 ft-lb	0.006 (1%)	1.25D+1.5L	L
Shear	194 lb	1'5 5/8"	3080 lb	0.063 (6%)	1.25D+1.5L	L
Perm Defl	in. 0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inc	ch 0.000 (Ľ/67719)	10 7/8"	0.044 (L/360)	0.010 (1%)	L	L
TL Deff ind	ch 0.000 (L/45357)	10 7/8"	0.067 (L/240)	0.010 (1%)	D+L	L

T.L. WISE 100083566 00083566 NCE OF ON August 17, 2018

Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- 5 Top flange braced at bearings.

6 Bottom flan	ge braced at bearings						
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow
1	Tie-In	0-0-0 to 1-6-14	(Span)3-3-0	Тор	15 PSF	40 PSF	0 PSF
2	Part. Uniform	0-2-6 to 1-6-14		Тор	8 PLF	0 PLF	0 PLF
3	Point	1-3-7		Far Face	27 lb	56 lb	dI 0

Pass Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

Comments

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.
 iJoist not to be treated with fire retardant or corrosive.

chemicals

Handling & Installation

I. Aloist flages must not be cut or drilled
 Refer to latest copy of the Libist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
 Damaged Libists must not be used
 Design assumes ton 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. Wob stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches

7. For flat roofs pondling

7. READ ALL NOTES ON TI

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

Manufacturer Info

Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario Canada



This design

Client: Project:

Address:

GREENPARK

Date: 8/13/2018

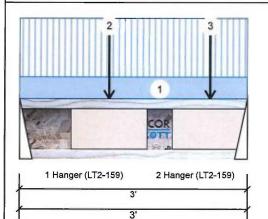
Designer: RCO

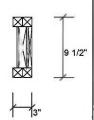
Job Name: HEMLOCK 3-1

Project #:

2-Ply - PASSED NJ 9.500"

Level: Ground Floor





Page 1 of 1

Meumer Turoun	iation		
Туре:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 DSE	l V	

Brg	Live	Dead	Snow	Wind	
1	295	111	0	0	
2	398	149	0	0	

-	Analysis Res	sults						
	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case	•
	Moment	576 ft-lb	1'2 1/8"	7340 ft-lb	0.078 (8%)	1.25D+1.5L	L	
	Unbraced	576 ft-lb	1'2 1/8"	4678 ft-lb	0.123 (12%)	1.25D+1.5L	L	
	Shear	776 lb	2'10 3/4"	3080 lb	0.252 (25%)	1.25D+1.5L	L,	
	Perm Defl in.	0.002 (L/20392)	1'2 1/8"	0.093 (L/360)	0.020 (2%)	D	Uniform	
	LL Defl inch	0.004 (L/7661)	1'2 1/8"	0.093 (L/360)	0.050 (5%)	L	L	
	TL Defl inch	0.006 (L/5569)	1'2 1/8"	0.140 (L/240)	0.040 (4%)	D+L	L	

Bearings and Factored Reactions

Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - Hanger	2.000"	22%	138 / 442	581	L	1.25D+1.5L	
2 - Hanger	2.000"	30%	187 / 597	783	L	1.25D+1.5L	

Wind

0 PSF 0 lb J5

Design Notes

1 Fill all hanger nailing holes.

Bill amala an Traffa manadia and

- 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 flange braced at bearings.

6 Bottom	flange braced at bearings	š.					
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow
1	Tie-In	0-0-0 to 3-0-0	(Span)1-8-15	Тор	15 PSF	40 PSF	0 PSF
2	Point	1-2-2		Far Face	127 lb	338 lb	0 lb
3	Point	2-6-2		Far Face	94 lb	250 lb	0 lb



Pass-thru Framing Squash Block is required at all point loads over bearings

Comments

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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
 Up is not to be treated with fire retardant or corrosive
- chemicals

- Handling & Installation

 1. Julist flanges must not be cut or drilled

 2. Refer to latest copy of the IJoist product Information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and anolling/erection details

 3. Damaged Lioists must not be used

 4. Design assumes too 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
7. For flat roofs

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

Manufacturer Info

Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400



This desig



Client:

GREENPARK

Project: Address:

8/13/2018 Date:

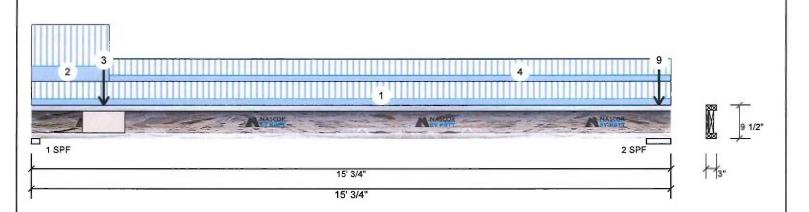
Designer: RCO

Job Name: HEMLOCK 3-1

Project #:

2-Ply - PASSED NJ 9.500"

Level: Ground Floor



Member Infor	mation			Unfacto	red Reac	tions U	INPATTERNI	ED lb (Uplift)	
Туре:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	v	Wind
Plies:	2	Design Method:	LSD	1	722		271		0	0
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	1030		495		0	0
Deflection LL:	360	Load Sharing:	No							
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked							
General Load										
Floor Live:	40 PSF			Bearing	s and Fac	tored	Reactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 - SPF	2.375"	53%	339 / 1083	1422	L	1.25D+1.5L
				2-SPF	6.875"	70%	619 / 1546	2164	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3260 ft-lb	6'8 1/16"	7340 ft-lb	0.444 (44%)	1.25D+1.5L	L.
Unbraced	3260 ft-lb	6'8 1/16"	3269 ft-lb	0.997 (100%)	1.25D+1.5L	L
Shear	1397 lb	1 5/8"	3080 lb	0.454 (45%)	1.25D+1.5L	L
Perm Defl in.	0.091 (L/1892)	7'1 11/16"	0.481 (L/360)	0.190 (19%)	D	Uniform
LL Defl inch	0.244 (L/710)	7'1 11/16"	0.481 (L/360)	0.510 (51%)	L	L
TL Defl inch	0.335 (L/516)	7'1 11/16"	0.721 (L/240)	0.460 (46%)	D+L	L

Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 3'8" o.c.

5 Bottom flange braced at bearings.

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August 17, 2018	

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Page 1 of 2

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 15-0-12	(Span)1-4-6	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-9-14	(Span)3-3-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-6		Near Face	111 lb	295 lb	0 lb	dl 0	F8
4	Tie-In	1-9-14 to 15-0-12	(Span)1-3-10	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	14-9-6		Тор	19 lb	49 lb	0 lb	0 lb	J7
6	Point	14-9-6		Тор	118 lb	314 lb	0 lb	0 lb	J7
7	Point	14-9-6		Тор	12 lb	32 lb	0 lb	0 lb	J7

This desig

Continued on page 2...

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and leadings 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
 Upost not to be treated with fire retardant or corrosive

chemicals

Handling & Installation

- Handling & Installation

 1. Usist flanges must not be but or drilled

 2. Refer to latest copy of the Wolst product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and andling/erection details

 3. Damaged Upists must not be used

 4. Design assumes top flange to be laterally restrained by attached sheatting 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

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

Kott Lumber Company 14 Anderson Blvd, Ontario Manufacturer Info Nascor by Kott Canada L4A 7X4







Client:

Address:

GREENPARK Project:

8/13/2018

Page 2 of 2

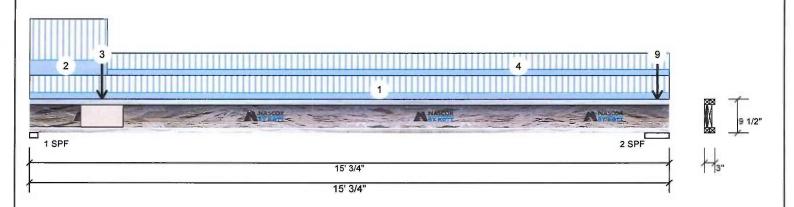
Designer: RCO Job Name: HEMLOCK 3-1

Project #:

Date:

NJ 9.500" 2-Ply - PASSED

Level: Ground Floor



.Continued from page 1

ID	Load Type	Location Tr	rib Width Side	Dead	Live	Snow	Wind	Comments
8	Point	14-9-6	Тор	71 lb	188 lb	0 lb	0 lb	J2
9	Point	14-9-6	Тор	107 lb	0 lb	0 lb	0 lb	Wall Self Weight

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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...
 Uoist not to be treated with fire retardant or corrosive...

chemicals

- nandling & Installation

 1. Julist flanges must not be cut or drilled

 2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

 3. Damaged Lioists must not be used

 4. Design assumes top flange to be laterally restrained by attached sheatting or as specified in engineering notes.

This design is valid until 7/10/2021

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

Nascor by Kott



Client: Project:

Address:

GREENPARK

8/13/2018 Date:

Designer:

Job Name: HEMLOCK 3-1

RCO

Project #:

2 - SPF 6.875"

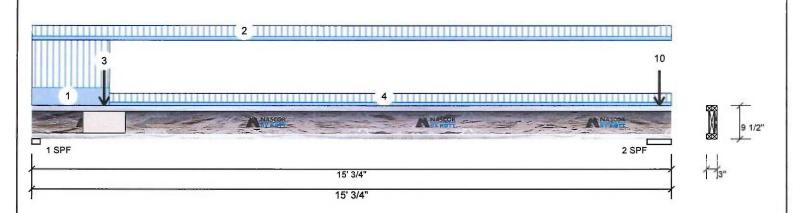
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NJ 2-Ply - PASSED 9.500"

Level: Ground Floor



Member Infor	mation		Unfactored Reactions UNPATTERNED Ib (Uplift)						
Туре:	Girder	Application:	Floor (Residential)	Brg	Live	Dead		Snow	Wind
Plies:	2	Design Method:	LSD	1	642	240		0	0
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	431	339		148	0
Deflection LL:	360	Load Sharing:	No	1 -					
Deflection TL:	240	Deck:	Not Checked	1					
Importance:	Normal	Vibration:	Not Checked	1					
General Load									
Floor Live:	40 PSF	V-1		Bearings	and Fact	ored Reaction	ons		
Dead:	15 PSF			Bearing L	ength	Cap. React I	D/L lb	Total Ld. Case	Ld. Comb.
				1 - SPF 2	2.375"	47% 300	/ 962	1263 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2136 ft-lb	5'6 3/8"	7340 ft-lb	0.291 (29%)	1.25D+1.5L	L
Unbraced	2136 ft-lb	5'6 3/8"	2138 ft-lb	0.999 (100%)	1.25D+1.5L	L
Shear	1242 lb	1 5/8"	3080 lb	0.403 (40%)	1.25D+1.5L	L
Perm Defl in.	0.060 (L/2896)	6'10 13/16"	0.481 (L/360)	0.120 (12%)	D	Uniform
LL Defl inch	0,159 (L/1086)	6'10 13/16"	0.481 (L/360)	0.330 (33%)	L+0.5S	L
TL Defl inch	0.219 (L/790)	6'10 13/16"	0.721 (L/240)	0.300 (30%)	D+L+0.5S	L

Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'6" o.c.

L	5 Bottom flange	braced at bearings.								
ſ	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
١	1	Tie-In	0-0-0 to 1-9-14	(Span)3-3-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
l	2	Tie-In	0-0-0 to 15-0-12	(Span)0-8-10	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
۱	3	Point	1-8-6		Far Face	149 lb	398 lb	0 lb	0 lb	F8
١	4	Tie-In	1-9-14 to 15-0-12	(Span)0-7-6	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
١	5	Point	14-9-6		Тор	11 lb	0 lb	0 lb	0 lb	Wall Self Weight
l	6	Point	14-9-6		Тор	32 lb	0 lb	74 lb	0 lb	
	7	Point	14-9-6		Тор	32 lb	0 lb	0 lb	0 lb	Wall Self Weight

Continued on page 2...

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
 Idoist not to be treated with fire retardant or corrosive

chemicals

Handling & Installation

- Handling & Installation
 Usist flanges must not be cut or drilled
 Refer to latest copy of the Usist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
 Damaged Lioists must not be used
 Design assumes too 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

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT. This desig

Manufacturer Info

Nascor by Kott

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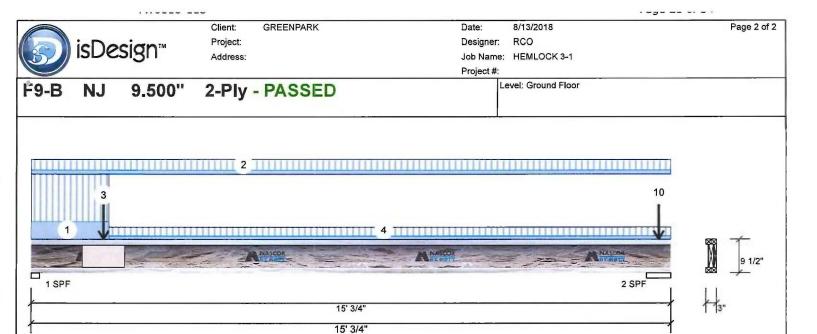
Page 1 of 2

1.25D+1.5L

+0.5S







.Continued from page 1 ID Load Type Location Trib Width Side Dead Live Snow Wind Comments 58 lb **Point** 71 lb 74 lb 0 lb .17 8 14-9-6 Top 9 Point 14-9-6 Top 45 lb 119 lb 0 lb 0 lb J7 10 Point 14-9-6 53 lb 0 lb 0 lb 0 lb Wall Self Weight Top

> Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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
 Usist not to be treated with fire retardant or corrosive

Handling & Installation

I. Juist Banges must not be cut or drilled
 Refer to latest copy of the Lloist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fasterning details and handling/erection details
 Damaged Lloists must not be used
 Design assumes top flange to be laterally restrained by attached sheating 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 roots provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Manufacturer Info

Nascor by Kott





Client:

GREENPARK

Project: Address: Date: 8/13/2018

Designer: RCO

Job Name: HEMLOCK 3-1

Project #:

9.500" NJ

2-Ply - PASSED

Application: Design Method:

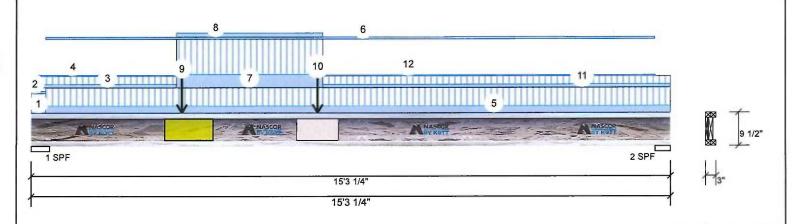
Building Code:

Load Sharing:

Deck:

Vibration:

Level: Ground Floor



Member Information							
Туре:	Girder	-					
Plies:	2						
Moisture Condition:	Dry						
Deflection LL:	360						
Deflection TL:	240						
Importance:	Normal						
General Load							
Floor Live:	40 PSF						
Dead:	15 PSF						

Unfactored Reactions UNPATTERNED lb (Uplift) Floor (Residential) Brg

LSD NBCC 2010 / OBC 2012 Νo Not Checked

Not Checked

Live Dead 437 214 2 331 161

Bearings and Factored Reactions Cap. React D/L lb Total Ld. Case Ld. Comb. Bearing Length 1.25D+1.5L 1 - SPF 5.250" 30% 267 / 655 923 L 2 - SPF 4.375" 23% 201 / 497 699 L 1.25D+1.5L

Snow

0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3691 ft-lb	6'10 1/8"	7340 ft-lb	0.503 (50%)	1.25D+1.5L	L
Unbraced	3691 ft-lb	6'10 1/8"	3712 ft-lb	0.995 (99%)	1.25D+1.5L	L
Shear	906 lb	4 1/2"	3080 lb	0.294 (29%)	1.25D+1.5L	L
Perm Defl in.	0.117 (L/1501)	7'3 7/16"	0.486 (L/360)	0.240 (24%)	D	Uniform
LL Defl inch	0.238 (L/735)	7'3 7/16"	0.486 (L/360)	0.490 (49%)	E	L
TL Defl inch	0.355 (L/493)	7'3 7/16"	0.730 (L/240)	0.490 (49%)	D+L	L

Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 3'4" o.c.

5 BULLUITI Harige	braced at bearings.								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-2	(Span)0-8-9	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 0-4-2		Тор	2 PLF	0 PLF	0 PLF	0 PLF	
3	Tie-In	0-1-2 to 3-5-10	(Span)0-4-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	0-1-2 to 3-5-10		Тор	1 PLF	0 PLF	0 PLF	0 PLF	
5	Tie-In	0-4-2 to 15-3-4	(Span)0-11-1	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
6	Part. Uniform	0-4-2 to 14-10-13		Тор	2 PLF	0 PLF	0 PLF	0 PLF	
7	Tie-In	3-5-10 to 6-11-10	(Span)1-8-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	

Continued on page 2...

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
 Usist not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

 1. Joist flanges must not be cut or drilled

 2. Refer to latest copy of the Uoist product information details for framing details, stiffnen tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

 3. Damaged Lioists must not be used

 4. Design assumes ton flange to be laterally restrained by attached sheathing or as specified in angineering 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 tlat roofs provide READ ALL NOTES OF

This design is v

READ ALL NOTES ON THIS PAGE AND ON THE

ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

Manufacturer Info

Nascor by Kott



Wind

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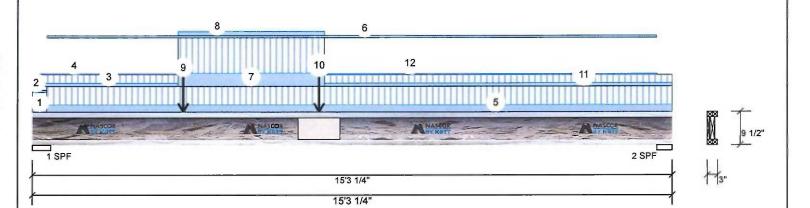
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Page 1 of 2





GREENPARK Date: 8/13/2018 Client: Designer: RCO isDesign™ Project: Job Name: HEMLOCK 3-1 Address: Project #: Level: Ground Floor NJ 9.500" 2-Ply - PASSED



Continued from p	page 1								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
8	Part. Uniform	3-5-10 to 6-11-10		Тор	4 PLF	0 PLF	0 PLF	0 PLF	
9	Point	3-7-2		Near Face	48 lb	98 lb	0 lb	0 lb	F7
10	Point	6-10-2		Near Face	85 lb	172 lb	0 lb	0 lb	F7
11	Tie-In	6-11-10 to 15-3-4	(Span)0-4-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
12	Part. Uniform	6-11-10 to 14-10-13		Тор	1 PLF	0 PLF	0 PLF	0 PLF	

Pass-Thru Framing Squash Block is required at all point loads over bearings

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Page 2 of 2

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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
 Upoist not to be treated with fire retardant or corrosive.

chemicals

- nanung & Installation

 1. Joist flanges must not be cut or drilled

 2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

 3. Darmaged Lioists must not be used

 4. 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 Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400



This design is valid until 7/10/2021

Client:

GREENPARK

Project: Address:

Date:

8/13/2018

Designer: RCO

Job Name: HEMLOCK 3-1

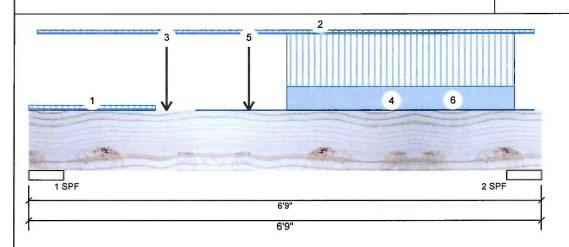
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor



Floor (Residential)

Not Checked

Not Checked

NBCC 2010 / OBC 2012

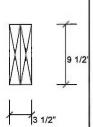
Application:

Design Method:

Building Code:

Load Sharing:

Deck: Vibration:



Page 1 of 1

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Member Information

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

Deflection TL: 240 Importance: Normal General Load

40 PSF Floor Live: Dead: 15 PSF

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	Wind
1	923	401	0	0
2	555	262	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	16%	502 / 1384	1885	L	1.25D+1.5L
2-SPF	5.500"	10%	327 / 832	1159	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2616 ft-lb	1'9 3/4"	22724 ft-lb	0.115 (12%)	1.25D+1.5L	L
Unbraced	2616 ft-lb	1'9 3/4"	22023 ft-lb	0.119 (12%)	1.25D+1.5L	L
Shear	2026 lb	1'2 1/4"	9277 lb	0.218 (22%)	1.25D+1.5L	L
Perm Deff in.	0.008 (L/8434)	3' 11/16"	0.199 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.019 (L/3740)	3' 1/16"	0.199 (L/360)	0.100 (10%)	L	L
TL Defl inch	0.028 (L/2591)	3' 1/4"	0.298 (L/240)	0.090 (9%)	D+L	L

Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top braced at bearings.
- 5 Bottom braced at bearings.
- 6 Lateral slenderness ratio based on full section width

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August 17, 2018

6 Lateral	siendemess ratio based (on full section width.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-8-0	(Span)0-4-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-1-4 to 6-7-14	(Span)0-3-9	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-9-12		Near Face	388 lb	973 lb	0 lb	0 lb	F3
4	Part. Uniform	2-2-6 to 6-7-14		Тор	1 PLF	0 PLF	0 PLF	0 Pass	Thru Framing Squash Block is
5	Point	2-10-12		Near Face	53 lb	117 lb	0 lb	requii 0 lb	red at all point loads over bearings
6	Part, Uniform	3-4-12 to 6-4-12		Near Face	49 PLF	112 PLF	0 PLF	Refer	to Multiple Member Connection

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.

Self Weight

Lumber

- Dry service conditions unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- chemicals
- Handling & Installation
- andling & Installation
 LVL beams must not be out 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 too 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 desig

8 PLF

Manufacturer Info Forex

APA: PR-L318

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400





Detail for ply to ply nailing or bolting

requirements

Client: Project: isDesian Address:

GREENPARK

8/13/2018

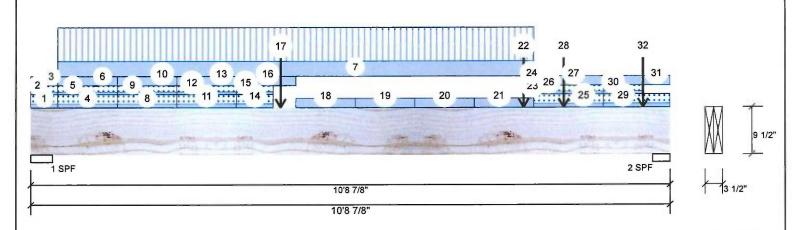
Designer: RCO

Job Name: HEMLOCK 3-1

Project #:

1.750" X 9.500" 2-Ply - PASSED Forex 2.0E-3000Fb LVL

Level: Second Floor



Member Inform	nation			Unfactor	ed React	tions UNPATTERN	ED lb (Uplift)	
Туре:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind
Plies:	2	Design Method:	LSD	1	1437	1455	719	0
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012	2	1424	1411	689	0
Deflection LL:	360	Load Sharing:	No	5.00				
Deflection TL:	240	Deck:	Not Checked	1				
Importance:	Normal	Vibration:	Not Checked	1				
General Load								
Floor Live:	40 PSF			Bearings	and Fac	tored Reactions		
Dead:	15 PSF			Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.

1 - SPF 4.375"

2 - SPF 3.500"

46%

56%

1819 / 2516

1764 / 2480

ľ							
Γ	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	10861 ft-lb	5'2 11/16"	22724 ft-lb	0.478 (48%)	1.25D+1.5L +0.5S	L
	Unbraced	10861 ft-lb	5'2 11/16"	20666 ft-lb	0.526 (53%)	1,25D+1,5L +0.5S	L
	Shear	4404 lb	9'8 5/8"	9277 lb	0.475 (47%)	1.25D+1.5L +0.5S	L
l	Perm Defl in.	0.147 (L/833)	5'4 7/16"	0.340 (L/360)	0.430 (43%)	D	Uniform

5'4 1/2" 0.340 (L/360) 0.550 (55%) L+0.5S 5'4 7/16" 0.510 (L/240) 0.650 (65%) D+L+0.5S T.L. WISE 100083566 100083566

4335 L

4244 L

1.25D+1.5L

+0.5S1.25D+1.5L

.

Page 1 of 2

August 17, 2018

Design Notes 1 Girders are designed to be supported on the bottom edge only.

- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top braced at bearings.

Analysis Results

5 Bottom braced at bearings.

LL Defl inch 0.187 (L/656)

TL Defl inch 0.334 (L/367)

6 Lateral slenderness ratio based on full section width.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow
1	Part. Uniform	0-0-0 to 0-5-7		Тор	34 PLF	0 PLF	80 PLF
2	Part, Uniform	0-0-0 to 0-5-7		Тор	23 PLF	0 PLF	53 PLF
3	Part. Uniform	0-0-0 to 0-5-7		Тор	80 PLF	0 PLF	0 PLF
4	Part. Uniform	0-5-7 to 1-5-7		Тор	34 PLF	0 PLF	80 PLF
5	Part, Uniform	0-5-7 to 1-5-7		Тор	23 PLF	0 PLF	53 PLF

Wind Comments 0 PLF

⁰Pass-Thru Framing Squash Block is orequired as ad lypoint loads over bearings

Refer to Multiple Member Connection ODetail for ply to ply nailing or bolting requirements

Continued on page 2...

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.

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 beaning points to avoid lateral displacement and rotation
- For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED This desig IN THE DESIGN OF THIS COMPONENT.





Client: **GREENPARK** Date: 8/13/2018 Page 2 of 2 Project: Designer: RCO isDesign Address: Job Name: HEMLOCK 3-1 Project #: Level: Second Floor Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED 17 22 28 32 7 10 13 16 24 27 31 3 6 12 15 26 30 5 9 23 11 18 25 7 29 8 14 4 1 SPF 2 SPF 10'8 7/8 10'8 7/8" .Continued from page 1 ID Location Trib Width Load Type Side Dead Live Snow Wind Comments Part, Uniform 80 PLF 0 PLF Wall Self Weight 6 0-5-7 to 1-5-7 Top 0 PLF 0 PLF 134 PLF 7 Part, Uniform 0-5-7 to 8-5-7 291 PLF 0 PLF 0 PLF Near Face 0 PLF 8 Part, Uniform 1-5-7 to 2-5-7 Top 34 PLF 0 PLF 80 PLF 9 Part, Uniform 1-5-7 to 2-5-7 23 PLF OPLE **53 PLF** 0 PLF Top 10 Part, Uniform 1-5-7 to 2-5-7 Top 80 PLF OPLE 0 PLF 0 PLF Wall Self Weight 80 PLF 0 PLF 0 PLF 11 Part, Uniform 2-5-7 to 3-5-7 Top 34 PLF 53 PLF 0 PLF 12 Part, Uniform 2-5-7 to 3-5-7 Top 23 PLF OPLE Part. Uniform 2-5-7 to 3-5-7 80 PLF OPIF 0 PLF 0 PLF Wall Self Weight 13 Top 14 Part, Uniform 3-5-7 to 4-0-14 Top 34 PLF 0 PLF 80 PLF 0 PLF OPIF 0 PLF 15 Part. Uniform 3-5-7 to 4-0-14 23 PI F **53 PLF** Top 16 Part. Uniform 3-5-7 to 4-5-7 Top 80 PLF 0 PLF 0 PLF 0 PLF Wall Self Weight **Point** 0 lb 288 lb Header Column 17 4-2-6 Top 141 lb 0 lb Part. Uniform 4-5-7 to 5-5-7 80 PLF 0 PLF 0 PLF 0 PLF Wall Self Weight 18 Top 80 PLF 0 PLF 0 PLF Wall Self Weight 19 Part. Uniform 5-5-7 to 6-5-7 OPLE Top 0 PLF 20 Part, Uniform 6-5-7 to 7-5-7 Тор 80 PLF 0 PLF 0 PLF Wall Self Weight 0 PLF 21 Part, Uniform 7-5-7 to 8-5-7 80 PLF 0 PLF Wall Self Weight Top 0 PLF 22 Point 8-3-6 Top 141 lb 0 lb 288 lb 0 lb Header Column 0 PLF 23 Part, Uniform 8-4-14 to 8-5-7 34 PLF 80 PLF 0 PLF Top 24 Part. Uniform 8-4-14 to 8-5-7 Top 23 PLF 0 PLF 53 PLF 0 PLF 34 PLF 0 PLF 80 PLF 0 PLF 25 Part, Uniform 8-5-7 to 9-7-7 Top 26 Part, Uniform 8-5-7 to 9-7-7 **23 PLF** 0 PLF **53 PLF** 0 PLF Top Part. Uniform 8-5-7 to 9-7-7 80 PLF 0 PLF 0 PLF 0 PLF Wall Self Weight 27 Top 28 **Point** 8-11-7 Near Face 138 lb 340 lb 0 lb 0 lb J7 Part. Uniform 9-7-7 to 10-8-14 Top 34 PLF 0 PLF 80 PLF 0 PLF 29 30 Part, Uniform 9-7-7 to 10-3-6 Top 23 PLF 0 PLF 53 PLF 0 PLF 31 Part. Uniform 9-7-7 to 10-8-14 80 PLF 0 PLF 0 PLF 0 PLF Wall Self Weight Top 32 Point 10-3-7 Near Face 79 lb 193 lb 4 lb 0 lb J7 Self Weight 8 PLF Manufacturer Info Kott Lumber Company 14 Anderson Blvd, Ontario chemicals 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. Handling & Installation Canada APA: PR-L318 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 L4A 7X4 905-642-4400 Lumber 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 2. LVL not to be treated with fire retardant or corrosive

This design is valid until 7/10/2021

********* Client: **GREENPARK** Date: 8/13/2018 Page 1 of 1 Project: Designer: RCO isDesign HEMLOCK 3-1 Address: Job Name: Project #: Level: Second Floor Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED 2 1 Hanger (HGUS410) 2 SPF 14'8' 14'8' **Unfactored Reactions UNPATTERNED Ib (Uplift)** Member Information Girder Floor (Residential) Snow Wind Type: Application: Live Dead Brg Plies: Design Method: LSD 2 422 234 0 0 NBCC 2010 / OBC 2012 Moisture Condition: Dry **Building Code:** 2 585 292 Deflection LL: 360 Load Sharing: No Deflection TL: 240 Deck: Not Checked Importance: Normal Vibration: Not Checked General Load **Bearings and Factored Reactions** 40 PSF Floor Live: Dead: 15 PSF Cap. React D/L lb Total Ld. Case Ld. Comb. Bearing Length 292 / 632 925 L 1.25D+1.5L 4.000" 9% Hanger 2 - SPF 5.500" 10% 365 / 877 1242 L 1.25D+1.5L **Analysis Results** Analysis Actual Location Allowed Capacity Comb. T.L. WISE 100083566 5610 ft-lb 8'5 3/4" 22724 ft-lb 0.247 (25%) 1.25D+1.5L L Moment Unbraced 5610 ft-lb 8'5 3/4" 18853 ft-lb 0.298 (30%) 1.25D+1.5L L Shear 1154 lb 13'5 3/4" 9277 lb 0.124 (12%) 1.25D+1.5L L Uniform Perm Defl in. 0.083 (L/2020) 7'7 1/8" 0.467 (L/360) 0.180 (18%) D LL Defl inch 0.168 (L/999) 7'8 1/8" 0.467 (L/360) 0.360 (36%) L 100083566 7'7 13/16" 0.700 (L/240) 0.360 (36%) D+L TL Defl inch 0.251 (L/668) **Design Notes** 1 Fill all hanger nailing holes. 2 Girders are designed to be supported on the bottom edge only. 3 Multiple plies must be fastened together as per manufacturer's details. August 17, 2018 4 Top loads must be supported equally by all plies. 5 Top braced at bearings. 6 Bottom braced at bearings. 7 Lateral slendemess ratio based on full section width. Side ID Load Type Location Trib Width Dead Live Snow Wind Comments 0-0-0 to 14-6-12 Тор 15 PSF 40 PSF 0 PSF 0 PSF Tie-In (Span)1-1-2 1 2 0 PLF 0 PLF 0 PLF Part, Uniform 0-1-0 to 8-3-11 2 PLF Top Pass-Thru Framing Squash Block is Point 8-5-12 Far Face 239 lb 583 lb 0 lb 3 required at all point loads over bearings Top 15 PSF 40 PSF 0 PSF Tie-In 8-6-10 to 14-3-12 (Span) 0-10-14 **Refer to Multiple Member Connection** Self Weight 8 PLF Detail for ply to ply nailing or bolting requirements Manufacturer Info Kott Lumber Company 6. For flat roofs provide proper drainage to prevent ponding chemicals 14 Anderson Blvd, Ontario 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. Handling & Installation Forex APA: PR-L318 Canada 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 READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE approvals
Damaged Beams must not be used
Design assumes top edge is laterafly restrained
Provide lateral Support at bearing points to avoid
lateral displacement and rotation Lumber IS AN INTEGRAL PART OF THIS DRAWING AS IT

CONTAINS SPECIFICATIONS AND CRITERIA USED

IN THE DESIGN OF THIS COMPONENT.

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

Client:

GREENPARK

Project: Address: Date:

8/13/2018

RCO Designer:

HEMLOCK 3-1 Job Name:

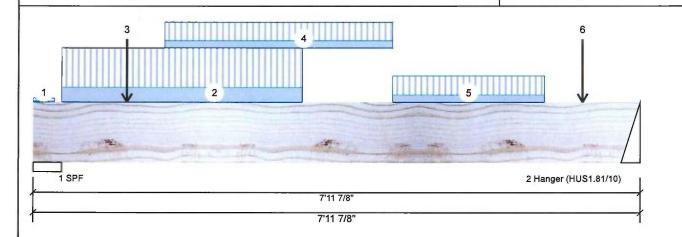
Project #:

Forex 2.0E-3000Fb LVL

..... ---

1.750" X 9.500" - PASSED

Level: Second Floor



Page 1 of 1

Member Informa	tion	ì
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Туре:	Girder
Plies:	1
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
General Load	
Floor Live:	40 DSE

Application: Design Method:

Building Code:

Load Sharing: Deck:

Vibration:

Floor (Residential) LSD NBCC 2010 / OBC 2012

Not Checked

Not Checked

Live 1 2

Dead Snow 389 239

Unfactored Reactions UNPATTERNED Ib (Uplift)

Wind 0 0 0

.

Floor Live: Dead: 15 PSF

Bearings and Factored Reactions

978

583

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.500"	40%	486 / 1467	1953	L	1.25D+1.5L
2 - Hanger	3.000"	30%	298 / 874	1172	L	1.25D+1.5L

Wind

0 PSF

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3003 ft-lb	3'2 15/16"	11362 ft-lb	0.264 (26%)	1.25D+1.5L	L
Unbraced	3003 ft-lb	3'2 15/16"	4978 ft-lb	0.603 (60%)	1.25D+1.5L	L
Shear	1594 lb	1'1 1/4"	4638 lb	0.344 (34%)	1.25D+1.5L	L
Perm Defl in.	0.028 (L/3259)	3'9 3/4"	0.250 (L/360)	0.110 (11%)	D	Uniform
LL Defl inch	0.069 (L/1310)	3'9 9/16"	0.250 (L/360)	0.270 (27%)	L	L
TL Defl inch	0.096 (L/934)	3'9 5/8"	0.374 (L/240)	0.260 (26%)	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 braced at bearings.
- 4 Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow
1	Tie-In	0-0-0 to 0-3-6	(Span)0-10-7	Тор	15 PSF	40 PSF	0 PSF
2	Part. Uniform	0-4-8 to 3-6-8		Тор	90 PLF	240 PLF	0 PLF
3	Point	1-2-12		Far Face	46 lb	117 lb	0 lb
4	Part. Uniform	1-8-12 to 4-8-12		Far Face	44 PLF	112 PLF	0 PLF
5	Part. Uniform	4-8-12 to 6-8-12		Far Face	45 PLF	116 PLF	0 PLF
6	Point	7-2-12		Far Face	42 lb	111 lb	0 lb
	Self Weight				4 PLF		

T.L. WISE 100083566 100083566 WCE OF ONTAR

August 17, 2018 Comments

0 PLF 0 lb 0 PLF Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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

Handling & Installation

1.

- 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
- approvers
 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 Forex APA: PR-L318

READ ALL NOTES ON THIS PAGE AND ON THE

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400

ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.



This design



Client:

Address:

GREENPARK

Project:

Date:

RCO Designer:

Job Name: HEMLOCK 3-1 (WOD)

8/13/2018

Project #:

Forex 2.0E-3000Fb LVL

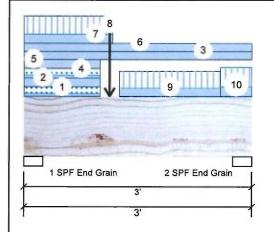
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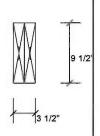
1.750" X 9.500" 2-Ply - PASSED

1

2

Level: Ground Floor





Wind

0

167

69

Page 1 of 2

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Bearings	and	Factored	Reactions

Live

128

130

Unfactored Reactions UNPATTERNED Ib (Uplift)

328

1				2000010110				
ı	Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.	
	1 - SPF End Grain	3.000"	16%	637 / 251	888	L	1.25D+1.5S	
	2 - SPF End Grain	3.000"	10%	410 / 195	606	L	1.25D+1.5L	

Analysis Results

Mambar Information

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	580 ft-lb	1'1 1/2"	16361 ft-lb	0.035 (4%)	1.25D+1.5S	L
Unbraced	580 ft-lb	1'1 1/2"	16361 ft-lb	0.035 (4%)	1.25D+1.5S	L
Shear	566 lb	11 3/4"	6679 lb	0.085 (8%)	1.25D+1.5S	L
Perm Defl in.	0.002 (L/17575)	1'1 11/16"	0.088 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.001 (L/39026)	1'1 1/2"	0.088 (L/360)	0.010 (1%)	S+0.5L	L
TL Defl inch	0.003 (L/12120)	1'1 1/2"	0.131 (L/240)	0.020 (2%)	D+S+0.5L	L

Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 To
- 5 B
- 6 1

Top braced at bearings.	
Bottom braced at bearings.	
_ateral slenderness ratio based on full section width.	



T.L. WISE

100083566

6 Lateral sier	idemess rado based on	ruii section width.								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Part. Uniform	0-0-0 to 1-0-0		Тор	14 PLF	0 PLF	34 PLF	0 PLF		
2	Part. Uniform	0-0-0 to 1-0-0		Тор	44 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight	
3	Part. Uniform	0-0-0 to 3-0-0		Тор	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight	
4	Part. Uniform	0-0-0 to 1-0-0		Near Face	14 PLF	0 PLF	34 PLF	0 PLF		
5	Part. Uniform	0-0-0 to 1-0-0		Near Face	44 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight	

Continued on page 2...

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

 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

Manufacturer Info

Forex APA: PR-L318

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT CONTAINS SPECIFICATIONS AND CRITERIA-USED

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400



This desig IN THE DESIGN OF THIS COMPONENT.

Client: Project:

Address:

GREENPARK

Date:

8/13/2018

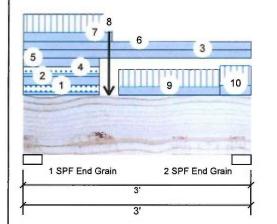
RCO

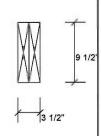
Designer: Job Name: HEMLOCK 3-1 (WOD)

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" 2-Ply - PASSED Level: Ground Floor





Page 2 of 2

Continued from	n page 1								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Part. Uniform	0-0-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
7	Part. Uniform	0-0-0 to 1-2-0		Near Face	45 PLF	90 PLF	0 PLF	0 PLF	J3
8	Point	1-1-8		Тор	332 lb	0 lb	168 lb	0 lb	Header Column Header Column
9	Part. Uniform	1-3-1 to 2-7-1		Near Face	41 PLF	85 PLF	0 PLF	0 PLF	J3
10	Part. Uniform	2-7-1 to 3-0-0		Near Face	48 PLF	97 PLF	0 PLF	0 PLF	J3
	Self Weight				8 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. LVL beams must not be out 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. Dasign assumes top adge is laterally restrained

5. Produce 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 7/10/2021

Forex APA: PR-L318

Manufacturer Info





WHERE FOUNDATION WALLS MUST BE LATERALLY SUPPORTED AND NO DETAIL IS PROVIDED BY THE BUILDING DESIGNER, SEE DETAIL U3 IN THE NASCOR SPECIFIER GUIDE

......

This certification is to confirm that: 1. The loads used in the calculation of the attached approved components conform to the floor assembly shown on this layout. 2. The floor joists comply with the Nascor span table for the loads and spacing shown on this layout.

The floor system must be assembled in accordance to the Nascor Specifier Guide. Multi-ply members must be attached together as per the included multiple member connection detail.

All other components and structural elements supporting the floor system such as beams, walls, columns and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of others.



OF ERAMPTON BUILDING DIVISION REVIEWED FEB 0 7 2013

All work shall conform to the Ontario Building Code O. Reg. 332/12 as amended

> ungmeered floor joists shall be installed in accordance with the supplier's layout and specifications forming part of the permit drawings.



Load from Above

- 1. OBC 2012 O.Reg 332/12 as amended
- 2. Nascor CCMC 13535-R
- 4. CAN/CSA-086-09
- 5. CCMC -12787-R APA PR-L310(C)

Wall
Wall Opening
Norbord Rimboard Plus 1.125 X 9.5
NJ 9.5
NJ60U 9.5
NJH 9.5
Forex 2.0E-3000Fb LVL 1.75 X 9.5

- 3. LVL CCMC -14056-R

Ground	Floor									
LVL/LS	L (Flus	sh)								ALACCOR
Label	Descr	iption	Wid	Ith De	epth	Qty	Plies	Pcs	Length	NASCOR
F5	Forex 2.0E-3	3000Fb LVL	1.	.75	9.5	7 7 1		1	10-0-0	
F11	Forex		1.	.75	9.5	2	2	4	8-0-0	Layout Name 407 /2 } HEMLOCK 3-1 (WOD)
F17	Forex 2.0E-3	3000Fb LVL	1.	.75	9.5			4	6-0-0	Design Method
FH3	Forex 2.0E-3	3000Fb LVL	1.	.75	9.5	1	2	2	4-0-0	Description
F1	Forex 2.0E-3	3000Fb LVL	1.	75	9.5			1	2-0-0	MINNISALE HOMES CORP. BRAMPTON, ONT.
I Joist ((Flush)	,								Revised
Label	-		Wid	ith De	epth	Qty	Plies	Pcs	Length	August 13, 2018
F9	NJ		1	1.5	9.5	3	2	6	16-0-0	
F8	NJ			1.5	9.5	1	2	2	4-0-0	Builder
F7	NJ		1	1.5	9.5	2	2	4	2-0-0	GREENPARK
J7	NJ60U	,	3	3.5	9.5			15	16-0-0	Sales Rep
J5	NJH 2,5		2.5	9.5			10	14-0-0	RM	
J4	NJH		2	2.5	9,5			8	10-0-0	Designer
J2	NJH	NJH 2.5 9.5				6	8-0-0	RCO		
J3	NJH		2	2.5	9.5			7	6-0-0	
J1	NJH		2	2.5	9.5			1	4-0-0	Shipping
Rim Bo	ard			23			215 211			Project
Label	Descr	iption	Wid	Ith De	epth	Qty	Plies	Pcs	Length	Builder's Project
R1		rd Rimboard .125 X 9.5	1.1:		9.5			12	12	Kott Lumber Company
Blockin								-	•	14 Anderson Blvd
	Descr	ription	Wid	ith De	epth	Qty	Plies	Pcs	Length	Stouffville, Ontario
BLK1	NJH			2.5	9.5	LinFt		Varies	8-0-0	Canada
Hanger										L4A 7X4
						Be	am/Girde		pported ember	905-642-4400 Job Path
Label	Pcs	Description	n	Skew	Slo	nne fr	asteners	_	steners	D:\Users\rochavillo\WORK FROM
H1	1	HGUS410	-	Onen	5.0		46 16d	_	6 16d	HOME\GREENPARK\MINNISALE
H2	2	HUS1.81/10	n		-		30 16d		0 16d	HOMES\HEMLOCK 3\HEMLOCK 3-
H3	4	LT2-159	-			_	10dx1 1/2		Odx1 1/2	\FLOOR\REV\WOD\HEMLOCK 3-1.
H4	18	LT259					10dx1 1/2		0dx1 1/2	Ground Floor
H5	1	L90	\neg						747	Design Method LSD
H7	4	LT359					4 10d	2 10	0dx1 1/2	Building Code NBCC 2010 / OBC
Н9	1	HUCQ1.81/ SDS	9-							Floor

NOTES:

- Framer to verify dimensions on the architectural drawings.
- 2. Double joist only require filler/backer ply when supporting another member using a face-mounted hanger.
- 3. Install 2x4 blocking @ 24" o/c under parallel non-load bearing walls.
- 4. Install single-ply flush window header along inside face of rimboard/rimjoist.
- . Refer to Nascor specifier guide for installation works.
- . Squash blocks recommended to be installed at end bearing on all first level joists which support loading from above exceeding two levels floor or roof.
- . Load transfer blocks to be installed under all point loads.
- 8. It shall be the framer's responsibility that floor joists and beams are fastened as per the hanger manufacturer's standards.

Refer to Multiple Member Connection Detail to ply to ply nailing or bolting requirements.

Rim parallel to joists: 1-1/8" rimboard with 2"x 4" block (1/16" longer than rim depth @ 16" o/c). All other components and structural elements supporting the floor system such as beams, walls, columns, and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of Others.

Hatch area represents ceramic tiled floor with an additional dead load of 5 PSF

The framing shown on this layout may deviate from the architectural and structural drawings. Project Engineer to review and approve the deviation prior

ARCHITECTURAL DRAWINGS:

VA3 DESIGN 255 Consumers Rd., Suite 120, Toronto, ON Date: Rev.5; July 23,2018 Project No: 18012 Model: Hemlock 3





Loads

Live

Dead

Deflection Joist

LL Span L/

TL Span L/

LL Cant 2L/

TL Cant 2L/

LL Span L/

TL Span L/

LL Cant 2L/

TL Cant 2L/

Decking

Thickness

Fastener

Vibration

Deck

Deflection Girder

40

15

480

360

480

360

360

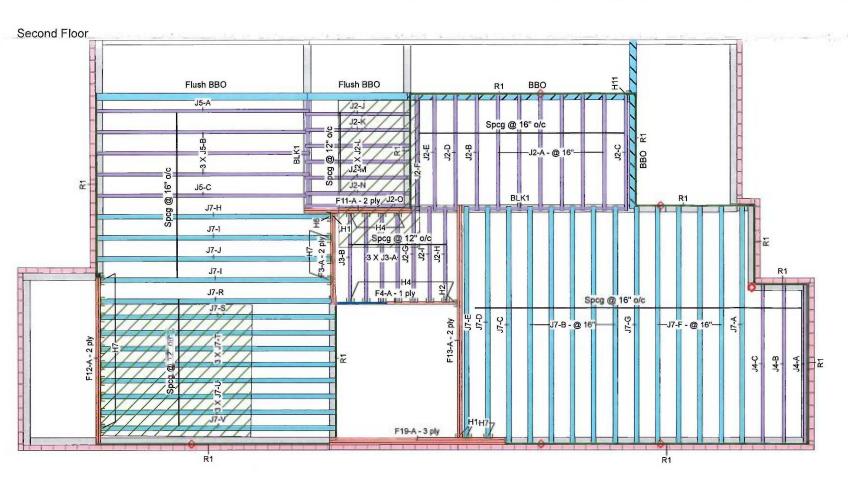
240

480

360

SPF Plywood

Nailed & Glued



4 BEDROOM OPTION



This certification is to confirm that: 1. The loads used in the calculation of the attached approved components conform to the floor assembly shown on this layout. 2. The floor joists comply with the Nascor span table for the loads and spacing shown on this layout.

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The floor system must be assembled in accordance to the Nascor Specifier Guide. Multi-ply members must be attached together as per the included multiple member connection detail.

All other components and structural elements supporting the floor system such as beams, walls, columns and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of others.

nd	
♦	Load from Above
	Wall
Section.	Norbord Rimboard Plus 1,125 X 9,5
	NJ60U 9.5
	NJH 9.5
	Forex 2.0E-3000Fb LVL 1.75 X 9.5
	5,25 X 9.5

- 1. OBC 2012 O.Reg 332/12 as amended
- 2. Nascor CCMC 13535-R
- 3. LVL CCMC -14056-R
- 4. CAN/CSA-086-09
- 5. CCMC -12787-R APA PR-L310(C)

Second LVL/LS																								
Label	Descri		Wid	th	De	pth	(Qty	Plies	Pcs	Length	n												
F13	Forex 2.0E-3	000Fb LVL	1.7	75		9.5		1	2	2	16-0-0													
F19	Forex 2.0E-3	000Fb LVL	1.7	75		9.5		1	3	3	12-0-0	Lay HE												
F12	Forex 2.0E-3	000Fb LVL	1.7	75		9.5		1	2	2	12-0-0	Des												
F11	Forex 2.0E-3	000Fb LVL	1.7	75		9.5		1	2	2	8-0-0	Des												
F4	Forex 2.0E-3	orex DE-3000Fb LVL		75		9.5				1	8-0-0	MI BF												
F3	Forex 2.0E-3000Fb LVL		1.7	75		9.5		1	2	2	6-0-0	Rev												
	Joist (Flush)																							
Label				Description													De	pth	(Qty	Plies	Pcs	Length	Bui
J7	NJ60U			.5		9.5				27	16-0-0	GF												
J5	NJH			.5	-	9,5				5	14-0-0	Sal												
J4	NJH			.5		9.5				3	10-0-0	RN												
J2	NJH			.5	9.5					21	8-0-0	Des												
J3	NJH		2	.5		9.5	_			4	6-0-0	RC												
Rim Bo												Shi												
Label		Description							(Qty	Plies	Pcs	Length											
R1		d Rimboard	1.12	25		9.5				9	12	Pro												
Dia akin		125 X 9.5								_		Bui												
Blockin	-	ntion	Wid	ih T	Da	-46	,	74.	Plies	Des	Lamadh	K												
Label BLK1	Descri NJH	puon		.5	De	9.5		Qty inFt	Piles	Pcs	Length 13-0-0	14												
			2	.5		9.5		InFt		Varies	13-0-0	Sto												
Hange								Bea	am/Girder		ported ember	Ca L4.												
Label	Pcs	Descriptio	n	Ske	ew	Slo	ре	fa	steners	fas	teners	90												
H1	2	HGUS410							46 16d		3 16d	Job												
H2	1	HUS1.81/1	0						30 16d) 16d	D:\												
H4	11	LT259						4 1	10dx1 1/2	2 10	dx1 1/2	HC												
H6	1	LT359										HC \FL												
H7	15	LT359							4 10d	2 10	dx1 1/2	3-1												
H11	1	Unknown Hanger										Sec												

NOTES:

- 1. Framer to verify dimensions on the architectural drawings. 2. Double joist only require filler/backer ply when supporting
- another member using a face-mounted hanger.

 3. Install 2x4 blocking @ 24" o/c under parallel non-load bearing walls.
- 4. Install single-ply flush window header along inside face of
- rimboard/rimjoist.
 5. Refer to Nascor specifier guide for installation works.
 6. Squash blocks recommended to be installed at end bearing on all first level joists which support loading from above exceeding two levels floor or roof,
- 7. Load transfer blocks to be installed under all point loads.
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Refer to Multiple Member Connection Detail to ply to ply nailing or

Rim parallel to joists: 1-1/8" rimboard with 2"x 4" block (1/16" longer than rim depth @ 16" o/c). All other components and structural elements supporting the floor system such as beams, walls, columns, and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of Others.

Hatch area represents ceramic tiled floor with an addtional dead load of 5 PSF

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ARCHITECTURAL DRAWINGS:

VA3 DESIGN 255 Consumers Rd., Suite 120, Toronto, ON Date: Rev.5; July 23,2018 Project No: 18012 Model: Hemlock 3

yout Name HEMLOCK 3-1 esign Method escription MINNISALE HOMES CORP. BRAMPTON, ONT. vised lugust 13, 2018 uilder GREENPARK ales Rep signer RCO nipping oject ilder's Project **Cott Lumber Company** 4 Anderson Blvd Stouffville, Ontario Canada 4A 7X4 05-642-4400 b Path :\Users\rochavillo\WORK FROM IOME\GREENPARK\MINNISALE HOMES HEMLOCK 3 HEMLOCK 3-FLOOR\REV\4 BED OPT\HEMLOCI econd Floor LSD Design Method Building Code NBCC 2010 / OBC 2012 Floor Loads Live 40 15 Dead Deflection Joist LL Span L/ 480 TL Span L/ 360 LL Cant 2L/ 480 TL Cant 2L/ 360 Deflection Girder LL Span L/ 360 TL Span L/ 240 480 LL Cant 2L/ TL Cant 2L/ 360 Decking SPF Plywood Deck

Thickness

Fastener

Vibration

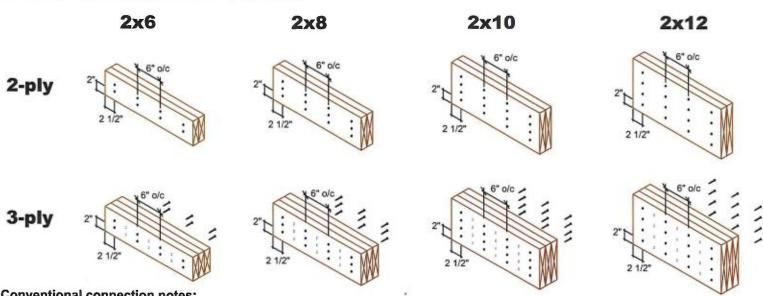
Ceiling:

Nailed & Glued

Gypsum 1/2"

MULTIPLE MEMBER CONNECTION

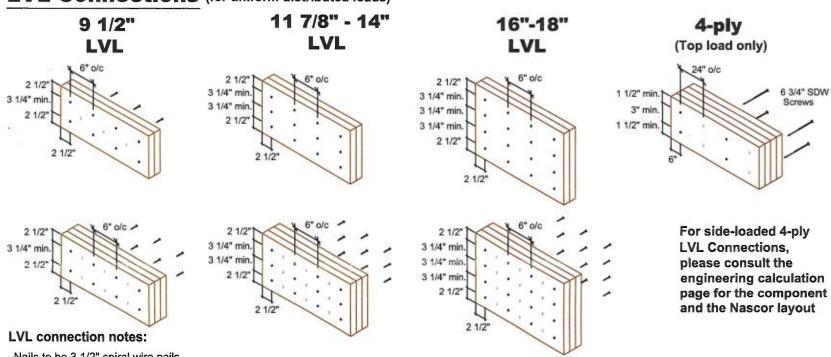
Conventional Connections (for uniform distributed loads)



Conventional connection notes:

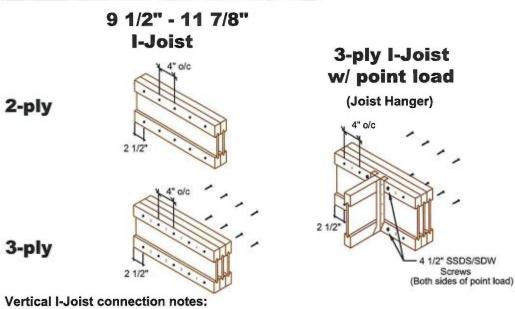
- -Nails to be 3" 10d spiral wire nails.
- -Nails to be located a minimum of 2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
- -Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

LVL Connections (for uniform distributed loads)



- -Nails to be 3 1/2" spiral wire nails.
- -Nails to be located a minimum of 2 1/2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
- -Minimum 3 1/4" spacing between rows.
- -Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail or screw driven from the opposite side.

Vertical I-Joist Connections (for uniform distributed loads)



- -Nails to be 3" spiral wire nails.
- -Nails to be located at centre of top and bottom flanges. Start all nails a minimum of 2 1/2" in from ends.
- -Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.



MULTI-PLY CONNECTION DETAILS

Scale: NTS

KOTT 3228 Moodie Drive Ottawa, ON **K2H 7V1**