LOT 37R

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 only 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.

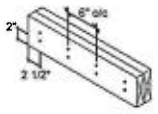
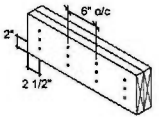
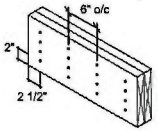
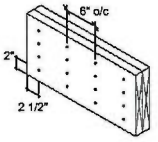
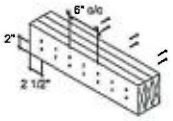
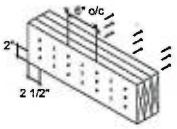
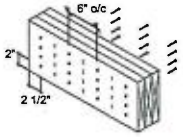
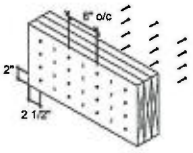
HANDLING AND INSTALLATION

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

KOTT

MULTIPLE MEMBER CONNECTIONS

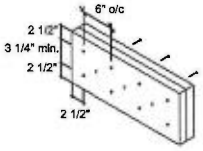
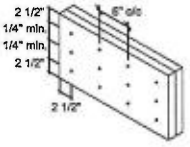
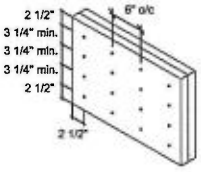
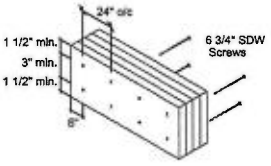
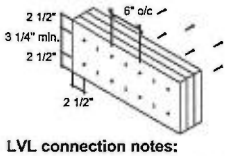
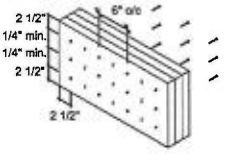
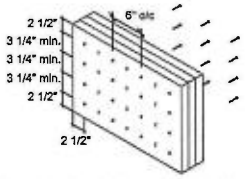
Conventional Connections (for uniform distributed loads)

	2x6	2x8	2x10	2x12
2-ply				
3-ply				

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)

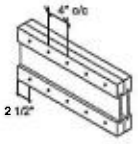
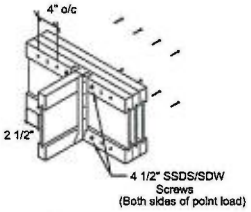
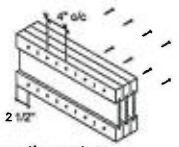
	9 1/2" LVL	11 7/8" - 14" LVL	16"-18" LVL	4-ply (Top load only)
				
				

For side-loaded 4-ply LVL Connections, please consult the engineering calculation page for the component and the Nascor layout

LVL connection notes:

-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)

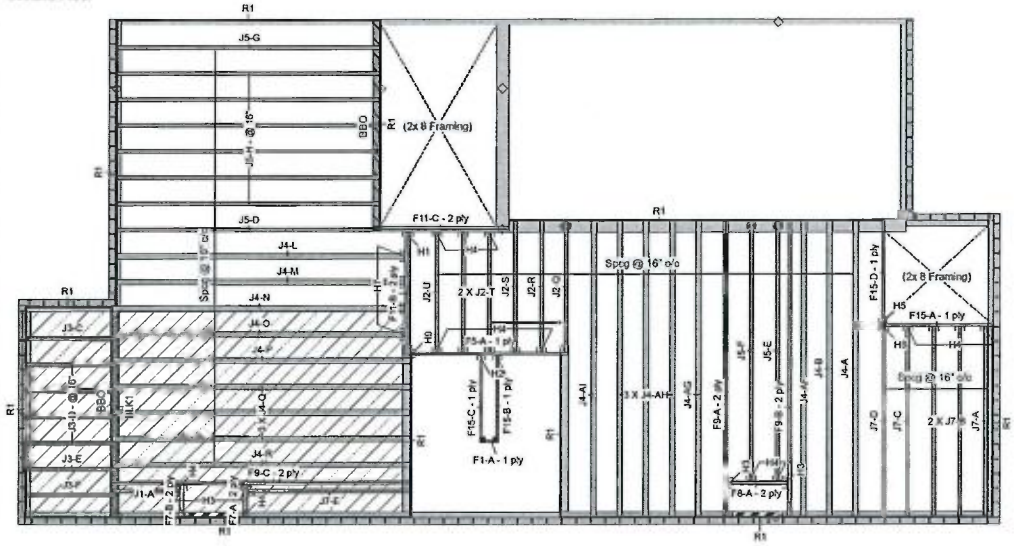
	9 1/2" - 11 7/8" I-Joist	3-ply I-Joist w/ point load (Joist Hanger)
2-ply		
3-ply		

Vertical I-Joist connection notes:

-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.

KOTT
3228 Moodie Drive
Ottawa, ON
K2H 7V1
Ph: 613-838-2775
Fax: 613-838-4751

Ground Floor



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.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO

August 17, 2018

Legend

◇	Load from Above
	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

1. OBC 2012 O.Reg 332/12 as amended
2. Nascor CCMC - 13535-R
3. LVL CCMC -14058-R
4. CAN/CSA-O86-09
5. CCMC -12787-R APA PR-L310(C)

Ground Floor
LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F5	Forex 2.0E-3000Fb LVL	1.75	9.5			1	10-0-0
F11	Forex 2.0E-3000Fb LVL	1.75	9.5	2	2	4	8-0-0
F15	Forex 2.0E-3000Fb LVL	1.75	9.5			4	6-0-0
F1	Forex 2.0E-3000Fb LVL	1.75	9.5			1	2-0-0

I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F9	NJ	1.5	9.5	3	2	6	16-0-0
F8	NJ	1.5	9.5	1	2	2	4-0-0
F7	NJ	1.5	9.5	2	2	4	2-0-0
J4	NJ60U	3.5	9.5			17	16-0-0
J5	NJH	2.5	9.5			10	14-0-0
J7	NJH	2.5	9.5			6	10-0-0
J2	NJH	2.5	9.5			6	8-0-0
J3	NJH	2.5	9.5			7	6-0-0
J1	NJH	2.5	9.5			1	4-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			12	12

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	NJH	2.5	9.5	LinFt		Varies	8-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H1	1	HGUS410			46 16d	16 16d
H2	2	HUS1.81/10			30 16d	10 16d
H3	4	LT2-159			4 10dx1 1/2	2 10dx1 1/2
H4	16	LT259			4 10dx1 1/2	2 10dx1 1/2
H5	1	L90				
H7	4	LT359			4 10d	2 10dx1 1/2
H8	1	LT259				
H9	1	HUCQ1.81/9-SDS				

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/nmjoist.
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.
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 nm 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

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

ARCHITECTURAL DRAWINGS:

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

NASCOR

Layout Name	HEMLOCK 3-2
Design Method	LSD
Description	MINNISALE HOMES CORP. BRAMPTON, ONT.
Revised	August 13, 2018
Builder	GREENPARK
Sales Rep	RM
Designer	RCO
Shipping	
Project	
Builder's Project	

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

Job Path
D:\Users\rochavillo\WORK FROM HOME\GREENPARK\MINNISALE HOMES\HEMLOCK 3\HEMLOCK 3-2 \FLOOR\REV\F-HEMLOCK 3-2 ENG

Ground Floor

Design Method	LSD
Building Code	NBCC 2010 / OBC 2012

Floor

Loads	
Live	40
Dead	15
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
LL Cant 2L/	480
TL Cant 2L/	360
Decking	
Deck	SPF Plywood
Thickness	3/4"
Fastener	Nailed & Glued
Vibration	

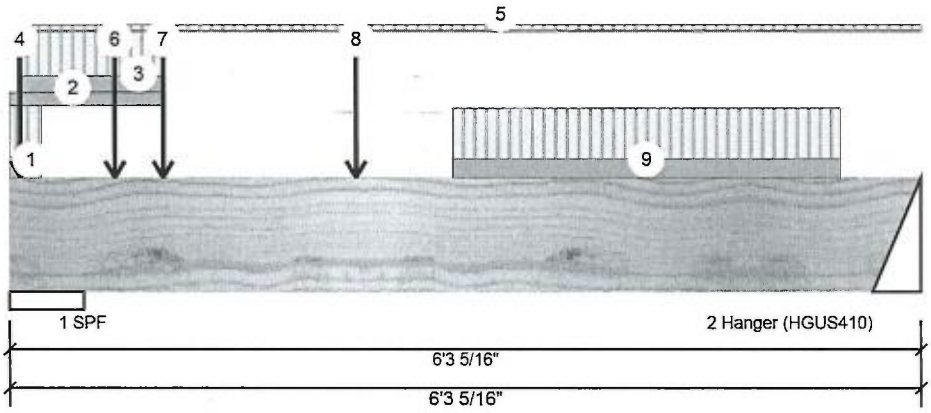
isDesign™

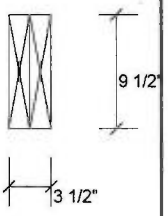
Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F11-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor





Member Information

Type:	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 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	3682	1598	0	0
2	916	382	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.078"	57%	1997 / 5523	7520	L	1.25D+1.5L
2 - Hanger	4.000"	18%	477 / 1374	1851	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3105 ft-lb	2'4 5/8"	22724 ft-lb	0.137 (14%)	1.25D+1.5L	L
Unbraced	3105 ft-lb	2'4 5/8"	22724 ft-lb	0.137 (14%)	1.25D+1.5L	L
Shear	3100 lb	1'2 13/16"	9277 lb	0.334 (33%)	1.25D+1.5L	L
Perm Defl in.	0.010 (L/6979)	3' 7/8"	0.185 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.023 (L/2958)	3'1 3/16"	0.185 (L/360)	0.120 (12%)	L	L
TL Defl inch	0.032 (L/2078)	3'1 3/16"	0.278 (L/240)	0.120 (12%)	D+L	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 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.
8 Lateral slenderness ratio based on full section width.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
August 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 0-2-10		Top	123 PLF	296 PLF	0 PLF	0 PLF	J4
2	Part. Uniform	0-0-0 to 1-0-10		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-0-10 to 1-0-10		Top	97 PLF	250 PLF	0 PLF	0 PLF	J4
4	Point	0-0-14		Near Face	350 lb	893 lb	0 lb	0 lb	F5

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

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

This design is

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
Forex
APA: PR-L318

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

NASCOR

KOTT CSI

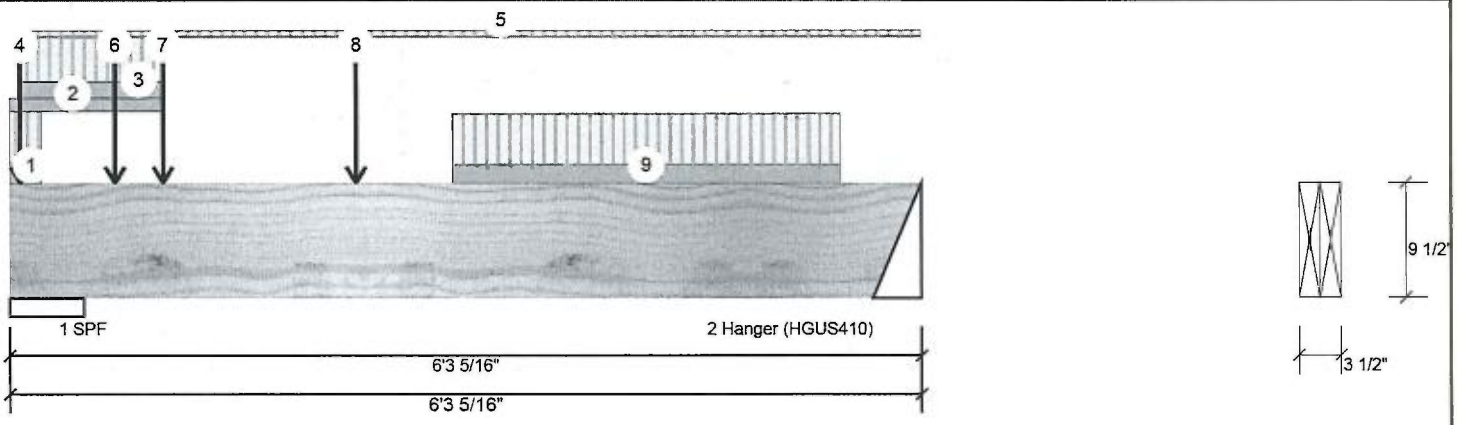
isDesign™

Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F11-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



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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	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Point	0-8-11		Top	659 lb	1641 lb	0 lb	0 lb	F4 F4 F3 F3
7	Point	1-0-10		Far Face	191 lb	392 lb	0 lb	0 lb	J4
8	Point	2-4-10		Far Face	161 lb	391 lb	0 lb	0 lb	J4
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

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 7/10/2021

Manufacturer Info

Forex
APA: PR-L318

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

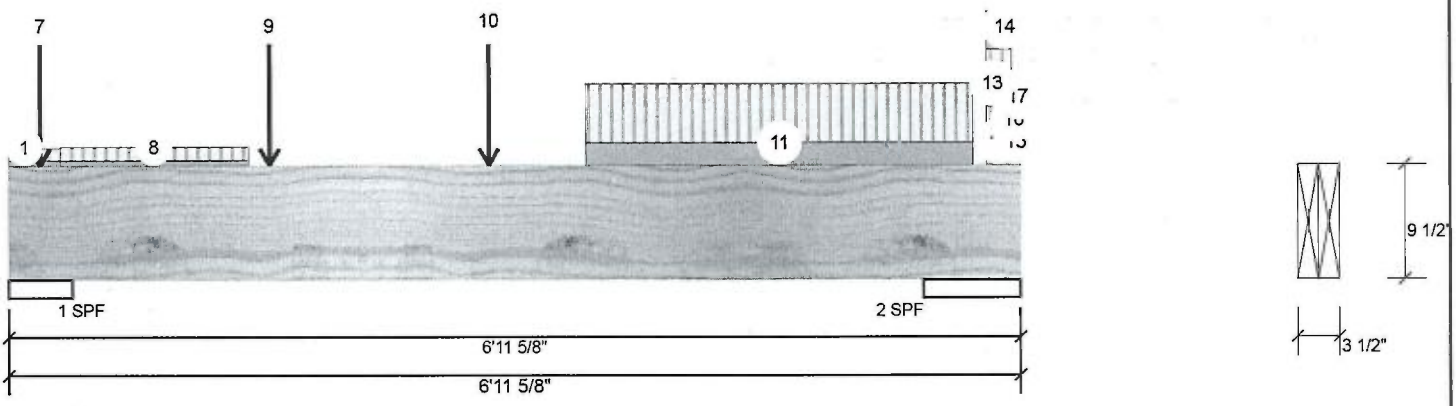
isDesign™

Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F11-C Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



Member Information

Type:	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 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1875	848	0	0
2	609	282	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	34%	1060 / 2812	3872	L	1.25D+1.5L
2 - SPF	8.000"	7%	353 / 914	1267	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2490 ft-lb	1'9 5/8"	22724 ft-lb	0.110 (11%)	1.25D+1.5L	L
Unbraced	2490 ft-lb	1'9 5/8"	22015 ft-lb	0.113 (11%)	1.25D+1.5L	L
Shear	1931 lb	1'2"	9277 lb	0.208 (21%)	1.25D+1.5L	L
Perm Defl in.	0.008 (L/8960)	3'1 3/8"	0.200 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.019 (L/3866)	3'1 7/16"	0.200 (L/360)	0.090 (9%)	L	L
TL Defl inch	0.027 (L/2701)	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 width X 4.5.
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 slenderness ratio based on full section width.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
August 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-4	(Span)1-3-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-2-10		Top	17 lb	46 lb	0 lb	0 lb	J5
3	Point	0-2-10		Top	6 lb	13 lb	0 lb	0 lb	J2
4	Point	0-2-10		Top	20 lb	0 lb	0 lb	0 lb	Wall Self Weight
5	Point	0-2-10		Top	401 lb	922 lb	0 lb	0 lb	F11 F11

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

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

This design

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
Forex
APA: PR-L318

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

NASCOR

KOTT

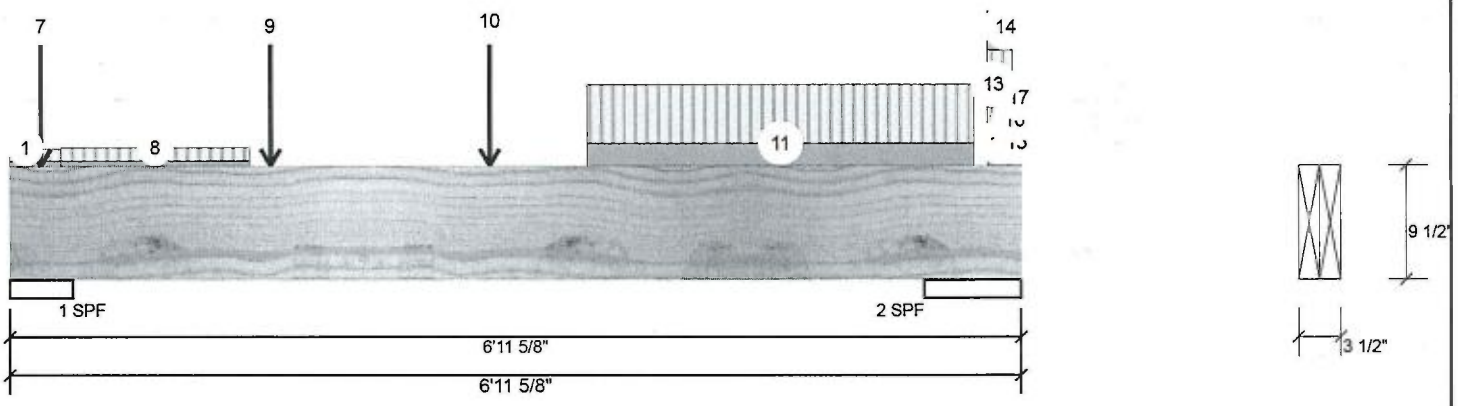
isDesign™

Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F11-C Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	0-2-10		Top	4 lb	8 lb	0 lb	0 lb	J2
7	Point	0-2-10		Top	13 lb	0 lb	0 lb	0 lb	Wall Self Weight
8	Tie-In	0-4-4 to 1-7-14	(Span)1-4-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
9	Point	1-9-10		Near Face	382 lb	916 lb	0 lb	0 lb	F11
10	Point	3-3-12		Near Face	65 lb	174 lb	0 lb	0 lb	J2
11	Part. Uniform	3-11-12 to 6-7-12		Near Face	46 PLF	123 PLF	0 PLF	0 PLF	
12	Part. Uniform	6-8-14 to 6-10-15		Top	37 PLF	84 PLF	0 PLF	0 PLF	J2
13	Part. Uniform	6-8-14 to 6-10-15		Top	36 PLF	82 PLF	0 PLF	0 PLF	J2
14	Part. Uniform	6-8-14 to 6-10-15		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
15	Part. Uniform	6-10-15 to 6-11-10		Top	14 PLF	33 PLF	0 PLF	0 PLF	J2
16	Part. Uniform	6-10-15 to 6-11-10		Top	14 PLF	32 PLF	0 PLF	0 PLF	J2
17	Part. Uniform	6-10-15 to 6-11-10		Top	31 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	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

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 7/10/2021

Manufacturer Info

Forex
APA: PR-L318

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

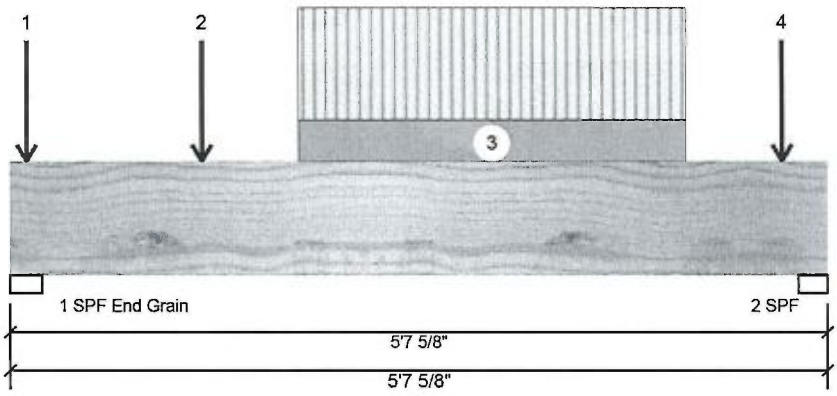
isDesign™

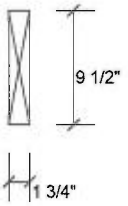
Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F15-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Ground Floor





Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	665	273	2	0
2	516	599	56	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	2.625"	39%	342 / 999	1341	L	1.25D+1.5L +0.5S
2 - SPF	2.375"	61%	749 / 802	1551	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1343 ft-lb	2'10 1/2"	11362 ft-lb	0.118 (12%)	1.25D+1.5L +0.5S	L
Unbraced	1343 ft-lb	2'10 1/2"	6976 ft-lb	0.193 (19%)	1.25D+1.5L +0.5S	L
Shear	1547 lb	4'8 1/2"	4638 lb	0.333 (33%)	1.25D+1.5L +0.5S	L
Perm Defl in.	0.008 (L/7849)	2'10 7/8"	0.178 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.018 (L/3587)	2'9 15/16"	0.178 (L/360)	0.100 (10%)	L+0.5S	L
TL Defl inch	0.026 (L/2462)	2'10 3/16"	0.267 (L/240)	0.100 (10%)	D+L+0.5S	L

Design Notes

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

August 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-1-6		Near Face	97 lb	259 lb	0 lb	0 lb	J7
2	Point	1-3-14		Near Face	92 lb	245 lb	0 lb	0 lb	J7
3	Part. Uniform	1-11-14 to 4-7-14		Near Face	72 PLF	193 PLF	0 PLF	0 PLF	
4	Point	5-3-14		Near Face	470 lb	163 lb	58 lb	0 lb	J7
	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

Notes

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

Lumber

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

Handling & Installation

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

This design is val

Manufacturer Info
Forex
APA: PR-L318

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

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NASCOR

KOTT

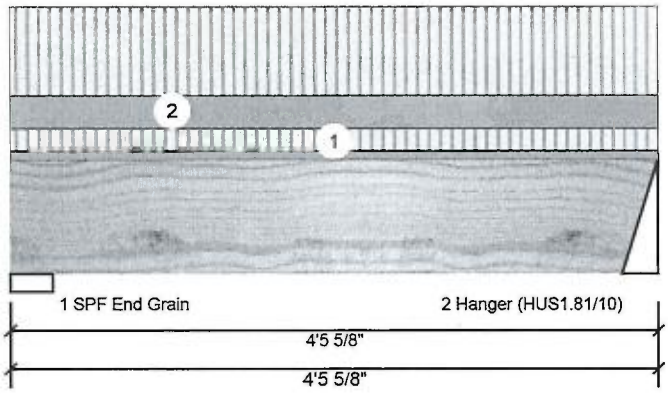
isDesign™

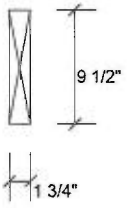
Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F15-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Ground Floor





Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	183	77	0	0
2	179	76	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	8%	96 / 274	371	L	1.25D+1.5L
2 - Hanger	3.000"	9%	95 / 269	364	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
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 (L/36948)	2'3 1/16"	0.135 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.003 (L/15591)	2'3 1/16"	0.135 (L/360)	0.020 (2%)	L	L
TL Defl inch	0.004 (L/10965)	2'3 1/16"	0.203 (L/240)	0.020 (2%)	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.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
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	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 4-5-10	(Span)3-2-13	Top	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

Notes

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

Lumber

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

Handling & Installation

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

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 design is valid until 11/8/2021

Manufacturer Info
Forex
APA: PR-L318

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

NASCOR

KOTT

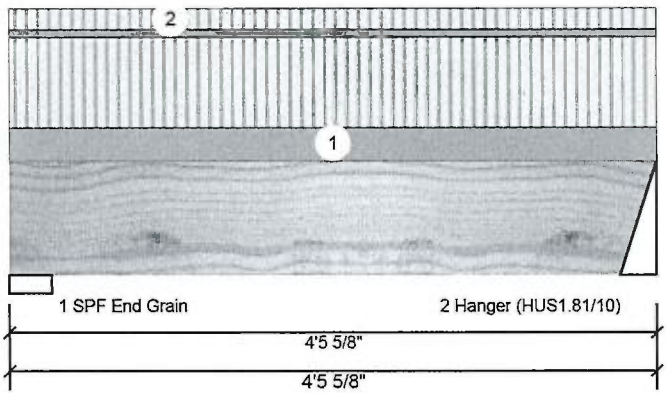
isDesign™

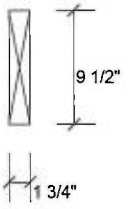
Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F15-C Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Ground Floor





Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	198	83	0	0
2	195	81	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	9%	104 / 298	401	L	1.25D+1.5L
2 - Hanger	3.000"	10%	102 / 292	394	L	1.25D+1.5L

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

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.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO

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)3-6-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 4-5-10	(Span)0-9-14	Top	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

Notes

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

Lumber

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

Handling & Installation

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

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 design is valid until 17/8/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

KOTT

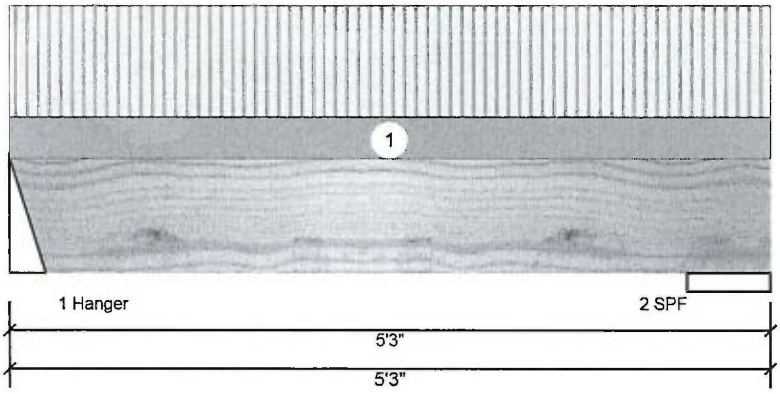
isDesign™

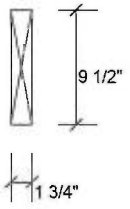
Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F15-D Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Ground Floor





Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	70	36	0	0
2	79	40	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	4%	44 / 105	149	L	1.25D+1.5L
2 - SPF	6.875"	2%	50 / 118	169	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	157 ft-lb	2'5 9/16"	11362 ft-lb	0.014 (1%)	1.25D+1.5L	L
Unbraced	157 ft-lb	2'5 9/16"	8088 ft-lb	0.019 (2%)	1.25D+1.5L	L
Shear	90 lb	11 3/4"	4638 lb	0.019 (2%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/66907)	2'5 9/16"	0.152 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/34092)	2'5 9/16"	0.152 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.002 (L/22584)	2'5 9/16"	0.228 (L/240)	0.010 (1%)	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.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO

August 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 5-3-0	(Span)1-5-0	Top	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

Notes

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

Lumber

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

Handling & Installation

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

This design is val

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
Forex
APA: PR-L318

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

NASCOR

KOTT

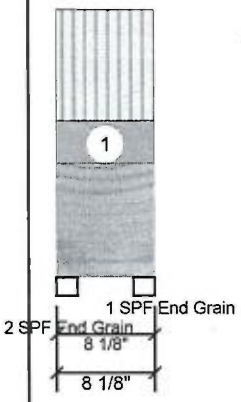
isDesign™

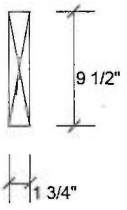
Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F1-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Ground Floor





Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	25	11	0	0
2	25	11	0	0

Bearings and Factored Reactions

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

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5 ft-lb	4 1/16"	11362 ft-lb	0.000 (0%)	1.25D+1.5L	L
Unbraced	5 ft-lb	4 1/16"	11362 ft-lb	0.000 (0%)	1.25D+1.5L	L
Shear	40 lb	-(2 3/8")	4638 lb	0.009 (1%)	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/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		

Design Notes

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

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
August 17, 2018

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

Notes

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

Lumber

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

Handling & Installation

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

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 design is valid until 7/8/2021

Manufacturer Info
Forex
APA: PR-L318

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

NASCOR

KOTT

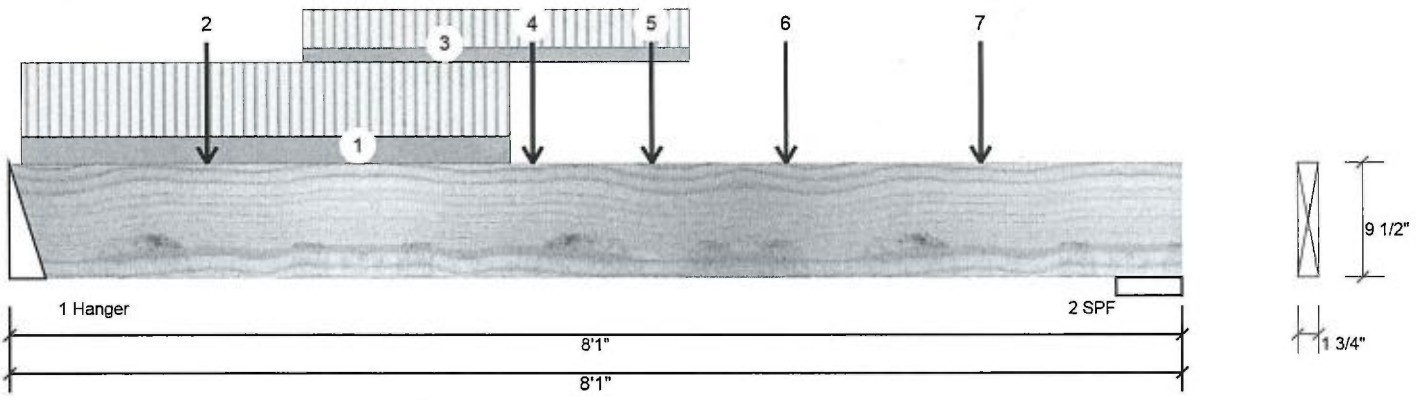
isDesign™

Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F5-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Ground Floor



Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1339	525	0	0
2	1160	459	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	68%	656 / 2008	2664	L	1.25D+1.5L
2 - SPF	5.500"	39%	574 / 1741	2315	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5089 ft-lb	3'7 3/8"	11362 ft-lb	0.448 (45%)	1.25D+1.5L	L
Unbraced	5089 ft-lb	3'7 3/8"	5098 ft-lb	0.998 (100%)	1.25D+1.5L	L
Shear	2309 lb	6'10 3/4"	4638 lb	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
LL Defl 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	L

Design Notes

1 Fill all hanger nailing holes.
2 Girders are designed to be supported on the bottom edge only.
3 Top must be laterally braced at a maximum of 7'3 3/4" o.c.
4 Bottom braced at bearings.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
August 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-1-0 to 3-5-8		Top	90 PLF	240 PLF	0 PLF	0 PLF	
2	Point	1-4-6		Far Face	65 lb	174 lb	0 lb	0 lb	J2
3	Part. Uniform	2-0-6 to 4-8-6		Far Face	46 PLF	123 PLF	0 PLF	0 PLF	
4	Point	3-7-6		Near Face	81 lb	195 lb	0 lb	0 lb	F15
5	Point	4-5-4		Near Face	76 lb	179 lb	0 lb	0 lb	F15
6	Point	5-4-6		Far Face	155 lb	413 lb	0 lb	0 lb	J2
7	Point	6-8-6		Far Face	150 lb	400 lb	0 lb	0 lb	J2
	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

Notes

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

Lumber

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

Handling & Installation

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

This design

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

NASCOR

KOTT

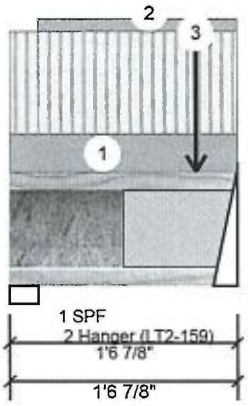
isDesign™

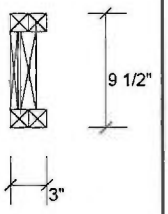
Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F7-A NJ 9.500" 2-Ply - PASSED

Level: Ground Floor





Member Information

Type:	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 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	71	34	0	0
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

Analysis Results

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

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.
5 Top flange braced at bearings.
6 Bottom flange braced at bearings.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO

August 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-6-14	(Span)3-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-2-6 to 1-6-14		Top	8 PLF	0 PLF	0 PLF	0 PLF	
3	Point	1-3-7		Near Face	69 lb	141 lb	0 lb	0 lb	

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

Notes

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

Lumber

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

Handling & Installation

1. I-Joist flanges must not be cut or drilled
2. Refer to latest copy of the I-Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged I-Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing
7. For flat roofs ponding

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 design is valid until 7/16/2021

Manufacturer Info
Nascor by Kott

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

NASCOR KOTT

iDesign™

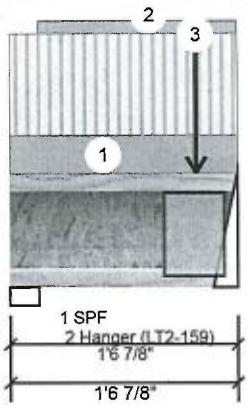
Client: GREENPARK
Project:
Address:

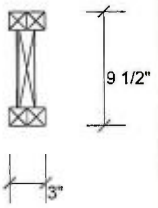
Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

Page 1 of 1

F7-B NJ 9.500" 2-Ply - PASSED

Level: Ground Floor





Member Information

Type:	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 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	60	28	0	0
2	98	48	0	0

Bearings and Factored Reactions

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

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 inch	0.000 (L/67719)	10 7/8"	0.044 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.000 (L/45357)	10 7/8"	0.067 (L/240)	0.010 (1%)	D+L	L

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.
5 Top flange braced at bearings.
6 Bottom flange braced at bearings.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO

August 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-6-14	(Span)3-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-2-6 to 1-6-14		Top	8 PLF	0 PLF	0 PLF	0 PLF	
3	Point	1-3-7		Far Face	27 lb	56 lb	0 lb	0 lb	

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

Notes

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

Lumber

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

Handling & Installation

1. I-Joist flanges must not be cut or drilled
2. Refer to latest copy of the I-Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged I-Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing
7. For flat roofs ponding

This design is valid until 7/10/2021

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

NASCOR

KOTT

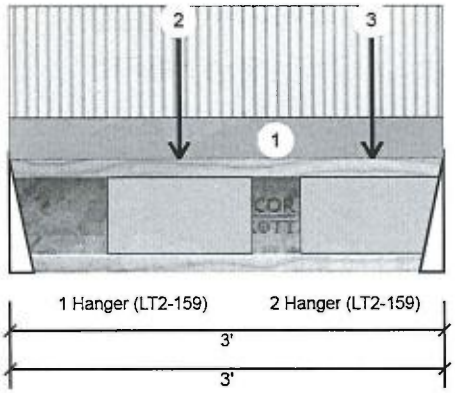
iDesign™

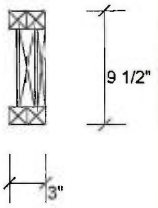
Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F8-A NJ 9.500" 2-Ply - PASSED

Level: Ground Floor





Member Information

Type:	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 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

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

Bearings and Factored Reactions

Bearing	Length	Cap.	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

Analysis Results

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

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.
5 Top flange braced at bearings.
6 Bottom flange braced at bearings.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO

August 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-0-0	(Span)1-8-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	1-2-2		Far Face	127 lb	338 lb	0 lb	0 lb	J5
3	Point	2-6-2		Far Face	94 lb	250 lb	0 lb	0 lb	J5

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

Notes

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

Lumber

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

Handling & Installation

1. iJoist 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 iJoists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
7. For flat roofs provide proper drainage to prevent ponding

This design

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

NASCOR

KOTT

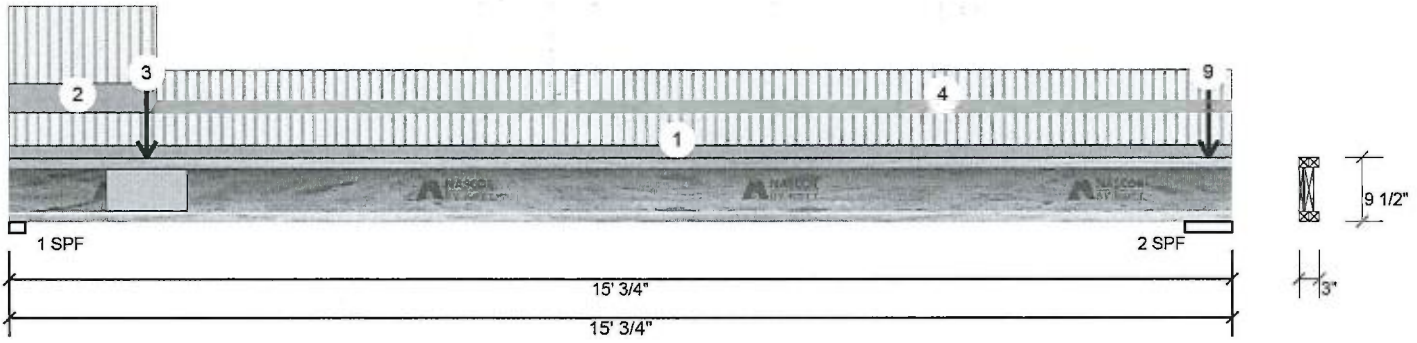
isDesign™

Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F9-A NJ 9.500" 2-Ply - PASSED

Level: Ground Floor



Member Information

Type:	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 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	722	271	0	0
2	1030	495	0	0

Bearings and Factored Reactions

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.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
August 17, 2018

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	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-9-14	(Span)3-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-6		Near Face	111 lb	295 lb	0 lb	0 lb	F8
4	Tie-In	1-9-14 to 15-0-12	(Span)1-3-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	14-9-6		Top	19 lb	49 lb	0 lb	0 lb	J4
6	Point	14-9-6		Top	118 lb	314 lb	0 lb	0 lb	J4
7	Point	14-9-6		Top	12 lb	32 lb	0 lb	0 lb	J4

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

1. iJoist 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 iJoists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length >= 3.5 inches
7. For flat roofs provid... ponding

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

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

NASCOR KOTT

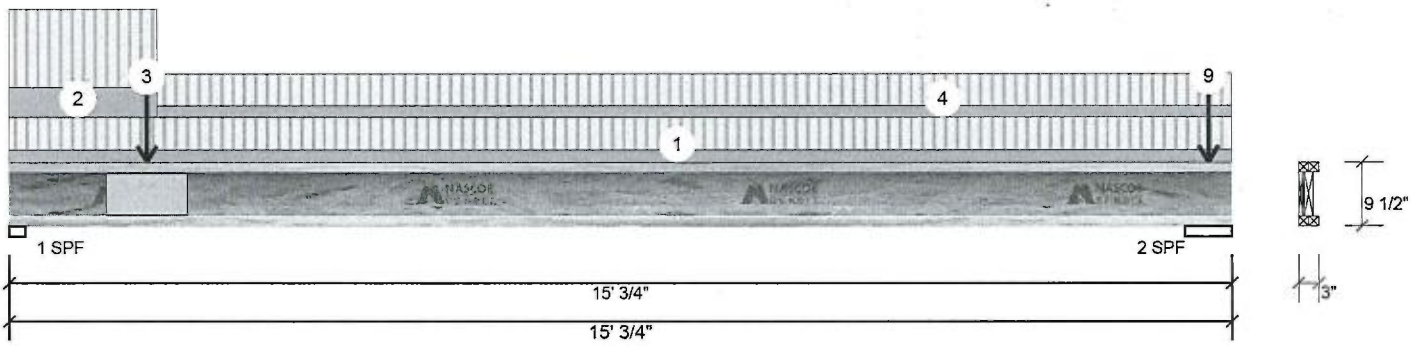
isDesign™

Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F9-A NJ 9.500" 2-Ply - PASSED

Level: Ground Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
8	Point	14-9-6		Top	71 lb	188 lb	0 lb	0 lb	J2
9	Point	14-9-6		Top	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

Notes

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

Lumber

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

Handling & Installation

1. IJoist 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 IJoists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
7. For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Manufacturer Info

Nascor by Kott

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

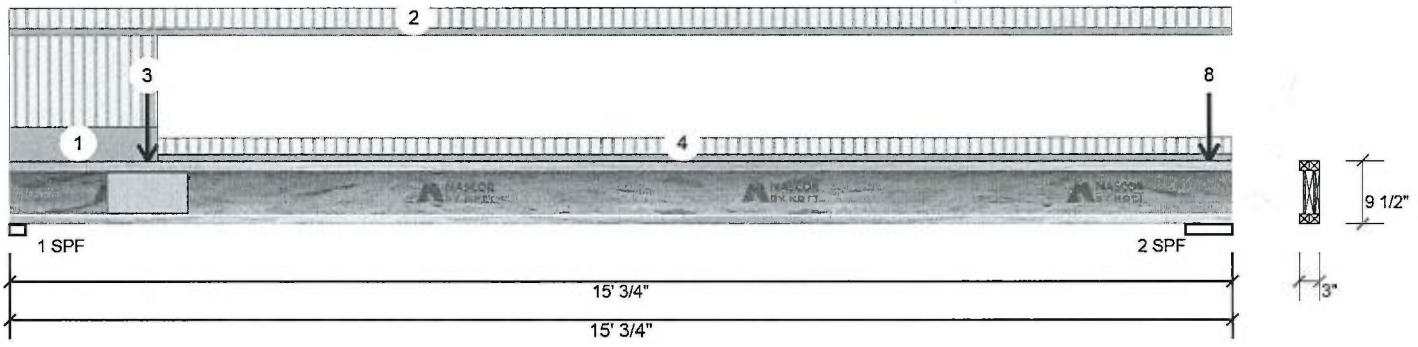
isDesign™

Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F9-B NJ 9.500" 2-Ply - PASSED

Level: Ground Floor



Member Information

Type:	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 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	642	240	0	0
2	373	276	69	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	47%	300 / 962	1263	L	1.25D+1.5L
2 - SPF	6.875"	31%	345 / 594	940	L	1.25D+1.5L +0.5S

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.
5 Bottom flange braced at bearings.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
August 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-9-14	(Span)3-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 15-0-12	(Span)0-8-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-6		Far Face	149 lb	398 lb	0 lb	0 lb	F8
4	Tie-In	1-9-14 to 15-0-12	(Span)0-7-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	14-9-6		Top	30 lb	0 lb	69 lb	0 lb	
6	Point	14-9-6		Top	53 lb	0 lb	0 lb	0 lb	Wall Self Weight
7	Point	14-9-6		Top	45 lb	119 lb	0 lb	0 lb	
8	Point	14-9-6		Top	53 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

Notes

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

Lumber

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

Handling & Installation

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the iJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length >= 3.5 inches
7. For flat roofs provid... ponding

This design is va...

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

NASCOR
KOTT LSL

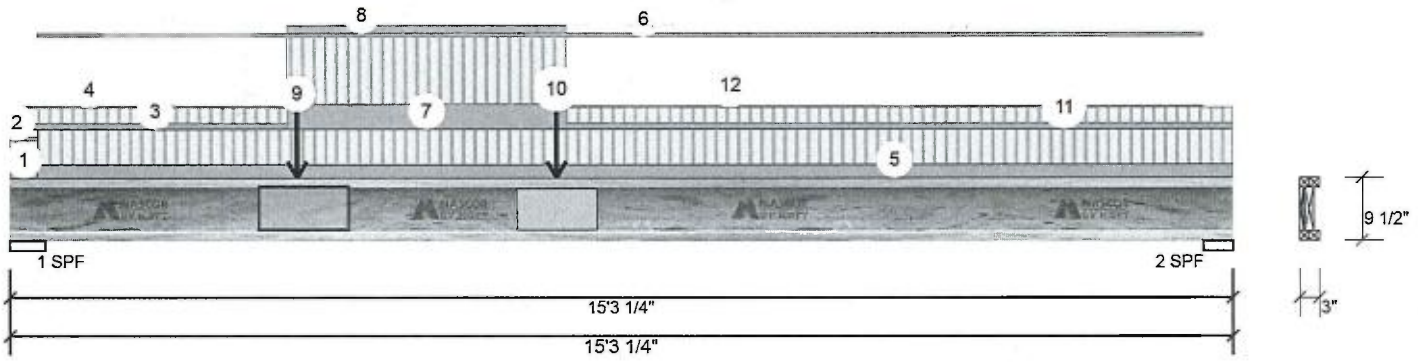
isDesign™

Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F9-C NJ 9.500" 2-Ply - PASSED

Level: Ground Floor



Member Information

Type:	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 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	437	214	0	0
2	331	161	0	0

Bearings and Factored Reactions

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

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%)	L	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 Bottom flange braced at bearings.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
August 17, 2018

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	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 0-4-2		Top	2 PLF	0 PLF	0 PLF	0 PLF	
3	Tie-In	0-1-2 to 3-5-10	(Span)0-4-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	0-1-2 to 3-5-10		Top	1 PLF	0 PLF	0 PLF	0 PLF	
5	Tie-In	0-4-2 to 15-3-4	(Span)0-11-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Part. Uniform	0-4-2 to 14-10-13		Top	2 PLF	0 PLF	0 PLF	0 PLF	
7	Tie-In	3-5-10 to 6-11-10	(Span)1-8-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

1. Ijoist 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 Ijoists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 Inches
7. For flat roofs provide [illegible] to prevent ponding

This design

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

NASCOR KOTT

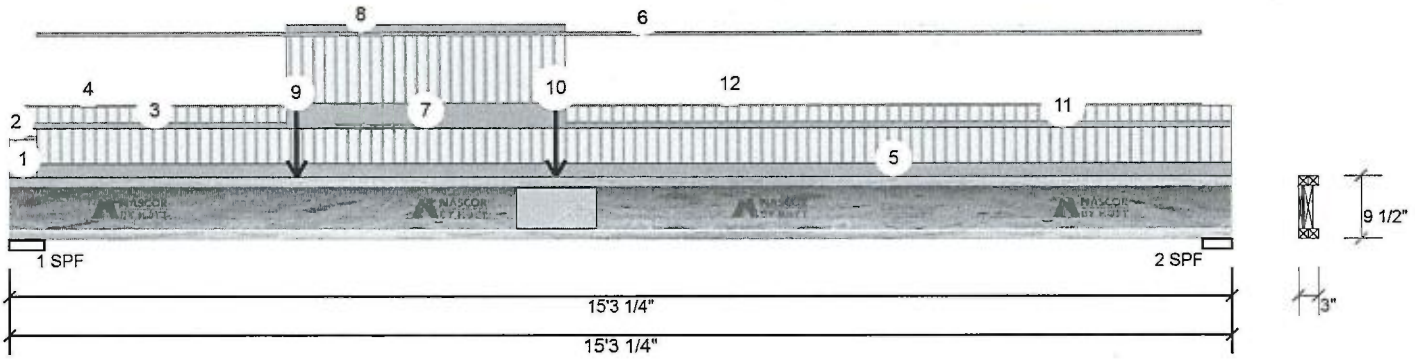
isDesign™

Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F9-C NJ 9.500" 2-Ply - PASSED

Level: Ground Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
8	Part. Uniform	3-5-10 to 6-11-10		Top	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	Top	15 PSF	40 PSF	0 PSF	0 PSF	
12	Part. Uniform	6-11-10 to 14-10-13		Top	1 PLF	0 PLF	0 PLF	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

Notes

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

Lumber

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

Handling & Installation

1. IJoist 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 IJoists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
7. For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Manufacturer Info

Nascor by Kott

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

NASCOR

KOTT

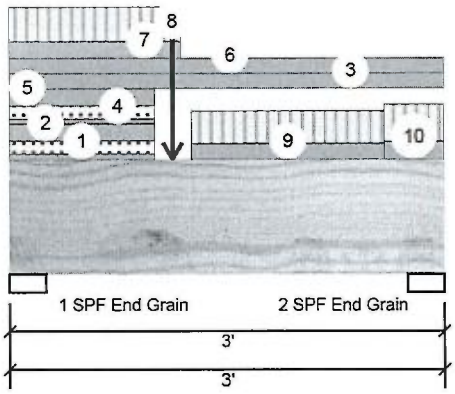
isDesign™

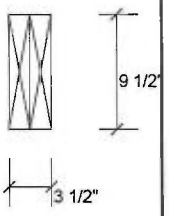
Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2 (WOD)
Project #:

FH3-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor





Member Information

Type:	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 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	129	495	167	0
2	131	320	69	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	15%	619 / 251	870	L	1.25D+1.5S
2 - SPF End Grain	3.000"	10%	400 / 196	597	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	565 ft-lb	1'1 1/2"	16588 ft-lb	0.034 (3%)	1.25D+1.5S	L
Unbraced	565 ft-lb	1'1 1/2"	16588 ft-lb	0.034 (3%)	1.25D+1.5S	L
Shear	550 lb	11 3/4"	6772 lb	0.081 (8%)	1.25D+1.5S	L
Perm Defl in.	0.002 (L/18231)	1'1 13/16"	0.088 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.001 (L/38904)	1'1 1/2"	0.088 (L/360)	0.010 (1%)	S+0.5L	L
TL Defl inch	0.003 (L/12418)	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 Top braced at bearings.
5 Bottom braced at bearings.
6 Lateral slenderness ratio based on full section width.

August 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 1-0-0		Top	14 PLF	0 PLF	34 PLF	0 PLF	
2	Part. Uniform	0-0-0 to 1-0-0		Top	44 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-0-0 to 3-0-0		Top	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...

Notes

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

Lumber

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

Handling & Installation

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

This design

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
Forex
APA: PR-L318

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

NASCOR

KOTT

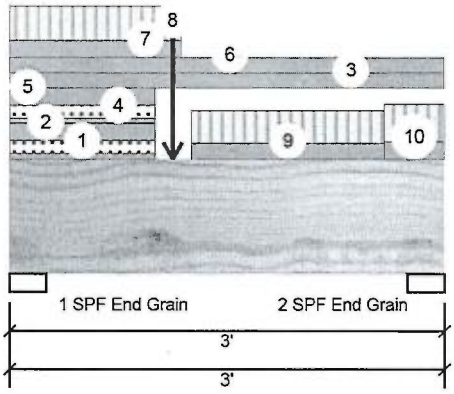
isDesign™

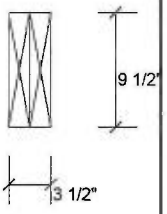
Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2 (WOD)
Project #:

FH3-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor





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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 1-2-3		Near Face	43 PLF	90 PLF	0 PLF	0 PLF	J3
8	Point	1-1-8		Top	312 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	46 PLF	97 PLF	0 PLF	0 PLF	J3
	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

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 7/10/2021

Manufacturer Info

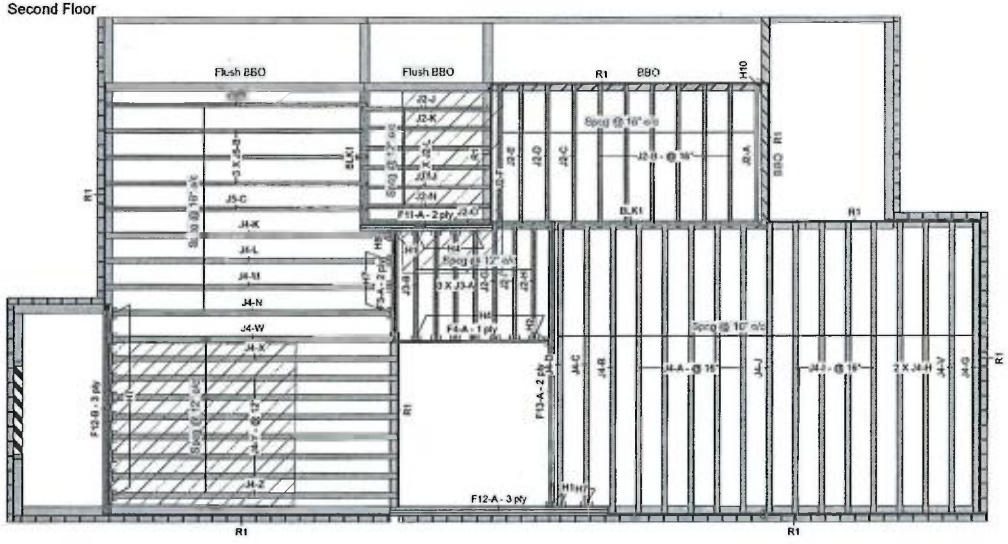
Forex
APA: PR-L318

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

NASCOR

KOTT

Second Floor



4 BEDROOM OPTION

Legend

- Load from Above
- Wall
- Wall Opening
- Norbord Rimboard Plus 1.125 X 9.5
- NJ60U 9.5
- NJH 9.5
- Forex 2.0E-3000Fb LVL 1.75 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-O86-09
5. CCMC -12787-R APA PR-L310(C)

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.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
August 17, 2018

Second Floor
LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F13	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	16-0-0
F12	Forex 2.0E-3000Fb LVL	1.75	9.5	2	3	6	12-0-0
F11	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	8-0-0
F4	Forex 2.0E-3000Fb LVL	1.75	9.5			1	8-0-0
F3	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	6-0-0

Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J4	NJ60U	3.5	9.5			30	16-0-0
J5	NJH	2.5	9.5			5	14-0-0
J2	NJH	2.5	9.5			21	8-0-0
J3	NJH	2.5	9.5			4	6-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			9	12

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	NJH	2.5	9.5	LinFt		Varies	13-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H1	2	HGUS410			46 16d	16 16d
H2	1	HUS1.81/10			30 16d	10 16d
H4	11	LT259			4 10dx1 1/2	2 10dx1 1/2
H6	1	LT359				
H7	15	LT359			4 10d	2 10dx1 1/2
H10	1	Unknown Hanger				

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.
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 to construction.

ARCHITECTURAL DRAWINGS:

VA3 DESIGN
255 Consumers Rd., Suite 120, Toronto, ON
Date: May 24,2018
Project No: 18012
Model: Hemlock 3

NASCOR

Layout Name	HEMLOCK 3-2
Design Method	LSD
Description	MINNISALE HOMES CORP. BRAMPTON, ONT.
Created	June 25, 2018
Builder	GREENPARK
Sales Rep	RM
Designer	RCO
Shipping	
Project	
Builder's Project	

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

Job Path: D:\Users\rochaville\WORK FROM HOME\GREENPARK\MINNISALE HOMES\HEMLOCK 3\HEMLOCK 3-2 \FLOOR\REV5 BED OPT\HEMLOCK

Second Floor

Design Method	LSD
Building Code	NBCC 2010 / OBC 2012

Floor

Loads	
Live	40
Dead	15
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
LL Cant 2L/	480
TL Cant 2L/	360
Decking	
Deck	SPF Plywood
Thickness	5/8"
Fastener	Nailed & Glued
Vibration	
Ceiling:	Gypsum 1/2"

KOTT

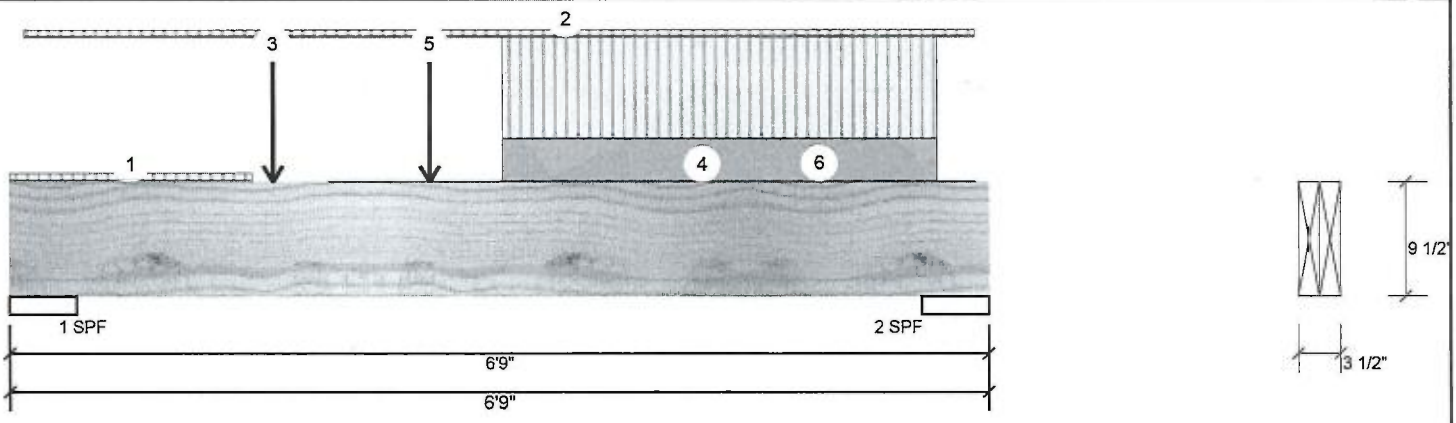
isDesign™

Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F11-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



Member Information

Type:	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 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	922	401	0	0
2	554	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 / 1383	1884	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	2614 ft-lb	1'9 3/4"	22724 ft-lb	0.115 (12%)	1.25D+1.5L	L
Unbraced	2614 ft-lb	1'9 3/4"	22023 ft-lb	0.119 (12%)	1.25D+1.5L	L
Shear	2025 lb	1'2 1/4"	9277 lb	0.218 (22%)	1.25D+1.5L	L
Perm Defl in.	0.008 (L/8434)	3' 11/16"	0.199 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.019 (L/3742)	3' 1/16"	0.199 (L/360)	0.100 (10%)	L	L
TL Defl inch	0.028 (L/2592)	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.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
August 17, 2018

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	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-1-4 to 6-7-14	(Span)0-3-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-9-12		Near Face	388 lb	972 lb	0 lb	0 lb	F3
4	Part. Uniform	2-2-6 to 6-7-14		Top	1 PLF	0 PLF	0 PLF	0 PLF	
5	Point	2-10-12		Near Face	53 lb	117 lb	0 lb	0 lb	
6	Part. Uniform	3-4-12 to 6-4-12		Near Face	49 PLF	112 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

Notes

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

Lumber

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

Handling & Installation

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

This design is vali

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 IN THE DESIGN OF THIS COMPONENT.

NASCOR

KOTT LSD

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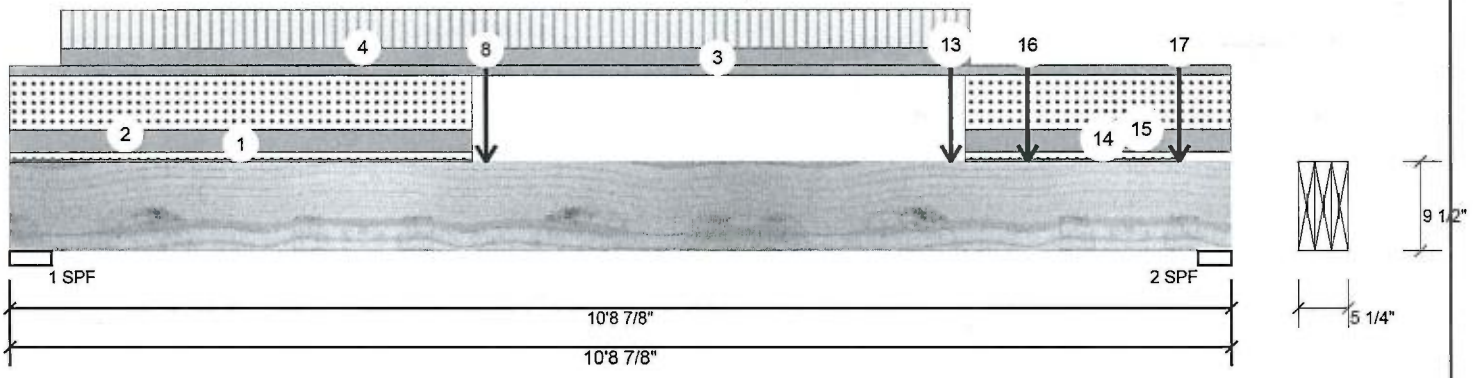
Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F12-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" 3-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	3	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	Yes
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1427	2224	2465	0
2	1595	2230	2408	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.375"	51%	2779 / 4411	7191	L	1.25D+1.5S +0.5L
2 - SPF	3.500"	64%	2788 / 4409	7197	L	1.25D+1.5S +0.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	16700 ft-lb	4'2 3/8"	35449 ft-lb	0.471 (47%)	1.25D+1.5S +0.5L	L
Unbraced	16700 ft-lb	4'2 3/8"	35449 ft-lb	0.471 (47%)	1.25D+1.5S +0.5L	L
Shear	6381 lb	9'8 5/8"	13915 lb	0.459 (46%)	1.25D+1.5S +0.5L	L
Perm Defl in.	0.144 (L/848)	5'4"	0.340 (L/360)	0.420 (42%)	D	Uniform
LL Defl inch	0.200 (L/614)	5'3 3/8"	0.340 (L/360)	0.590 (59%)	S+0.5L	L
TL Defl inch	0.344 (L/356)	5'3 5/8"	0.510 (L/240)	0.670 (67%)	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 Top braced at bearings.
5 Bottom braced at bearings.
6 Lateral slenderness ratio based on full section width.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO

August 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 4-0-14		Top	23 PLF	0 PLF	53 PLF	0 PLF	
2	Part. Uniform	0-0-0 to 4-0-14		Top	173 PLF	0 PLF	403 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 10-8-14		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Part. Uniform	0-5-7 to 8-5-7		Near Face	133 PLF	288 PLF	0 PLF	0 PLF	
8	Point	4-2-6		Top	442 lb	0 lb	988 lb	0 lb	Header Column

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

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

This desig

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
Forex
APA: PR-L318

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

NASCOR

KOTT

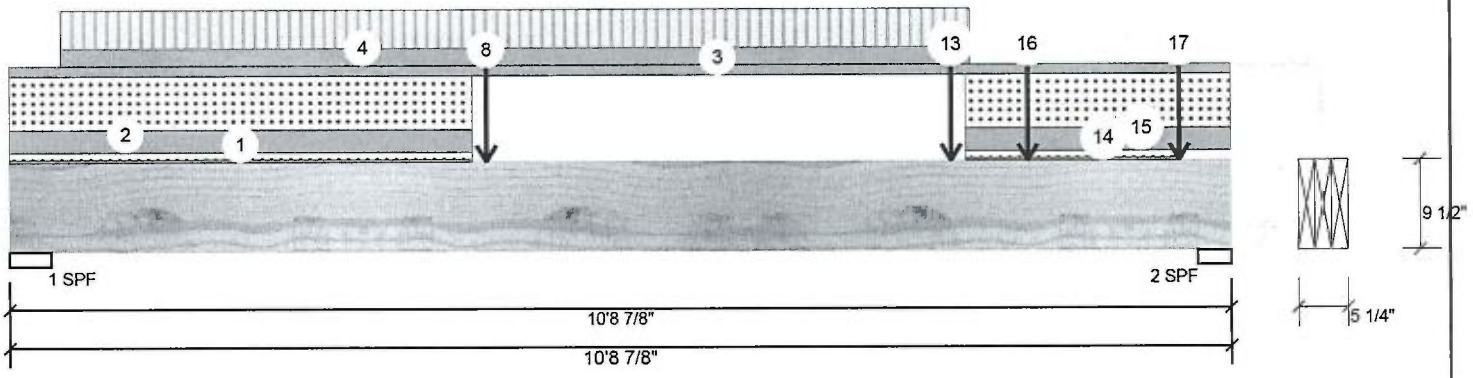
isDesign™

Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F12-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" 3-Ply - PASSED

Level: Second Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
13	Point	8-3-6		Top	442 lb	0 lb	988 lb	0 lb	Header Column
14	Part. Uniform	8-4-14 to 10-3-6		Top	23 PLF	0 PLF	53 PLF	0 PLF	
15	Part. Uniform	8-4-14 to 10-8-14		Top	173 PLF	0 PLF	403 PLF	0 PLF	
16	Point	8-11-7		Near Face	136 lb	336 lb	0 lb	0 lb	J4
17	Point	10-3-7		Near Face	143 lb	382 lb	0 lb	0 lb	J4
	Self Weight				11 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

Notes

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

Lumber

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2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Manufacturer Info

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

isDesign™

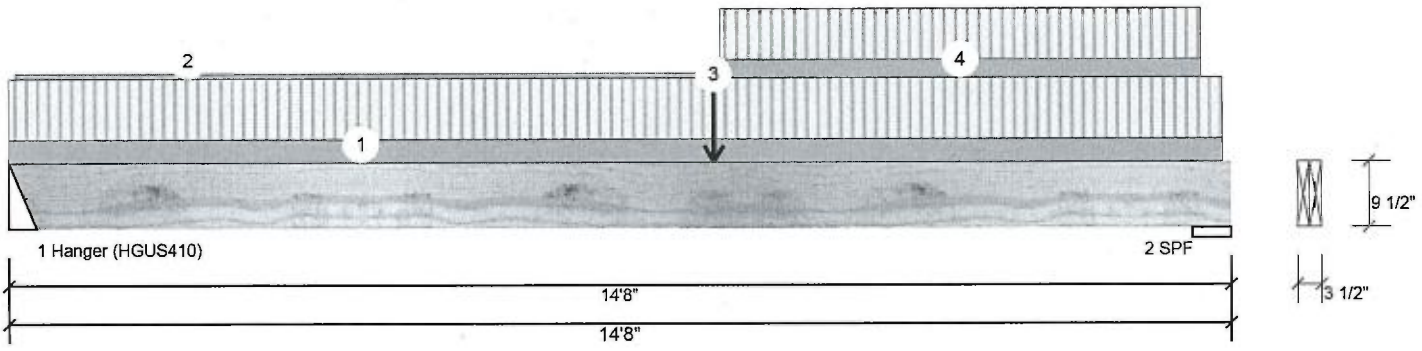
Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

Page 1 of 1

F13-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



Member Information

Type:	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 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	422	234	0	0
2	585	292	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	4.000"	9%	292 / 632	925	L	1.25D+1.5L
2 - SPF	5.500"	10%	365 / 877	1242	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5610 ft-lb	8'5 3/4"	22724 ft-lb	0.247 (25%)	1.25D+1.5L	L
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
Perm Defl in.	0.083 (L/2020)	7'7 1/8"	0.467 (L/360)	0.180 (18%)	D	Uniform
LL Defl inch	0.168 (L/999)	7'8 1/8"	0.467 (L/360)	0.360 (36%)	L	L
TL Defl inch	0.251 (L/668)	7'7 13/16"	0.700 (L/240)	0.360 (36%)	D+L	L

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.
5 Top braced at bearings.
6 Bottom braced at bearings.
7 Lateral slenderness ratio based on full section width.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO

August 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 14-6-12	(Span)1-1-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-1-0 to 8-3-11		Top	2 PLF	0 PLF	0 PLF	0 PLF	
3	Point	8-5-12		Far Face	239 lb	583 lb	0 lb	0 lb	F4
4	Tie-In	8-6-10 to 14-3-12	(Span) 0-10-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	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

Notes

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

Lumber

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

Handling & Installation

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

This desig

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

NASCOR

KOTT

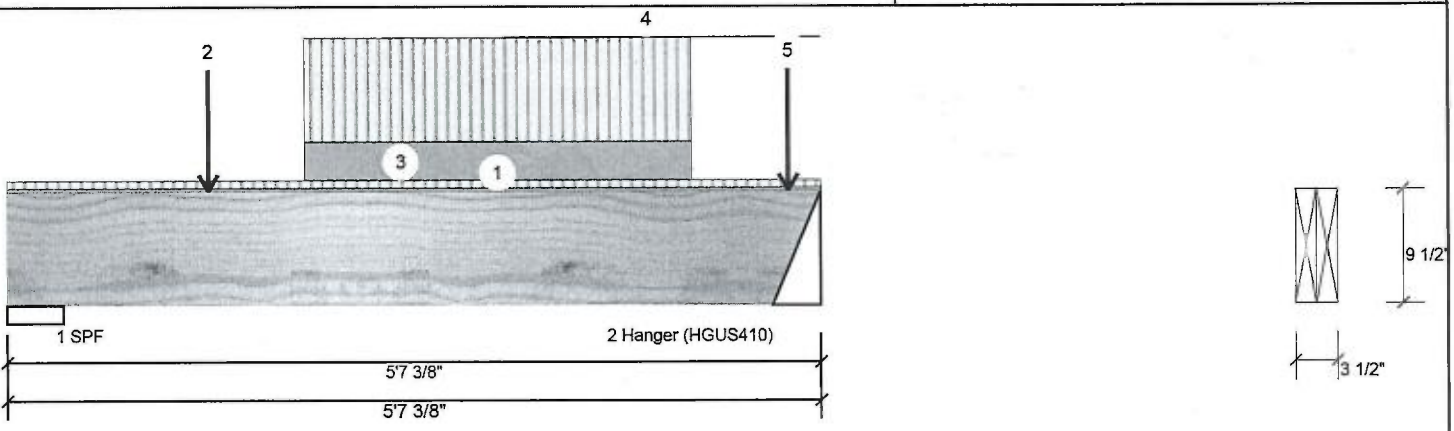
isDesign™

Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

F3-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



Member Information

Type:	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 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	663	271	0	0
2	972	388	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.651"	13%	338 / 995	1333	L	1.25D+1.5L
2 - Hanger	4.000"	19%	484 / 1458	1942	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1881 ft-lb	2'9 13/16"	22724 ft-lb	0.083 (8%)	1.25D+1.5L	L
Unbraced	1881 ft-lb	2'9 13/16"	22724 ft-lb	0.083 (8%)	1.25D+1.5L	L
Shear	1373 lb	1'1 3/8"	9277 lb	0.148 (15%)	1.25D+1.5L	L
Perm Defl in.	0.005 (L/12746)	2'9 7/8"	0.167 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.012 (L/5124)	2'9 7/8"	0.167 (L/360)	0.070 (7%)	L	L
TL Defl inch	0.016 (L/3655)	2'9 7/8"	0.251 (L/240)	0.070 (7%)	D+L	L

Design Notes

1 Fill all hanger nailing holes.
2 Girders are designed to be supported on the bottom edge only.
3 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 slenderness ratio based on full section width.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO

August 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 5-7-6	(Span)1-1-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	1-4-11		Far Face	143 lb	382 lb	0 lb	0 lb	J4
3	Part. Uniform	2-0-11 to 4-8-11		Far Face	109 PLF	290 PLF	0 PLF	0 PLF	
4	Part. Uniform	3-5-5 to 5-7-6		Top	1 PLF	0 PLF	0 PLF	0 PLF	
5	Point	5-4-11		Far Face	134 lb	358 lb	0 lb	0 lb	J4
	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

Notes

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

Lumber

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

Handling & Installation

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

This desig

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 IN THE DESIGN OF THIS COMPONENT.

NASCOR

KOTT

isDesign™

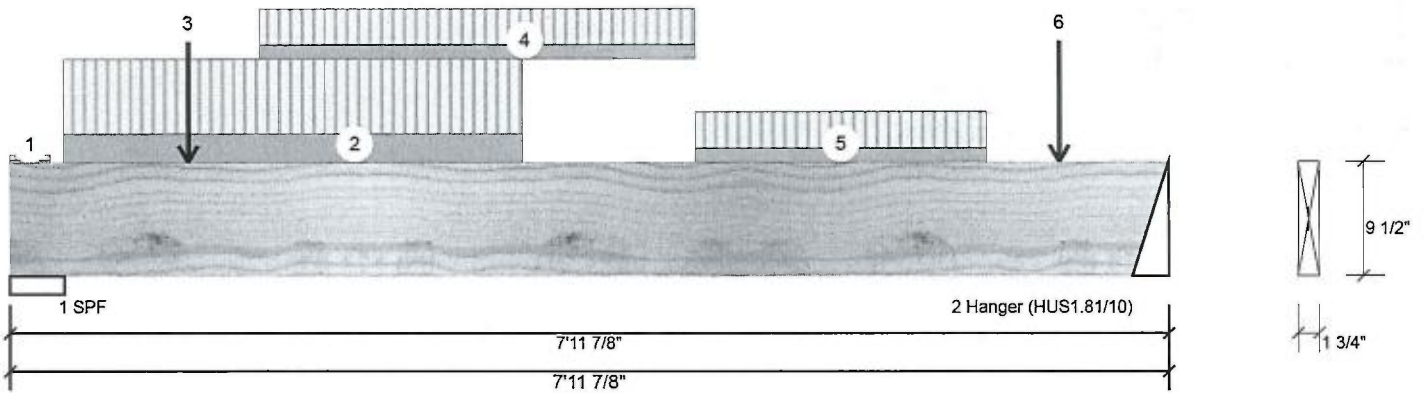
Client: GREENPARK
Project:
Address:

Date: 8/13/2018
Designer: RCO
Job Name: HEMLOCK 3-2
Project #:

Page 1 of 1

F4-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Second Floor



Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	978	389	0	0
2	583	239	0	0

Bearings and Factored Reactions

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

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.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO

August 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-3-6	(Span)0-10-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-4-8 to 3-6-8		Top	90 PLF	240 PLF	0 PLF	0 PLF	
3	Point	1-2-12		Far Face	46 lb	117 lb	0 lb	0 lb	J3
4	Part. Uniform	1-8-12 to 4-8-12		Far Face	44 PLF	112 PLF	0 PLF	0 PLF	
5	Part. Uniform	4-8-12 to 6-8-12		Far Face	45 PLF	116 PLF	0 PLF	0 PLF	
6	Point	7-2-12		Far Face	42 lb	111 lb	0 lb	0 lb	J2
	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

Notes

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

Lumber

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

Handling & Installation

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

This desig

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

Forex
APA: PR-L318

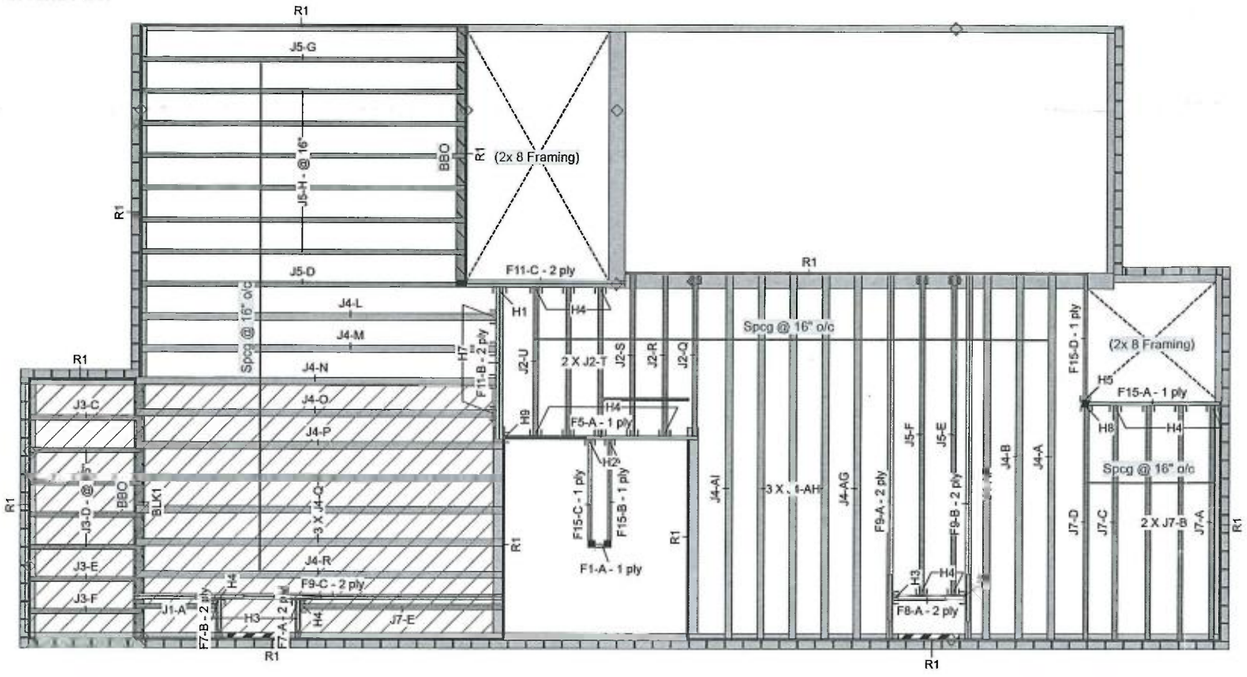
Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400

NASCOR

KOTT

FLOOR JOIST TW0818-114 18-411410 000 00 RR

Ground Floor



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.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO

August 17, 2018

Legend

- Load from Above
- 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

1. OBC 2012 O.Reg 332/12 as amended
2. Nascor CCMC - 13535-R
3. LVL CCMC -14056-R
4. CAN/CSA-O86-09
5. CCMC -12787-R APA PR-L310(C)

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

CITY OF BRAMPTON
BUILDING DIVISION
REVIEWED
JAN 05 2019
BY
MARY FRENETTE

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

Ground Floor
LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F5	Forex 2.0E-3000Fb LVL	1.75	9.5			1	10-0-0
F11	Forex 2.0E-3000Fb LVL	1.75	9.5	2	2	4	8-0-0
F15	Forex 2.0E-3000Fb LVL	1.75	9.5			4	6-0-0
F1	Forex 2.0E-3000Fb LVL	1.75	9.5			1	2-0-0

I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F9	NJ	1.5	9.5	3	2	6	16-0-0
F8	NJ	1.5	9.5	1	2	2	4-0-0
F7	NJ	1.5	9.5	2	2	4	2-0-0
J4	NJ60U	3.5	9.5			17	16-0-0
J5	NJH	2.5	9.5			10	14-0-0
J7	NJH	2.5	9.5			6	10-0-0
J2	NJH	2.5	9.5			6	8-0-0
J3	NJH	2.5	9.5			7	6-0-0
J1	NJH	2.5	9.5			1	4-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			12	12

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	NJH	2.5	9.5	LinFt		Varies	8-0-0

Hanger

					Beam/Girder	Supported Member
Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H1	1	HGUS410			46 16d	16 16d
H2	2	HUS1.81/10			30 16d	10 16d
H3	4	LT2-159			4 10dx1 1/2	2 10dx1 1/2
H4	16	LT259			4 10dx1 1/2	2 10dx1 1/2
H5	1	L90				
H7	4	LT359			4 10d	2 10dx1 1/2
H8	1	LT259				
H9	1	HUCQ1.81/9-SDS				

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.
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 addtional 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 to construction.

ARCHITECTURAL DRAWINGS:

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

NASCOR

Layout Name: HEMLOCK 3-2
Design Method: LSD
Description: MINNISALE HOMES CORP. BRAMPTON, ONT.
Revised: August 13, 2018
Builder: GREENPARK
Sales Rep: RM
Designer: RCO
Shipping
Project
Builder's Project

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

Job Path: D:\Users\rochavillo\WORK FROM HOME\GREENPARK\MINNISALE HOMES\HEMLOCK 3\HEMLOCK 3-2 \FLOOR\REV\F-HEMLOCK 3-2 ENG(

Ground Floor

Design Method	LSD
Building Code	NBCC 2010 / OBC 2012

Floor

Loads	
Live	40
Dead	15
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
LL Cant 2L/	480
TL Cant 2L/	360
Decking	
Deck	SPF Plywood
Thickness	3/4"
Fastener	Nailed & Glued
Vibration	

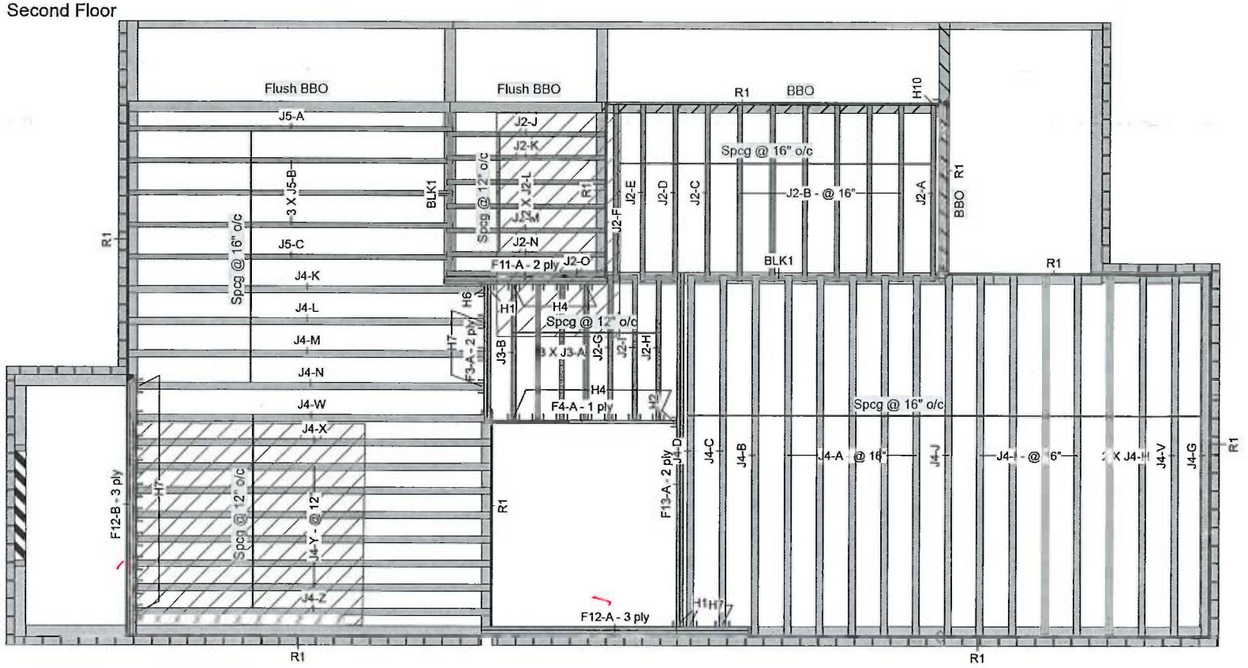
LOT 37R

18-411410-000-00-RR

KOTT

1096563

Second Floor



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.

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.

LICENSED PROFESSIONAL ENGINEER
T.L. WISE
100083566
PROVINCE OF ONTARIO
August 17, 2018

Legend

Load from Above
Wall
Wall Opening
Norbord Rimboard Plus 1.125 X 9.5
NJ60U 9.5
NJH 9.5
Forex 2.0E-3000Fb LVL 1.75 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-O86-09
5. CCMC -12787-R APA PR-L310(C)

Second Floor
LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F13	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	16-0-0
F12	Forex 2.0E-3000Fb LVL	1.75	9.5	2	3	6	12-0-0
F11	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	8-0-0
F4	Forex 2.0E-3000Fb LVL	1.75	9.5			1	8-0-0
F3	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	6-0-0

I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J4	NJ60U	3.5	9.5			30	16-0-0
J5	NJH	2.5	9.5			5	14-0-0
J2	NJH	2.5	9.5			21	8-0-0
J3	NJH	2.5	9.5			4	6-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			9	12

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	NJH	2.5	9.5	LinFt		Varies	13-0-0

Hanger

					Beam/Girder	Supported Member
Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H1	2	HGUS410			46 16d	16 16d
H2	1	HUS1.81/10			30 16d	10 16d
H4	11	LT259			4 10dx1 1/2	2 10dx1 1/2
H6	1	LT359				
H7	15	LT359			4 10d	2 10dx1 1/2
H10	1	Unknown Hanger				

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.
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 addtional 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 to construction.

ARCHITECTURAL DRAWINGS:

VA3 DESIGN
255 Consumers Rd., Suite 120, Toronto, ON
Date: May 24,2018
Project No: 18012
Model: Hemlock 3

NASCOR

Layout Name
HEMLOCK 3-2

Design Method
LSD

Description
MINNISALE HOMES CORP.
BRAMPTON, ONT.

Created
June 25, 2018

Builder
GREENPARK

Sales Rep
RM

Designer
RCO

Shipping

Project

Builder's Project

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

Job Path
D:\Users\rochavillo\WORK FROM HOME\GREENPARK\MINNISALE HOMES\HEMLOCK 3\HEMLOCK 3-2 \FLOOR\REV\5 BED OPT\HEMLOCK

Second Floor

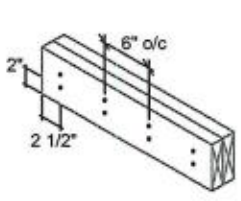
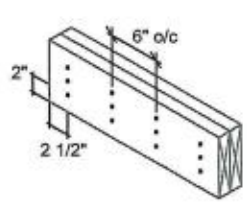
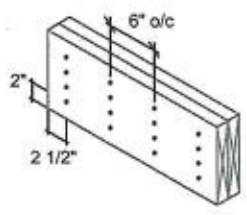
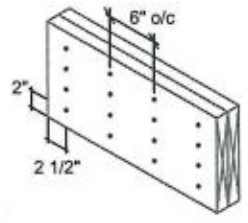
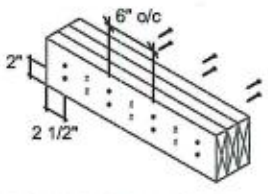
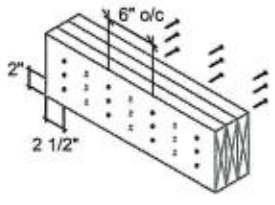
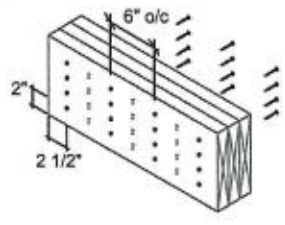
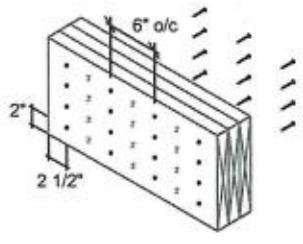
Design Method	LSD
Building Code	NBCC 2010 / OBC 2012
Floor	
Loads	
Live	40
Dead	15
Deflection Joist	
LL Span L/	480
TL Span L/	360
LL Cant 2L/	480
TL Cant 2L/	360
Deflection Girder	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	480
TL Cant 2L/	360
Decking	
Deck	SPF Plywood
Thickness	5/8"
Fastener	Nailed & Glued
Vibration	
Ceiling:	Gypsum 1/2"

LOT 37R

KOTT

MULTIPLE MEMBER CONNECTIONS

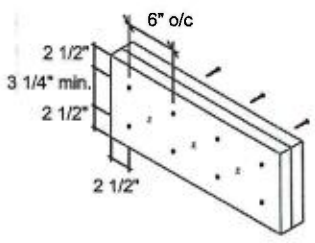
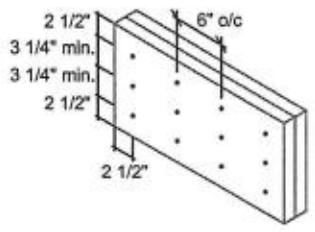
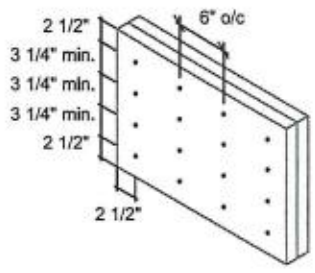
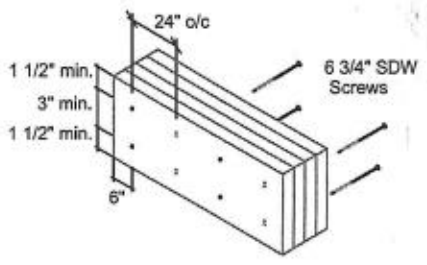
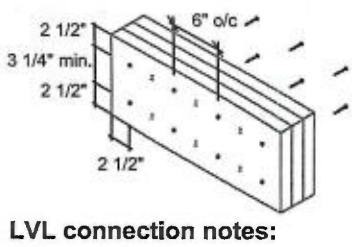
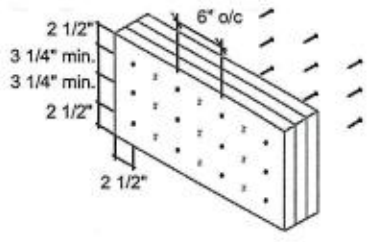
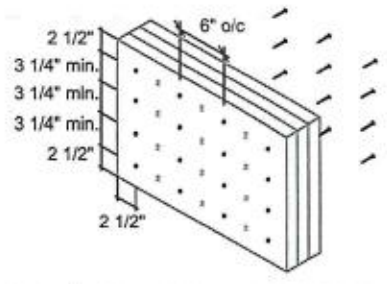
Conventional Connections (for uniform distributed loads)

	2x6	2x8	2x10	2x12
2-ply				
3-ply				

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)

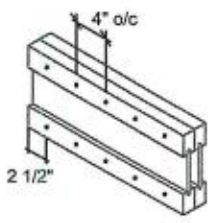
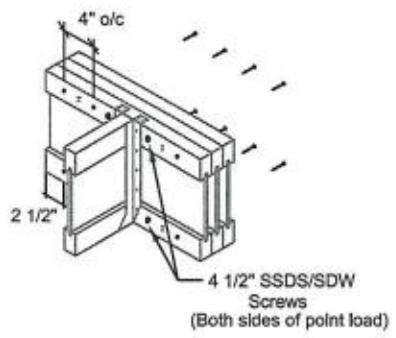
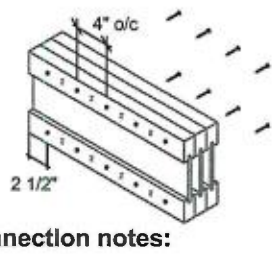
	9 1/2" LVL	11 7/8" - 14" LVL	16"-18" LVL	4-ply (Top load only)
				
				

For side-loaded 4-ply LVL Connections, please consult the engineering calculation page for the component and the Nascor layout

LVL connection notes:

-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)

	9 1/2" - 11 7/8" I-Joist	3-ply I-Joist w/ point load (Joist Hanger)
2-ply		
3-ply		

Vertical I-Joist connection notes:

-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
Date: November 30, 2016
Scale: NTS

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