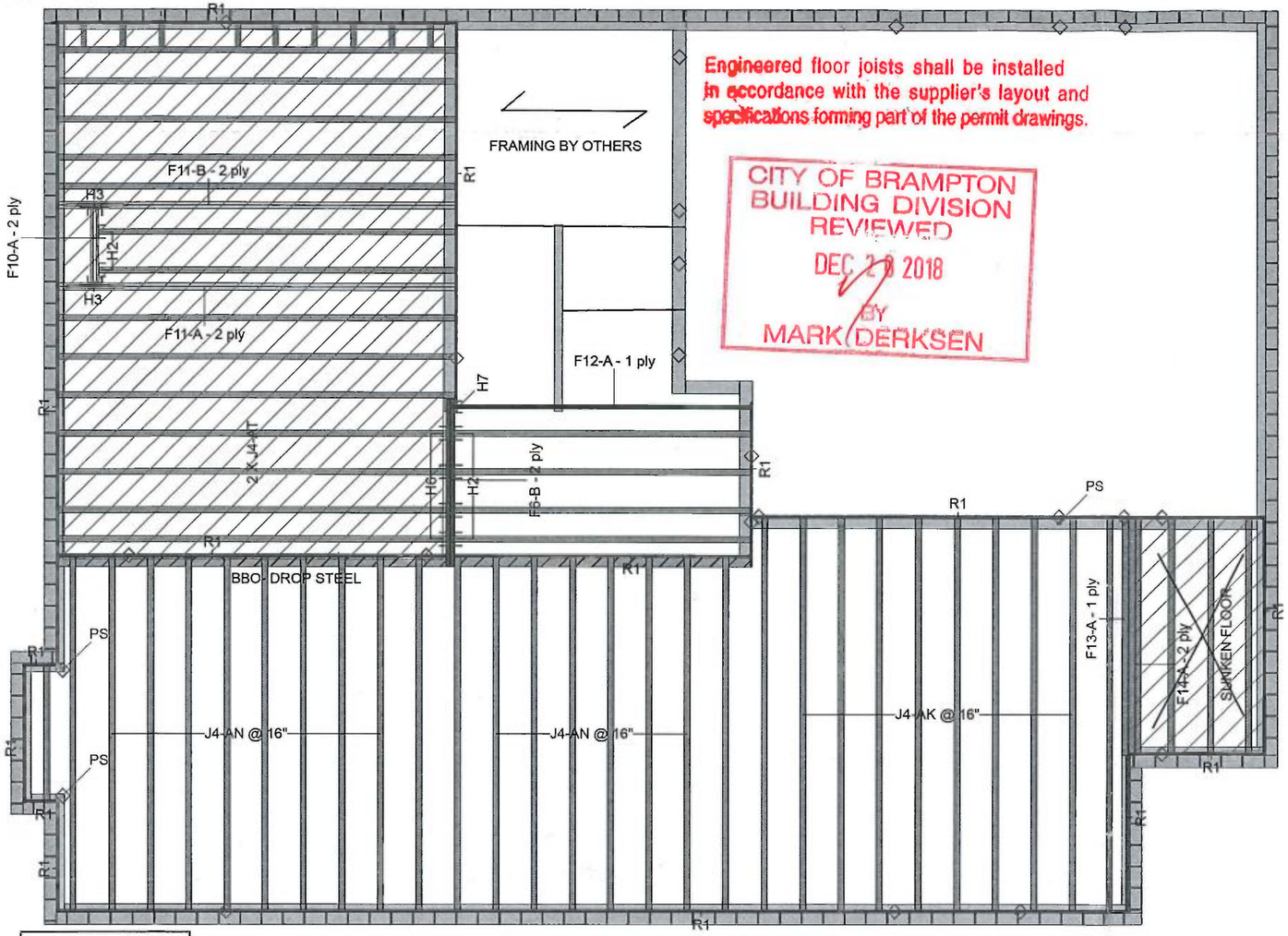
FLOOR JOIST 18-333 292 000 00 RR
M2060 LOT 5

Ground Floor



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
DEC 20 2018
BY
MARK DERKSEN

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

Architectural Drawing Info

JARDIN DESIGN GROUP
64 JARDIN DR, SUITE 3A
VAUGHAN,ON L4K 3P3

Project # 18-24
Model: Millwood 1 EL-3
Date: AUGUST 09 2018

JOISTS SPACING 16"O/C UNLESS NOTED OTHERWISE

Legend

PS	Point Load Support
◇	Load from Above
	Wall
	Norbord Rimboard Plus 1.125 X 9.5
	NJ 9.5
	NJH 9.5
	Forex 2.0E-3000Fb LVL 1.75 X 9.5
	5.25 X 10.25 (Dropped)

1. OBC 2012 O.Reg 332/12 as amended
2. Nascor CCMC - 13535-R
3. LVL CCMC -12904-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
September 17, 2018

Ground Floor
LVL/LSL

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F12	Forex 2.0E-3000Fb LVL	1.75	9.5			1	12-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	6-0-0

I Joist

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F11	NJ	1.5	9.5	2	2	4	14-0-0
F10	NJ	1.5	9.5	1	2	2	4-0-0
J4	NJH	2.5	9.5			42	14-0-0
J3	NJH	2.5	9.5			4	12-0-0
J2	NJH	2.5	9.5			3	10-0-0
J7	NJH	2.5	9.5			1	6-0-0
F14	NJH	2.5	9.5	1	2	2	10-0-0
F13	NJH	2.5	9.5			1	10-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			14	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
H2	6	LT259			4 10d	2 10dx1 1/2
H3	2	LT2-159			4 10d	2 10dx1 1/2
H6	4	LF259			10 10d	1 #8x1 1/4WS
H7	1	HUS1.81/10			30 16d	10 16d

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-loadbearing walls.
4. Install single-ply flush window header along inside face of rimboard/rimjoist
5. Refer to Nascor specifier guide for installation details.
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"x4" 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 be deviate from the architectural drawings. Project Engineer to review and approve the deviation prior to construction.

NASCOR

Layout Name
MILLWOOD 1 EL-3
Design Method
LSD
Description
GREENPARK HOMES
MINNISALE HOME
CORP.,BRAMPTON,ON
Created
June 26, 2018
Builder
Sales Rep
Designer
S B
Shipping
Project
Builder's Project

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

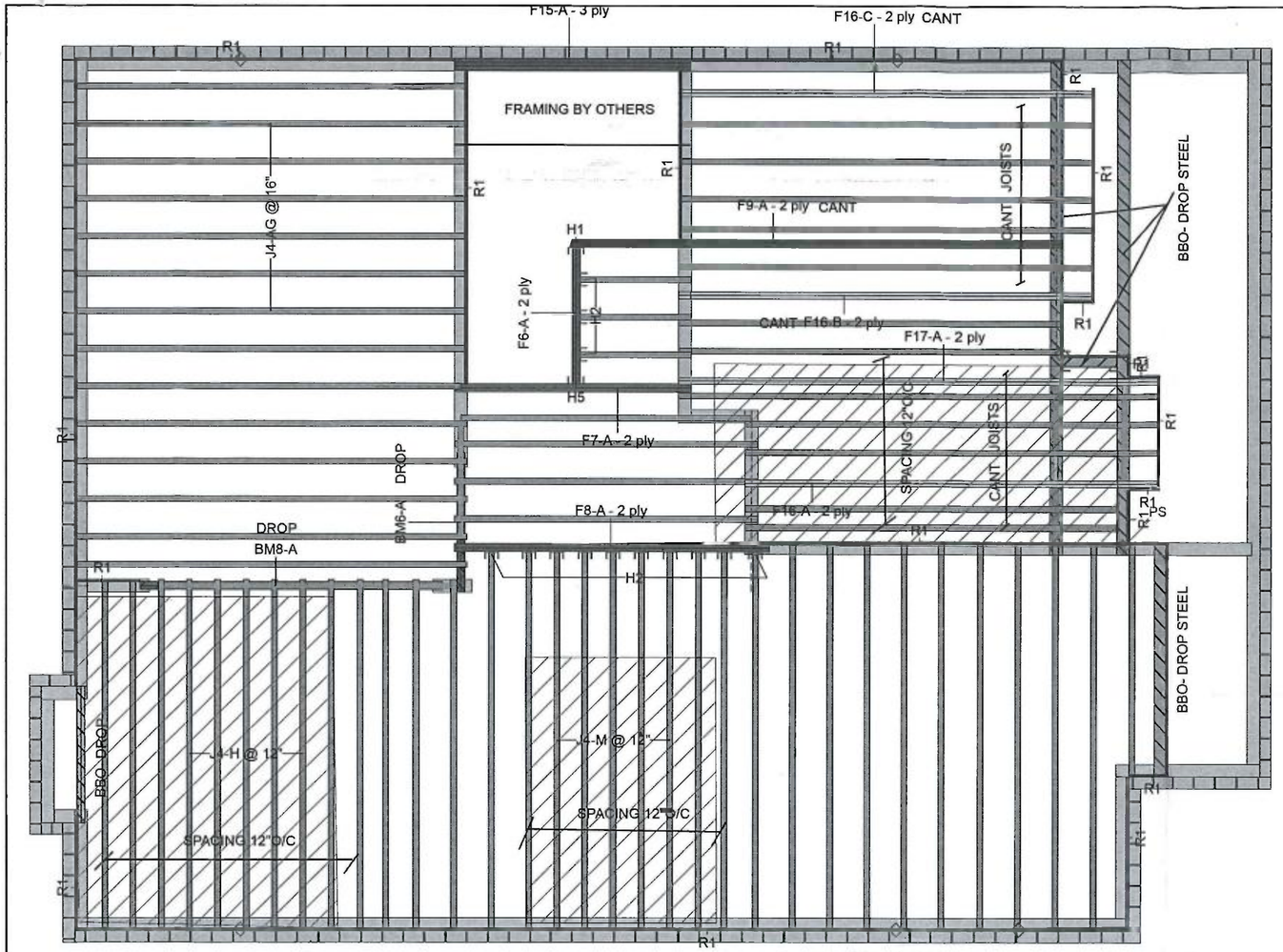
Ground Floor

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	OSB
Thickness	3/4"
Fastener	Nailed & Glued
Vibration	

LOT 5

This layout is to be used as an installation guide only. It is meant to be used in conjunction with the architectural and structural drawings, not to replace them

KOTT



Legend

PS	Point Load Support
◇	Load from Above
	Wall
	Norbord Rimboard Plus 1.125 X 9.5
	NJ 9.5
	NJH 9.5
	Forex 2.0E-3000Fb LVL 1.75 X 9.5
	Forex 2.0E-3000Fb LVL 1.75 X 9.5 (Dropped)
	1.75 X 9.5 (Dropped)
	5.25 X 10.25 (Dropped)

1. OBC 2012 O.Reg 332/12 as amended
2. Nascor CCMC - 13535-R
3. LVL CCMC -12904-R
4. CAN/CSA-O86-09
5. CCMC -12787-R APA PR-L310(C)

JOISTS SPACING 16"O/C UNLESS NOTED OTHERWISE

Architectural Drawing Info

JARDIN DESIGN GROUP
64 JARDIN DR, SUITE 3A
VAUGHAN,ON L4K 3P3

Project # 18-24
Model: Millwood 1 EL-3
Date: AUGUST 09 2018

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

September 17, 2018

Second Floor
LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F9	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	18-0-0
F8	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	12-0-0
F15	Forex 2.0E-3000Fb LVL	1.75	9.5	1	3	3	10-0-0
F7	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	10-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	6-0-0

LVL/LSL (Dropped)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BM8	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	12-0-0
BM6	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
F17	NJ	1.5	9.5	1	2	2	18-0-0
F16	NJ	1.5	9.5	3	2	6	16-0-0
J5	NJH	2.5	9.5			1	18-0-0
J6	NJH	2.5	9.5			7	16-0-0
J4	NJH	2.5	9.5			50	14-0-0
J3	NJH	2.5	9.5			4	12-0-0
J2	NJH	2.5	9.5			1	10-0-0
J1	NJH	2.5	9.5			3	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			14	12

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	NJ	1.5	9.5	LinFt		Varies	1-0-0
BLK2	NJ	1.5	9.5	LinFt		Varies	2-0-0
BLK1	NJH	2.5	9.5	LinFt		Varies	15-0-0
BLK2	NJH	2.5	9.5	LinFt		Varies	8-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H1	1	HUC410 (Min)			14 16d	6 10d
H2	13	LT259			4 10d	2 10dx1 1/2
H4	2	Unknown Hanger				
H5	1	HGUS410			46 16d	16 16d

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-loadbearing walls.
4. Install single-ply flush window header along inside face of rimboard/rimjoist
5. Refer to Nascor specifier guide for installation details.
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"x4" 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 be deviate from the architectural drawings. Project Engineer to review and approve the deviation prior to construction.

NASCOR

Layout Name	MILLWOOD 1 EL-3 STD 3BEDRM
Design Method	LSD
Description	GREENPARK HOMES MINNISALE HOME CORP.,BRAMPTON,ON
Created	June 26, 2018
Builder	
Sales Rep	
Designer	S B
Shipping	
Project	
Builder's Project	

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

Second Floor

Design Method	LSD
Building Code	NBCC 2010 / OBC 2012

Floor

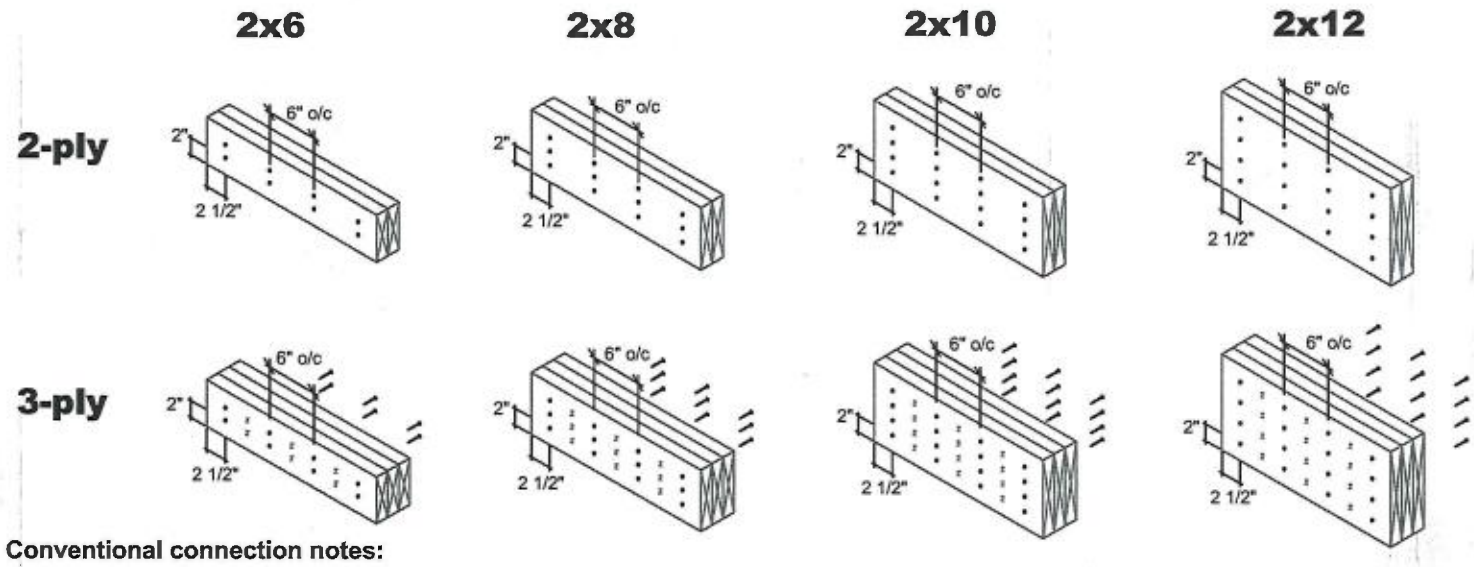
Loads	
Live	40
Dead	15
Deflection Joist	
LL Span L/	480
TL Span L/	360
LL Cant 2L/	480
TL Cant 2L/	360
Deflection Girder	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	480
TL Cant 2L/	360
Decking	
Deck	OSB
Thickness	5/8"
Fastener	Nailed & Glued
Vibration	
Ceiling:	Gypsum 1/2"

Lot 5

KOTT

MULTIPLE MEMBER CONNECTIONS

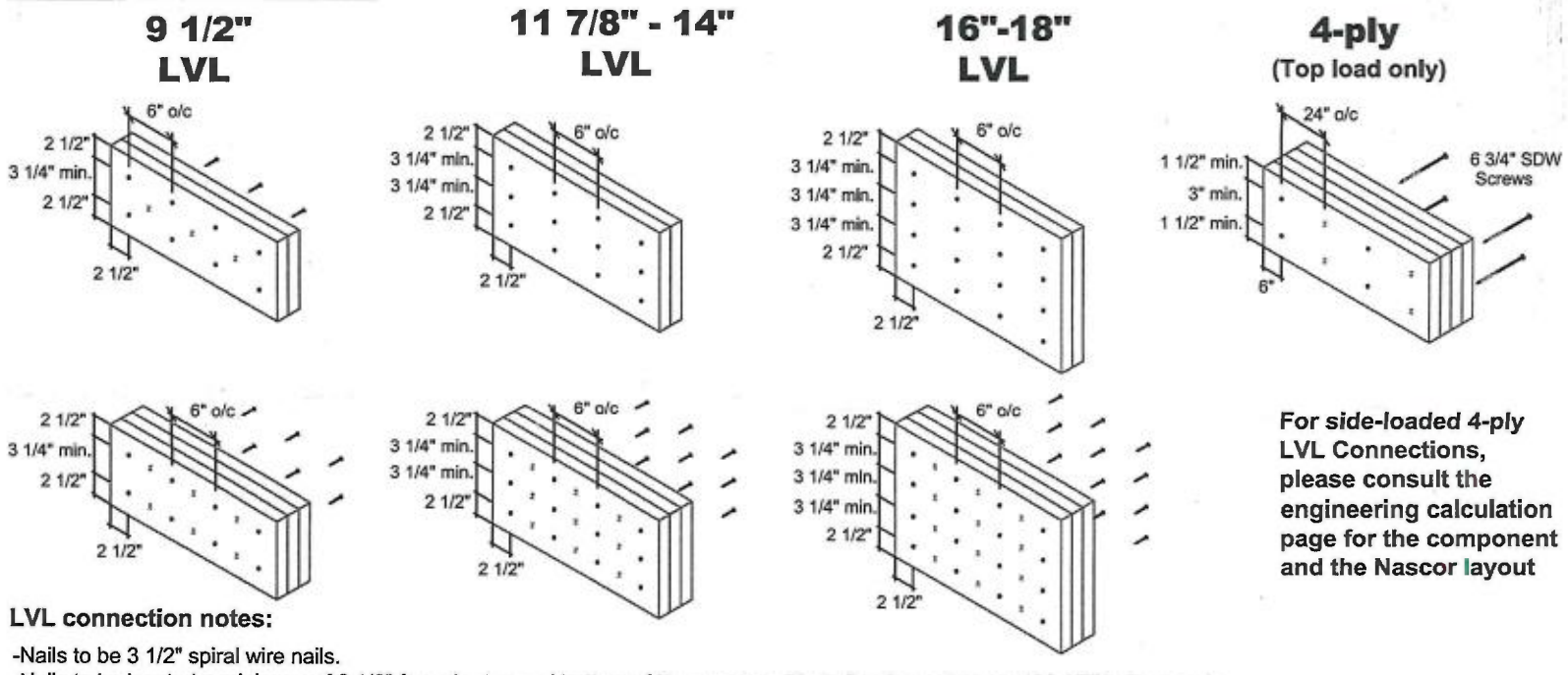
Conventional Connections (for uniform distributed loads)



Conventional connection notes:

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

LVL Connections (for uniform distributed loads)

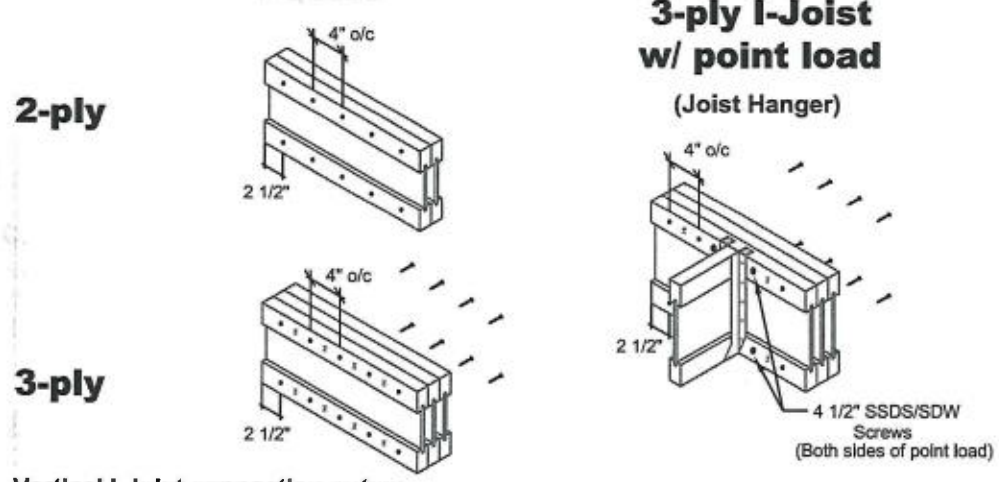


For side-loaded 4-ply LVL Connections, please consult the engineering calculation page for the component and the Nascor layout

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)



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

KOTT

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

KOTT

LOT 5

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.

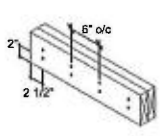
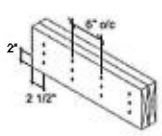
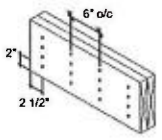
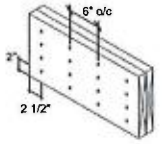
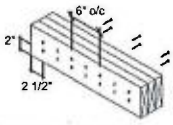
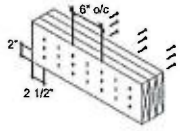
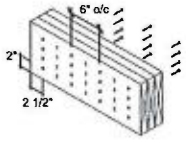
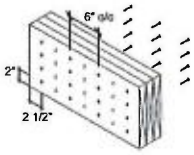
HANDLING AND INSTALLATION

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

KOTT

MULTIPLE MEMBER CONNECTIONS

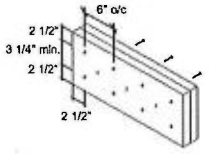
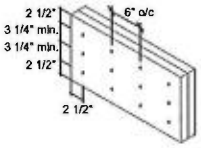
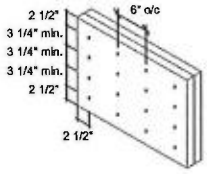
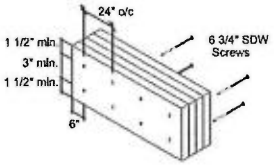
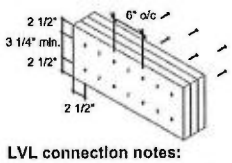
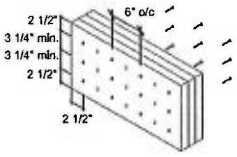
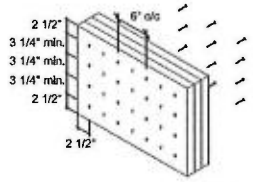
Conventional Connections (for uniform distributed loads)

	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)

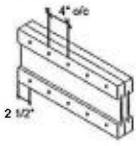
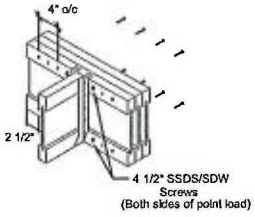
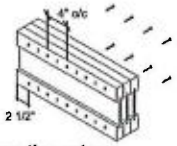
	9 1/2" LVL	11 7/8" - 14" LVL	16"-18" LVL	4-ply (Top load only)
				
				

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)

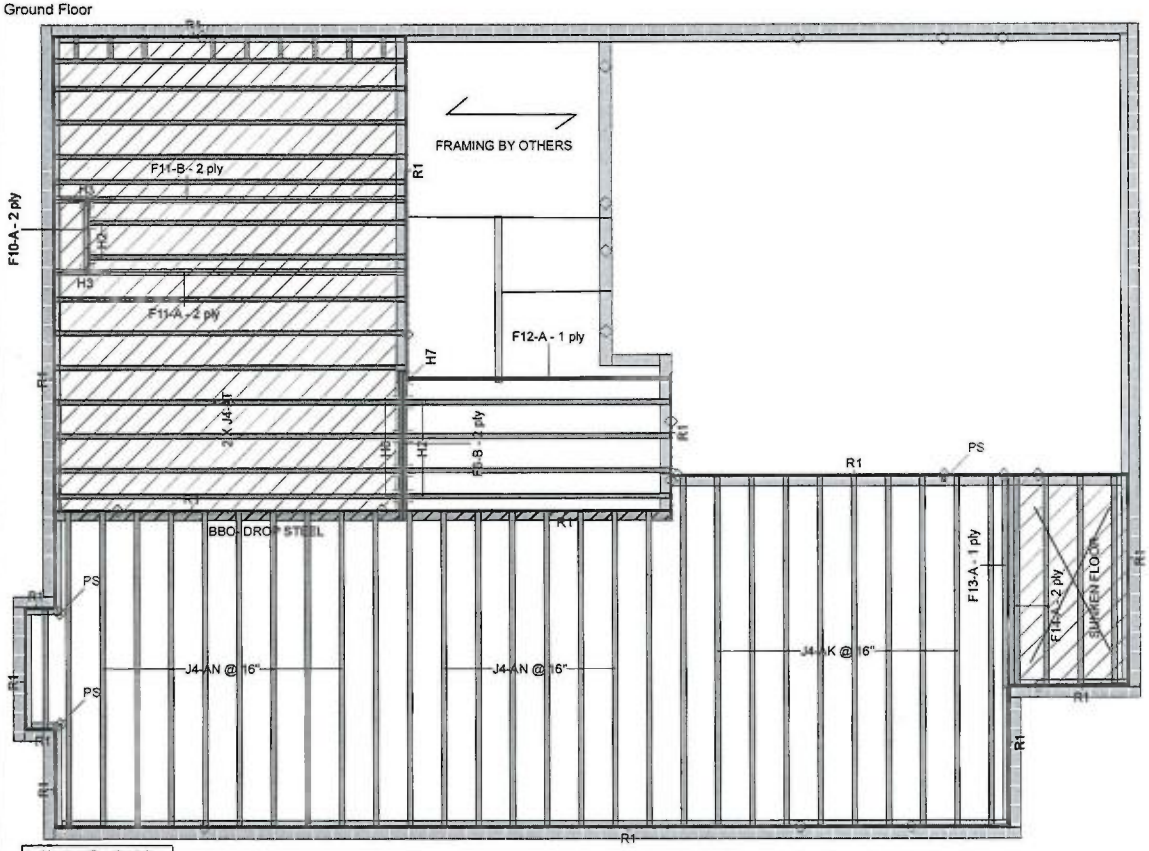
	9 1/2" - 11 7/8" I-Joist	3-ply I-Joist w/ point load (Joist Hanger)
2-ply		
3-ply		

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



Ground Floor
LVL/LSL

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F12	Forex 2.0E-3000Fb LVL	1.75	9.5			1	12-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	8-0-0

I Joist

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F11	NJ	1.5	9.5	2	2	4	14-0-0
F10	NJ	1.5	9.5	1	2	2	4-0-0
J4	NJH	2.5	9.5			42	14-0-0
J3	NJH	2.5	9.5			4	12-0-0
J2	NJH	2.5	9.5			3	10-0-0
J7	NJH	2.5	9.5			1	6-0-0
F14	NJH	2.5	9.5	1	2	2	10-0-0
F13	NJH	2.5	9.5			1	10-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			14	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
H2	6	LT259			4 10d	2 10dx1 1/2
H3	2	LT2-159			4 10d	2 10dx1 1/2
H6	4	LF259			10 10d	1 #8x1 1/4WS
H7	1	HUS1.81/10			30 16d	10 16d

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-loadbearing walls.
4. Install single-ply flush window header along inside face of rimboard/rimjoist
5. Refer to Nascor specifier guide for installation details.
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"x4" 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 be deviate from the architectural drawings. Project Engineer to review and approve the deviation prior to construction.

NASCOR

Layout Name
MILLWOOD 1 EL-3

Design Method
LSD

Description
GREENPARK HOMES
MINNISALE HOME
CORP.,BRAMPTON,ON

Created
June 26, 2018

Builder

Sales Rep

Designer
SB

Shipping

Project

Builder's Project

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

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	OSB
Thickness	3/4"
Fastener	Nailed & Glued
Vibration	

Architectural Drawing Info

JARDIN DESIGN GROUP
64 JARDIN DR, SUITE 3A
VAUGHAN,ON L4K 3P3

Project # 18-24
Model: Millwood 1 EL-3
Date: AUGUST 09 2018

JOISTS SPACING 16"O/C UNLESS NOTED OTHERWISE

Legend

PS	Point Load Support
◇	Load from Above
	Wall
	Norbord Rimboard Plus 1.125 X 9.5
	NJ 9.5
	NJH 9.5
	Forex 2.0E-3000Fb LVL 1.75 X 9.5
	5.25 X 10.25 (Dropped)

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

September 17, 2018

1. OBC 2012 O.Reg 332/12 as amended
2. Nascor CCMC - 13535-R
3. LVL CCMC -12904-R
4. CAN/CSA-O86-09
5. CCMC -12787-R APA PR-L310(C)

Version 18.40.162 Powered by iStruct™

This layout is to be used as an installation guide only. It is meant to be used in conjunction with the architectural and structural drawings, not to replace them

KOTT

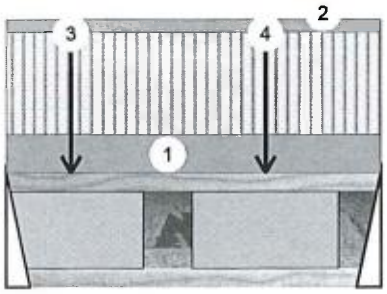
isDesign™

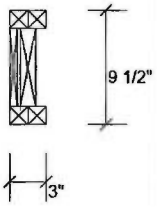
Client:
Project:
Address:

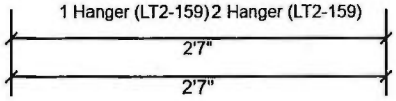
Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F10-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	311	150	0	0
2	262	127	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	25%	187 / 466	653	L	1.25D+1.5L
2 - Hanger	2.000"	21%	159 / 393	552	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	364 ft-lb	1'9 7/16"	7340 ft-lb	0.050 (5%)	1.25D+1.5L	L
Unbraced	364 ft-lb	1'9 7/16"	5436 ft-lb	0.067 (7%)	1.25D+1.5L	L
Shear	647 lb	1 1/4"	3080 lb	0.210 (21%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/25061)	1'8 7/16"	0.079 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/12149)	1'8 3/8"	0.079 (L/360)	0.030 (3%)	L	L
TL Defl inch	0.003 (L/8182)	1'8 3/8"	0.119 (L/240)	0.030 (3%)	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
September 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-7-0	(Span)1-3-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 2-7-0		Top	3 PLF	0 PLF	0 PLF	0 PLF	
3	Point	0-5-7		Near Face	111 lb	232 lb	0 lb	0 lb	
4	Point	1-9-7		Near Face	133 lb	274 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 length>= 3.5 inches
7. For flat roofs provide adequate 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

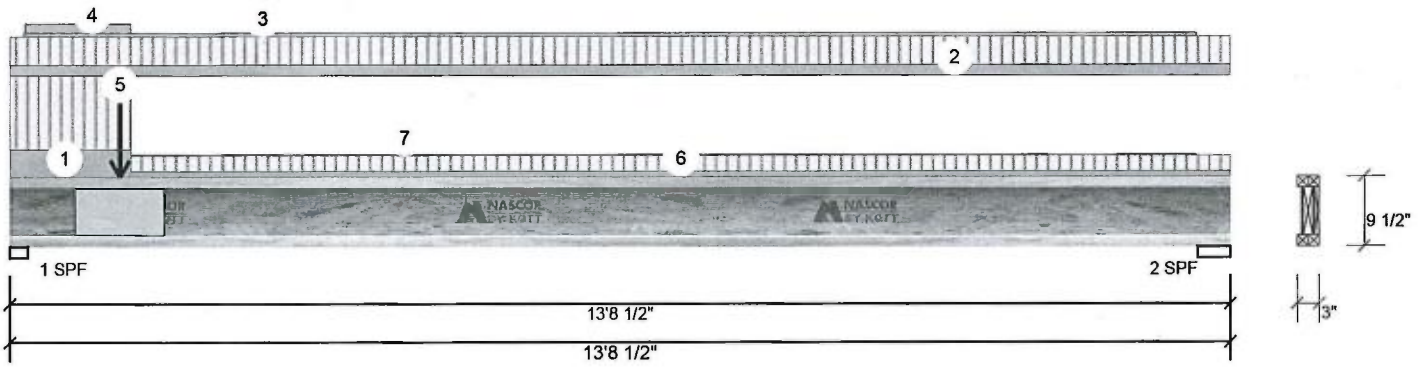
isDesign™

Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F11-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	570	278	0	0
2	260	127	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	45%	347 / 855	1202	L	1.25D+1.5L
2 - SPF	4.375"	18%	158 / 390	548	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1978 ft-lb	5'11 1/16"	7340 ft-lb	0.269 (27%)	1.25D+1.5L	L
Unbraced	1978 ft-lb	5'11 1/16"	1987 ft-lb	0.995 (100%)	1.25D+1.5L	L
Shear	1181 lb	1 5/8"	3080 lb	0.383 (38%)	1.25D+1.5L	L
Perm Defl in.	0.058 (L/2728)	6'6 1/4"	0.442 (L/360)	0.130 (13%)	D	Uniform
LL Defl inch	0.119 (L/1344)	6'6 3/16"	0.442 (L/360)	0.270 (27%)	L	L
TL Defl inch	0.177 (L/900)	6'6 3/16"	0.664 (L/240)	0.270 (27%)	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 4'8" o.c.
5 Bottom flange braced at bearings.

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-4-6	(Span)2-10-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 13-8-8	(Span)1-1-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-1-15 to 13-4-0		Top	3 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-2-1 to 1-4-6		Top	7 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-2-14		Far Face	150 lb	311 lb	0 lb	0 lb	
6	Tie-In	1-4-6 to 13-8-8	(Span)0-6-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-4-6 to 13-4-0		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. 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 length>= 3.5 inches
7. For flat roofs provide [illegible] to prevent ponding

This design is vali[illegible]

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 CSI

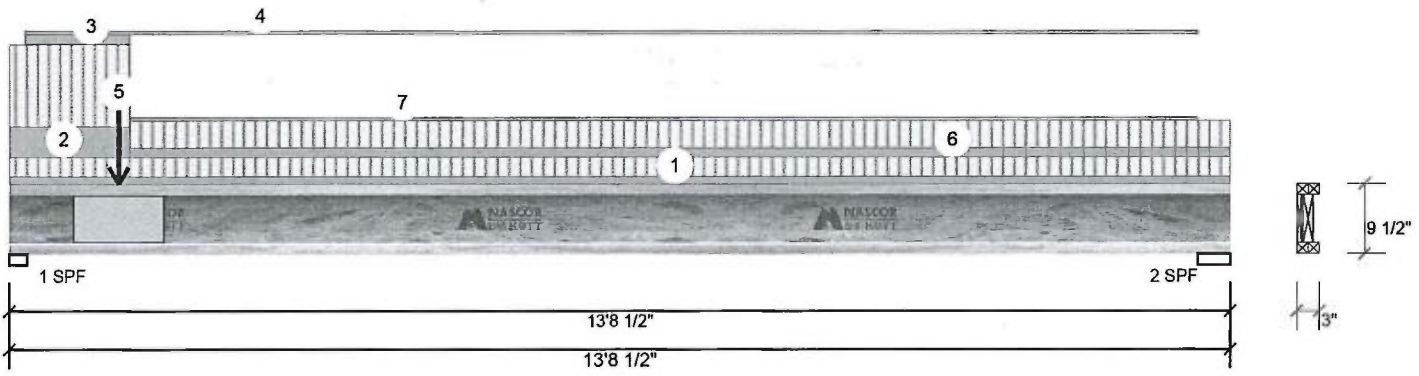
iStDesign™

Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F11-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	505	248	0	0
2	244	120	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	40%	310 / 757	1067	L	1.25D+1.5L
2 - SPF	4.375"	17%	150 / 365	516	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1837 ft-lb	6' 1/4"	7340 ft-lb	0.250 (25%)	1.25D+1.5L	L
Unbraced	1837 ft-lb	6' 1/4"	1848 ft-lb	0.994 (99%)	1.25D+1.5L	L
Shear	1048 lb	1 5/8"	3080 lb	0.340 (34%)	1.25D+1.5L	L
Perm Defl in.	0.055 (L/2916)	6'6 9/16"	0.442 (L/360)	0.120 (12%)	D	Uniform
LL Defl inch	0.110 (L/1453)	6'6 1/2"	0.442 (L/360)	0.250 (25%)	L	L
TL Defl inch	0.164 (L/970)	6'6 1/2"	0.664 (L/240)	0.250 (25%)	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 4'10" o.c.
5 Bottom flange braced at bearings.

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-8-8	(Span)0-7-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-4-6	(Span)2-10-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-2-2 to 1-4-6		Top	7 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-2-2 to 13-4-2		Top	2 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-2-14		Near Face	127 lb	262 lb	0 lb	0 lb	F10
6	Tie-In	1-4-6 to 13-8-8	(Span)0-11-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-4-6 to 13-4-2		Top	2 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. Joist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

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

This design is vali

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

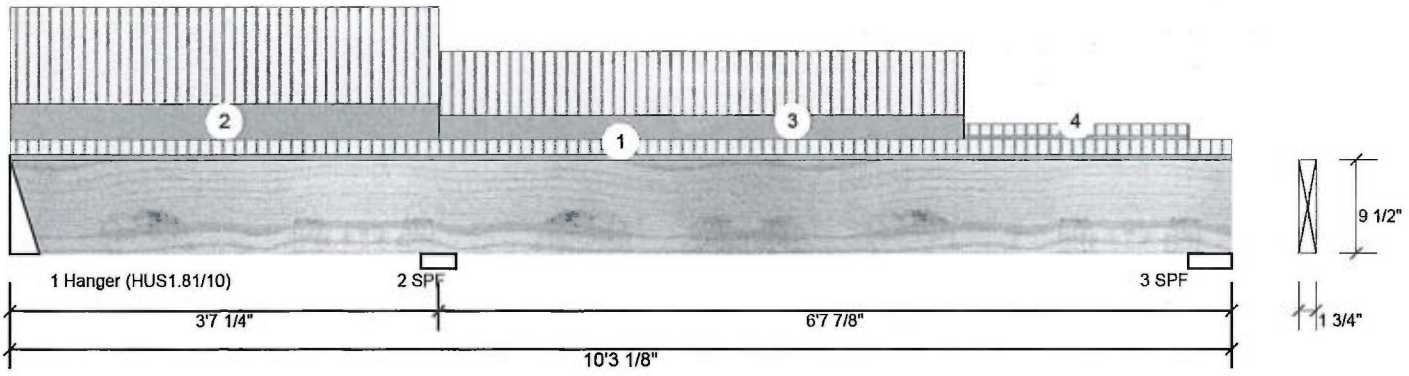
isDesign™

Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F12-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	171	68	0	0
2	670	276	0	0
3	159	71	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	11%	78 / 363	441 (-30)	L_	1.25D+1.5L
2 - SPF	3.500"	37%	354 / 1034	1388	LL	1.25D+1.5L
3 - SPF	4.375"	7%	85 / 246	331	_L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-717 ft-lb	3'7 1/4"	11362 ft-lb	0.063 (6%)	1.25D+1.5L	LL
Unbraced	-717 ft-lb	3'7 1/4"	10999 ft-lb	0.065 (7%)	1.25D+1.5L	LL
Pos Moment	582 ft-lb	7' 7/8"	11362 ft-lb	0.051 (5%)	1.25D+1.5L	_L
Unbraced	582 ft-lb	7' 7/8"	7023 ft-lb	0.083 (8%)	1.25D+1.5L	_L
Shear	548 lb	4'4 3/4"	4638 lb	0.118 (12%)	1.25D+1.5L	LL
Perm Defl in.	0.004 (L/18084)	6'10 5/8"	0.212 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.011 (L/6896)	6'9 15/16"	0.212 (L/360)	0.050 (5%)	L	_L
TL Defl inch	0.015 (L/4993)	6'10 3/16"	0.318 (L/240)	0.050 (5%)	D+L	_L

Design Notes

1 Fill all hanger nailing holes.
2 Girders are designed to be supported on the bottom edge only.
3 Tie-down connection required at bearing 1 for uplift 30 lb (Combination 0.9D+1.5L, Load Case _L).
4 Top braced at bearings.
5 Bottom braced at bearings.

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-3-2	(Span)0-11-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 3-7-4		Top	45 PLF	120 PLF	0 PLF	0 PLF	
3	Part. Uniform	3-7-4 to 8-0-4		Top	30 PLF	80 PLF	0 PLF	0 PLF	
4	Tie-In	8-0-4 to 9-10-12	(Span)0-8-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				4 PLF				

Base-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

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

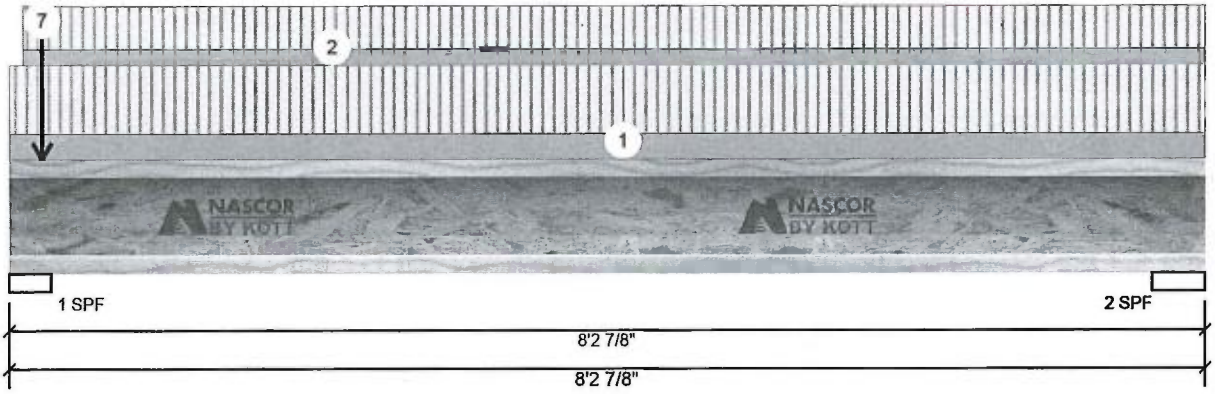
isDesign™

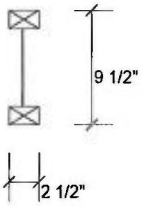
Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F13-A NJH 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	137	87	0	0
2	76	29	0	0

Bearings and Factored Reactions

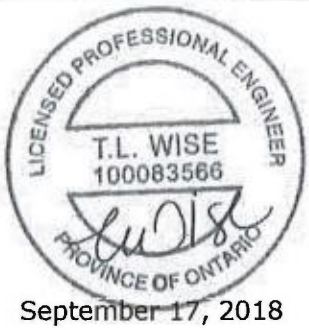
Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	20%	109 / 206	314	L	1.25D+1.5L
2 - SPF	4.375"	9%	36 / 114	150	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	268 ft-lb	4'1"	3830 ft-lb	0.070 (7%)	1.25D+1.5L	L
Unbraced	268 ft-lb	4'1"	1068 ft-lb	0.251 (25%)	1.25D+1.5L	L
Shear	139 lb	2 3/4"	1580 lb	0.088 (9%)	1.25D+1.5L	L
Perm Defl in.	0.004 (L/22525)	4'1 1/16"	0.257 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.011 (L/8447)	4'1 1/16"	0.257 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.015 (L/6143)	4'1 1/16"	0.385 (L/240)	0.040 (4%)	D+L	L

Design Notes

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



September 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 8-2-14	(Span)0-6-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-1-2 to 8-2-14	(Span)0-4-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	0-2-12		Top	1 lb	2 lb	0 lb	0 lb	J2
5	Point	0-2-12		Top	1 lb	0 lb	0 lb	0 lb	Wall Self Weight
6	Point	0-2-12		Top	23 lb	61 lb	0 lb	0 lb	J2
7	Point	0-2-12		Top	34 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. 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 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

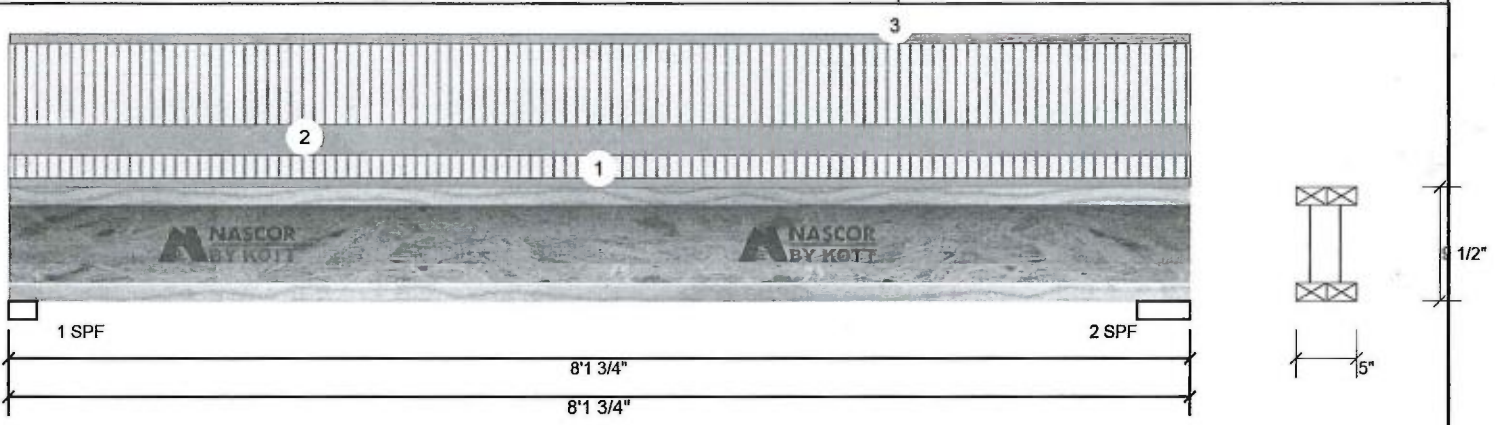
iStruct™ isDesign™

Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F14-A NJH 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	128	60	0	0
2	133	62	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	8%	75 / 192	267	L	1.25D+1.5L
2 - SPF	4.375"	9%	78 / 200	278	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	497 ft-lb	3'11 7/8"	7660 ft-lb	0.065 (6%)	1.25D+1.5L	L
Unbraced	497 ft-lb	3'11 7/8"	2136 ft-lb	0.233 (23%)	1.25D+1.5L	L
Shear	258 lb	1 5/8"	3160 lb	0.082 (8%)	1.25D+1.5L	L
Perm Defl in.	0.004 (L/20605)	3'11 15/16"	0.257 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.010 (L/9653)	3'11 15/16"	0.257 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.014 (L/6574)	3'11 15/16"	0.385 (L/240)	0.040 (4%)	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 braced at bearings.
5 Bottom flange braced at bearings.

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 8-1-12	(Span)0-4-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 8-1-12	(Span)1-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-1 to 8-1-12		Top	3 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. 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 length= 3.5 Inches
7. For flat roofs provide adequate drainage to prevent ponding

This design is valid until 1/10/2021

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

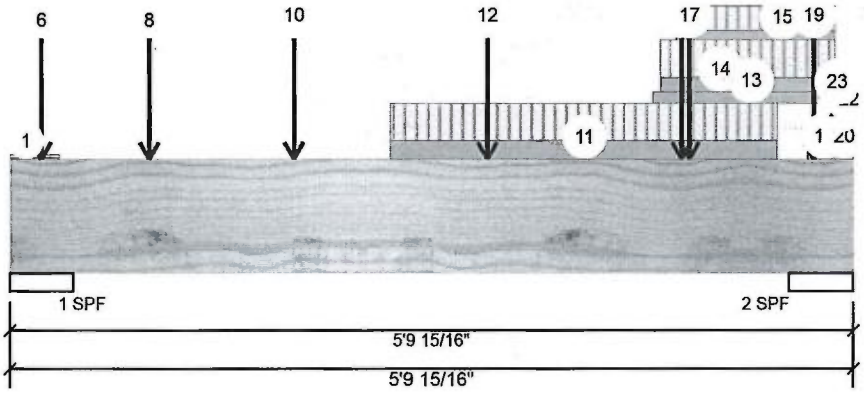
isDesign™

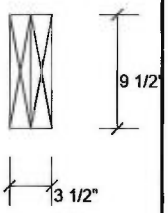
Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F6-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	2962	1324	0	0
2	2826	1291	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	54%	1655 / 4444	6099	L	1.25D+1.5L
2 - SPF	5.313"	51%	1614 / 4240	5853	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4369 ft-lb	3'3 9/16"	22724 ft-lb	0.192 (19%)	1.25D+1.5L	L
Unbraced	4369 ft-lb	3'3 9/16"	22724 ft-lb	0.192 (19%)	1.25D+1.5L	L
Shear	3973 lb	4'7 7/8"	9277 lb	0.428 (43%)	1.25D+1.5L	L
Perm Defl in.	0.012 (L/5025)	3'1 1/2"	0.169 (L/360)	0.070 (7%)	D	Uniform
LL Defl inch	0.027 (L/2256)	3'1 11/16"	0.169 (L/360)	0.160 (16%)	L	L
TL Defl inch	0.039 (L/1557)	3'1 5/8"	0.254 (L/240)	0.150 (15%)	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
September 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)1-1-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-2-10		Top	19 lb	49 lb	0 lb	0 lb	J4
3	Point	0-2-10		Top	16 lb	0 lb	0 lb	0 lb	Wall Self Weight
4	Point	0-2-10		Top	656 lb	1548 lb	0 lb	0 lb	BM6 BM6
5	Point	0-2-10		Top	25 lb	68 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. 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

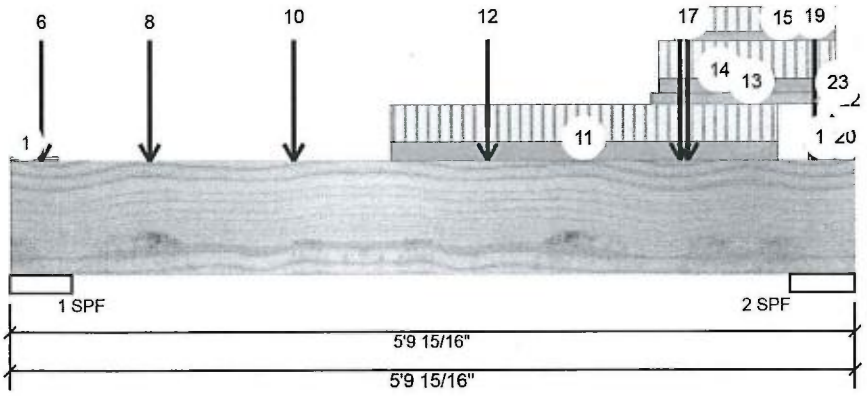
isDesign™

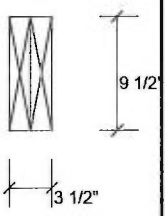
Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F6-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor





...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	0-2-10		Top	22 lb	0 lb	0 lb	0 lb	Wall Self Weight
7	Point	0-11-9		Far Face	99 lb	211 lb	0 lb	0 lb	J4
8	Point	0-11-9		Near Face	59 lb	158 lb	0 lb	0 lb	J3
9	Point	1-11-9		Far Face	150 lb	313 lb	0 lb	0 lb	J4
10	Point	1-11-9		Near Face	88 lb	235 lb	0 lb	0 lb	J3
11	Part. Uniform	2-7-9 to 5-3-9		Far Face	130 PLF	268 PLF	0 PLF	0 PLF	
12	Point	3-3-9		Near Face	101 lb	268 lb	0 lb	0 lb	J3
13	Part. Uniform	4-5-3 to 5-8-6		Top	82 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
14	Part. Uniform	4-5-13 to 5-8-6		Top	102 PLF	272 PLF	0 PLF	0 PLF	J4
15	Part. Uniform	4-7-1 to 5-8-6		Top	66 PLF	175 PLF	0 PLF	0 PLF	J3
16	Point	4-7-9		Near Face	85 lb	227 lb	0 lb	0 lb	J3
17	Point	4-8-4		Top	523 lb	1280 lb	0 lb	0 lb	BM6 BM6
18	Part. Uniform	5-6-1 to 5-8-6		Top	43 PLF	116 PLF	0 PLF	0 PLF	J3
19	Point	5-6-10		Near Face	51 lb	128 lb	0 lb	0 lb	F12
20	Part. Uniform	5-8-6 to 5-9-15		Top	51 PLF	136 PLF	0 PLF	0 PLF	J4
21	Part. Uniform	5-8-6 to 5-9-15		Top	22 PLF	58 PLF	0 PLF	0 PLF	J3
22	Part. Uniform	5-8-6 to 5-9-15		Top	33 PLF	87 PLF	0 PLF	0 PLF	J3
23	Part. Uniform	5-8-6 to 5-9-15		Top	41 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

NASCOR

KOTT

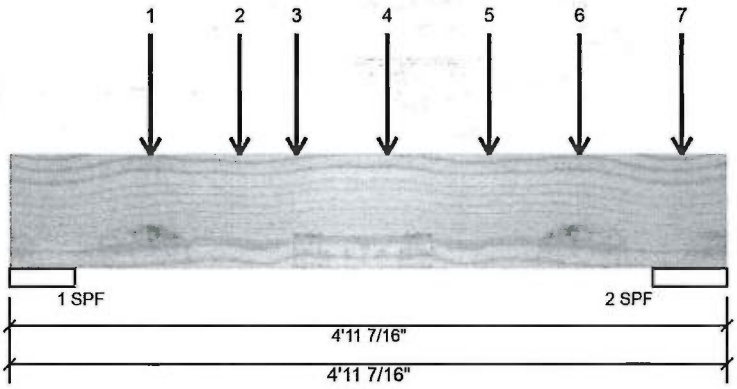
isDesign™

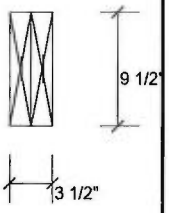
Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

BM6-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	1548	656	0	0
2	1280	523	0	0

Bearings and Factored Reactions

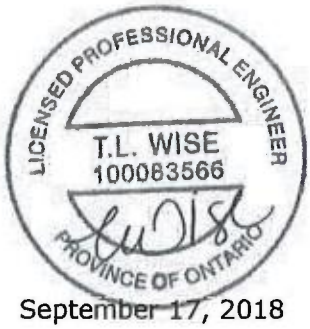
Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	27%	820 / 2322	3142	L	1.25D+1.5L
2 - SPF	6.094"	20%	653 / 1920	2573	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3495 ft-lb	1'11 11/16"	22724 ft-lb	0.154 (15%)	1.25D+1.5L	L
Unbraced	3495 ft-lb	1'11 11/16"	22724 ft-lb	0.154 (15%)	1.25D+1.5L	L
Shear	3023 lb	1'2 1/4"	9277 lb	0.326 (33%)	1.25D+1.5L	L
Perm Defl in.	0.007 (L/7527)	2'2 1/8"	0.137 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.016 (L/3135)	2'2 3/8"	0.137 (L/360)	0.110 (11%)	L	L
TL Defl inch	0.022 (L/2213)	2'2 5/16"	0.205 (L/240)	0.110 (11%)	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.



September 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-11-11		Top	77 lb	206 lb	0 lb	0 lb	J4
2	Point	1-7-0		Top	569 lb	1304 lb	0 lb	0 lb	F8
3	Point	1-11-11		Top	116 lb	310 lb	0 lb	0 lb	J4
4	Point	2-7-3		Top	91 lb	241 lb	0 lb	0 lb	J3
5	Point	3-3-11		Top	134 lb	356 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. 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 v

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

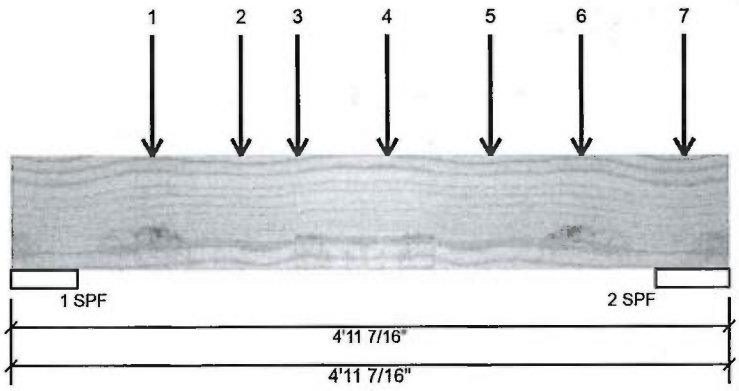
isDesign™

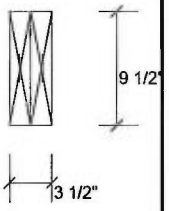
Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

BM6-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor





...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	3-11-3		Top	102 lb	272 lb	0 lb	0 lb	J3
7	Point	4-7-11		Top	52 lb	139 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 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

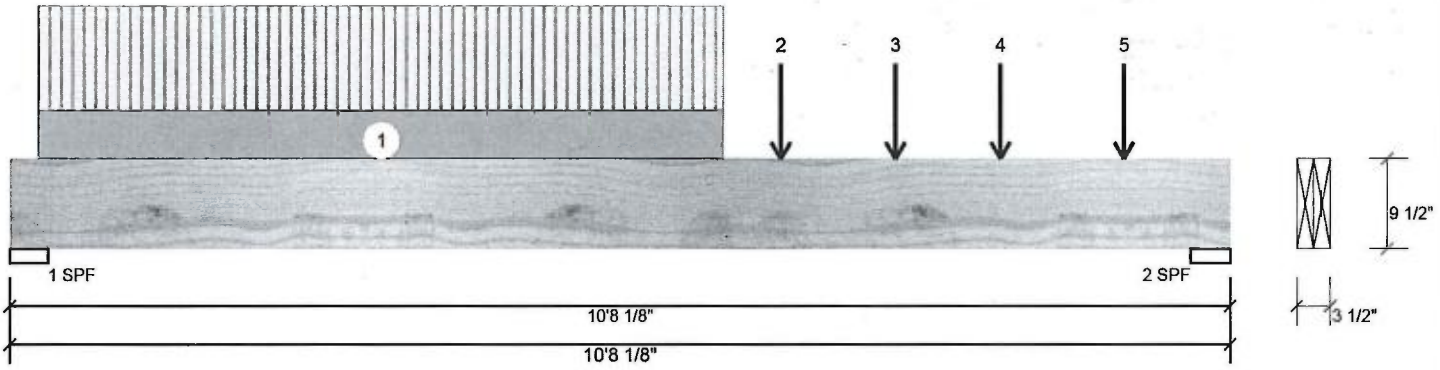
isDesign™

Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

BM8-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	1263	612	0	0
2	1259	559	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.000"	31%	765 / 1895	2660	L	1.25D+1.5L
2 - SPF	4.188"	29%	699 / 1888	2587	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6663 ft-lb	5'3 11/16"	22724 ft-lb	0.293 (29%)	1.25D+1.5L	L
Unbraced	6663 ft-lb	5'3 11/16"	20700 ft-lb	0.322 (32%)	1.25D+1.5L	L
Shear	2468 lb	9'7 3/16"	9277 lb	0.266 (27%)	1.25D+1.5L	L
Perm Defl in.	0.061 (L/2007)	5'3 5/8"	0.337 (L/360)	0.180 (18%)	D	Uniform
LL Defl inch	0.129 (L/942)	5'4 1/16"	0.337 (L/360)	0.380 (38%)	L	L
TL Defl inch	0.189 (L/641)	5'3 15/16"	0.506 (L/240)	0.370 (37%)	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
September 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-3-0 to 6-3-0		Top	115 PLF	248 PLF	0 PLF	0 PLF	
2	Point	6-9-0		Top	106 lb	248 lb	0 lb	0 lb	J4
3	Point	7-9-0		Top	89 lb	238 lb	0 lb	0 lb	J4
4	Point	8-8-0		Top	93 lb	248 lb	0 lb	0 lb	J4
5	Point	9-9-0		Top	112 lb	300 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 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

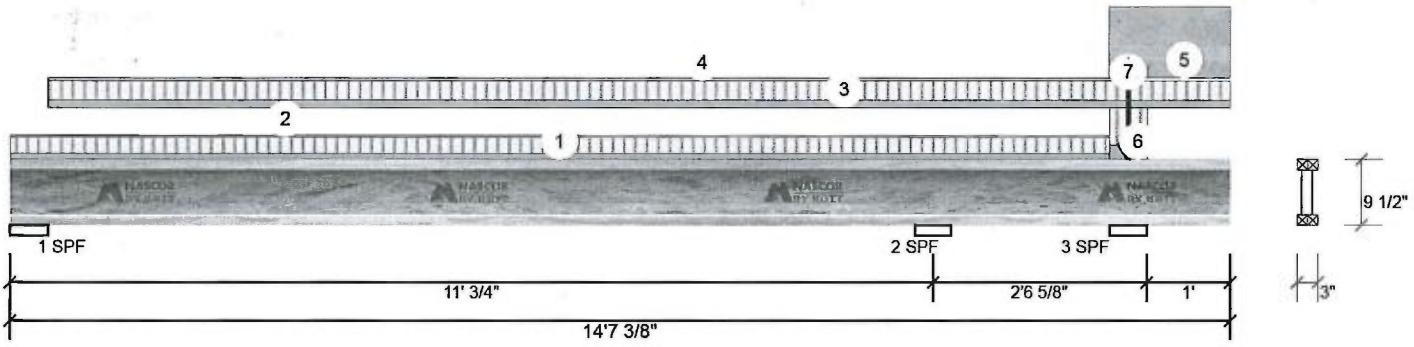
isDesign™

Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F16-A NJ 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	182	91	0	0
2	460	216	0	0
3	74	197	87	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	13%	114 / 274	388	L__	1.25D+1.5L
2 - SPF	5.250"	21%	270 / 696	966	LL_	1.25D+1.5L
3 - SPF	5.250"	16%	246 / 403	649	_LL	1.25D+1.5L +0.5S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-835 ft-lb	11' 3/4"	7340 ft-lb	0.114 (11%)	1.25D+1.5L	LLL
Unbraced	-835 ft-lb	11' 3/4"	5510 ft-lb	0.151 (15%)	1.25D+1.5L	LLL
Pos Moment	831 ft-lb	4'9 13/16"	7340 ft-lb	0.113 (11%)	1.25D+1.5L	L__
Unbraced	831 ft-lb	4'9 13/16"	832 ft-lb	0.998 (100%)	1.25D+1.5L	L__
Shear	532 lb	11' 3/4"	3080 lb	0.173 (17%)	1.25D+1.5L	LLL
Perm Defl in.	0.015 (L/8397)	5'4"	0.356 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.031 (L/4139)	5'4 3/16"	0.356 (L/360)	0.090 (9%)	L+0.5S	L__
TL Defl inch	0.046 (L/2772)	5'4 1/8"	0.533 (L/240)	0.090 (9%)	D+L+0.5S	L__
LL Cant	-0.001 (2L/24468)	Rt Cant	0.200 (2L/480)	0.005 (0%)	L+0.5S	LL_
TL Cant	0.001 (2L/35150)	Rt Cant	0.300 (2L/360)	0.002 (0%)	D+L+0.5S	__L

Design Notes

1 Warning Note: right cant exceeds 1/3 of back span, wind uplift may need to be checked.
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 must be laterally braced at a maximum of 6'8" o.c.
6 Bottom flange must be laterally braced at a maximum of 6'3" o.c.

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

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 length>= 3.5 inches
7. For flat roofs provi... 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

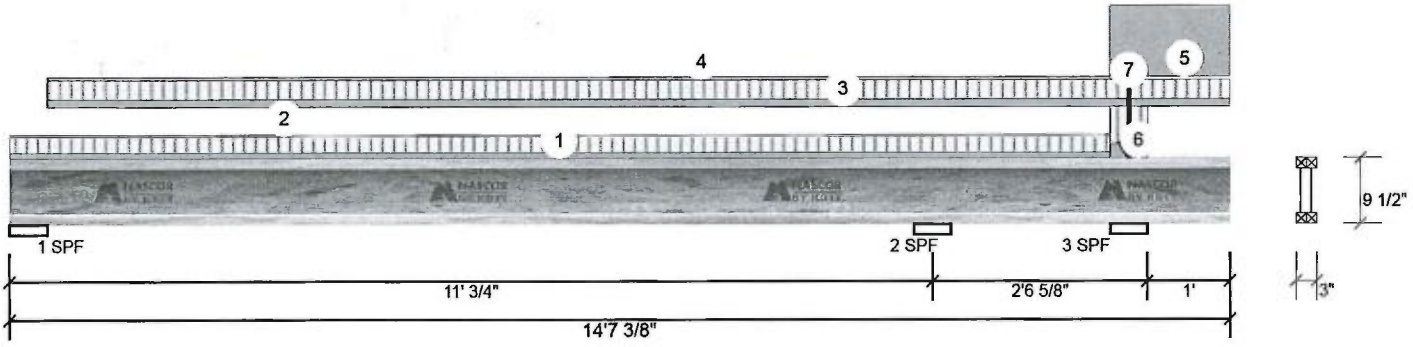
isDesign™

Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F16-A NJ 9.500" 2-Ply - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-2-2	(Span) 0-10-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 13-2-2		Top	2 PLF	0 PLF	0 PLF	0 PLF	
3	Tie-In	0-5-8 to 14-7-6	(Span)1-1-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	0-5-8 to 13-2-10		Top	3 PLF	0 PLF	0 PLF	0 PLF	
5	Part. Uniform	13-2-0 to 14-7-6		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Tie-In	13-2-2 to 13-7-8	(Span)2-1-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Point	13-4-12		Top	110 lb	149 lb	87 lb	0 lb	F2 F2

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 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

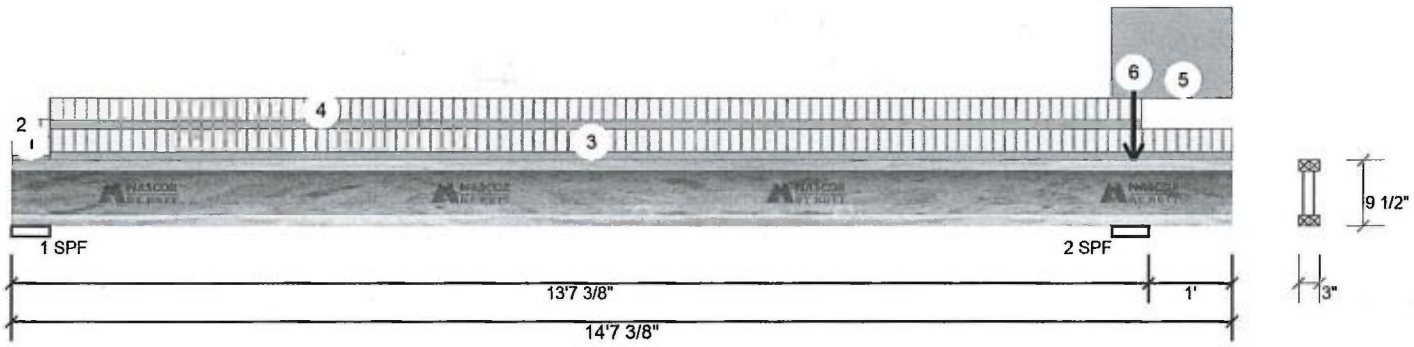
isDesign™

Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F16-B NJ 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	269	98	0	0
2	288	372	264	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	17%	122 / 405	527	L_	1.25D+1.5L
2 - SPF	5.250"	23%	465 / 564	1029	LL	1.25D+1.5L +0.5S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-70 ft-lb	13'7 3/8"	4771 ft-lb	0.015 (1%)	1.25D+1.5L	_L
Unbraced	-70 ft-lb	13'7 3/8"	4691 ft-lb	0.015 (1%)	1.25D+1.5L	_L
Pos Moment	1638 ft-lb	6'10 1/8"	7340 ft-lb	0.223 (22%)	1.25D+1.5L	L_
Unbraced	1638 ft-lb	6'10 1/8"	1647 ft-lb	0.994 (99%)	1.25D+1.5L	L_
Shear	540 lb	13'4 3/4"	3080 lb	0.175 (18%)	1.25D+1.5L	LL
Perm Defl in.	0.035 (L/4444)	6'9 15/16"	0.433 (L/360)	0.080 (8%)	D	Uniform
LL Defl inch	0.101 (L/1547)	6'10 3/4"	0.433 (L/360)	0.230 (23%)	L+0.5S	L_
TL Defl inch	0.136 (L/1148)	6'10 9/16"	0.650 (L/240)	0.210 (21%)	D+L+0.5S	L_
LL Cant	-0.023 (2L/1062)	Rt Cant	0.200 (2L/480)	0.113 (11%)	L+0.5S	L_
TL Cant	-0.029 (2L/817)	Rt Cant	0.300 (2L/360)	0.098 (10%)	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 5'1" o.c.
5 Bottom flange must be laterally braced at a maximum of 6'3" o.c.

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

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 length>= 3.5 inches
7. For flat roofs provi... 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 (SI)

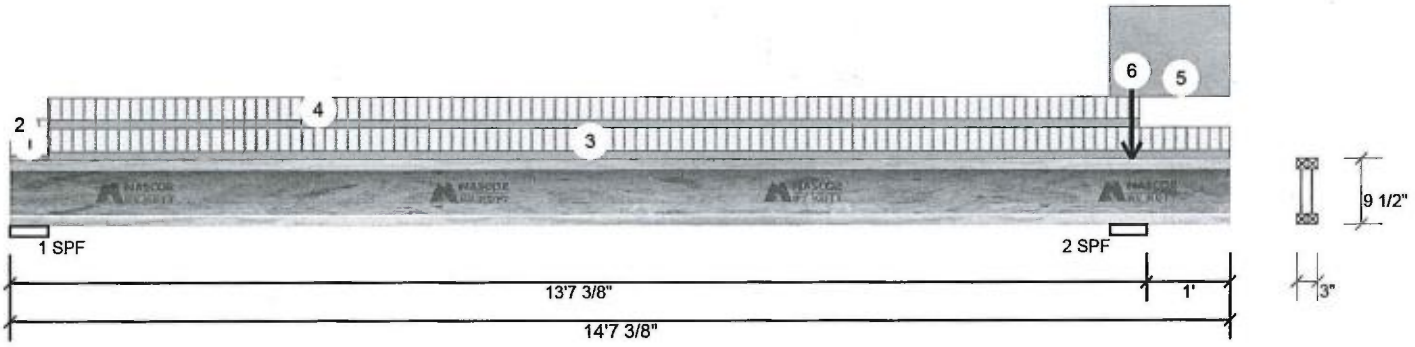
isDesign™

Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F16-B NJ 9.500" 2-Ply - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-5-8	(Span)0-6-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-5-8	(Span)0-9-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-5-8 to 14-7-6	(Span)1-0-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	0-5-8 to 13-6-6	(Span) 0-11-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Part. Uniform	13-2-0 to 14-7-6		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Point	13-5-4		Top	145 lb	0 lb	264 lb	0 lb	F3 F3

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 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

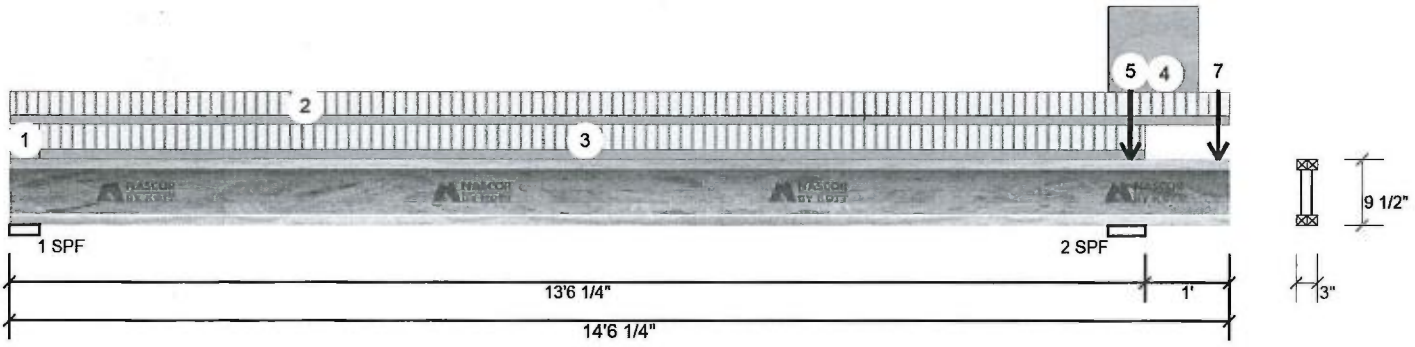
isDesign™

Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F16-C NJ 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	309	111	0 (-1)	0
2	331	428	319	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.375"	20%	139 / 465	604	L_	1.25D+1.5L
2 - SPF	5.250"	26%	536 / 656	1191	LL	1.25D+1.5L +0.5S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-102 ft-lb	13'6 1/4"	4771 ft-lb	0.021 (2%)	1.25D+1.5L	_L
Unbraced	-102 ft-lb	13'6 1/4"	4691 ft-lb	0.022 (2%)	1.25D+1.5L	_L
Pos Moment	1863 ft-lb	6'8 3/4"	7340 ft-lb	0.254 (25%)	1.25D+1.5L	L_
Unbraced	1863 ft-lb	6'8 3/4"	1875 ft-lb	0.994 (99%)	1.25D+1.5L	L_
Shear	617 lb	13'3 5/8"	3080 lb	0.200 (20%)	1.25D+1.5L +0.5S	LL
Perm Defl in.	0.039 (L/4002)	6'8 7/16"	0.433 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.115 (L/1352)	6'9 5/8"	0.433 (L/360)	0.270 (27%)	L	L_
TL Defl inch	0.154 (L/1010)	6'9 3/8"	0.650 (L/240)	0.240 (24%)	D+L	L_
LL Cant	-0.026 (2L/928)	Rt Cant	0.200 (2L/480)	0.129 (13%)	L	L_
TL Cant	-0.033 (2L/730)	Rt Cant	0.300 (2L/360)	0.110 (11%)	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 4'10" o.c.
5 Bottom flange must be laterally braced at a maximum of 6'3" o.c.

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

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 length>= 3.5 inches
7. For flat roofs provide for ponding

This design is valid

Manufacturer Info

Nascor by Kott

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

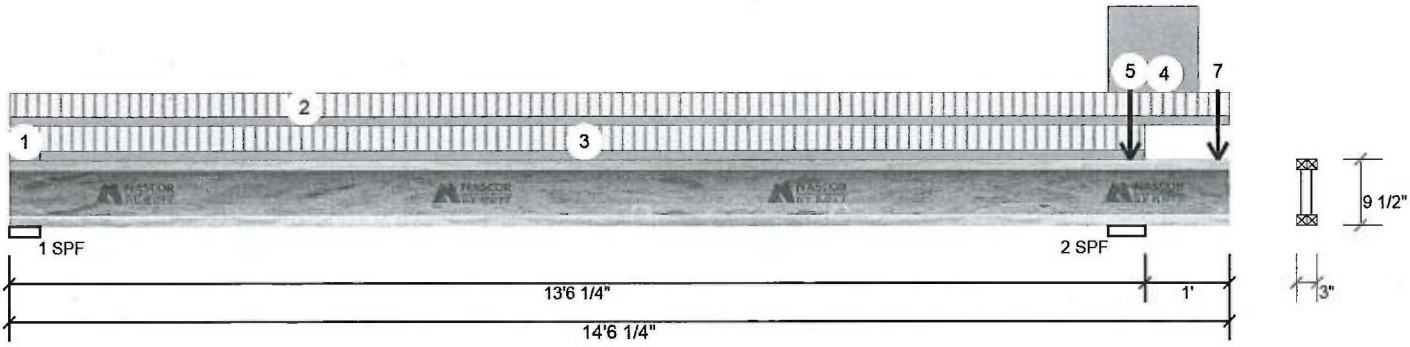
isDesign™

Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F16-C NJ 9.500" 2-Ply - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-6	(Span)1-0-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 14-6-4	(Span)1-1-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-4-6 to 13-6-4	(Span)1-2-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	13-0-14 to 14-1-14		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
5	Point	13-4-2		Top	161 lb	0 lb	299 lb	0 lb	F3 F3
6	Point	14-4-10		Top	8 lb	0 lb	19 lb	0 lb	
7	Point	14-4-10		Top	44 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

NASCOR

KOTT

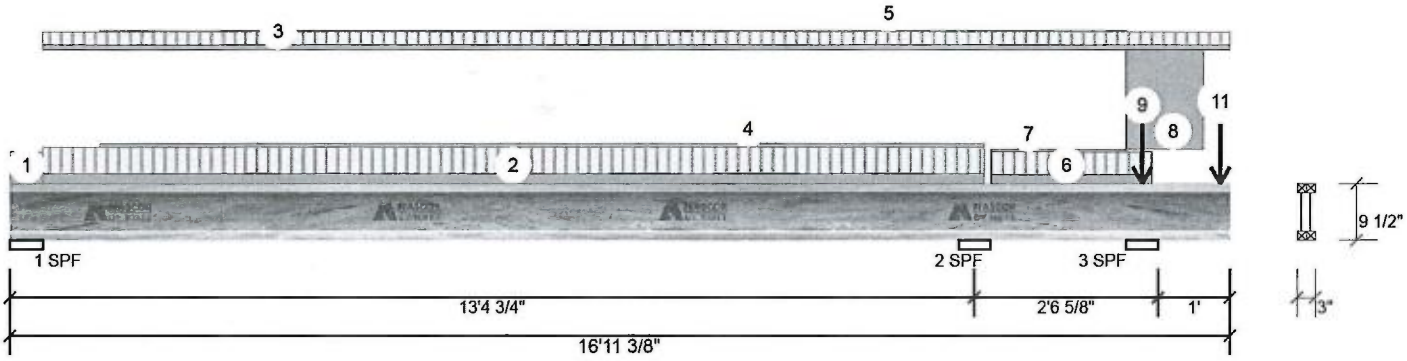
isDesign™

Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F17-A NJ 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	175	83	0 (0)	0
2	482	223	0 (-4)	0
3	0 (-9)	176	128	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	12%	104 / 263	367	L__	1.25D+1.5L
2 - SPF	5.250"	22%	279 / 727	1006	LL_	1.25D+1.5L
3 - SPF	5.250"	14%	220 / 363	583	_LL	1.25D+1.5L +0.5S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-1039 ft-lb	13'4 3/4"	7340 ft-lb	0.142 (14%)	1.25D+1.5L +0.5S	LLL
Unbraced	-1039 ft-lb	13'4 3/4"	5435 ft-lb	0.191 (19%)	1.25D+1.5L +0.5S	LLL
Pos Moment	951 ft-lb	5'8 5/8"	7340 ft-lb	0.130 (13%)	1.25D+1.5L	L__
Unbraced	951 ft-lb	5'8 5/8"	956 ft-lb	0.995 (99%)	1.25D+1.5L	L__
Shear	518 lb	13'4 3/4"	3080 lb	0.168 (17%)	1.25D+1.5L +0.5S	LLL
Perm Defl in.	0.024 (L/6483)	6'4 3/16"	0.433 (L/360)	0.060 (6%)	D	Uniform
LL Defl inch	0.049 (L/3205)	6'4 5/16"	0.433 (L/360)	0.110 (11%)	L	L__
TL Defl inch	0.073 (L/2145)	6'4 5/16"	0.650 (L/240)	0.110 (11%)	D+L	L__
LL Cant	-0.001 (2L/20851)	Rt Cant	0.200 (2L/480)	0.006 (1%)	L	LL_
TL Cant	0.001 (2L/31246)	Rt Cant	0.300 (2L/360)	0.003 (0%)	D+S+0.5L	__L

Design Notes

1 Warning Note: right cant exceeds 1/3 of back span, wind uplift may need to be checked.
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 must be laterally braced at a maximum of 6'4" o.c.
6 Bottom flange must be laterally braced at a maximum of 6'3" o.c.

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

September 17, 2018

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 length>= 3.5 inches
7. For flat roofs provi... 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 (ST)

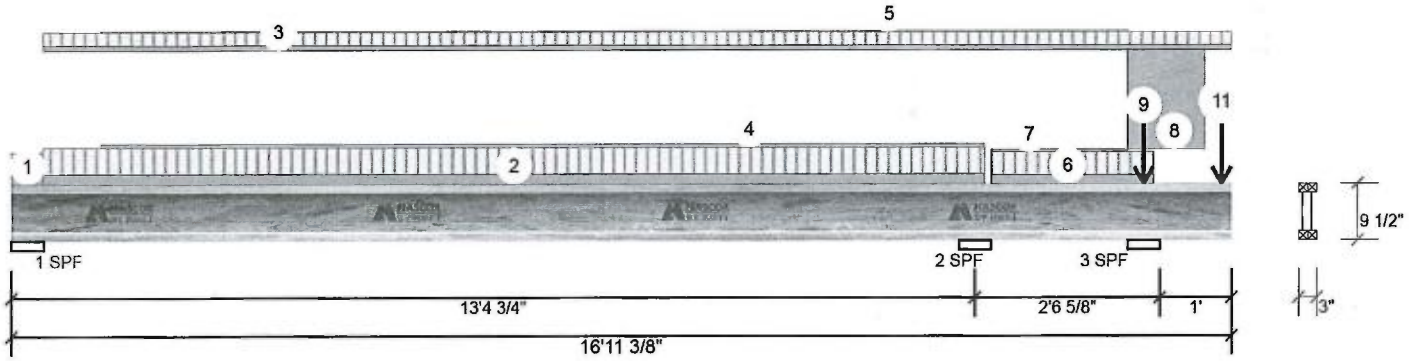
isDesign™

Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F17-A NJ 9.500" 2-Ply - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-5-8	(Span)0-11-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-5-8 to 13-6-6	(Span)1-0-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-5-8 to 16-11-6	(Span)0-6-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	1-3-1 to 13-6-6		Top	3 PLF	0 PLF	0 PLF	0 PLF	
5	Part. Uniform	1-3-2 to 15-6-3		Top	1 PLF	0 PLF	0 PLF	0 PLF	
6	Tie-In	13-7-8 to 15-10-6	(Span)0-11-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	13-7-8 to 15-6-2		Top	2 PLF	0 PLF	0 PLF	0 PLF	
8	Part. Uniform	15-6-0 to 16-7-0		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
9	Point	15-8-12		Top	121 lb	149 lb	112 lb	0 lb	F2 F2
10	Point	16-9-12		Top	5 lb	0 lb	12 lb	0 lb	
11	Point	16-9-12		Top	28 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

NASCOR

KOTT

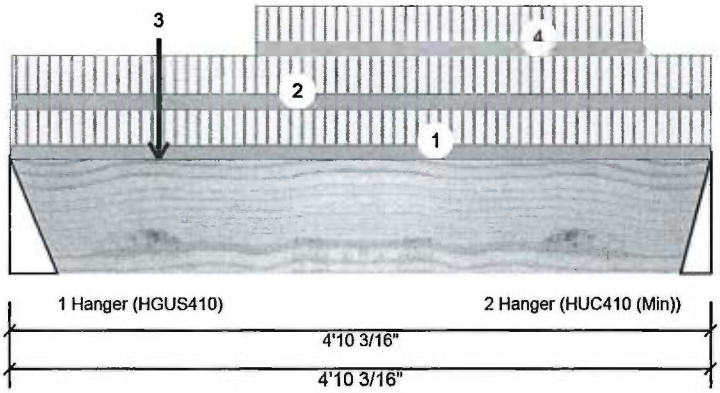
isDesign™

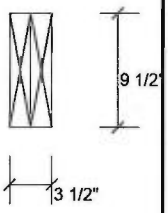
Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F6-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	521	214	0	0
2	491	202	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	4.000"	10%	268 / 781	1049	L	1.25D+1.5L
2 - Hanger	2.500"	15%	253 / 736	989	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1091 ft-lb	2'5 13/16"	22724 ft-lb	0.048 (5%)	1.25D+1.5L	L
Unbraced	1091 ft-lb	2'5 13/16"	22724 ft-lb	0.048 (5%)	1.25D+1.5L	L
Shear	791 lb	1' 3/4"	9277 lb	0.085 (9%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/22723)	2'5 13/16"	0.148 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.006 (L/9302)	2'5 13/16"	0.148 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.008 (L/6600)	2'5 13/16"	0.222 (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 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

September 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-10-3	(Span)3-7-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-3 to 4-10-3	(Span) 3-10-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-0-7		Near Face	34 lb	91 lb	0 lb	0 lb	
4	Part. Uniform	1-8-7 to 4-4-7		Near Face	27 PLF	72 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 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

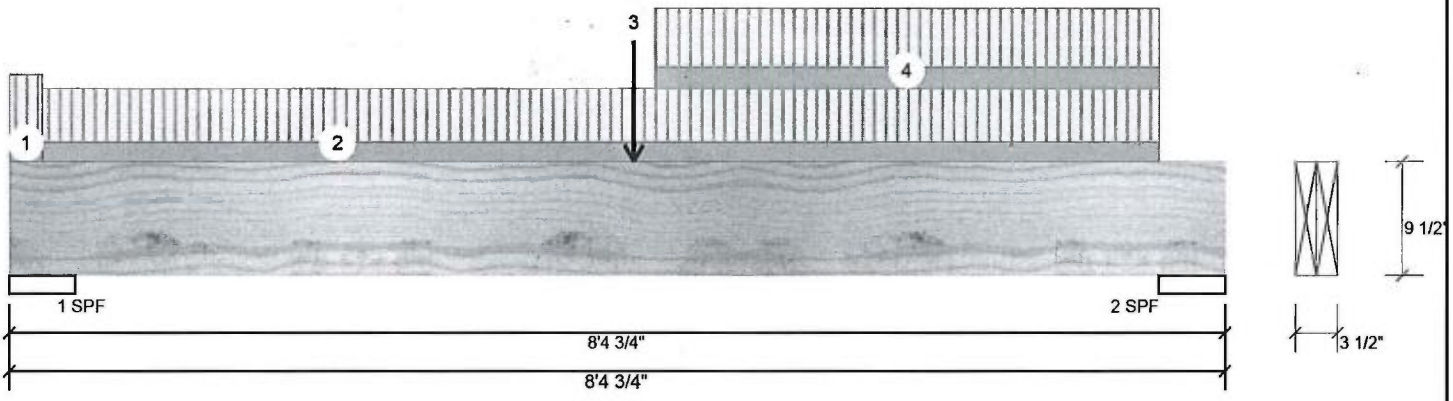
isDesign™

Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F7-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	362	177	0	0
2	411	196	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	6%	221 / 543	764	L	1.25D+1.5L
2 - SPF	5.500"	7%	245 / 617	862	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2515 ft-lb	4'3 13/16"	22724 ft-lb	0.111 (11%)	1.25D+1.5L	L
Unbraced	2515 ft-lb	4'3 13/16"	21582 ft-lb	0.117 (12%)	1.25D+1.5L	L
Shear	786 lb	7'2 1/2"	9277 lb	0.085 (8%)	1.25D+1.5L	L
Perm Defl in.	0.012 (L/7866)	4'3 13/16"	0.253 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.025 (L/3582)	4'3 13/16"	0.253 (L/360)	0.100 (10%)	L	L
TL Defl inch	0.037 (L/2461)	4'3 13/16"	0.380 (L/240)	0.100 (10%)	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
September 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-2-12	(Span)1-3-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-2-12 to 7-11-4	(Span)1-0-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	4-3-13		Far Face	214 lb	521 lb	0 lb	0 lb	F6
4	Tie-In	4-5-9 to 7-11-4	(Span)1-2-3	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 design is v

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

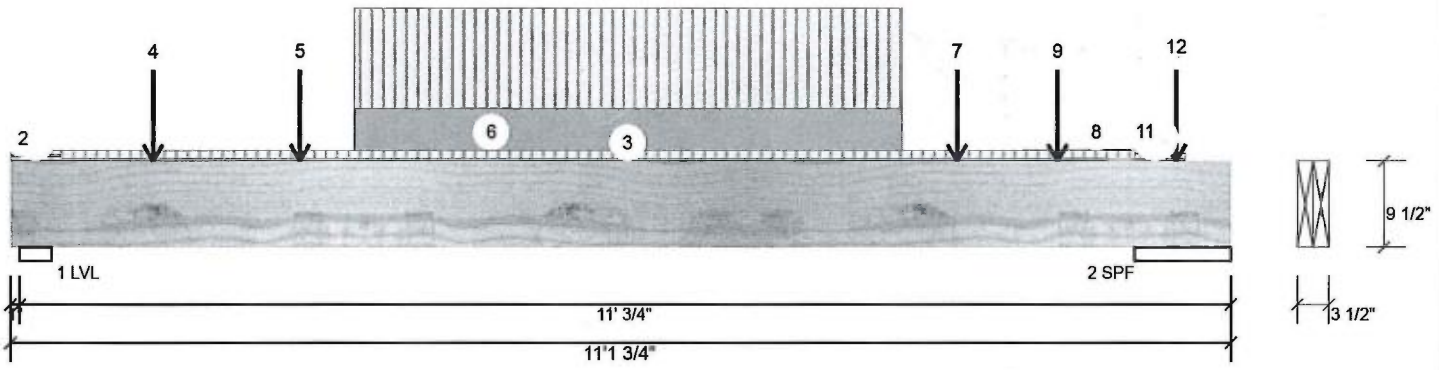
isDesign™

Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F8-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	1304	569	0	0
2	1586	695	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - LVL	3.500"	29%	712 / 1956	2668	LL	1.25D+1.5L
2 - SPF	10.502"	14%	868 / 2380	3248	_L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7404 ft-lb	5'3 9/16"	22724 ft-lb	0.326 (33%)	1.25D+1.5L	_L
Unbraced	7404 ft-lb	5'3 9/16"	20708 ft-lb	0.358 (36%)	1.25D+1.5L	_L
Shear	2770 lb	9'6 1/2"	9277 lb	0.299 (30%)	1.25D+1.5L	_L
Perm Defl in.	0.064 (L/1890)	5'3 9/16"	0.337 (L/360)	0.190 (19%)	D	Uniform
LL Defl inch	0.145 (L/837)	5'3 7/16"	0.337 (L/360)	0.430 (43%)	L	_L
TL Defl inch	0.209 (L/580)	5'3 7/16"	0.505 (L/240)	0.410 (41%)	D+L	_L
LL Cant	-0.003 (2L/574)	Lt Cant	0.200 (2L/480)	0.017 (2%)	L	_L
TL Cant	-0.005 (2L/398)	Lt Cant	0.300 (2L/360)	0.017 (2%)	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
September 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-5-8	(Span)0-4-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-5-8	(Span)0-7-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-5-8 to 10-3-4	(Span)1-0-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	1-3-12		Near Face	122 lb	326 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. 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 v

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 (SI)

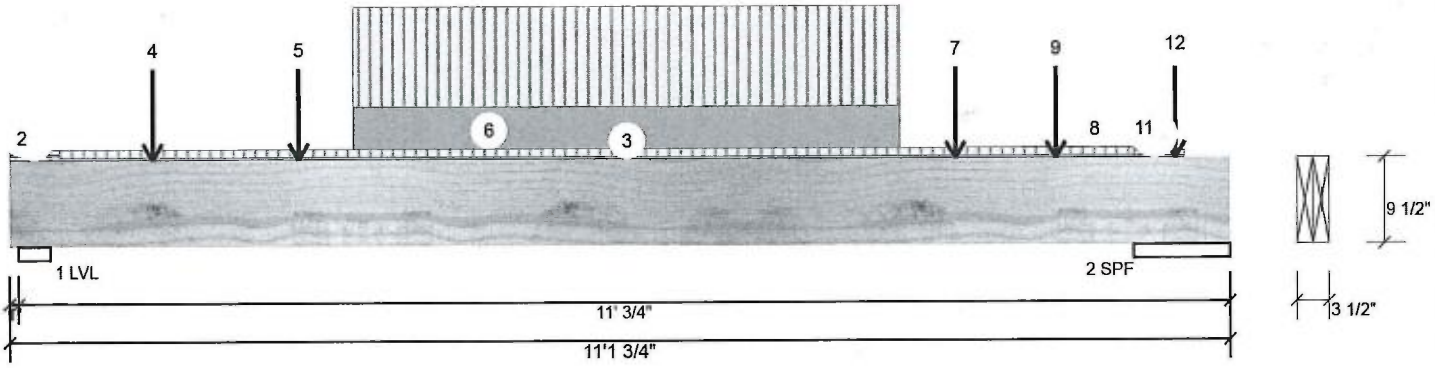
isDesign™

Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F8-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Point	2-7-12		Near Face	124 lb	307 lb	0 lb	0 lb	J4
6	Part. Uniform	3-1-12 to 8-1-12		Near Face	112 PLF	263 PLF	0 PLF	0 PLF	
7	Point	8-7-12		Near Face	108 lb	252 lb	0 lb	0 lb	J4
8	Part. Uniform	9-3-0 to 10-3-4		Top	2 PLF	0 PLF	0 PLF	0 PLF	
9	Point	9-6-12		Near Face	102 lb	263 lb	0 lb	0 lb	J4
10	Tie-In	10-3-4 to 10-8-12	(Span)0-8-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
11	Part. Uniform	10-3-4 to 10-8-12		Top	1 PLF	0 PLF	0 PLF	0 PLF	
12	Point	10-7-12		Near Face	80 lb	212 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 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 (SJ)

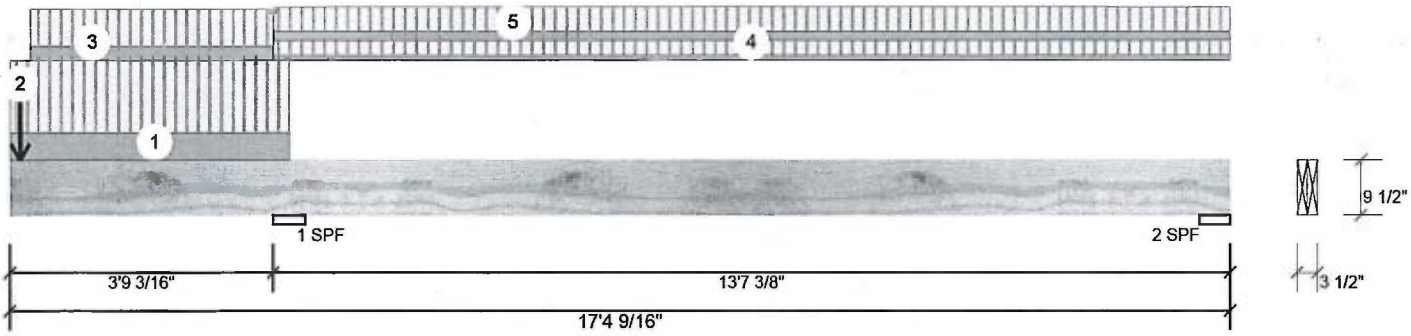
isDesign™

Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F9-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	1136	534	0	0
2	8	46	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	20%	667 / 1704	2371	LL	1.25D+1.5L
2 - SPF	5.250"	3%	58 / 275	333 (-207)	_L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-4651 ft-lb	3'11 15/16"	22724 ft-lb	0.205 (20%)	1.25D+1.5L	L_
Unbraced	-4651 ft-lb	3'11 15/16"	19381 ft-lb	0.240 (24%)	1.25D+1.5L	L_
Pos Moment	783 ft-lb	11'8 1/2"	20451 ft-lb	0.038 (4%)	0.9D+1.5L	_L
Unbraced	783 ft-lb	11'8 1/2"	18837 ft-lb	0.042 (4%)	0.9D+1.5L	_L
Shear	1447 lb	2'11 11/16"	9277 lb	0.156 (16%)	1.25D+1.5L	L_
Perm Defl in.	0.014 (L/10786)	7'11 7/8"	0.434 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.086 (L/1820)	9'5 15/16"	0.434 (L/360)	0.200 (20%)	L	L_
TL Defl inch	0.099 (L/1572)	9'2 7/8"	0.651 (L/240)	0.150 (15%)	D+L	L_
LL Cant	0.174 (2L/520)	Lt Cant	0.200 (2L/480)	0.868 (87%)	L	L_
TL Cant	0.227 (2L/398)	Lt Cant	0.300 (2L/360)	0.756 (76%)	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 Tie-down connection required at bearing 2 for uplift 207 lb (Combination 0.9D+1.5L, Load Case L_).
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
September 17, 2018

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

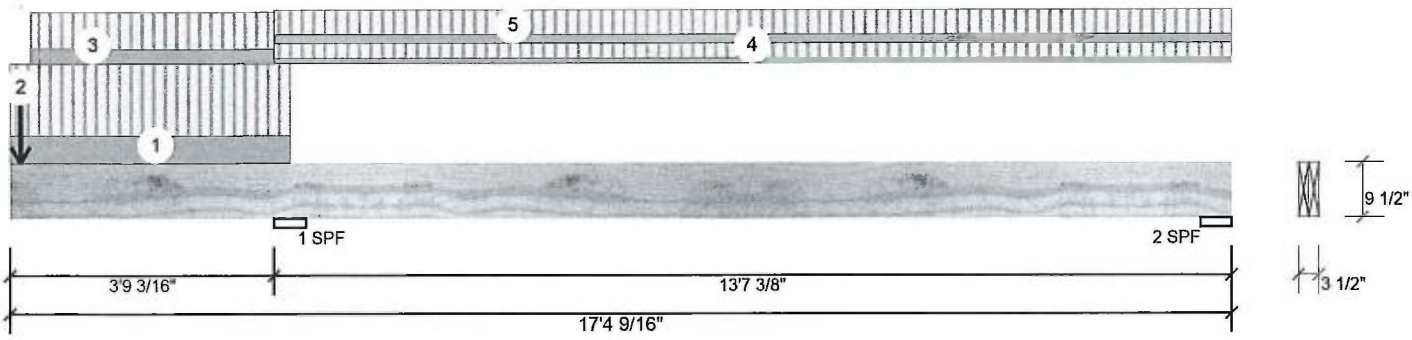
isDesign™

Client:
Project:
Address:

Date: 9/10/2018
Designer: S B
Job Name: MILLWOOD 1 EL-3
Project #:

F9-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-11-15		Top	19 PLF	50 PLF	0 PLF	0 PLF	
2	Point	0-1-12		Near Face	202 lb	491 lb	0 lb	0 lb	F6
3	Tie-In	0-3-8 to 3-9-3	(Span)1-3-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	3-9-3 to 17-4-9	(Span)0-6-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tie-In	3-9-3 to 17-4-9	(Span)0-10-0	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 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