GREEN YORK HOMES- LOT 28
(LIANA 1 EL-1)-BRAMPTON-ON

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

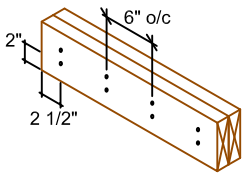
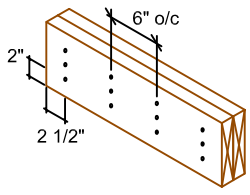
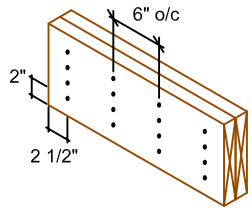
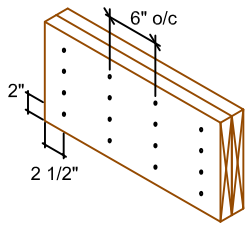
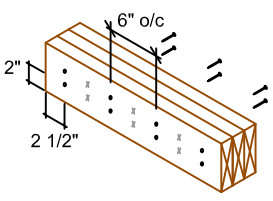
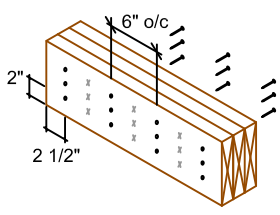
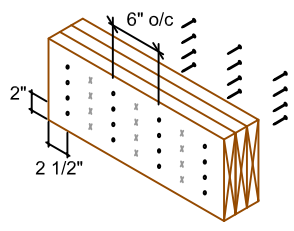
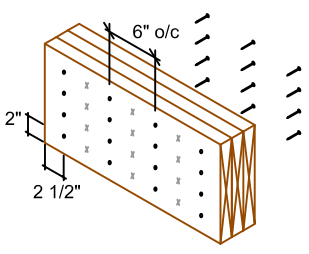
Do not drill any hole, cut or notch a certified building component without a written pre-authorization.

KOTT

MULTIPLE MEMBER CONNECTIONS

GREEN YORK HOMES- LOT 28
(LIANA 1 EL-1)-BRAMPTON-ON

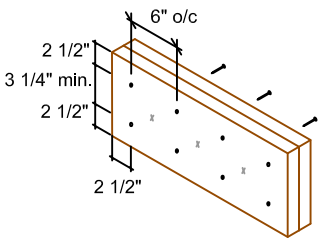
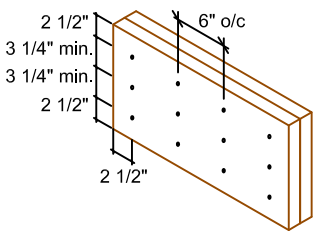
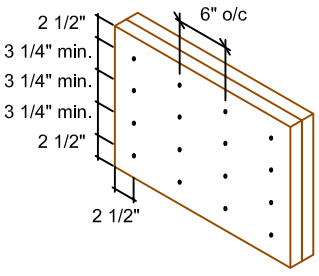
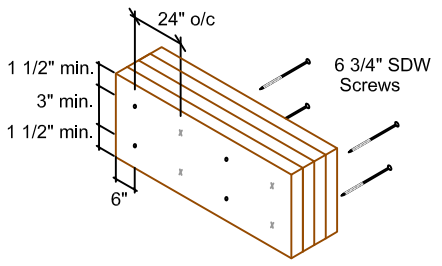
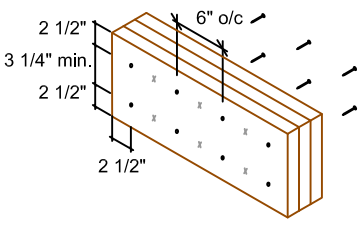
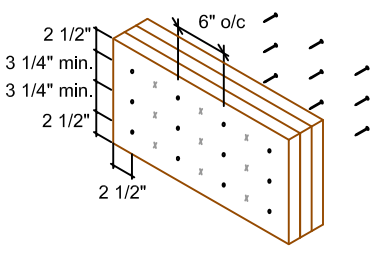
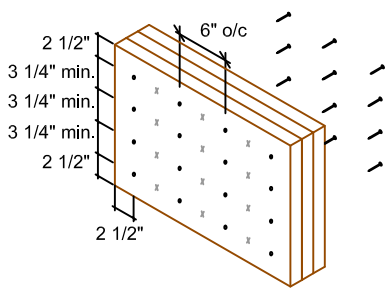
Conventional Connections (for uniform distributed loads)

	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)

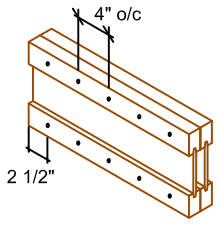
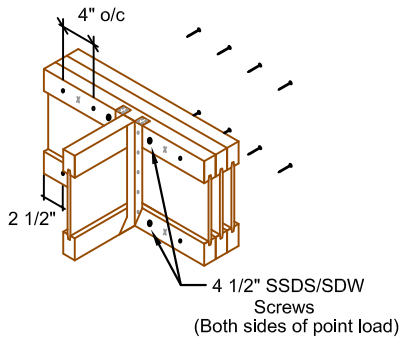
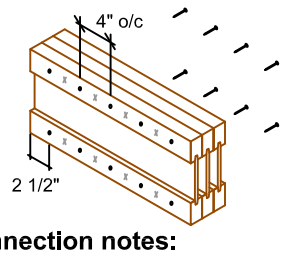
	9 1/2" LVL	11 7/8" - 14" LVL	16"-18" LVL	4-ply (Top load only)
2-ply				
3-ply				

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

LVL connection notes:

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

Vertical I-Joist Connections (for uniform distributed loads)

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

Vertical I-Joist connection notes:

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

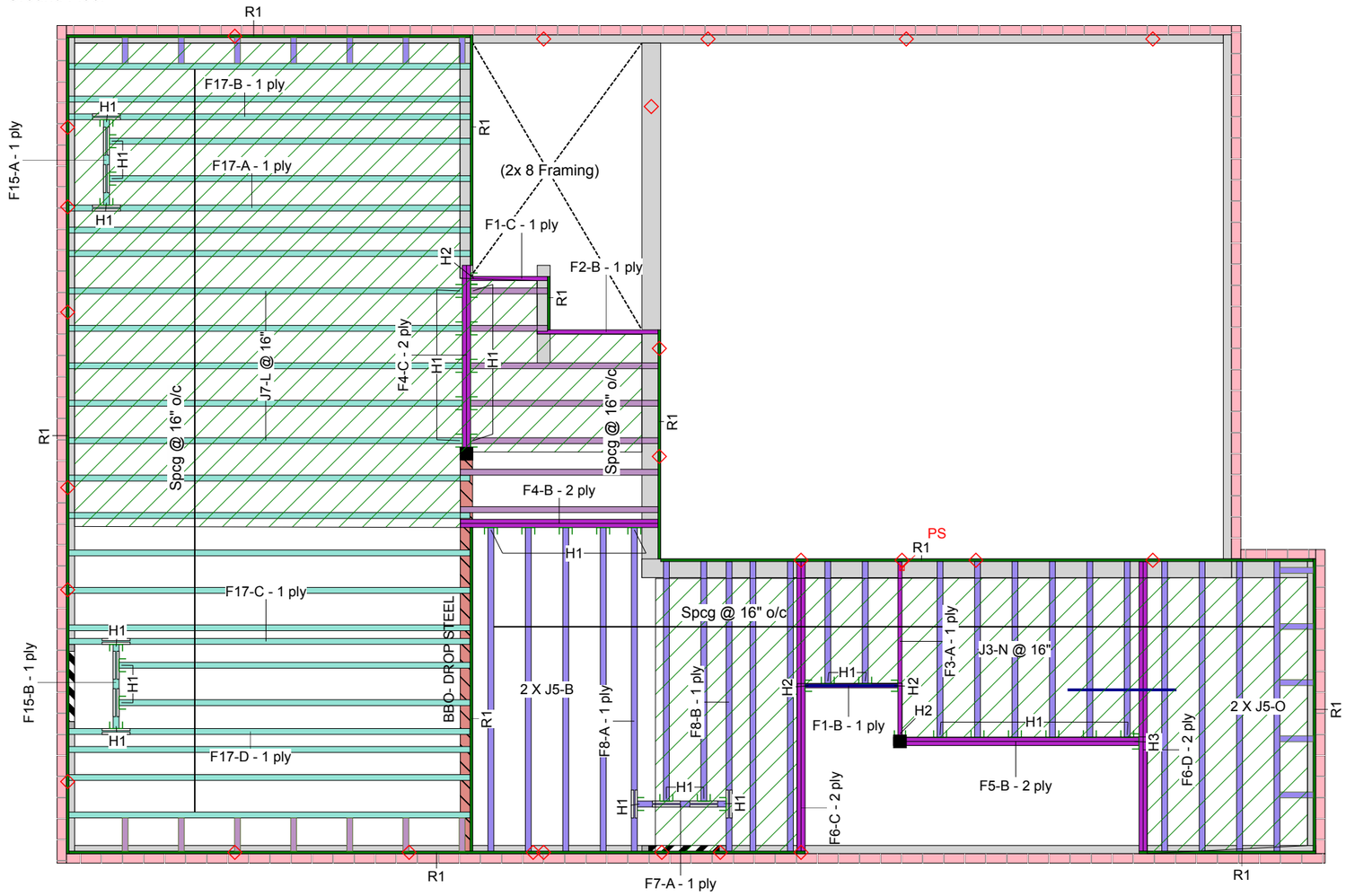
MULTI -PLY CONNECTION DETAILS

Date: November 30, 2016

Scale: NTS

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

Ground Floor



Ground Floor LVL/LSL (Flush)							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F6	Forex 2.0E-3000Fb LVL	1.75	9.5	2	2	4	12-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	10-0-0
F4	Forex 2.0E-3000Fb LVL	1.75	9.5	2	2	4	8-0-0
F3	Forex 2.0E-3000Fb LVL	1.75	9.5			1	8-0-0
F2	Forex 2.0E-3000Fb LVL	1.75	9.5			1	6-0-0
F1	Forex 2.0E-3000Fb LVL	1.75	9.5			2	4-0-0

I Joist (Flush)							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F8	LPI 20Plus	2.5	9.5			2	12-0-0
F7	LPI 20Plus	2.5	9.5			1	4-0-0
J5	LPI 20Plus	2.5	9.5			10	12-0-0
J4	LPI 20Plus	2.5	9.5			2	10-0-0
J3	LPI 20Plus	2.5	9.5			6	8-0-0
J2	LPI 20Plus	2.5	9.5			2	6-0-0
F17	NJ60H	2.5	9.5			4	16-0-0
F15	NJ60H	2.5	9.5			2	4-0-0
J7	NJ60H	2.5	9.5			17	16-0-0
J6	NJ60H	2.5	9.5			4	14-0-0
J9	NJH	2.5	9.5			5	8-0-0
J1	NJH	2.5	9.5			2	4-0-0

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

Hanger

					Beam/Girder	Supported Member
Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H1	35	LT259			4 10dx1 1/2	2 10dx1 1/2
H2	4	HUS1.81/10			30 16d	10 16d
H3	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-load bearing walls.
4. Install single-ply flush window header along inside face of rimboard/rimjoist.
5. Refer to Nascor specifier guide for installation works.
6. Squash blocks recommended to be installed at end bearing on all first level joists which support loading from above exceeding two levels floor or roof.
7. Load transfer blocks to be installed under all point loads.
8. It shall be the framer's responsibility that floor joists and beams are fastened as per the hanger manufacturer's standards.

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

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

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

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

Legend

PS	Point Load Support
◇	Load from Above
	Wall
	Wall Opening
	Norbord Rimboard Plus 1.125 X 9.5
	LPI 20Plus 9.5
	NJ60H 9.5
	NJH 9.5
	Forex 2.0E-3000Fb LVL 1.75 X 9.5
	0 X 0 (Dropped)
	5.25 X 8 (Dropped)

NASCOR

Layout Name
LOT-28 (LIANA 1 EL-1)

Design Method
LSD

Description
GRANELLI HOME CORP.
BRAMPTON, ONT.

Created
May 29, 2018

Builder
GREEN YORK HOMES

Sales Rep
RM

Designer
SB

Shipping

Project

Builder's Project

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

Job Path
GRANELLI HOME CORP\MODELS\LOT-28\FLOOR\LO-28 (LIANA 1 EL-1).isl

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 DRAWINGS:

JARDIN DESIGN GROUP INC.
64 Jardin Dr., Suite 3A, Vaughan, ON
Date: Rev.5; DEC 21 ,2018
Project No: 17-55
Model: LOT-28 (Liana 1 EL-1)

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 S
UNLESS
NOTED

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.

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

ENG.JOB:NE0119-05

KOTT

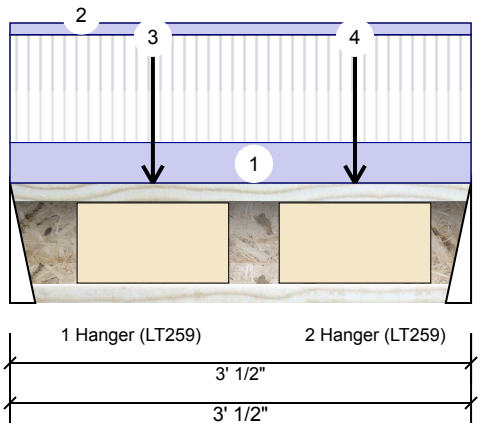
isDesign™

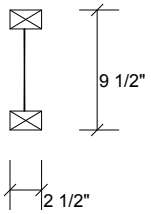
Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F15-A NJ60H 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	319	158	0	0
2	345	169	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	43%	198 / 479	677	L	1.25D+1.5L
2 - Hanger	2.000"	46%	212 / 517	729	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	542 ft-lb	11 5/16"	5675 ft-lb	0.095 (10%)	1.25D+1.5L	L
Unbraced	542 ft-lb	11 5/16"	4811 ft-lb	0.113 (11%)	1.25D+1.5L	L
Shear	723 lb	2'11 1/4"	1830 lb	0.395 (40%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/11016)	1'3 11/16"	0.094 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.006 (L/5453)	1'3 15/16"	0.094 (L/360)	0.070 (7%)	L	L
TL Defl inch	0.009 (L/3648)	1'3 13/16"	0.142 (L/240)	0.070 (7%)	D+L	L

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-0-8	(Span)1-4-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 3-0-8		Top	3 PLF	0 PLF	0 PLF	0 PLF	
3	Point	0-11-5		Near Face	151 lb	301 lb	0 lb	0 lb	J6
4	Point	2-3-5		Near Face	136 lb	279 lb	0 lb	0 lb	J6

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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

KOTT Inc.
CCMC: 12787

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

NASCOR

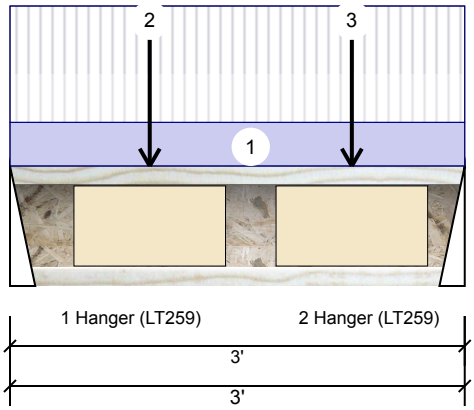
isDesign™

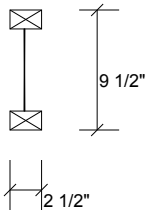
Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F15-B NJ60H 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	319	120	0	0
2	344	129	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	40%	150 / 479	628	L	1.25D+1.5L
2 - Hanger	2.000"	43%	161 / 516	678	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	485 ft-lb	11 1/16"	5675 ft-lb	0.086 (9%)	1.25D+1.5L	L
Unbraced	485 ft-lb	11 1/16"	4843 ft-lb	0.100 (10%)	1.25D+1.5L	L
Shear	671 lb	2'10 3/4"	1830 lb	0.367 (37%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/14896)	1'3 3/4"	0.093 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.006 (L/5585)	1'3 3/4"	0.093 (L/360)	0.060 (6%)	L	L
TL Defl inch	0.008 (L/4062)	1'3 3/4"	0.140 (L/240)	0.060 (6%)	D+L	L

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-0-0	(Span)1-8-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-11-1		Near Face	109 lb	291 lb	0 lb	0 lb	J6
3	Point	2-3-1		Near Face	101 lb	269 lb	0 lb	0 lb	J6

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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

KOTT Inc.
CCMC: 12787

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

NASCOR

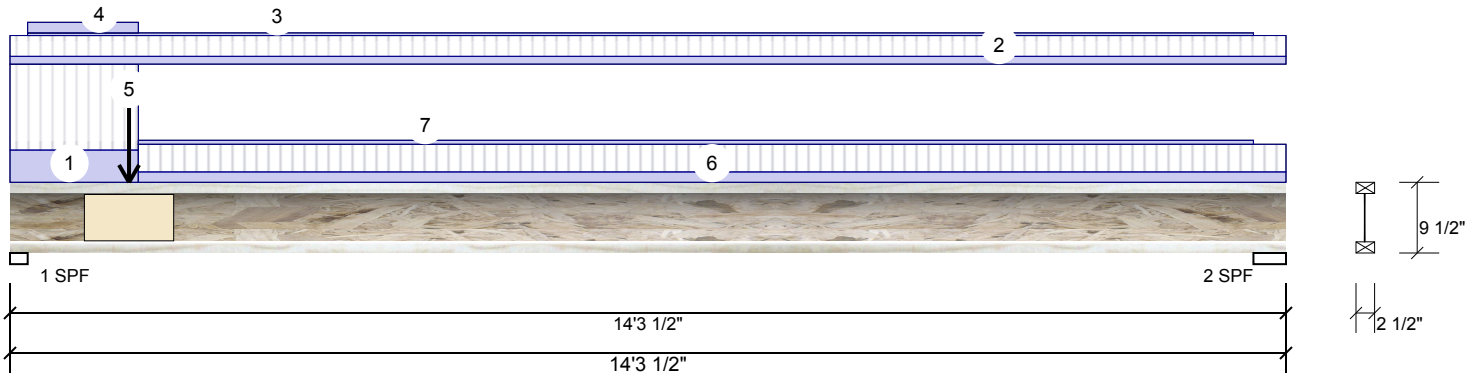
isDesign™

Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F17-A NJ60H 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	611	304	0	0
2	295	149	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	78%	381 / 917	1297	L	1.25D+1.5L
2 - SPF	4.375"	34%	186 / 443	629	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2352 ft-lb	6'2 15/16"	5675 ft-lb	0.415 (41%)	1.25D+1.5L	L
Unbraced	2352 ft-lb	6'2 15/16"	2359 ft-lb	0.997 (100%)	1.25D+1.5L	L
Shear	1276 lb	1 5/8"	1830 lb	0.697 (70%)	1.25D+1.5L	L
Perm Defl in.	0.096 (L/1737)	6'9 3/4"	0.462 (L/360)	0.210 (21%)	D	Uniform
LL Defl inch	0.189 (L/882)	6'9 5/8"	0.462 (L/360)	0.410 (41%)	L	L
TL Defl inch	0.284 (L/585)	6'9 11/16"	0.693 (L/240)	0.410 (41%)	D+L	L

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Top flange must be laterally braced at a maximum of 5'8" o.c.
3 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-5-4	(Span)3-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 14-3-8	(Span)0-9-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-2-6 to 13-11-2		Top	2 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-2-6 to 1-5-4		Top	8 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-4-0		Far Face	158 lb	319 lb	0 lb	0 lb	F15
6	Tie-In	1-5-4 to 14-3-8	(Span)1-0-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-5-4 to 13-11-2		Top	3 PLF	0 PLF	0 PLF	0 PLF	

Notes

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

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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

KOTT Inc.
CCMC: 12787

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

NASCOR

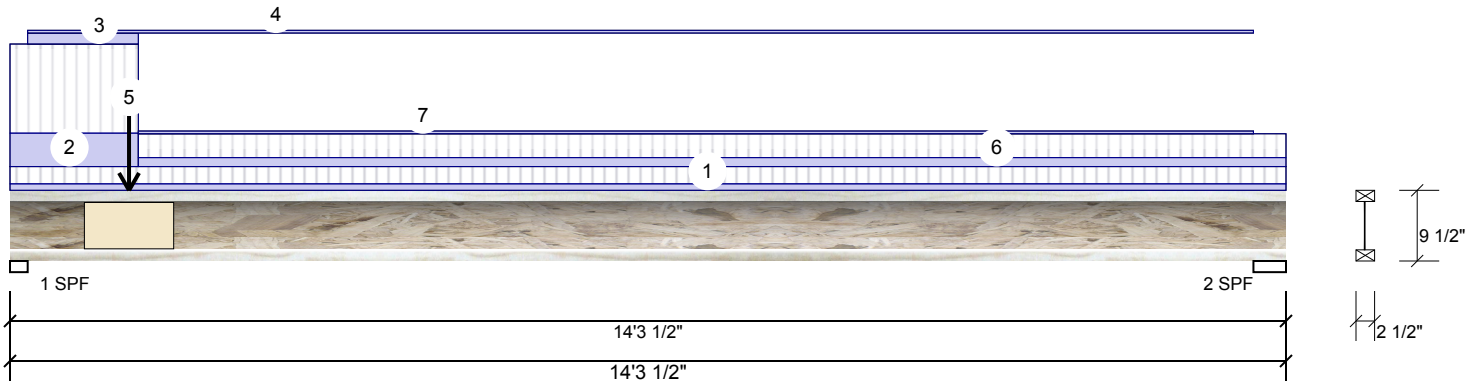
isDesign™

Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F17-B NJ60H 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	593	293	0	0
2	250	125	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	76%	366 / 889	1255	L	1.25D+1.5L
2 - SPF	4.375"	29%	156 / 374	531	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2054 ft-lb	5'11 13/16"	5675 ft-lb	0.362 (36%)	1.25D+1.5L	L
Unbraced	2054 ft-lb	5'11 13/16"	2056 ft-lb	0.999 (100%)	1.25D+1.5L	L
Shear	1234 lb	1 5/8"	1830 lb	0.674 (67%)	1.25D+1.5L	L
Perm Defl in.	0.083 (L/1998)	6'8 15/16"	0.462 (L/360)	0.180 (18%)	D	Uniform
LL Defl inch	0.165 (L/1006)	6'8 13/16"	0.462 (L/360)	0.360 (36%)	L	L
TL Defl inch	0.248 (L/669)	6'8 7/8"	0.693 (L/240)	0.360 (36%)	D+L	L

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Top flange must be laterally braced at a maximum of 6'1" o.c.
3 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 14-3-8	(Span)0-7-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-5-4	(Span)3-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-2-6 to 1-5-4		Top	8 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-2-6 to 13-11-2		Top	2 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-4-0		Near Face	169 lb	345 lb	0 lb	0 lb	F15
6	Tie-In	1-5-4 to 14-3-8	(Span)0-10-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-5-4 to 13-11-2		Top	2 PLF	0 PLF	0 PLF	0 PLF	

Notes

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

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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

KOTT Inc.
CCMC: 12787

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

NASCOR

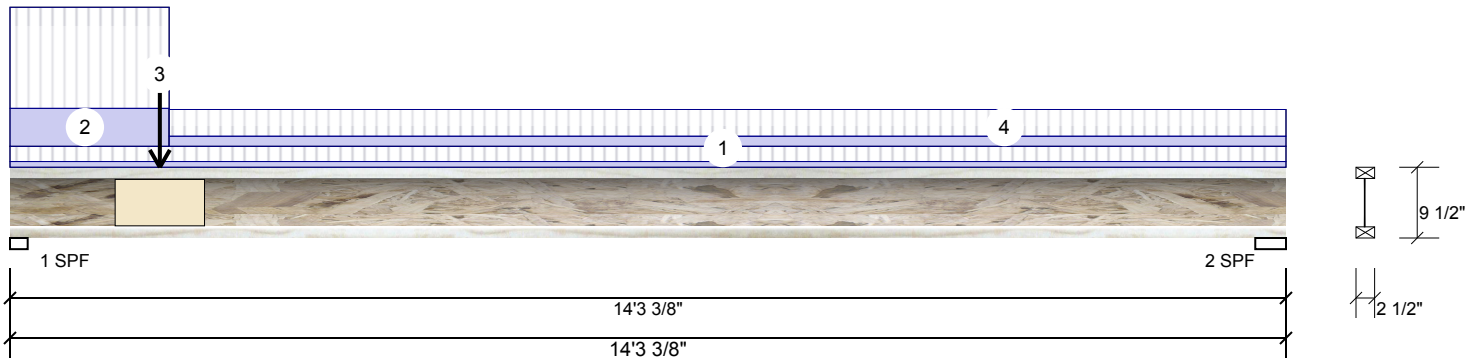
isDesign™

Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F17-C NJ60H 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	574	215	0	0
2	235	88	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	68%	269 / 860	1129	L	1.25D+1.5L
2 - SPF	4.125"	25%	110 / 353	463	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1914 ft-lb	5'5 1/2"	5675 ft-lb	0.337 (34%)	1.25D+1.5L	L
Unbraced	1914 ft-lb	5'5 1/2"	1919 ft-lb	0.998 (100%)	1.25D+1.5L	L
Shear	1110 lb	1 5/8"	1830 lb	0.606 (61%)	1.25D+1.5L	L
Perm Defl in.	0.062 (L/2674)	6'7 11/16"	0.462 (L/360)	0.130 (13%)	D	Uniform
LL Defl inch	0.166 (L/1003)	6'7 11/16"	0.462 (L/360)	0.360 (36%)	L	L
TL Defl inch	0.228 (L/729)	6'7 11/16"	0.693 (L/240)	0.330 (33%)	D+L	L

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Top flange must be laterally braced at a maximum of 6'3" o.c.
3 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 14-3-6	(Span)0-5-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-9-6	(Span)3-2-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-2		Near Face	129 lb	344 lb	0 lb	0 lb	F15
4	Tie-In	1-9-6 to 14-3-6	(Span)0-10-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	

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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

KOTT Inc.
CCMC: 12787

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

NASCOR

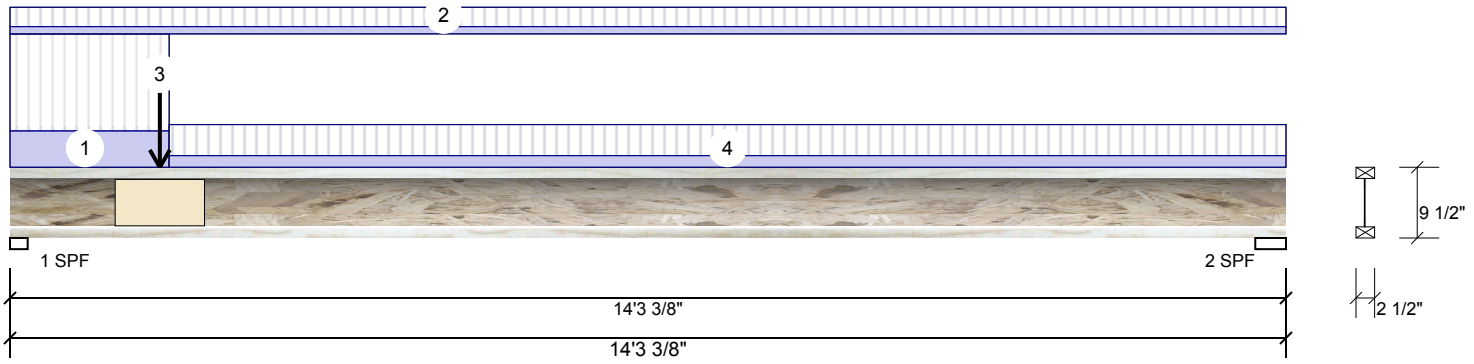
isDesign™

Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F17-D NJ60H 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	593	223	0	0
2	280	105	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	71%	278 / 889	1167	L	1.25D+1.5L
2 - SPF	4.125"	30%	131 / 420	552	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2166 ft-lb	5'10 1/2"	5675 ft-lb	0.382 (38%)	1.25D+1.5L	L
Unbraced	2166 ft-lb	5'10 1/2"	2181 ft-lb	0.993 (99%)	1.25D+1.5L	L
Shear	1147 lb	1 5/8"	1830 lb	0.627 (63%)	1.25D+1.5L	L
Perm Defl in.	0.071 (L/2353)	6'8 11/16"	0.462 (L/360)	0.150 (15%)	D	Uniform
LL Defl inch	0.188 (L/883)	6'8 11/16"	0.462 (L/360)	0.410 (41%)	L	L
TL Defl inch	0.259 (L/642)	6'8 11/16"	0.693 (L/240)	0.370 (37%)	D+L	L

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Top flange must be laterally braced at a maximum of 5'10" o.c.
3 Bottom flange braced at bearings.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-9-6	(Span)3-2-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 14-3-6	(Span)0-7-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-2		Far Face	120 lb	319 lb	0 lb	0 lb	F15
4	Tie-In	1-9-6 to 14-3-6	(Span)1-0-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	

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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

KOTT Inc.
CCMC: 12787

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

NASCOR

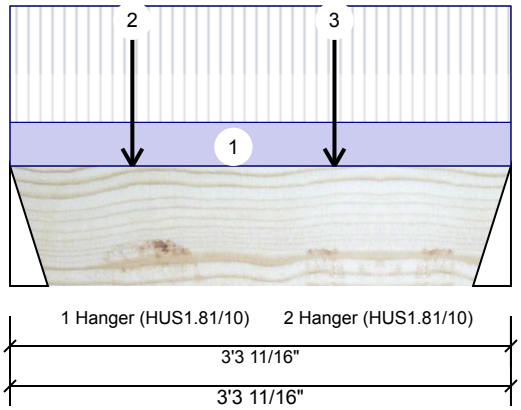
isDesign™

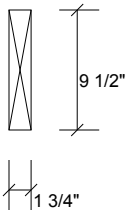
Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

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

Level: Ground Floor





Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	171	82	0	0
2	152	74	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	9%	103 / 256	359	L	1.25D+1.5L
2 - Hanger	3.000"	8%	92 / 229	321	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	259 ft-lb	2' 5/16"	11362 ft-lb	0.023 (2%)	1.25D+1.5L	L
Unbraced	259 ft-lb	2' 5/16"	10006 ft-lb	0.026 (3%)	1.25D+1.5L	L
Shear	277 lb	11 3/4"	4638 lb	0.060 (6%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/45050)	1'9 1/16"	0.098 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/21849)	1'9"	0.098 (L/360)	0.020 (2%)	L	L
TL Defl inch	0.002 (L/14713)	1'9"	0.146 (L/240)	0.020 (2%)	D+L	L

Design Notes

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER N.A. EL-MASRI PROVINCE OF ONTARIO
Jan 22, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-3-11		Top	15 PLF	40 PLF	0 PLF	0 PLF	
2	Point	0-9-11		Far Face	44 lb	90 lb	0 lb	0 lb	J2
3	Point	2-1-11		Far Face	50 lb	101 lb	0 lb	0 lb	J2
	Self Weight				4 PLF				

Notes

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

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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

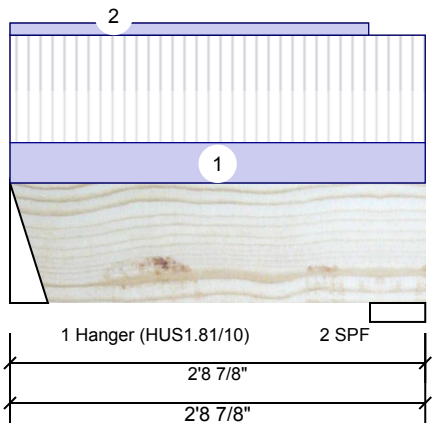
isDesign™

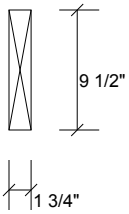
Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

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

Level: Ground Floor





Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	12	11	0	0
2	13	11	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	1%	13 / 17	31	L	1.25D+1.5L
2 - SPF	4.375"	1%	14 / 19	33	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	15 ft-lb	1'3 3/4"	11362 ft-lb	0.001 (0%)	1.25D+1.5L	L
Unbraced	15 ft-lb	1'3 3/4"	10562 ft-lb	0.001 (0%)	1.25D+1.5L	L
Shear	8 lb	1'7 3/4"	4638 lb	0.002 (0%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		

Design Notes

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-8-14	(Span)0-5-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 2-4-6		Top	1 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				4 PLF				

Notes

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

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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

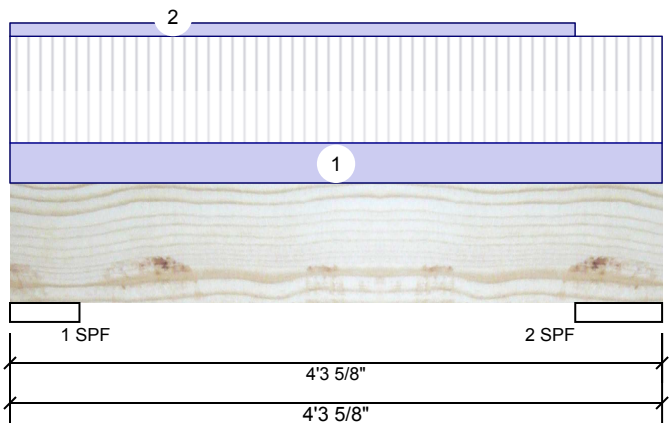
isDesign™

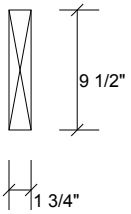
Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F2-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Ground Floor





Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	50	33	0	0
2	53	33	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	2%	41 / 76	117	L	1.25D+1.5L
2 - SPF	6.875"	2%	42 / 80	121	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	81 ft-lb	2'1 1/8"	11362 ft-lb	0.007 (1%)	1.25D+1.5L	L
Unbraced	81 ft-lb	2'1 1/8"	9540 ft-lb	0.008 (1%)	1.25D+1.5L	L
Shear	51 lb	3'	4638 lb	0.011 (1%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.001 (L/46449)	2'1 3/16"	0.170 (L/240)	0.010 (1%)	D+L	L

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

Design Notes

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

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

Notes

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

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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

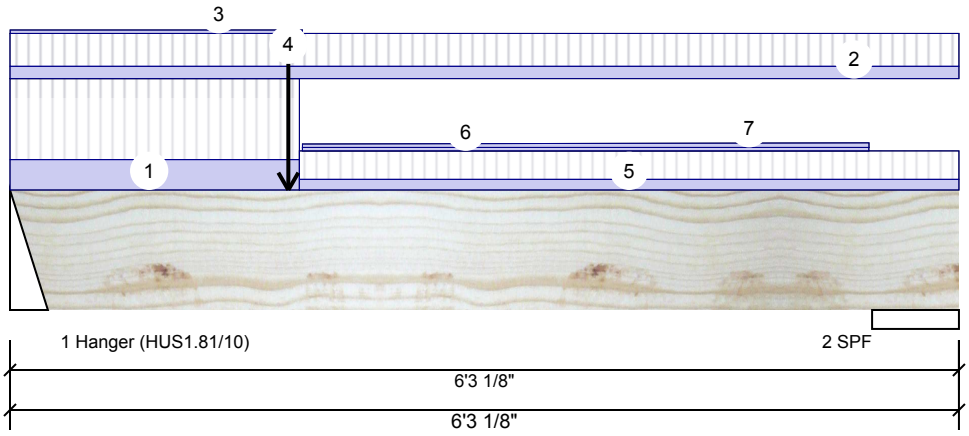
isDesign™

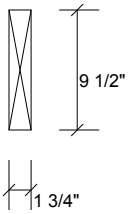
Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F3-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	340	164	0	0
2	233	122	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	18%	205 / 511	716	L	1.25D+1.5L
2 - SPF	6.875"	7%	152 / 349	501	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	842 ft-lb	1'11 5/8"	11362 ft-lb	0.074 (7%)	1.25D+1.5L	L
Unbraced	842 ft-lb	1'11 5/8"	6701 ft-lb	0.126 (13%)	1.25D+1.5L	L
Shear	517 lb	11 3/4"	4638 lb	0.111 (11%)	1.25D+1.5L	L
Perm Defl in.	0.006 (L/11851)	2'9 1/16"	0.185 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.011 (L/6054)	2'8 9/16"	0.185 (L/360)	0.060 (6%)	L	L
TL Defl inch	0.017 (L/4007)	2'8 3/4"	0.278 (L/240)	0.060 (6%)	D+L	L

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER N.A. EL-MASRI PROVINCE OF ONTARIO
Jan 22, 2019

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-10-15	(Span)3-6-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 6-3-2	(Span)1-5-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 1-11-2		Top	3 PLF	0 PLF	0 PLF	0 PLF	
4	Point	1-10-1		Far Face	74 lb	152 lb	0 lb	0 lb	F1
5	Tie-In	1-10-15 to 6-3-2	(Span)1-2-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Part. Uniform	1-11-2 to 5-8-0		Top	3 PLF	0 PLF	0 PLF	0 PLF	
7	Tapered Start	1-11-2		Top	3 PLF	0 PLF	0 PLF	0 PLF	

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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

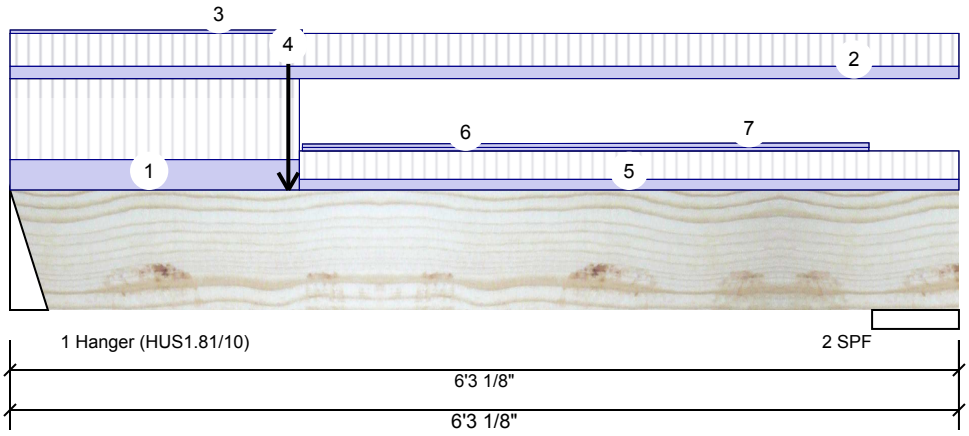
isDesign™

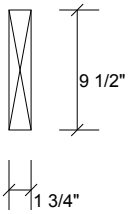
Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

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

Level: Ground Floor





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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	End	5-8-0			4 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				4 PLF				

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

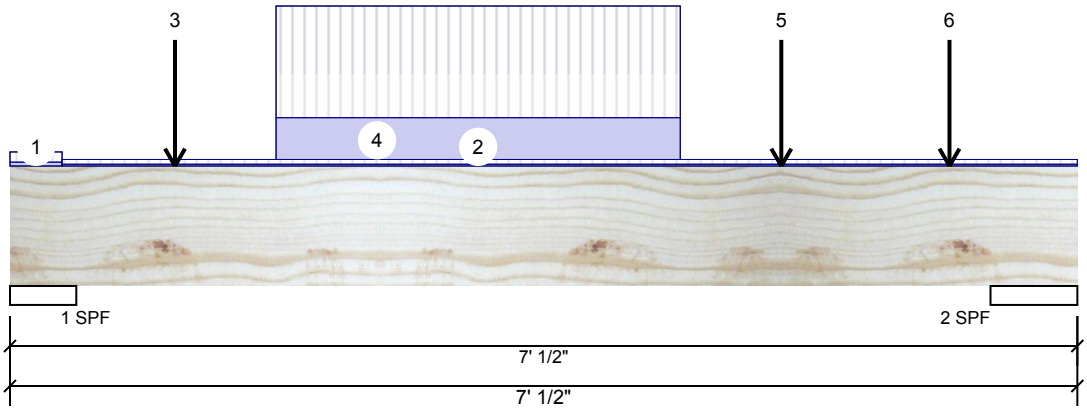
isDesign™

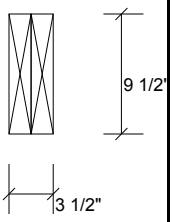
Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F4-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	669	277	0	0
2	821	338	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	12%	346 / 1004	1350	L	1.25D+1.5L
2 - SPF	6.875"	11%	423 / 1232	1654	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2220 ft-lb	3'5 13/16"	22724 ft-lb	0.098 (10%)	1.25D+1.5L	L
Unbraced	2220 ft-lb	3'5 13/16"	21975 ft-lb	0.101 (10%)	1.25D+1.5L	L
Shear	1617 lb	5'8 7/8"	9277 lb	0.174 (17%)	1.25D+1.5L	L
Perm Defl in.	0.008 (L/9578)	3'5 5/8"	0.205 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.019 (L/3902)	3'5 5/8"	0.205 (L/360)	0.090 (9%)	L	L
TL Defl inch	0.027 (L/2773)	3'5 5/8"	0.308 (L/240)	0.090 (9%)	D+L	L

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-2	(Span)1-0-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-4-2 to 7-0-8	(Span)0-5-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-1-1		Near Face	88 lb	234 lb	0 lb	0 lb	J5
4	Part. Uniform	1-9-1 to 4-5-1		Near Face	86 PLF	230 PLF	0 PLF	0 PLF	
5	Point	5-1-1		Near Face	105 lb	281 lb	0 lb	0 lb	J5
6	Point	6-2-6		Near Face	112 lb	289 lb	0 lb	0 lb	F8
	Self Weight				8 PLF				

Notes

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

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

KOTT

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Manufacturer Info

Forex
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Job Name: LOT-28 (LIANA 1 EL-1)
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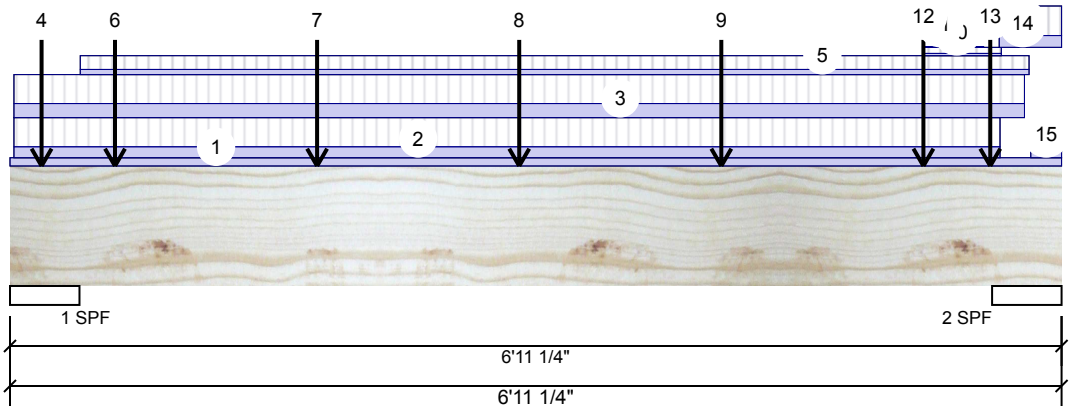
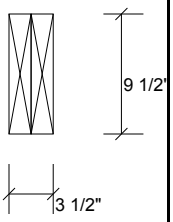
F4-C Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor





Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	5605	2698	0	0
2	2554	1395	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	99%	3373 / 8408	11780	L	1.25D+1.5L
2 - SPF	5.500"	47%	1744 / 3830	5574	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7852 ft-lb	3'4 11/16"	22724 ft-lb	0.346 (35%)	1.25D+1.5L	L
Unbraced	7852 ft-lb	3'4 11/16"	21978 ft-lb	0.357 (36%)	1.25D+1.5L	L
Shear	4612 lb	1'2 1/4"	9277 lb	0.497 (50%)	1.25D+1.5L	L
Perm Defl in.	0.033 (L/2213)	3'5 7/16"	0.205 (L/360)	0.160 (16%)	D	Uniform
LL Defl inch	0.062 (L/1197)	3'5 3/8"	0.205 (L/360)	0.300 (30%)	L	L
TL Defl inch	0.095 (L/777)	3'5 3/8"	0.307 (L/240)	0.310 (31%)	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.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 6-11-4		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-5 to 6-6-6		Top	106 PLF	282 PLF	0 PLF	0 PLF	J7
3	Part. Uniform	0-0-5 to 6-8-5		Far Face	136 PLF	280 PLF	0 PLF	0 PLF	
4	Point	0-2-8		Top	1254 lb	2945 lb	0 lb	0 lb	F11 F11
5	Part. Uniform	0-5-9 to 6-8-11		Top	50 PLF	133 PLF	0 PLF	0 PLF	J3

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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

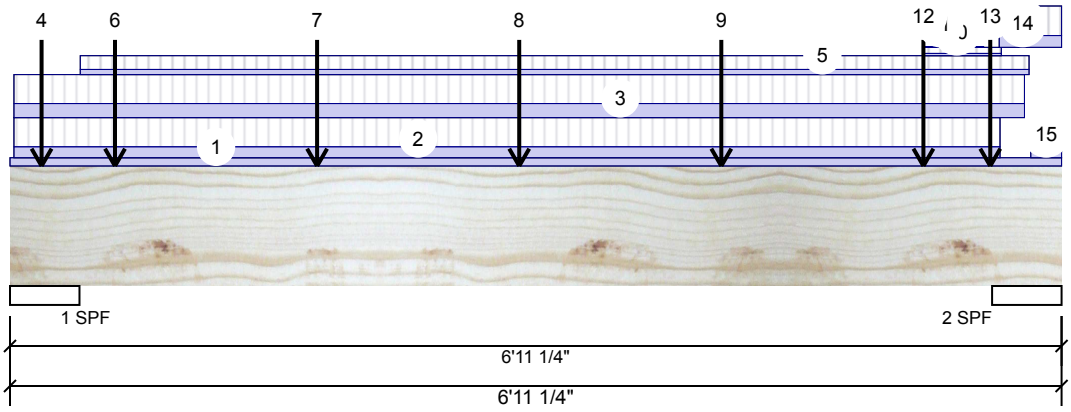
isDesign™

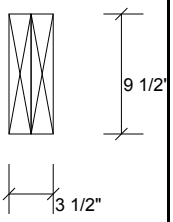
Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F4-C Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor





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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	0-8-5		Near Face	73 lb	154 lb	0 lb	0 lb	J9
7	Point	2-0-5		Near Face	82 lb	167 lb	0 lb	0 lb	J9
8	Point	3-4-5		Near Face	29 lb	59 lb	0 lb	0 lb	J9
9	Point	4-8-5		Near Face	32 lb	68 lb	0 lb	0 lb	J1
10	Tie-In	6-0-5 to 6-6-8	(Span)2-11-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
11	Part. Uniform	6-0-5 to 6-5-1		Top	7 PLF	0 PLF	0 PLF	0 PLF	
12	Point	6-0-5		Near Face	22 lb	45 lb	0 lb	0 lb	J1
13	Point	6-5-10		Near Face	11 lb	12 lb	0 lb	0 lb	F1
14	Part. Uniform	6-6-5 to 6-11-4		Top	114 PLF	286 PLF	0 PLF	0 PLF	J7
15	Part. Uniform	6-8-13 to 6-11-4		Top	60 PLF	133 PLF	0 PLF	0 PLF	J3
	Self Weight				8 PLF				

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

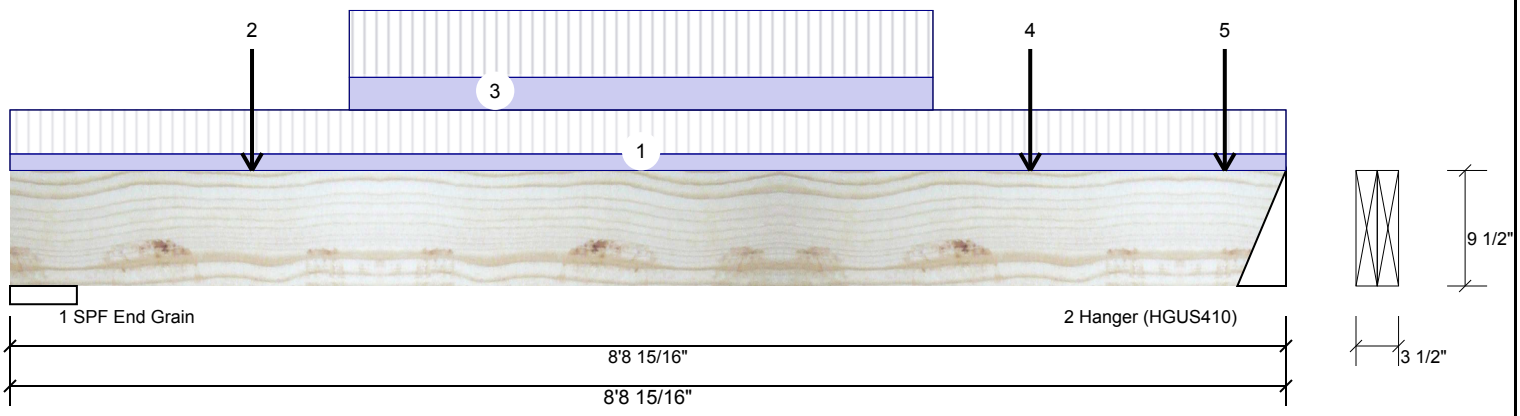
isDesign™

Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F5-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	795	379	0	0
2	1170	525	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	5.500"	12%	474 / 1192	1666	L	1.25D+1.5L
2 - Hanger	4.000"	23%	656 / 1755	2412	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3661 ft-lb	4'7 3/4"	22724 ft-lb	0.161 (16%)	1.25D+1.5L	L
Unbraced	3661 ft-lb	4'7 3/4"	21435 ft-lb	0.171 (17%)	1.25D+1.5L	L
Shear	2241 lb	7'8 3/16"	9277 lb	0.242 (24%)	1.25D+1.5L	L
Perm Defl in.	0.022 (L/4321)	4'5 15/16"	0.269 (L/360)	0.080 (8%)	D	Uniform
LL Defl inch	0.048 (L/2031)	4'6 3/16"	0.269 (L/360)	0.180 (18%)	L	L
TL Defl inch	0.070 (L/1381)	4'6 1/16"	0.404 (L/240)	0.170 (17%)	D+L	L

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 8-8-15	(Span)3-10-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	1-7-14		Far Face	81 lb	162 lb	0 lb	0 lb	J3
3	Part. Uniform	2-3-14 to 6-3-14		Far Face	57 PLF	117 PLF	0 PLF	0 PLF	
4	Point	6-11-14		Far Face	162 lb	386 lb	0 lb	0 lb	J3
5	Point	8-3-14		Far Face	114 lb	275 lb	0 lb	0 lb	J3
	Self Weight				8 PLF				

Notes

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

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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

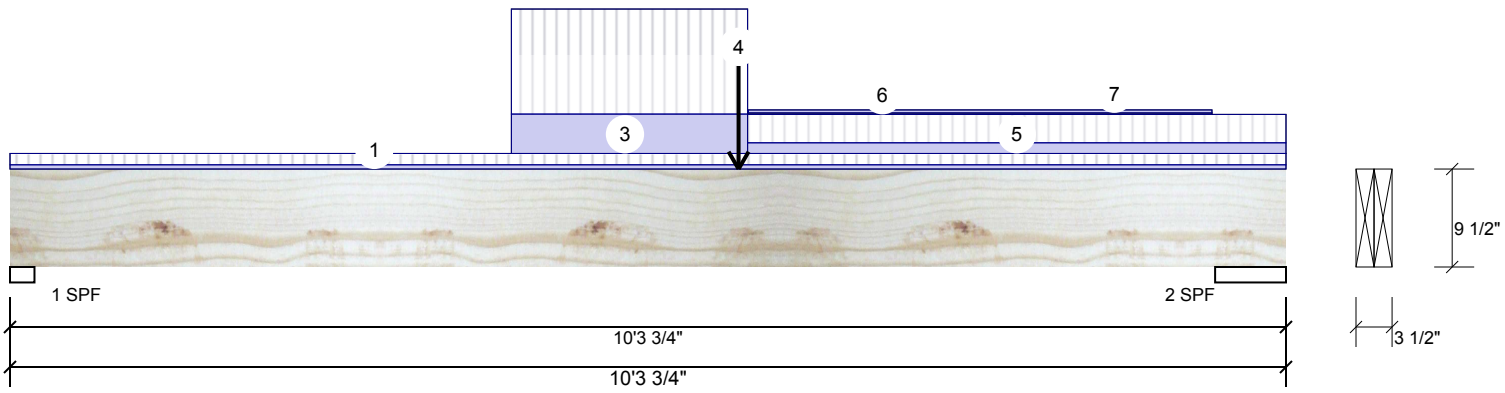
isDesign™

Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

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

Level: Ground Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	188	118	0	0
2	279	165	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	8%	147 / 282	430	L	1.25D+1.5L
2 - SPF	6.875"	4%	206 / 418	624	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1815 ft-lb	5'10 11/16"	22724 ft-lb	0.080 (8%)	1.25D+1.5L	L
Unbraced	1815 ft-lb	5'10 11/16"	20878 ft-lb	0.087 (9%)	1.25D+1.5L	L
Shear	541 lb	9' 1/8"	9277 lb	0.058 (6%)	1.25D+1.5L	L
Perm Defl in.	0.015 (L/7593)	5'2 3/8"	0.322 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.027 (L/4220)	5'2 11/16"	0.322 (L/360)	0.090 (9%)	L	L
TL Defl inch	0.043 (L/2713)	5'2 9/16"	0.483 (L/240)	0.090 (9%)	D+L	L

Design Notes

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-3-12	(Span)0-4-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	4-0-10 to 5-11-9	(Span)3-6-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	5-10-11		Near Face	82 lb	171 lb	0 lb	0 lb	F1
5	Tie-In	5-11-9 to 10-3-12	(Span)0-11-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Part. Uniform	5-11-10 to 9-8-9		Top	1 PLF	0 PLF	0 PLF	0 PLF	
7	Part. Uniform	5-11-10 to 9-8-9		Top	2 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				8 PLF				

Notes

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

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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

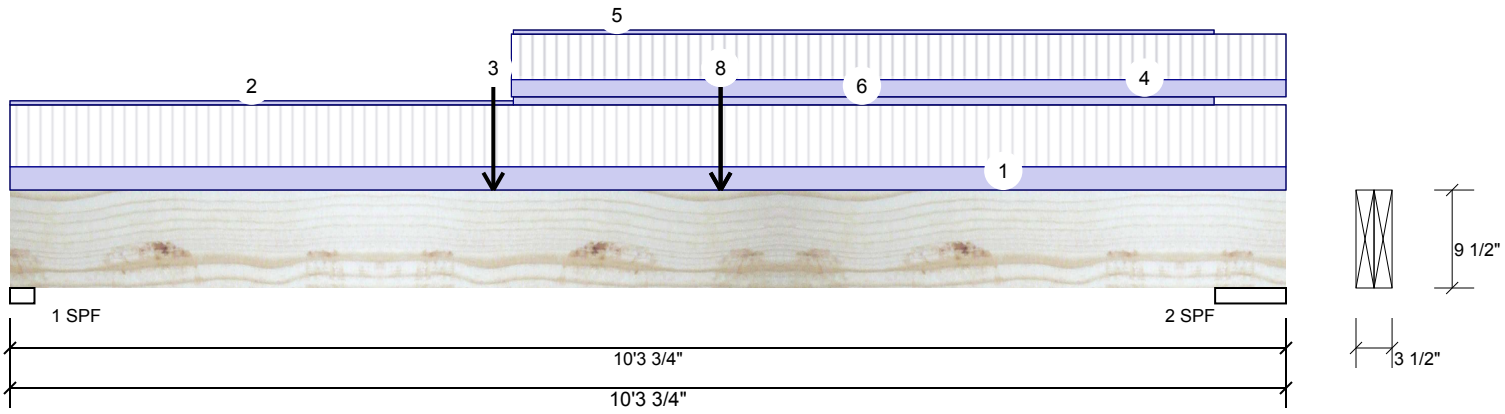
isDesign™

Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F6-D 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	876	428	0	0
2	683	343	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	36%	534 / 1315	1849	L	1.25D+1.5L
2 - SPF	6.875"	10%	429 / 1024	1453	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6659 ft-lb	3'10 7/8"	22724 ft-lb	0.293 (29%)	1.25D+1.5L	L
Unbraced	6659 ft-lb	3'10 7/8"	20878 ft-lb	0.319 (32%)	1.25D+1.5L	L
Shear	1811 lb	11 1/8"	9277 lb	0.195 (20%)	1.25D+1.5L	L
Perm Defl in.	0.048 (L/2432)	4'7 3/4"	0.322 (L/360)	0.150 (15%)	D	Uniform
LL Defl inch	0.100 (L/1158)	4'7 9/16"	0.322 (L/360)	0.310 (31%)	L	L
TL Defl inch	0.148 (L/784)	4'7 5/8"	0.483 (L/240)	0.310 (31%)	D+L	L

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-3-12	(Span)0-9-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 4-0-13		Top	1 PLF	0 PLF	0 PLF	0 PLF	
3	Point	3-10-14		Far Face	525 lb	1170 lb	0 lb	0 lb	F5
4	Tie-In	4-0-10 to 10-3-12	(Span)0-6-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Part. Uniform	4-0-13 to 9-8-12		Top	1 PLF	0 PLF	0 PLF	0 PLF	
6	Part. Uniform	4-0-13 to 9-8-12		Top	2 PLF	0 PLF	0 PLF	0 PLF	

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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

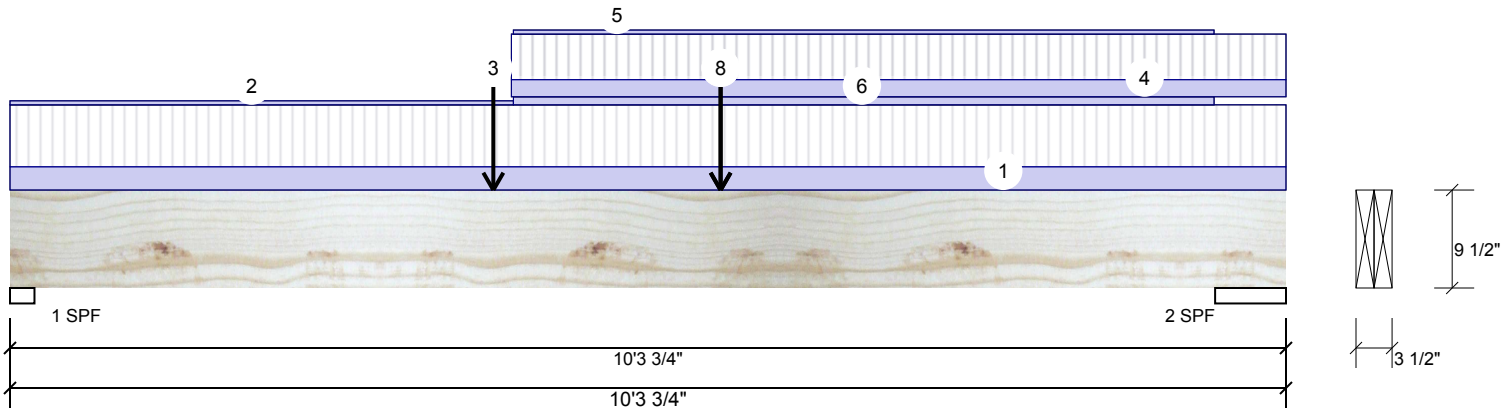
isDesign™

Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

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

Level: Ground Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	5-8-15		Top	25 lb	68 lb	0 lb	0 lb	
8	Point	5-8-15		Top	35 lb	92 lb	0 lb	0 lb	
	Self Weight				8 PLF				

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

Notes

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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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

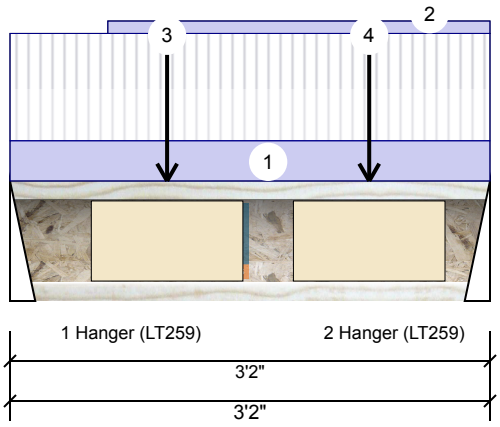
isDesign™

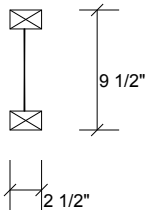
Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F7-A LPI 20Plus 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	235	111	0	0
2	257	124	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	31%	138 / 352	491	L	1.25D+1.5L
2 - Hanger	2.000"	34%	155 / 386	541	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	421 ft-lb	1' 7/16"	4670 ft-lb	0.090 (9%)	1.25D+1.5L	L
Shear	534 lb	3' 3/4"	1990 lb	0.268 (27%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/12044)	1'4 15/16"	0.099 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.006 (L/5783)	1'4 13/16"	0.099 (L/360)	0.060 (6%)	L	L
TL Defl inch	0.009 (L/3907)	1'4 7/8"	0.148 (L/240)	0.060 (6%)	D+L	L

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.003", Long Term = 0.004"
3 Fill all hanger nailing holes.
4 See manufacture installation guide note E4 for installation details
5 Girders are designed to be supported on the bottom edge only.
6 Top flange braced at bearings.
7 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-2-0	(Span)1-8-11 to 1-8-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-7-12 to 3-2-0		Top	4 PLF	0 PLF	0 PLF	0 PLF	
3	Point	1-0-7		Far Face	96 lb	201 lb	0 lb	0 lb	J4
4	Point	2-4-7		Far Face	88 lb	182 lb	0 lb	0 lb	J4

Notes

This component analysis is based on the loads, geometry and other conditions as entered by the user and listed in this report. The user is responsible to ensure the accuracy of the input and the applicability to the actual conditions of the structure for which this component is intended. This analysis is valid only for the product listed.

KOTT
This design is valid until 10/31/2020

Manufacturer Info

Louisiana-Pacific Corp
414 Union Street, Suite 2000
Nashville, TN 37219
(888) 820-0325
www.lpcorp.com
CCMC: 12412-R APA: PR-L238C

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

NASCOR

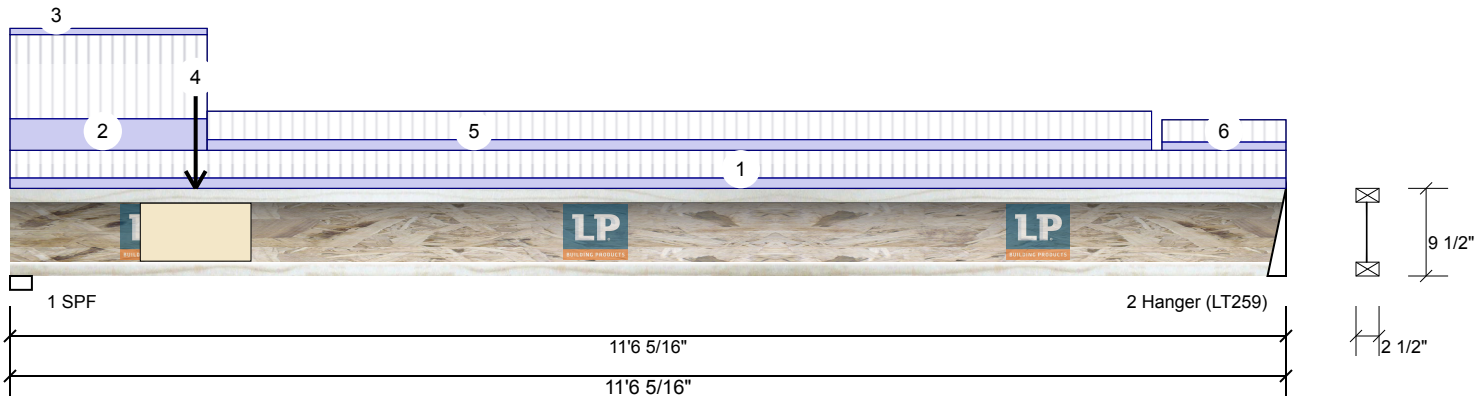
isDesign™

Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F8-A LPI 20Plus 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	537	229	0	0
2	289	112	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	68%	287 / 805	1092	L	1.25D+1.5L
2 - Hanger	2.000"	36%	140 / 433	573	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1884 ft-lb	4'10 5/8"	4670 ft-lb	0.403 (40%)	1.25D+1.5L	L
Shear	1067 lb	1 5/8"	1990 lb	0.536 (54%)	1.25D+1.5L	L
Perm Defl in.	0.056 (L/2411)	5'5 1/2"	0.376 (L/360)	0.150 (15%)	D	Uniform
LL Defl inch	0.140 (L/966)	5'6 1/8"	0.376 (L/360)	0.370 (37%)	L	L
TL Defl inch	0.196 (L/690)	5'6"	0.564 (L/240)	0.350 (35%)	D+L	L

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.056", Long Term = 0.084"
3 Fill all hanger nailing holes.
4 See manufacture installation guide note E4 for installation details
5 Girders are designed to be supported on the bottom edge only.
6 Top flange must be laterally braced at a maximum of 6'8" o.c.
7 Bottom flange braced at bearings.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 11-6-5	(Span)1-1-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-9-6	(Span)3-4-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 1-9-6		Top	5 PLF	0 PLF	0 PLF	0 PLF	
4	Point	1-8-2		Near Face	111 lb	235 lb	0 lb	0 lb	F7
5	Tie-In	1-9-6 to 10-3-12	(Span)1-1-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Tie-In	10-4-14 to 11-6-5	(Span) 0-10-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

This component analysis is based on the loads, geometry and other conditions as entered by the user and listed in this report. The user is responsible to ensure the accuracy of the input and the applicability to the actual conditions of the structure for which this component is intended. This analysis is valid only for the product listed.

KOTT
This design is valid until 10/31/2020

Manufacturer Info

Louisiana-Pacific Corp
414 Union Street, Suite 2000
Nashville, TN 37219
(888) 820-0325
www.lpcorp.com
CCMC: 12412-R APA: PR-L238C

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

NASCOR

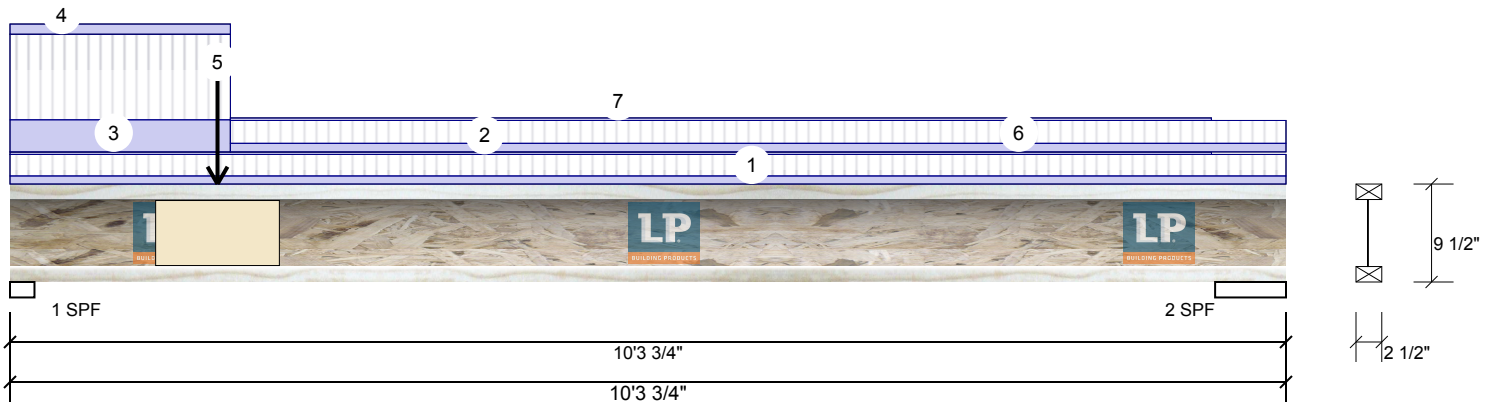
isDesign™

Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F8-B LPI 20Plus 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	471	230	0	0
2	235	112	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	62%	287 / 707	994	L	1.25D+1.5L
2 - SPF	6.875"	28%	140 / 352	493	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1420 ft-lb	3'7 1/4"	4670 ft-lb	0.304 (30%)	1.25D+1.5L	L
Shear	969 lb	1 5/8"	1990 lb	0.487 (49%)	1.25D+1.5L	L
Perm Defl in.	0.037 (L/3113)	4'7"	0.322 (L/360)	0.120 (12%)	D	Uniform
LL Defl inch	0.076 (L/1517)	4'7"	0.322 (L/360)	0.240 (24%)	L	L
TL Defl inch	0.114 (L/1020)	4'7"	0.483 (L/240)	0.240 (24%)	D+L	L

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER N.A. EL-MASRI PROVINCE OF ONTARIO
Jan 22, 2019

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.037", Long Term = 0.056"
3 See manufacture installation guide note E4 for installation details
4 Girders are designed to be supported on the bottom edge only.
5 Top flange must be laterally braced at a maximum of 7'7" o.c.
6 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-3-12	(Span)0-10-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 9-8-8		Top	2 PLF	0 PLF	0 PLF	0 PLF	
3	Tie-In	0-0-0 to 1-9-6	(Span)3-4-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	0-0-0 to 1-9-6		Top	8 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-8-2		Far Face	124 lb	257 lb	0 lb	0 lb	F7
6	Tie-In	1-9-6 to 10-3-12	(Span) 0-10-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-9-6 to 9-8-8		Top	2 PLF	0 PLF	0 PLF	0 PLF	

Notes

This component analysis is based on the loads, geometry and other conditions as entered by the user and listed in this report. The user is responsible to ensure the accuracy of the input and the applicability to the actual conditions of the structure for which this component is intended. This analysis is valid only for the product listed.

KOTT
This design is valid until 10/31/2020

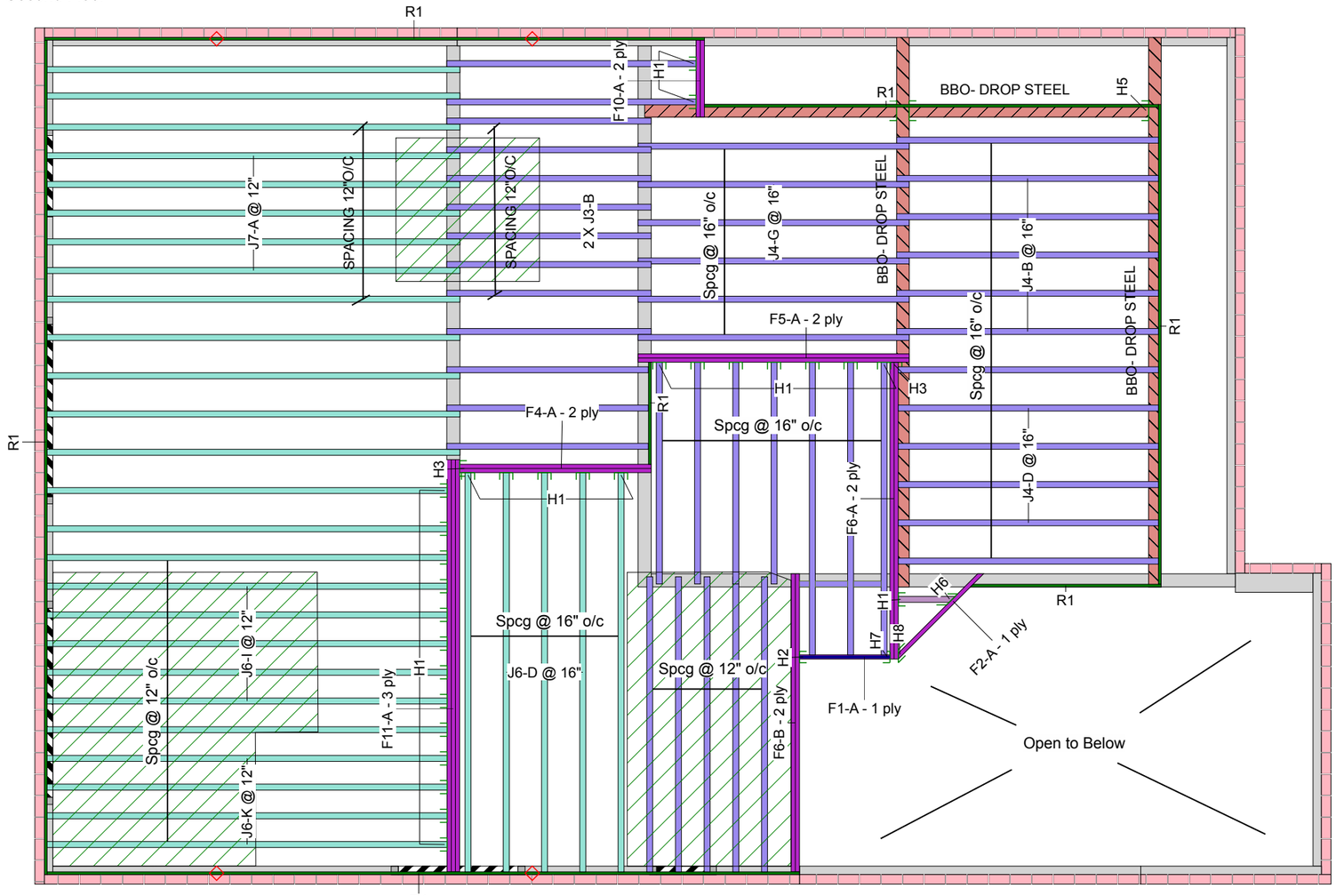
Manufacturer Info

Louisiana-Pacific Corp
414 Union Street, Suite 2000
Nashville, TN 37219
(888) 820-0325
www.lpcorp.com
CCMC: 12412-R APA: PR-L238C

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

NASCOR

Second Floor



REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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JOISTS SPACING 16"O/C
UNLESS
NOTED OTHERWISE

Legend

PS ◇	Point Load Support
	Load from Above
	Wall
	Wall Opening
	Norbord Rimboard Plus 1.125 X 9.5
	LPI 20Plus 9.5
	NJ60H 9.5
	NJH 9.5
	Forex 2.0E-3000Fb LVL 1.75 X 9.5
	0 X 0 (Dropped)
	5.25 X 8 (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.

Second Floor
LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F11	Forex 2.0E-3000Fb LVL	1.75	9.5	1	3	3	16-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	9.5	2	2	4	12-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	10-0-0
F4	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	8-0-0
F2	Forex 2.0E-3000Fb LVL	1.75	9.5			1	6-0-0
F10	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	4-0-0
F1	Forex 2.0E-3000Fb LVL	1.75	9.5			1	4-0-0

I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J5	LPI 20Plus	2.5	9.5			8	12-0-0
J4	LPI 20Plus	2.5	9.5			20	10-0-0
J3	LPI 20Plus	2.5	9.5			15	8-0-0
J7	NJ60H	2.5	9.5			13	16-0-0
J6	NJ60H	2.5	9.5			18	14-0-0
J8	NJH	2.5	9.5			1	2-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			11	12

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK2	LPI 20 Plus	2.5	9.5	LinFt		Varies	3-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H1	28	LT259			4 10dx1 1/2	2 10dx1 1/2
H2	1	HUS1.81/10			30 16d	10 16d
H3	2	HGUS410			46 16d	16 16d
H5	3	Unknown Hanger				
H6	1	SUR2.56/9 (Min)	Right		14 10dx1 1/2	2 10dx1 1/2
H7	1	HUCQ1.81/9-SDS				
H8	1	LSSUI25	Right			

NOTES:

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

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

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

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

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

ARCHITECTURAL DRAWINGS:

JARDIN DESIGN GROUP INC.
64 Jardin Dr., Suite 3A, Vaughan, ON
Date: Rev.5; DEC 21, 2018
Project No: 17-55
Model: LOT-28 (Liana 1 EL-1)

NASCOR

Layout Name
LOT-28 (LIANA 1 EL-1)

Design Method
LSD

Description
GRANELLI HOME CORP.
BRAMPTON, ONT.

Created
May 29, 2018

Builder
GREEN YORK HOMES

Sales Rep
RM

Designer
SB

Shipping

Project

Builder's Project

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

Job Path
GRANELLI HOME CORP\MODELS\LOT-28\FLOOR\LO-28 (LIANA 1 EL-1).isl

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"

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

ENG.JOB:NE0119-05

KOTT

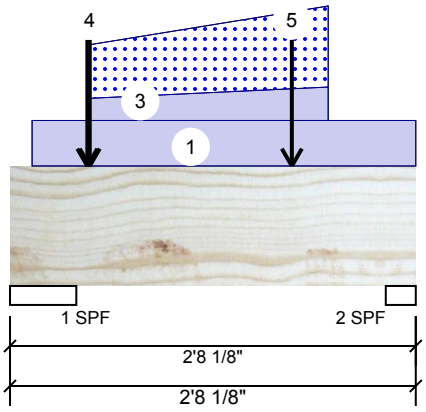
isDesign™

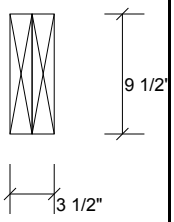
Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F10-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	238	641	1044	0
2	140	196	132	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	25%	802 / 1685	2486	L	1.25D+1.5S +0.5L
2 - SPF	2.375"	11%	245 / 210	455	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	388 ft-lb	1'1 11/16"	22724 ft-lb	0.017 (2%)	1.25D+1.5S +0.5L	L
Unbraced	388 ft-lb	1'1 11/16"	22724 ft-lb	0.017 (2%)	1.25D+1.5S +0.5L	L
Shear	569 lb	1'2"	7700 lb	0.074 (7%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/40131)	1'4 11/16"	0.072 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.001 (L/29955)	1'3 1/16"	0.072 (L/360)	0.010 (1%)	S+0.5L	L
TL Defl inch	0.002 (L/17197)	1'3 7/8"	0.108 (L/240)	0.010 (1%)	D+S+0.5L	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.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

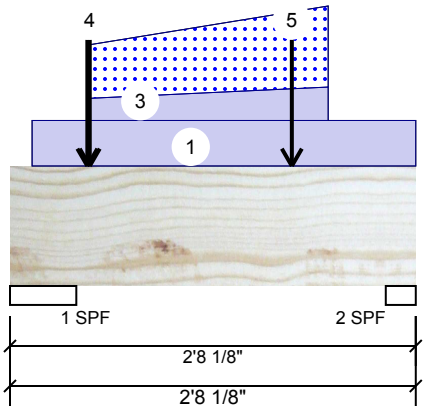
isDesign™

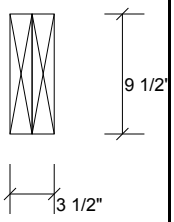
Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F10-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	0-1-12 to 2-8-2		Top	64 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Point	0-6-2		Top	452 lb	0 lb	1026 lb	0 lb	F13 F13
3	Tapered Start	0-6-2		Top	31 PLF	0 PLF	75 PLF	0 PLF	
	End	2-1-3			47 PLF	0 PLF	114 PLF	0 PLF	
4	Point	0-6-5		Far Face	72 lb	193 lb	0 lb	0 lb	J4
5	Point	1-10-5		Far Face	69 lb	185 lb	0 lb	0 lb	J4
	Self Weight				8 PLF				

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

Notes

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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
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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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

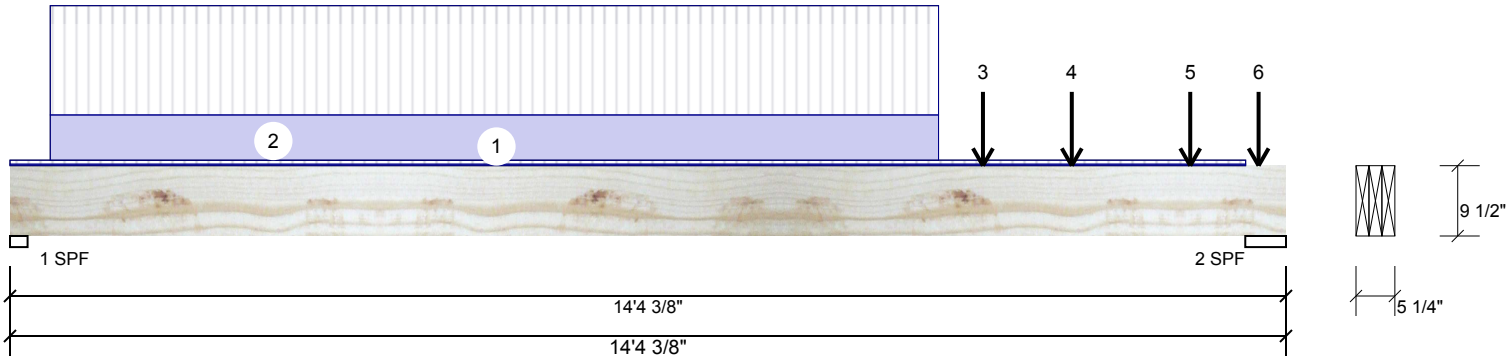
isDesign™

Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F11-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 3-Ply - PASSED

Level: Second Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1909	863	0	0
2	2945	1254	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	51%	1079 / 2864	3943	L	1.25D+1.5L
2 - SPF	5.500"	34%	1567 / 4417	5984	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	14206 ft-lb	7' 5/8"	35449 ft-lb	0.401 (40%)	1.25D+1.5L	L
Unbraced	14206 ft-lb	7' 5/8"	34190 ft-lb	0.416 (42%)	1.25D+1.5L	L
Shear	4299 lb	13'2 1/8"	13915 lb	0.309 (31%)	1.25D+1.5L	L
Perm Defl in.	0.149 (L/1117)	7' 1/2"	0.461 (L/360)	0.320 (32%)	D	Uniform
LL Defl inch	0.333 (L/499)	7' 11/16"	0.461 (L/360)	0.720 (72%)	L	L
TL Defl inch	0.481 (L/345)	7' 11/16"	0.692 (L/240)	0.700 (70%)	D+L	L

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-10-15	(Span)0-6-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-5-7 to 10-5-7		Far Face	115 PLF	278 PLF	0 PLF	0 PLF	
3	Point	10-11-7		Far Face	104 lb	278 lb	0 lb	0 lb	J6
4	Point	11-11-7		Far Face	122 lb	324 lb	0 lb	0 lb	J6
5	Point	13-3-7		Far Face	139 lb	371 lb	0 lb	0 lb	J6
6	Point	14-0-11		Near Face	384 lb	959 lb	0 lb	0 lb	F4
	Self Weight				11 PLF				

Notes

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

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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

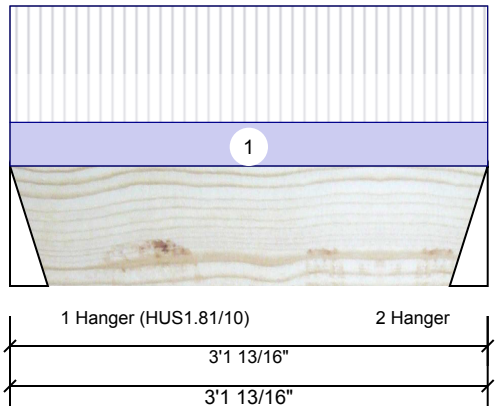
isDesign™

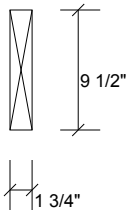
Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

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

Level: Second Floor





Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	378	148	0	0
2	378	148	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	19%	185 / 567	752	L	1.25D+1.5L
2 - Hanger	3.000"	19%	185 / 567	752	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	460 ft-lb	1'6 15/16"	11362 ft-lb	0.040 (4%)	1.25D+1.5L	L
Unbraced	460 ft-lb	1'6 15/16"	10144 ft-lb	0.045 (5%)	1.25D+1.5L	L
Shear	285 lb	2'2 1/16"	4638 lb	0.061 (6%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/29538)	1'6 15/16"	0.093 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.003 (L/11546)	1'6 15/16"	0.093 (L/360)	0.030 (3%)	L	L
TL Defl inch	0.004 (L/8301)	1'6 15/16"	0.139 (L/240)	0.030 (3%)	D+L	L

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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LICENSED PROFESSIONAL ENGINEER N.A. EL-MASRI PROVINCE OF ONTARIO
Jan 22, 2019

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-1-13		Top	90 PLF	240 PLF	0 PLF	0 PLF	
	Self Weight				4 PLF				

Notes

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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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

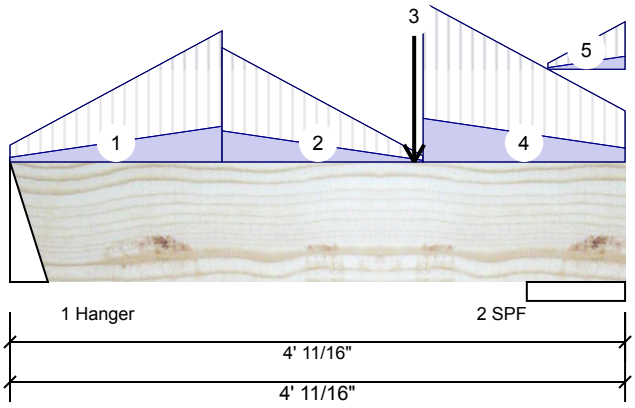
isDesign™

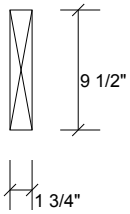
Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F2-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Second Floor





Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	42	23	0	0
2	80	39	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	2%	29 / 63	92	L	1.25D+1.5L
2 - SPF	7.778"	2%	48 / 121	169	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	94 ft-lb	2'2 7/16"	11362 ft-lb	0.008 (1%)	1.25D+1.5L	L
Unbraced	94 ft-lb	2'2 7/16"	9657 ft-lb	0.010 (1%)	1.25D+1.5L	L
Shear	88 lb	2'8 3/16"	4638 lb	0.019 (2%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.001 (L/60406)	1'11 13/16"	0.109 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.001 (L/40550)	1'11 5/8"	0.164 (L/240)	0.010 (1%)	D+L	L

Design Notes

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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LICENSED PROFESSIONAL ENGINEER N.A. EL-MASRI PROVINCE OF ONTARIO
Jan 22, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-4-13	(Span)0-2-8 to 1-7-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	1-4-13 to 2-8-11	(Span)1-4-13 to 0-0-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	2-8-0		Far Face	15 lb	40 lb	0 lb	0 lb	J8
4	Tie-In	2-8-11 to 4-0-11	(Span)1-11-8 to 0-7-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tie-In	3-6-9 to 4-0-11	(Span)0-0-14 to 0-7-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				4 PLF				

Notes

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Lumber

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2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
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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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
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905-642-4400

NASCOR

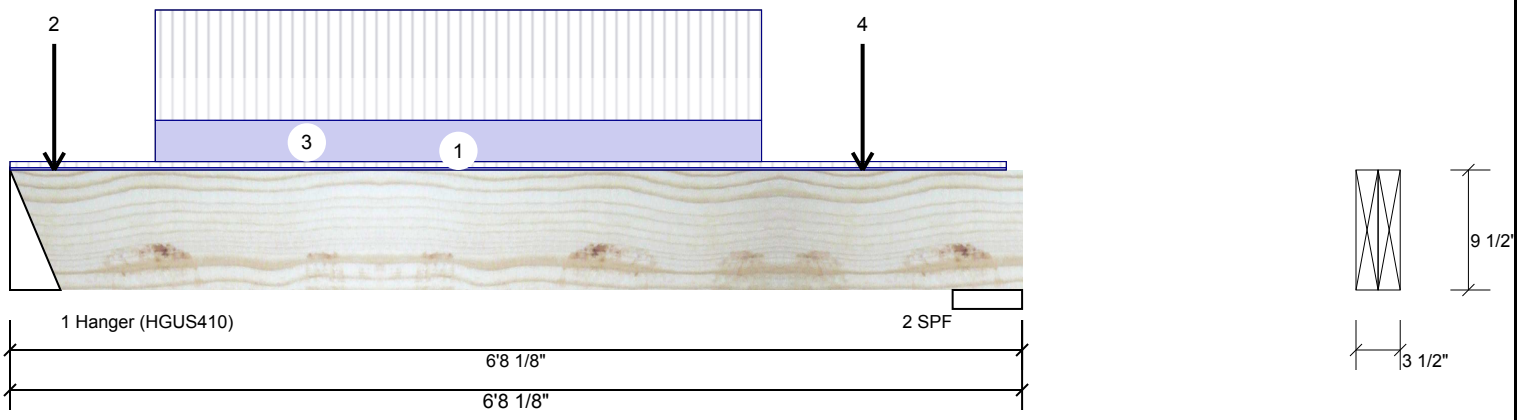
isDesign™

Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F4-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	959	384	0	0
2	855	349	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	4.000"	18%	481 / 1439	1919	L	1.25D+1.5L
2 - SPF	5.500"	15%	437 / 1283	1720	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2571 ft-lb	3'3 5/8"	22724 ft-lb	0.113 (11%)	1.25D+1.5L	L
Unbraced	2571 ft-lb	3'3 5/8"	22010 ft-lb	0.117 (12%)	1.25D+1.5L	L
Shear	1733 lb	5'5 7/8"	9277 lb	0.187 (19%)	1.25D+1.5L	L
Perm Defl in.	0.008 (L/8511)	3'3 1/2"	0.200 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.021 (L/3423)	3'3 1/2"	0.200 (L/360)	0.110 (11%)	L	L
TL Defl inch	0.030 (L/2441)	3'3 1/2"	0.301 (L/240)	0.100 (10%)	D+L	L

Design Notes

1 Fill all hanger nailing holes.
2 Girders are designed to be supported on the bottom edge only.
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5 Top braced at bearings.
6 Bottom braced at bearings.
7 Lateral slenderness ratio based on full section width.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 6-6-14	(Span)0-9-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-3-8		Near Face	96 lb	256 lb	0 lb	0 lb	J6
3	Part. Uniform	0-11-8 to 4-11-8		Near Face	104 PLF	278 PLF	0 PLF	0 PLF	
4	Point	5-7-8		Near Face	133 lb	345 lb	0 lb	0 lb	J6
	Self Weight				8 PLF				

Notes

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Lumber

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Manufacturer Info

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Client: GREEN YORK HOMES
Project:
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Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
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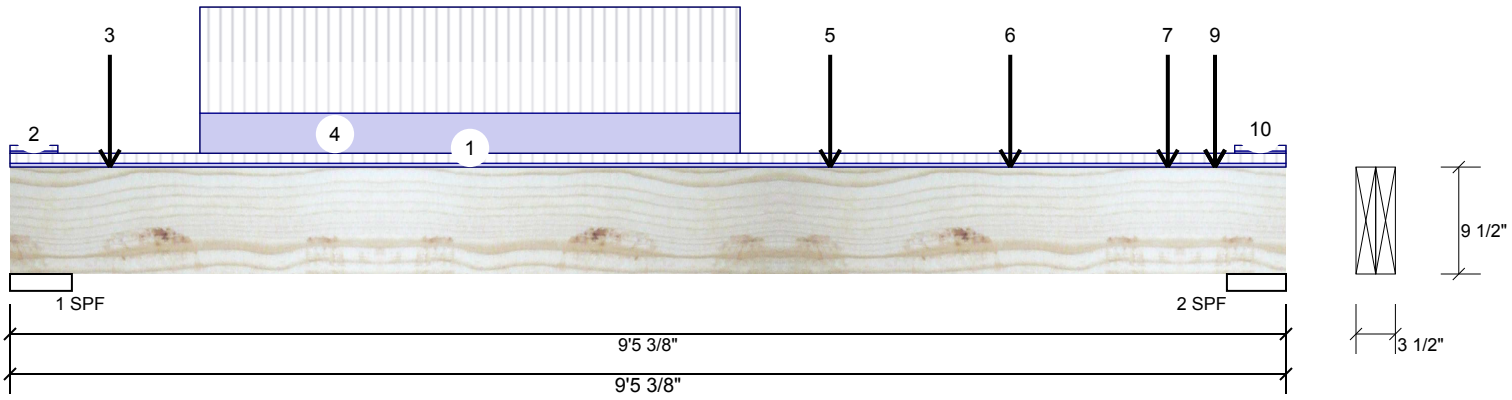
F5-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

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	710 (-2)	304	0	0
2	650 (-115)	259	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	12%	380 / 1065	1444	L	1.25D+1.5L
2 - SPF	5.250"	11%	324 / 976	1300	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3030 ft-lb	4'8 3/16"	22724 ft-lb	0.133 (13%)	1.25D+1.5L	L
Unbraced	3030 ft-lb	4'8 3/16"	21237 ft-lb	0.143 (14%)	1.25D+1.5L	L
Shear	1394 lb	1'2 1/4"	9277 lb	0.150 (15%)	1.25D+1.5L	L
Perm Defl in.	0.019 (L/5399)	4'8 11/16"	0.289 (L/360)	0.070 (7%)	D	Uniform
LL Defl inch	0.046 (L/2287)	4'8 11/16"	0.289 (L/360)	0.160 (16%)	L	L
TL Defl inch	0.065 (L/1607)	4'8 11/16"	0.434 (L/240)	0.150 (15%)	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.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 9-5-6	(Span)0-8-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-4-4	(Span)0-4-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-8-14		Near Face	55 lb	145 lb	0 lb	0 lb	J3
4	Part. Uniform	1-4-14 to 5-4-14		Near Face	57 PLF	151 PLF	0 PLF	0 PLF	
5	Point	6-0-14		Near Face	72 lb	191 lb	0 lb	0 lb	J5
6	Point	7-4-14		Near Face	65 lb	174 lb	0 lb	0 lb	J5

Continued on page 2...

Notes

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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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

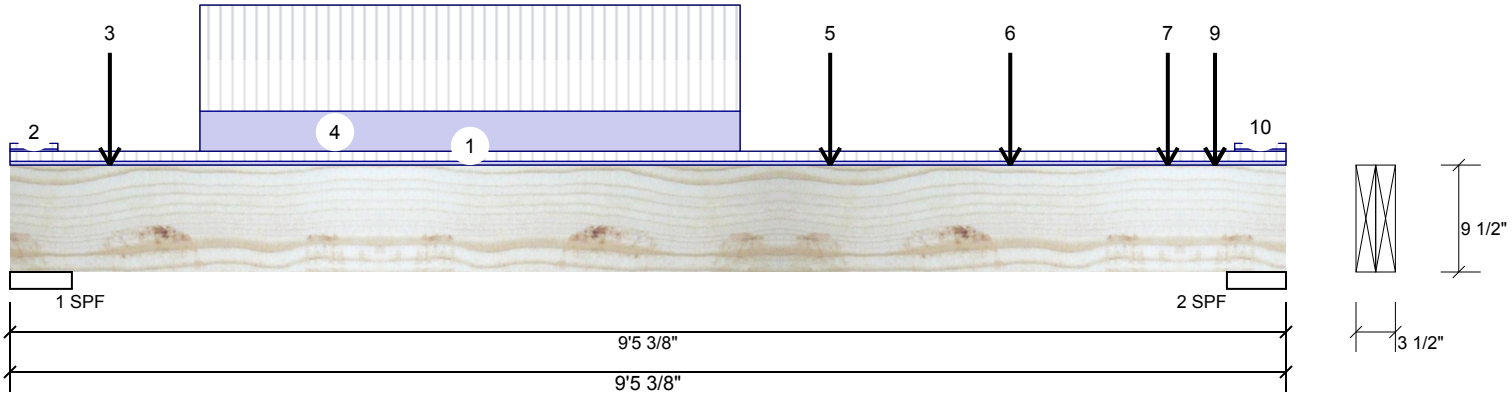
isDesign™

Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F5-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	8-6-14		Near Face	40 lb	105 lb	0 lb	0 lb	J5
8	Point	8-11-1		Near Face	-22 lb	0 lb	0 lb	0 lb	F6
9	Point	8-11-1		Near Face	0 lb	-117 lb	0 lb	0 lb	F6
10	Tie-In	9-0-13 to 9-5-6	(Span)0-4-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				8 PLF				

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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Lumber

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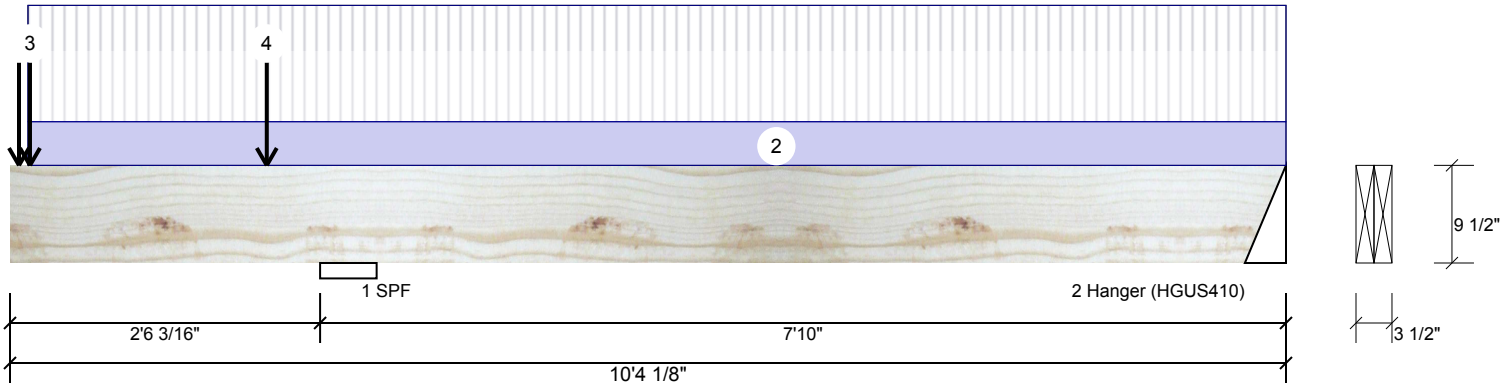
F6-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

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	658	316	0	0
2	0 (-117)	(-22)	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	12%	395 / 987	1382	LL	1.25D+1.5L
2 - Hanger	4.000"	0%	-20 / 41 22 (-242)		_L	0.9D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-2162 ft-lb	2'8 15/16"	22724 ft-lb	0.095 (10%)	1.25D+1.5L	L_
Unbraced	-2162 ft-lb	2'8 15/16"	21662 ft-lb	0.100 (10%)	1.25D+1.5L	L_
Pos Moment	7 ft-lb	9'2 15/16"	14770 ft-lb	0.000 (0%)	0.9D+1.5L	_L
Unbraced	7 ft-lb	9'2 15/16"	14770 ft-lb	0.000 (0%)	0.9D+1.5L	_L
Shear	978 lb	1'8 11/16"	9277 lb	0.105 (11%)	1.25D+1.5L	L_
Perm Defl in.	0.004 (L/22511)	5'7 5/16"	0.244 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.013 (L/6952)	5'10 1/8"	0.244 (L/360)	0.050 (5%)	L	L_
TL Defl inch	0.017 (L/5316)	5'9 7/16"	0.367 (L/240)	0.050 (5%)	D+L	L_
LL Cant	0.035 (2L/1727)	Lt Cant	0.200 (2L/480)	0.175 (17%)	L	L_
TL Cant	0.048 (2L/1247)	Lt Cant	0.300 (2L/360)	0.161 (16%)	D+L	L_

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

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 Tie-down connection required at bearing 2 for uplift 242 lb (Combination 1.25D+1.5L, Load Case L_).
6 Top braced at bearings.
7 Bottom braced at bearings.
8 Lateral slenderness ratio based on full section width.

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

KOTT

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

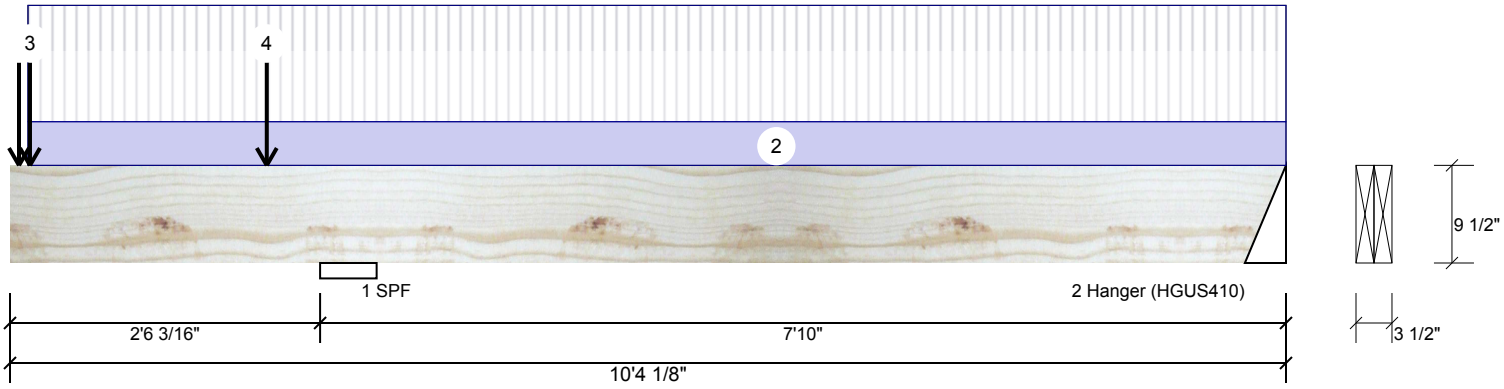
isDesign™

Client: GREEN YORK HOMES
Project:
Address:

Date: 1/18/2019
Designer: SB
Job Name: LOT-28 (LIANA 1 EL-1)
Project #:

F6-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	Point	0-0-14		Far Face	148 lb	378 lb	0 lb	0 lb	F1
2	Tie-In	0-1-12 to 10-4-2	(Span)0-4-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-1-15		Near Face	23 lb	42 lb	0 lb	0 lb	F2
4	Point	2-1-0		Near Face	18 lb	49 lb	0 lb	0 lb	J8
	Self Weight				8 PLF				

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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Lumber

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

Handling & Installation

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2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
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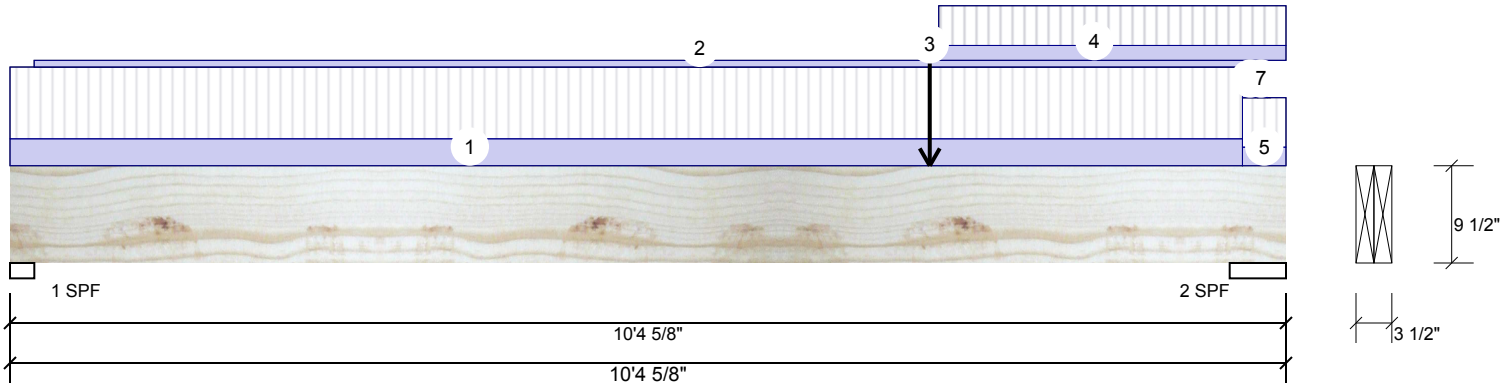

Member Information

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	208	128	0	0
2	424	214	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	9%	160 / 312	472	L	1.25D+1.5L
2 - SPF	5.500"	8%	268 / 636	904	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1955 ft-lb	7'5 13/16"	22724 ft-lb	0.086 (9%)	1.25D+1.5L	L
Unbraced	1955 ft-lb	7'5 13/16"	20806 ft-lb	0.094 (9%)	1.25D+1.5L	L
Shear	817 lb	9'2 3/8"	9277 lb	0.088 (9%)	1.25D+1.5L	L
Perm Defl in.	0.016 (L/7225)	5'5 1/8"	0.328 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.031 (L/3827)	5'6 3/4"	0.328 (L/360)	0.090 (9%)	L	L
TL Defl inch	0.047 (L/2502)	5'6 1/4"	0.493 (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.
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LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-0-6	(Span)1-0-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-2-6 to 10-0-6		Top	2 PLF	0 PLF	0 PLF	0 PLF	
3	Point	7-5-13		Near Face	148 lb	378 lb	0 lb	0 lb	F1
4	Tie-In	7-6-11 to 10-4-10	(Span)0-7-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tie-In	10-0-6 to 10-4-10	(Span)0-8-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Part. Uniform	10-0-6 to 10-1-14		Top	1 PLF	0 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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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

KOTT

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Manufacturer Info

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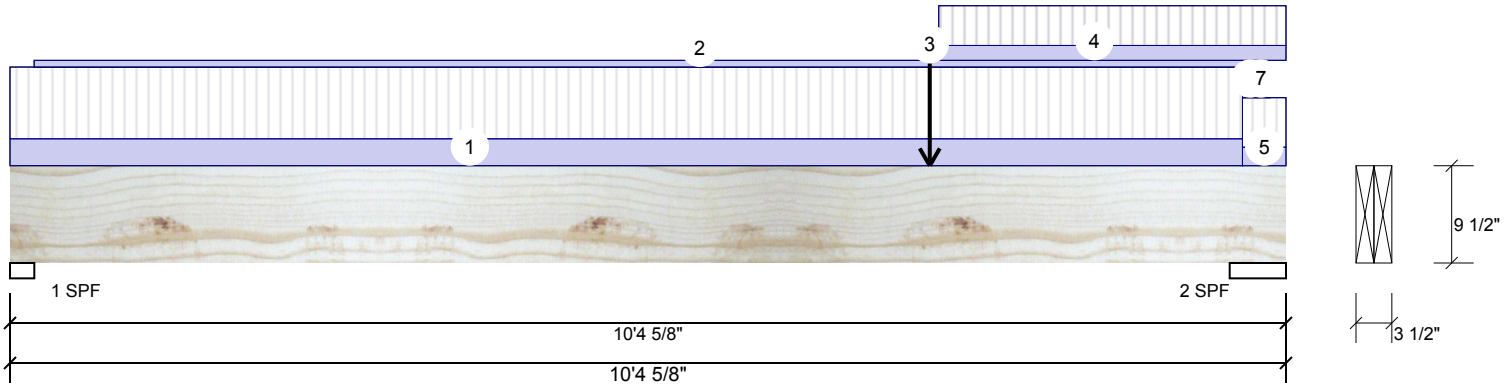
F6-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Tapered Start	10-1-14		Top	1 PLF	0 PLF	0 PLF	0 PLF	
	End	10-2-14			0 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				8 PLF				

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 22, 2019

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