

**Engineering Note Page (ENP-2)**

REVISION 2009-10-09

**Please read all notes prior to installation of the component**

GREEN YORK HOMES-  
GRANELLI HOME CORP-  
LIANA 1 (ELEV.2)

**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.

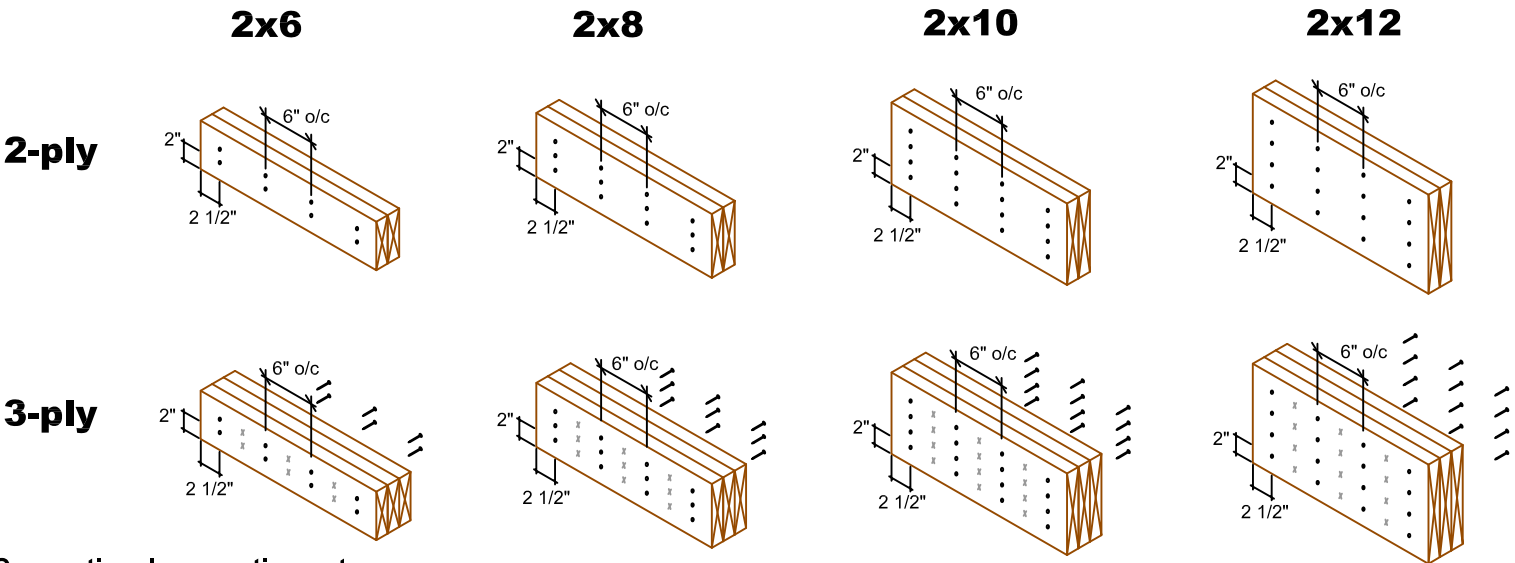
**HANDLING AND INSTALLATION**

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

# MULTIPLE MEMBER CONNECTIONS

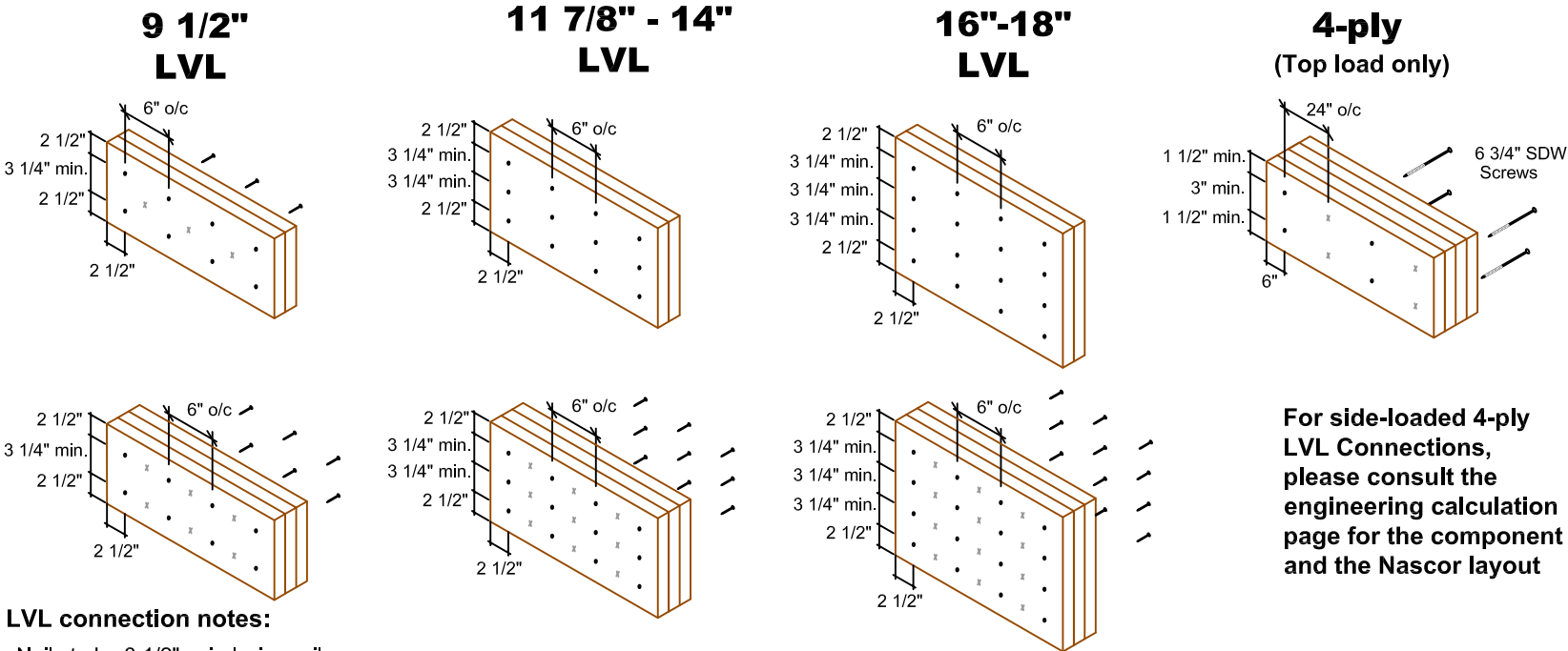
GREEN YORK HOMES-  
GRANELLI HOME CORP-  
LIANA 1 (ELEV.2

## Conventional Connections (for uniform distributed loads)



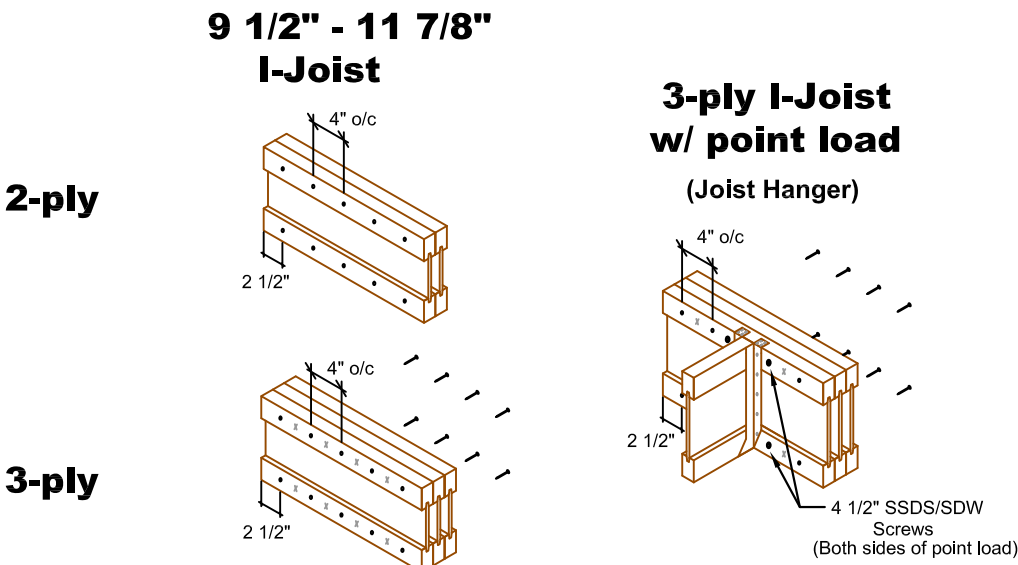
- Conventional connection notes:**
- Nails to be 3" 10d spiral wire nails.
  - Nails to be located a minimum of 2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
  - Number of rows and spacing as per details shown, unless noted otherwise.
  - "X" represents nail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

## LVL Connections (for uniform distributed loads)



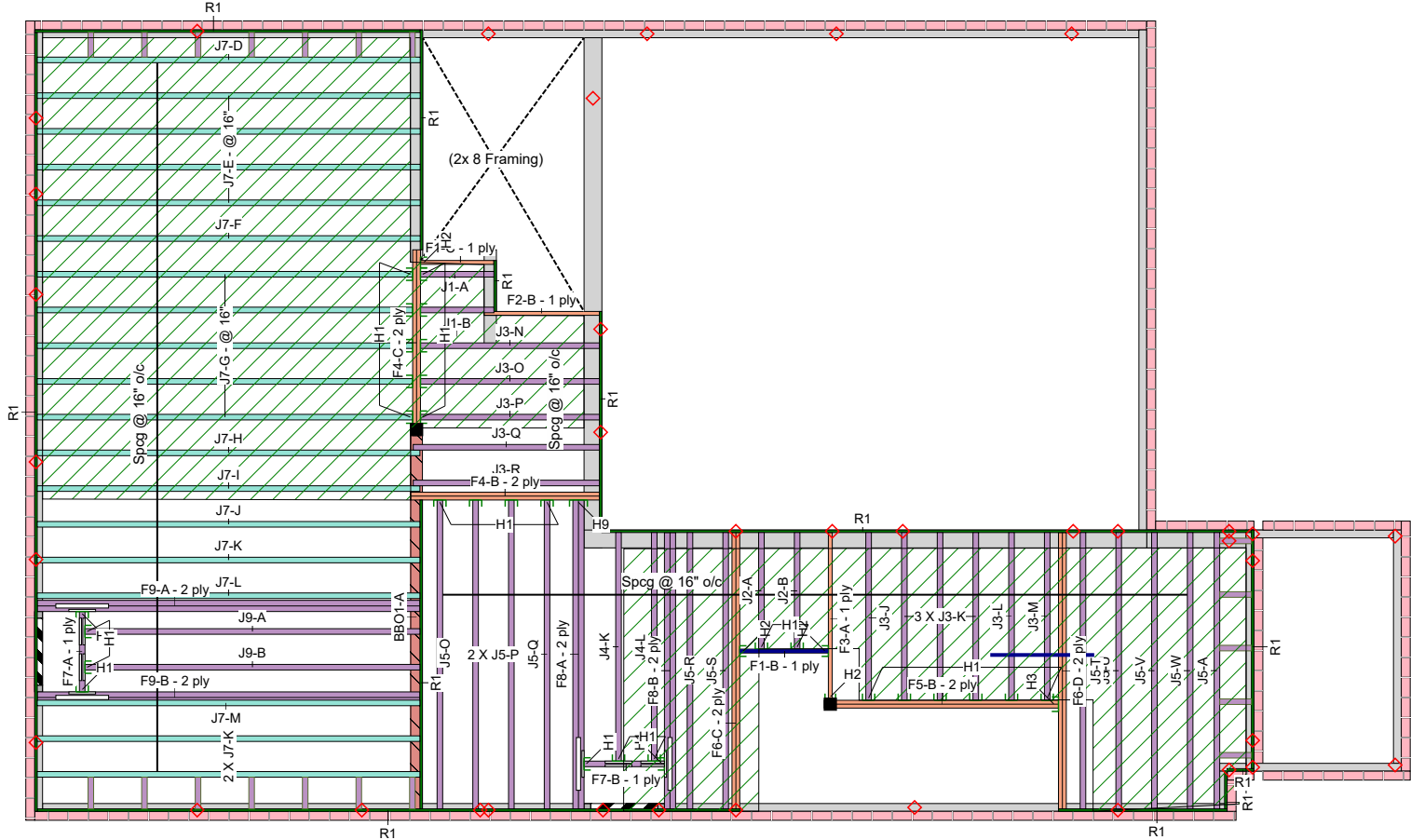
- LVL connection notes:**
- Nails to be 3 1/2" spiral wire nails.
  - Nails to be located a minimum of 2 1/2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
  - Minimum 3 1/4" spacing between rows.
  - Number of rows and spacing as per details shown, unless noted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

## Vertical I-Joist Connections (for uniform distributed loads)



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

Ground Floor



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 MEMBFP CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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

Legend

	Load from Above
	Wall
	Wall Opening
	Norbord Rimboard Plus 1.125 X 9.5
	NJ60H 9.5
	NJH 9.5

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



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
J7	NJ60H	2.5	9.5			19	16-0-0
F9	NJH	2.5	9.5	2	2	4	16-0-0
F8	NJH	2.5	9.5	2	2	4	12-0-0
F7	NJH	2.5	9.5			2	4-0-0
J9	NJH	2.5	9.5			2	14-0-0
J5	NJH	2.5	9.5			11	12-0-0
J4	NJH	2.5	9.5			2	10-0-0
J3	NJH	2.5	9.5			11	8-0-0
J2	NJH	2.5	9.5			2	6-0-0
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	30	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	
H9	1	THAI-2 (Min)			2 10d	2 10dx1 1/2	

NOTES:		
1. Framer to verify dimensions on the architectural drawings.		
2. Double joist only require filler/backer ply when supporting another member using a face-mounted hanger.		
3. Install 2x4 blocking @ 24" o/c under parallel non-load bearing walls.		
4. Install single-ply flush window header along inside face of rimboard/rimjoist.		
5. Refer to Nascor specifier guide for installation works.		
6. Squash blocks recommended to be installed at end bearing on all first level joists which support loading from above exceeding two levels floor or roof.		
7. Load transfer blocks to be installed under all point loads.		
8. It shall be the framer's responsibility that floor joists and beams are fastened as per the hanger manufacturer's standards.		
Refer to Multiple Member Connection Detail to ply to ply nailing or bolting requirements.		
Rim parallel to joists: 1-1/8" rimboard with 2"x 4" block (1/16" longer than rim depth @ 16" o/c). All other components and structural elements supporting the floor system such as beams, walls, columns, and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of Others.		
Hatch area represents ceramic tiled floor with an additional dead load of 5 PSF		
The framing shown on this layout may deviate from the architectural and structural drawings. Project Engineer to review and approve the deviation prior to construction.		

ARCHITECTURAL DRAWINGS:

JARDIN DESIGN GROUP INC.  
64 Jardin Dr., Suite 3A, Vaughan, ON  
Date: Rev.2; May 22,2018  
Project No: 17-55  
Model: Liana 1

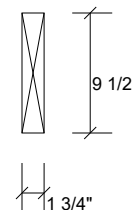
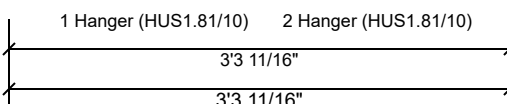
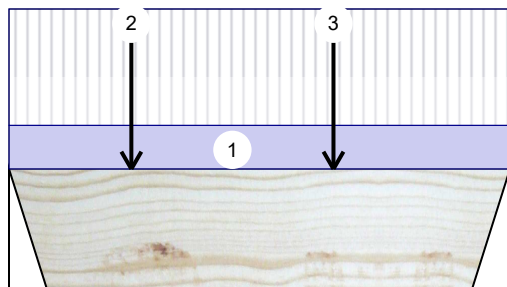


Layout Name	LIANA 1 (ELEV.2)
Design Method	LSD
Description	GRANELLI HOME CORP. BRAMPTON, ONT.
Created	May 29, 2018
Builder	GREEN YORK HOMES
Sales Rep	RM
Designer	RCO
Shipping	
Project	
Builder's Project	
Kott Lumber Company	
14 Anderson Blvd	
Stouffville, Ontario	
Canada	
L4A 7X4	
905-642-4400	
Job Path	D:\Users\rochavillo\WORK FROM HOME\GREEN YORK HOMES \GRANELLI HOME CORP\MODELS \LIANA 1\LIANA 1 ELEV 2\FLOOR \LIANA 1 (ELEV.2).isl

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	

**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	80	0	0
2	152	73	0	0

**Bearings and Factored Reactions**

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	9%	100 / 256	356	L	1.25D+1.5L
2 - Hanger	3.000"	8%	91 / 229	320	L	1.25D+1.5L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	258 ft-lb	2' 7/16"	11362 ft-lb	0.023 (2%)	1.25D+1.5L	L
Unbraced	258 ft-lb	2' 7/16"	10006 ft-lb	0.026 (3%)	1.25D+1.5L	L
Shear	274 lb	11 3/4"	4638 lb	0.059 (6%)	1.25D+1.5L	L
Perm Defl in. (L/45769)	0.001	1'9 1/4"	0.098 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch (L/21849)	0.002	1'9"	0.098 (L/360)	0.020 (2%)	L	L
TL Defl inch (L/14790)	0.002	1'9 1/16"	0.146 (L/240)	0.020 (2%)	D+L	L

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**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.**

**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 3-3-11		Top	15 PLF	40 PLF	0 PLF	0 PLF	
2	Point	0-9-11		Far Face	41 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 Structural 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

**Manufacturer Info**

Forex  
APA: PR-L318

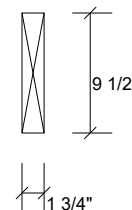
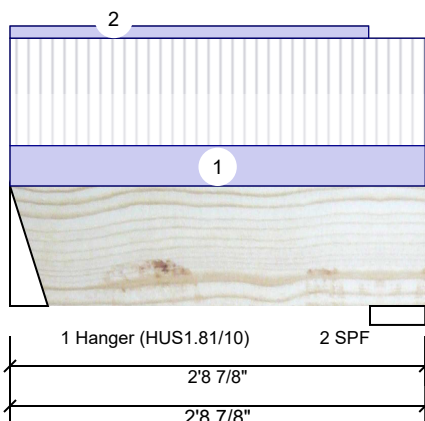


Kott Lumber Company  
14 Anderson Blvd, Ontario  
Canada  
L4A 7X4  
905-642-4400



**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%)		

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**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.**

**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 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 Structural 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

**Manufacturer Info**

Forex  
APA: PR-L318



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



**EWP Studio**  
 Simpson Strong-Tie®  
 Component Solutions™

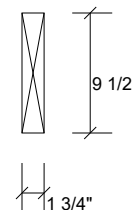
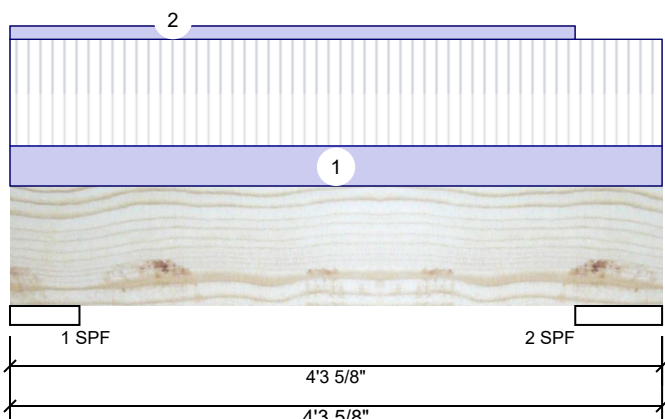
Client: GREEN YORK HOMES  
 Project:  
 Address:

Date: 5/31/2018  
 Designer: RCO  
 Job Name: LIANA 1 (ELEV.2)  
 Project #:

Page 1 of 1

**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

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


**Design Notes**

- Girders are designed to be supported on the bottom edge only.
- Top braced at bearings.
- 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 Structural Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

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

chemicals

**Handling & Installation**

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

- For flat roofs provide proper drainage to prevent ponding

**Manufacturer Info**

Forex  
APA: PR-L318

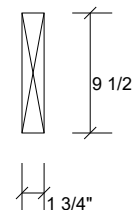
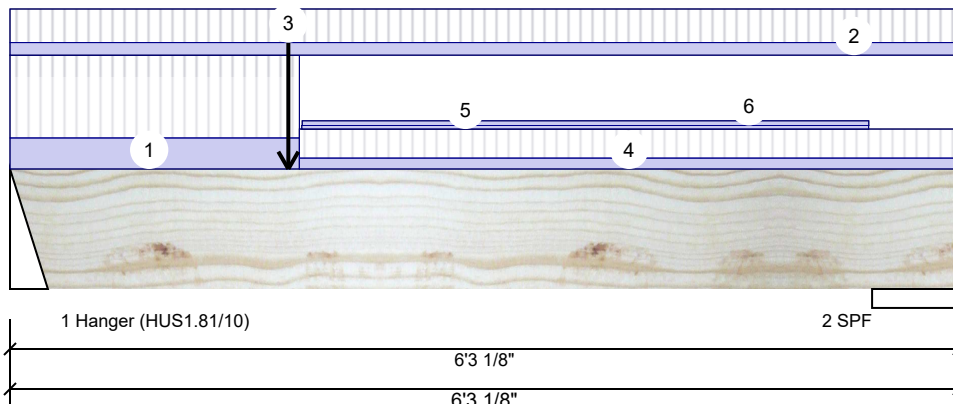


Kott Lumber Company  
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Canada  
L4A 7X4  
905-642-4400



**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	159	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%	199 / 511	710 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	839 ft-lb	1'11 7/8"	11362 ft-lb	0.074 (7%)	1.25D+1.5L	L
Unbraced	839 ft-lb	1'11 7/8"	6701 ft-lb	0.125 (13%)	1.25D+1.5L	L
Shear	514 lb	11 3/4"	4638 lb	0.111 (11%)	1.25D+1.5L	L
Perm Defl in. (L/11950)	0.006	2'9 1/8"	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/4019)	2'8 13/16"	0.278 (L/240)	0.060 (6%)	D+L	L

**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.**

**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	Point	1-10-1		Far Face	73 lb	152 lb	0 lb	0 lb	F1
4	Tie-In	1-10-15 to 6-3-2	(Span)1-2-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Part. Uniform	1-11-2 to 5-8-0		Top	3 PLF	0 PLF	0 PLF	0 PLF	
6	Part. Uniform	1-11-2 to 5-8-0		Top	4 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				4 PLF				

**Notes**

Calculated Structural 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

**Manufacturer Info**

Forex  
APA: PR-L318



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





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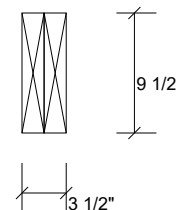
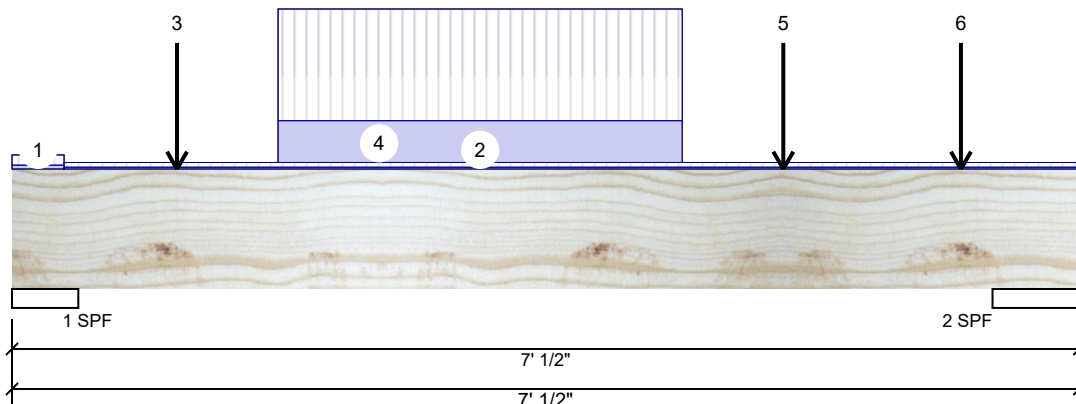
Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 1 of 1

# 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	862	351	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"	12%	439 / 1293	1732	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2221 ft-lb	3'5 13/16"	22724 ft-lb	0.098 (10%)	1.25D+1.5L	L
Unbraced	2221 ft-lb	3'5 13/16"	21975 ft-lb	0.101 (10%)	1.25D+1.5L	L
Shear	1694 lb	5'8 7/8"	9277 lb	0.183 (18%)	1.25D+1.5L	L
Perm Defl in.	0.008 (L/9580)	3'5 5/8"	0.205 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.019 (L/3901)	3'5 5/8"	0.205 (L/360)	0.090 (9%)	L	
TL Defl inch	0.027 (L/2772)	3'5 5/8"	0.308 (L/240)	0.090 (9%)	D+L	L

**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.**



## Design Notes

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top braced at bearings.
- Bottom braced at bearings.
- 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	108 lb	288 lb	0 lb	0 lb	J5
6	Point	6-3-2		Near Face	122 lb	323 lb	0 lb	0 lb	F8
	Self Weight				8 PLF				

## Notes

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

## Lumber

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

chemicals

## Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

## Manufacturer Info

Forex  
APA: PR-L318



Kott Lumber Company  
14 Anderson Blvd, Ontario  
Canada  
L4A 7X4  
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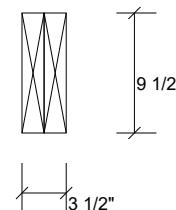
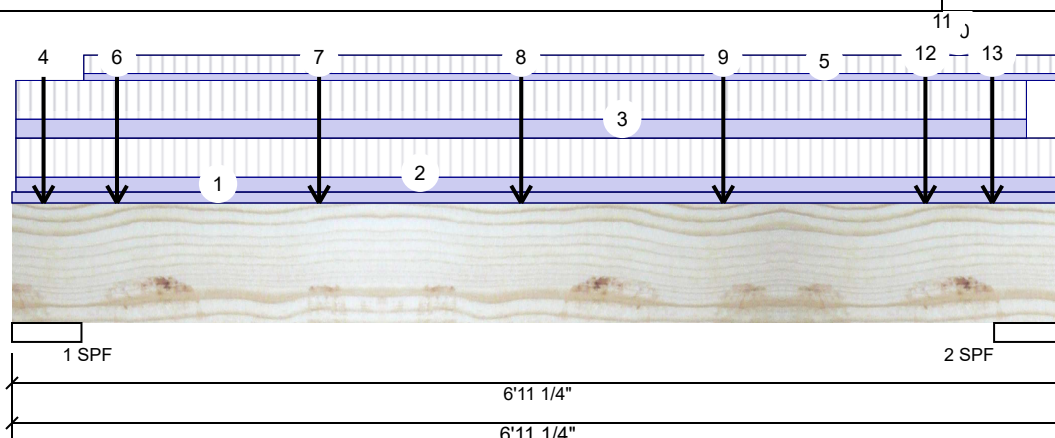
Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 1 of 2

# 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	5607	2698	0	0
2	2555	1390	0	0

## Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	99%	3372 / 8411	11783	L	1.25D+1.5L
2 - SPF	5.500"	47%	1737 / 3833	5570	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7859 ft-lb	3'4 11/16"	22724 ft-lb	0.346 (35%)	1.25D+1.5L	L
Unbraced	7859 ft-lb	3'4 11/16"	21978 ft-lb	0.358 (36%)	1.25D+1.5L	L
Shear	4616 lb	1'2 1/4"	9277 lb	0.498 (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/1195)	3'5 3/8"	0.205 (L/360)	0.300 (30%)	L	
TL Defl inch	0.095 (L/776)	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.

**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.**



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 6-11-4		Top	106 PLF	283 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	0-5-11 to 6-11-4		Top	50 PLF	133 PLF	0 PLF	0 PLF	J3

Continued on page 2...

## Notes

Calculated Structural 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

## Manufacturer Info

Forex  
APA: PR-L318



Kott Lumber Company  
14 Anderson Blvd, Ontario  
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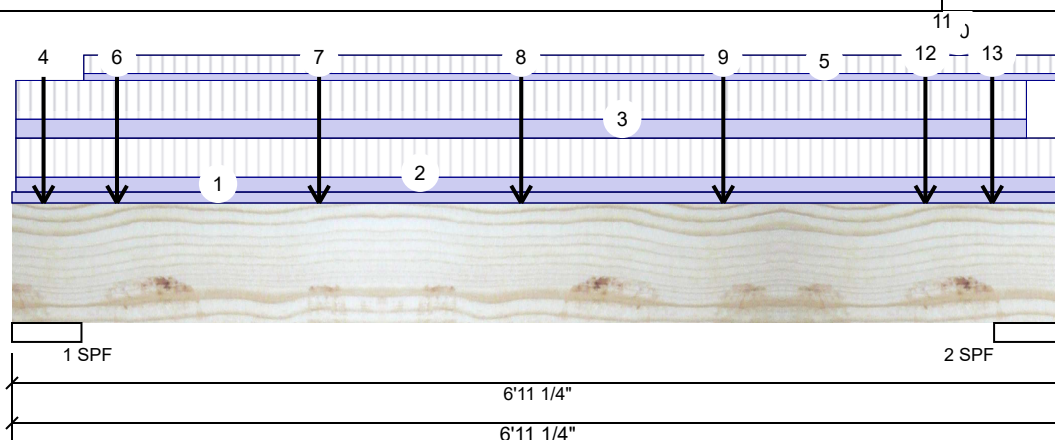
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Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 2 of 2

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

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	0-8-5		Near Face	73 lb	154 lb	0 lb	0 lb	J3
7	Point	2-0-5		Near Face	82 lb	167 lb	0 lb	0 lb	J3
8	Point	3-4-5		Near Face	29 lb	59 lb	0 lb	0 lb	J3
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
	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.

## Notes

Calculated Structural 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

## Manufacturer Info

Forex  
APA: PR-L318



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





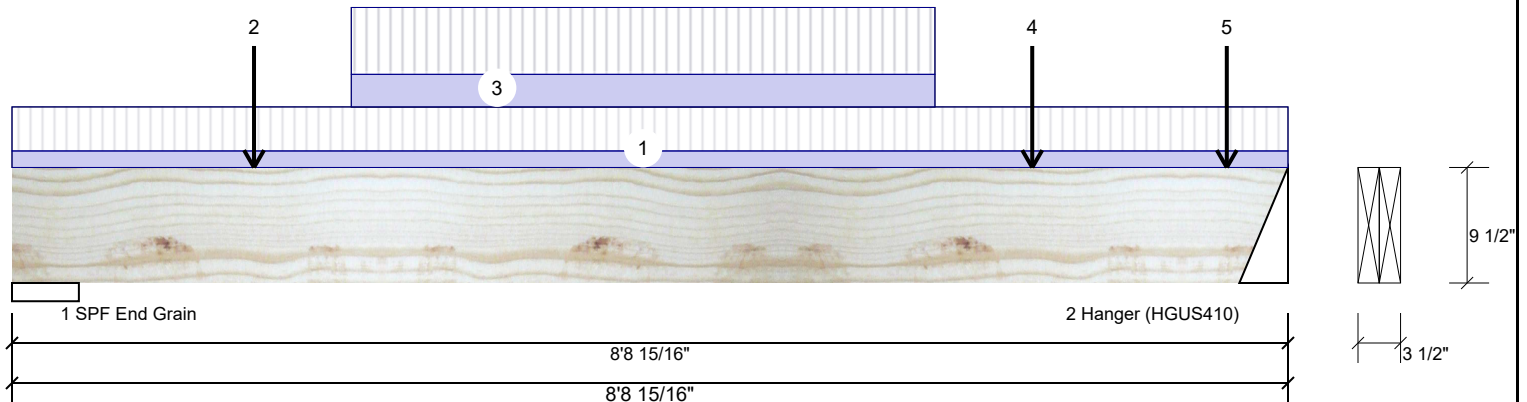
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Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

F5-B	Forex 2.0E-3000Fb LVL	1.750" X 9.500"	2-Ply - PASSED
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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 Ib (Uplift)

Brg	Live	Dead	Snow	Wind
1	795	377	0	0
2	1170	525	0	0

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3658 ft-lb	4'7 3/4"	22724 ft-lb	0.161 (16%)	1.25D+1.5L	L
Unbraced	3658 ft-lb	4'7 3/4"	21435 ft-lb	0.171 (17%)	1.25D+1.5L	L
Shear	2240 lb	7'8 3/16"	9277 lb	0.241 (24%)	1.25D+1.5L	L
Perm Defl in.	0.022 (L/4332)	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/1383)	4'6 1/16"	0.404 (L/240)	0.170 (17%)	D+L	L

## Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	5.500"	12%	471 / 1192	1663	L	1.25D+1.5L
2 -	4.000"	23%	656 / 1755	2411	L	1.25D+1.5L

**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.**



## 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	78 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

Manufacturer Info
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Forex  
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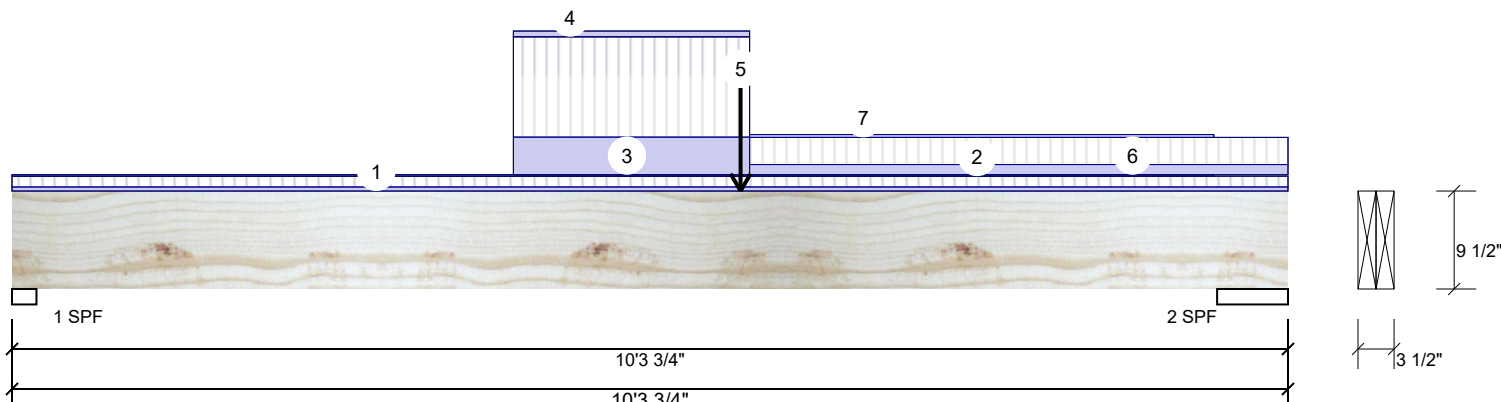
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Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 1 of 2

# 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	125	0	0
2	279	169	0	0

## Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	9%	156 / 282	439 L	1.25D+1.5L
2 - SPF	6.875"	4%	212 / 418	629 L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1837 ft-lb	5'10 11/16"	22724 ft-lb	0.081 (8%)	1.25D+1.5L	L
Unbraced	1837 ft-lb	5'10 11/16"	20878 ft-lb	0.088 (9%)	1.25D+1.5L	L
Shear	546 lb	9' 1/8"	9277 lb	0.059 (6%)	1.25D+1.5L	L
Perm Defl in.	0.016 (L/7265)	5'2 1/8"	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/2670)	5'2 7/16"	0.483 (L/240)	0.090 (9%)	D+L	L

**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.**



## Design Notes

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top braced at bearings.
- Bottom braced at bearings.
- 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)0-4-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 9-8-9		Top	1 PLF	0 PLF	0 PLF	0 PLF	
3	Tie-In	4-0-10 to 5-11-9	(Span)3-6-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	4-0-10 to 5-11-9		Top	4 PLF	0 PLF	0 PLF	0 PLF	
5	Point	5-10-11		Near Face	80 lb	171 lb	0 lb	0 lb	F1
6	Tie-In	5-11-9 to 10-3-12	(Span)0-11-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Continued on page 2...

## Notes

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

## Lumber

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

chemicals

## Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

## Manufacturer Info

Forex  
APA: PR-L318



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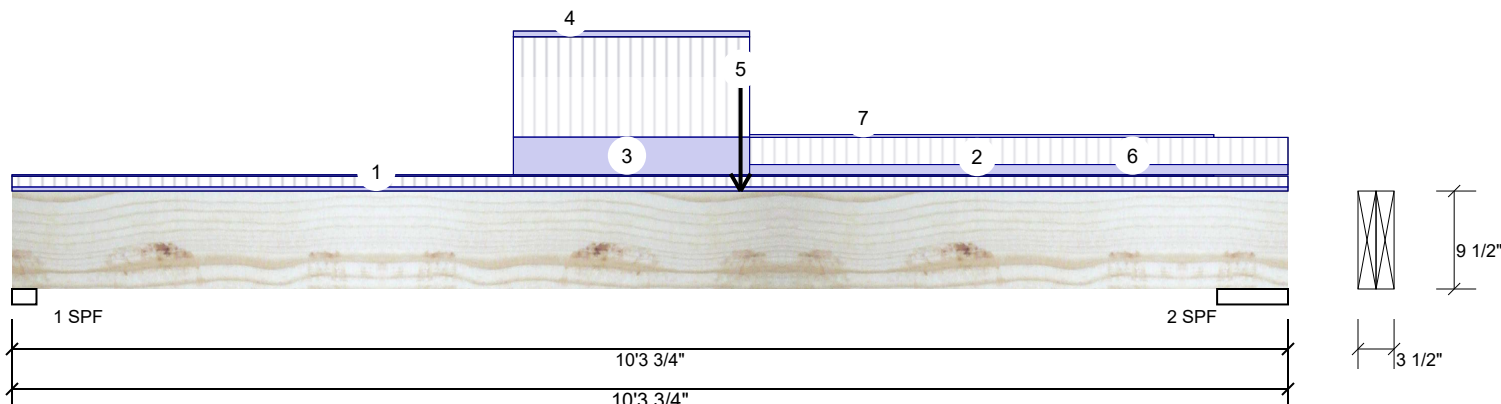
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Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 2 of 2

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

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Part. Uniform	5-11-9 to 9-8-9		Top	2 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				8 PLF				

**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.**



## 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

## Manufacturer Info

Forex  
APA: PR-L318



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





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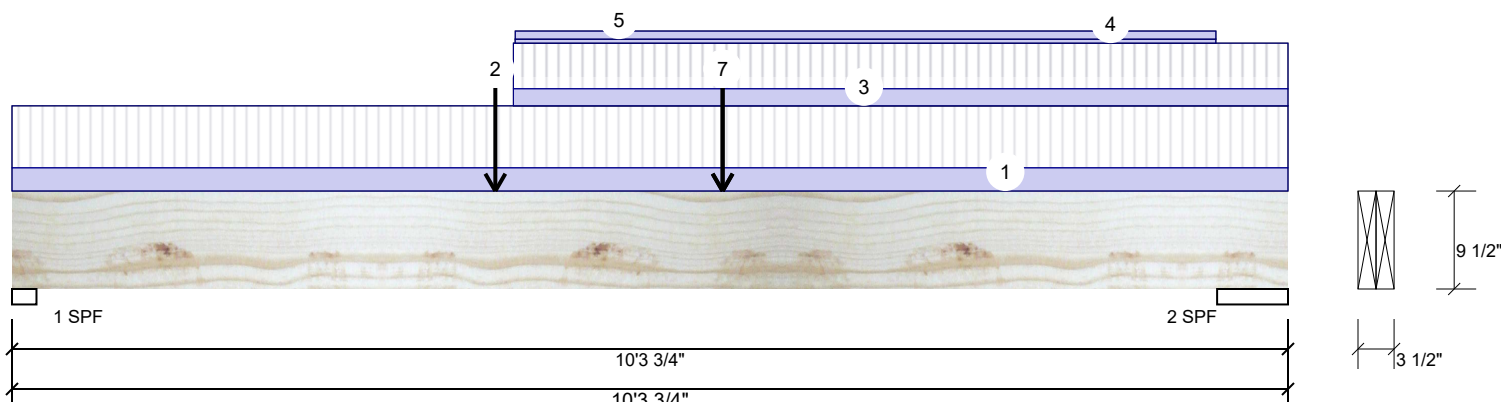
Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 1 of 2

# 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	424	0	0
2	683	342	0	0

## Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	36%	530 / 1315	1845 L	1.25D+1.5L
2 - SPF	6.875"	10%	428 / 1024	1452 L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6654 ft-lb	3'10 7/8"	22724 ft-lb	0.293 (29%)	1.25D+1.5L	L
Unbraced	6654 ft-lb	3'10 7/8"	20878 ft-lb	0.319 (32%)	1.25D+1.5L	L
Shear	1808 lb	11 1/8"	9277 lb	0.195 (19%)	1.25D+1.5L	L
Perm Defl in.	0.048 (L/2440)	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/785)	4'7 11/16"	0.483 (L/240)	0.310 (31%)	D+L	L

**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.**



## Design Notes

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top braced at bearings.
- Bottom braced at bearings.
- 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	Point	3-10-14		Far Face	525 lb	1170 lb	0 lb	0 lb	F5
3	Tie-In	4-0-10 to 10-3-12	(Span)0-6-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	4-0-13 to 9-8-12		Top	1 PLF	0 PLF	0 PLF	0 PLF	
5	Part. Uniform	4-0-13 to 9-8-12		Top	2 PLF	0 PLF	0 PLF	0 PLF	
6	Point	5-8-15		Top	25 lb	68 lb	0 lb	0 lb	

Continued on page 2...

## Notes

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

## Lumber

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

chemicals

## Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

## Manufacturer Info

Forex  
APA: PR-L318



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





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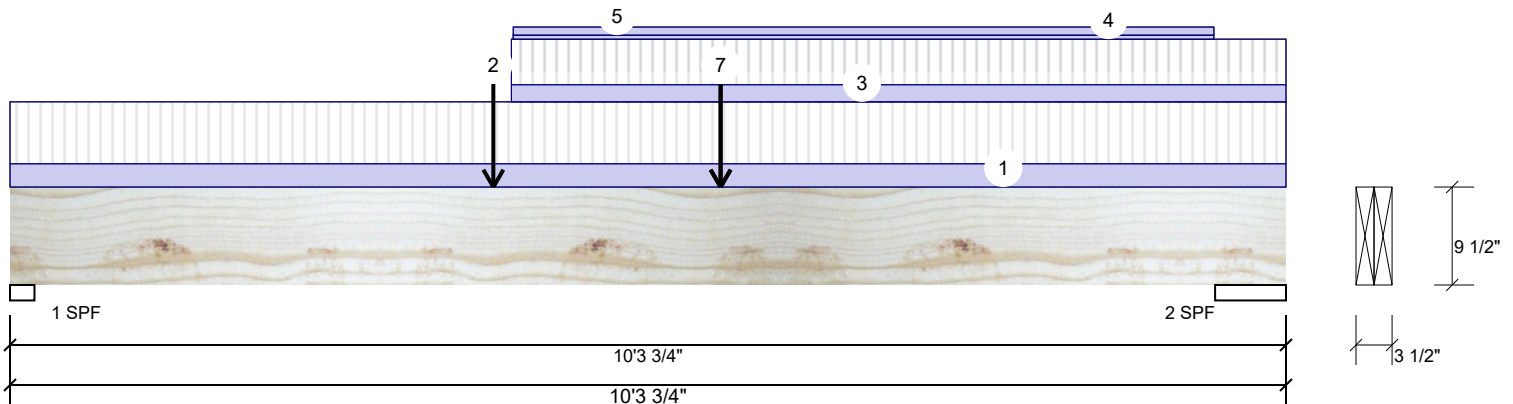
Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 2 of 2

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

Level: Ground Floor



...Continued from page 1

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

**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.**



## Notes

Calculated Structural 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

## Manufacturer Info

Forex  
APA: PR-L318



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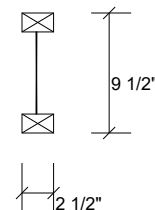
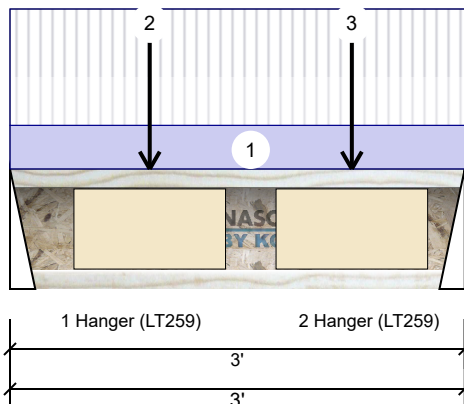
Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 1 of 1

**F7-A NJH 9.500" - PASSED**

Level: Ground Floor

**Member Information**

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

**Unfactored Reactions UNPATTERNED lb (Uplift)**

Brg	Live	Dead	Snow	Wind
1	331	124	0	0
2	358	134	0	0

**Bearings and Factored Reactions**

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	41%	155 / 497	652	L	1.25D+1.5L
2 - Hanger	2.000"	45%	168 / 537	705	L	1.25D+1.5L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	505 ft-lb	11 1/16"	3830 ft-lb	0.132 (13%)	1.25D+1.5L	L
Unbraced	505 ft-lb	11 1/16"	3411 ft-lb	0.148 (15%)	1.25D+1.5L	L
Shear	698 lb	2'10 3/4"	1580 lb	0.442 (44%)	1.25D+1.5L	L
Perm Defl in. (L/12051)	0.003	1'3 15/16"	0.093 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.007 (L/4523)	1'3 15/16"	0.093 (L/360)	0.080 (8%)	L	L
TL Defl inch	0.010 (L/3288)	1'3 15/16"	0.140 (L/240)	0.070 (7%)	D+L	L

**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.**

**Design Notes**

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top flange unbraced.
- 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	114 lb	304 lb	0 lb	0 lb	J9
3	Point	2-3-1		Near Face	106 lb	282 lb	0 lb	0 lb	J9

**Notes**

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

**Lumber**

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

**chemicals****Handling & Installation**

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
7. For flat roofs provide proper drainage to prevent ponding

**Manufacturer Info**

Nascor by Kott



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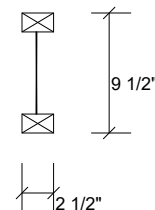
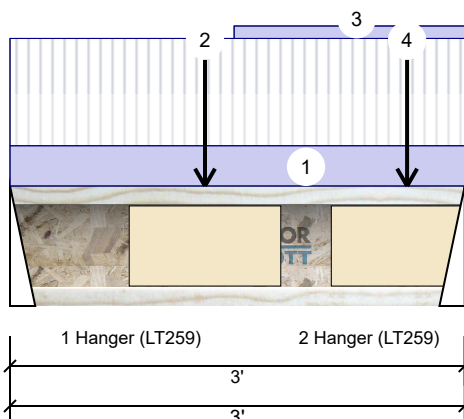
Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 1 of 1

## F7-B NJH 9.500" - PASSED

Level: Ground Floor



### Member Information

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

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	200	82	0	0
2	290	131	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	26%	103 / 300	403 L	1.25D+1.5L
2 - Hanger	2.000"	38%	164 / 435	599 L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	420 ft-lb	1'3 7/16"	3830 ft-lb	0.110 (11%)	1.25D+1.5L	L
Unbraced	420 ft-lb	1'3 7/16"	3411 ft-lb	0.123 (12%)	1.25D+1.5L	L
Shear	591 lb	2'10 3/4"	1580 lb	0.374 (37%)	1.25D+1.5L	L
Perm Defl in. (L/13745)	0.002	1'3 7/16"	0.093 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.006 (L/5760)	1'3 7/16"	0.093 (L/360)	0.060 (6%)	L	L
TL Defl inch	0.008 (L/4059)	1'3 7/16"	0.140 (L/240)	0.060 (6%)	D+L	L

**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.**



### Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top flange unbraced.
- 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 to 1-8-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	1-3-7		Far Face	94 lb	230 lb	0 lb	0 lb	J4
3	Part. Uniform	1-5-12 to 3-0-0		Top	4 PLF	0 PLF	0 PLF	0 PLF	
4	Point	2-7-7		Far Face	75 lb	156 lb	0 lb	0 lb	J4

### Notes

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### Lumber

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

chemicals

### Handling & Installation

1. Joist flanges must not be cut or drilled
2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged Joists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length >= 3.5 inches
7. For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

Nascor by Kott

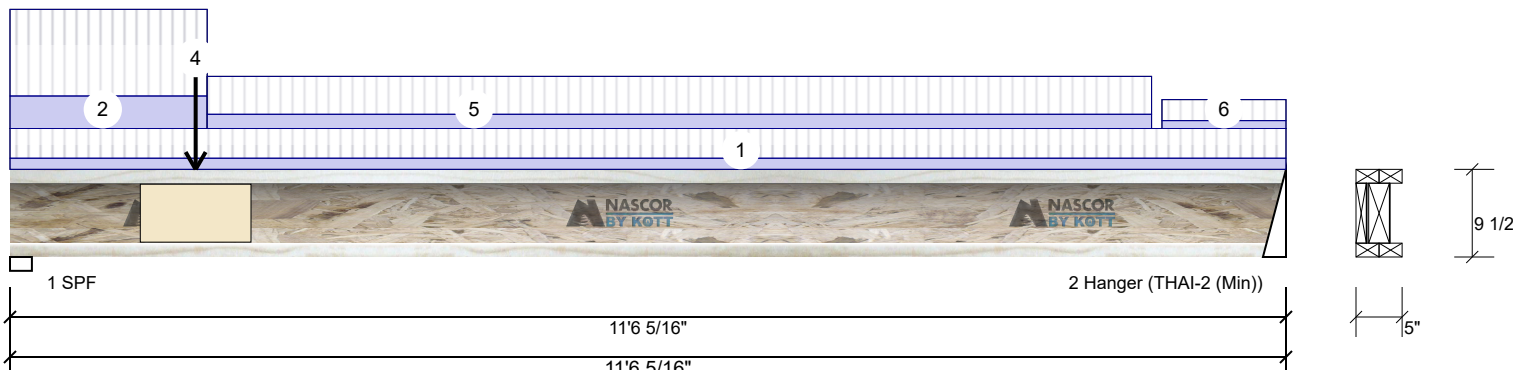


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905-642-4400



**F8-A NJH 9.500" 2-Ply - PASSED**

Level: Ground Floor

**Member Information**

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

**Unfactored Reactions UNPATTERNED lb (Uplift)**

Brg	Live	Dead	Snow	Wind
1	543	210	0	0
2	323	122	0	0

**Bearings and Factored Reactions**

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	34%	262 / 814	1076 L	1.25D+1.5L
2 - Hanger	2.500"	20%	153 / 484	637 L	1.25D+1.5L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2033 ft-lb	5'1 9/16"	7660 ft-lb	0.265 (27%)	1.25D+1.5L	L
Unbraced	2033 ft-lb	5'1 9/16"	2038 ft-lb	0.997 (100%)	1.25D+1.5L	L
Shear	1052 lb	1 5/8"	3160 lb	0.333 (33%)	1.25D+1.5L	L
Perm Defl in.	0.029 (L/4604)	5'6 1/2"	0.375 (L/360)	0.080 (8%)	D	Uniform
LL Defl inch	0.077 (L/1754)	5'6 5/8"	0.375 (L/360)	0.210 (21%)	L	L
TL Defl inch	0.106 (L/1270)	5'6 5/8"	0.562 (L/240)	0.190 (19%)	D+L	L

**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.**

**Design Notes**

- Fill all hanger nailing holes.
- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top flange must be laterally braced at a maximum of 7'10" o.c.
- Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 11-6-5	(Span)1-2-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-9-6	(Span)3-5-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	1-8-2		Near Face	82 lb	200 lb	0 lb	0 lb	F7
5	Tie-In	1-9-6 to 10-3-12	(Span)1-5-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Tie-In	10-4-14 to 11-6-5	(Span)0-9-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	

**Notes**

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

**Lumber**

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

**chemicals****Handling & Installation**

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

- Provide lateral support at bearing points to avoid lateral displacement and rotation
- Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
- For flat roofs provide proper drainage to prevent ponding

**Manufacturer Info**

Nascor by Kott

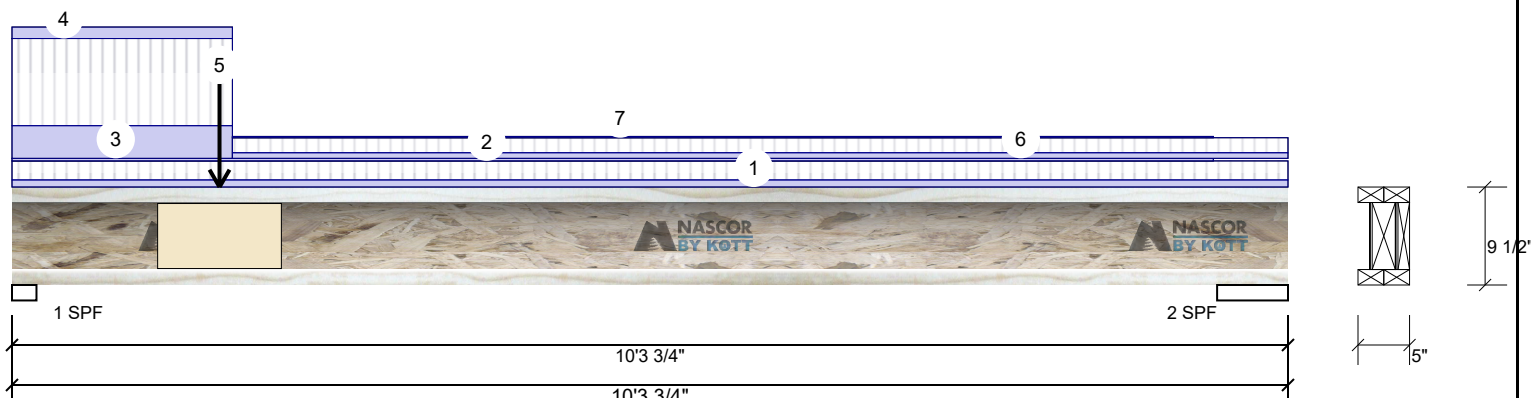


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Canada  
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905-642-4400



**F8-B NJH 9.500" 2-Ply - PASSED**

Level: Ground Floor

**Member Information**

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

**Unfactored Reactions UNPATTERNED lb (Uplift)**

Brg	Live	Dead	Snow	Wind
1	469	223	0	0
2	197	93	0	0

**Bearings and Factored Reactions**

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	31%	278 / 704	982	L	1.25D+1.5L
2 - SPF	6.875"	13%	116 / 295	411	L	1.25D+1.5L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1313 ft-lb	2'11 5/8"	7660 ft-lb	0.171 (17%)	1.25D+1.5L	L
Unbraced	1313 ft-lb	2'11 5/8"	1322 ft-lb	0.993 (99%)	1.25D+1.5L	L
Shear	958 lb	1 5/8"	3160 lb	0.303 (30%)	1.25D+1.5L	L
Perm Defl in.	0.017 (L/6969)	4'6"	0.322 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.035 (L/3306)	4'5 7/8"	0.322 (L/360)	0.110 (11%)	L	
TL Defl inch	0.052 (L/2242)	4'5 7/8"	0.483 (L/240)	0.110 (11%)	D+L	L

**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.**

**Design Notes**

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top flange must be laterally braced at a maximum of 9'6" o.c.
- 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)0-8-15	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)3-5-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	0-0-0 to 1-9-6		Top	9 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-8-2		Far Face	131 lb	290 lb	0 lb	0 lb	F7
6	Tie-In	1-9-6 to 10-3-12	(Span)0-7-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-9-6 to 9-8-8		Top	1 PLF	0 PLF	0 PLF	0 PLF	

**Notes**

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

**Lumber**

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

**chemicals****Handling & Installation**

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

- Provide lateral support at bearing points to avoid lateral displacement and rotation
- Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
- For flat roofs provide proper drainage to prevent ponding

**Manufacturer Info**

Nascor by Kott

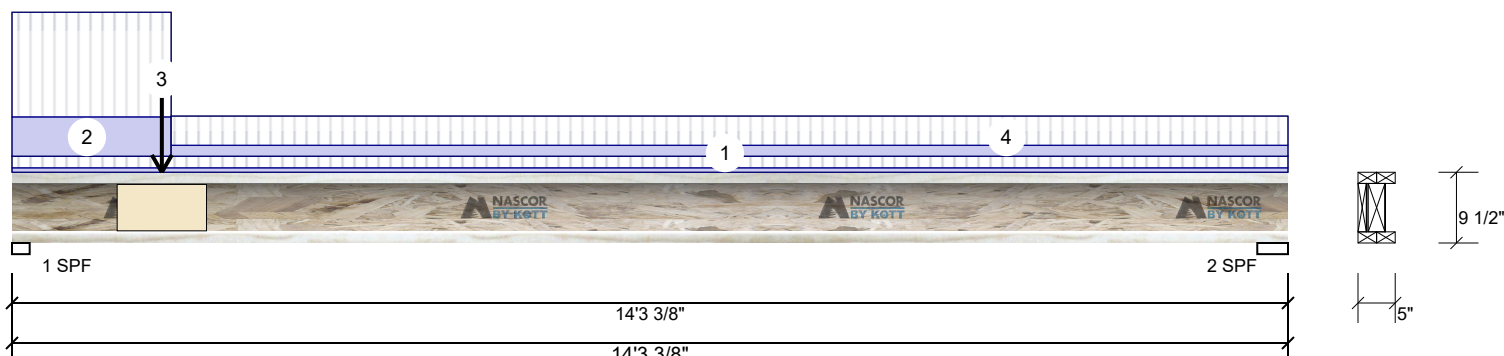


Kott Lumber Company  
14 Anderson Blvd, Ontario  
Canada  
L4A 7X4  
905-642-4400



**F9-A NJH 9.500" 2-Ply - PASSED**

Level: Ground Floor



### Member Information

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

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	590	221	0	0
2	237	89	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	37%	276 / 884	1161 L	1.25D+1.5L
2 - SPF	4.125"	15%	111 / 355	467 L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1944 ft-lb	5'4 3/4"	7660 ft-lb	0.254 (25%)	1.25D+1.5L	L
Unbraced	1944 ft-lb	5'4 3/4"	1951 ft-lb	0.996 (100%)	1.25D+1.5L	L
Shear	1140 lb	1 5/8"	3160 lb	0.361 (36%)	1.25D+1.5L	L
Perm Defl in.	0.040 (L/4158)	6'7 5/8"	0.462 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.107 (L/1558)	6'7 5/8"	0.462 (L/360)	0.230 (23%)	L	L
TL Defl inch	0.147 (L/1134)	6'7 5/8"	0.693 (L/240)	0.210 (21%)	D+L	L

**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.**



### Design Notes

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top flange must be laterally braced at a maximum of 8' o.c.
- 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)0-4-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-9-6	(Span)3-5-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-2		Near Face	134 lb	358 lb	0 lb	0 lb	F7
4	Tie-In	1-9-6 to 14-3-6	(Span)0-11-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	

### Notes

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

### Lumber

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

### Handling & Installation

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

- Provide lateral support at bearing points to avoid lateral displacement and rotation
- Web stiffeners for point load as shown Minimum point load bearing length >= 3.5 inches
- For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

Nascor by Kott

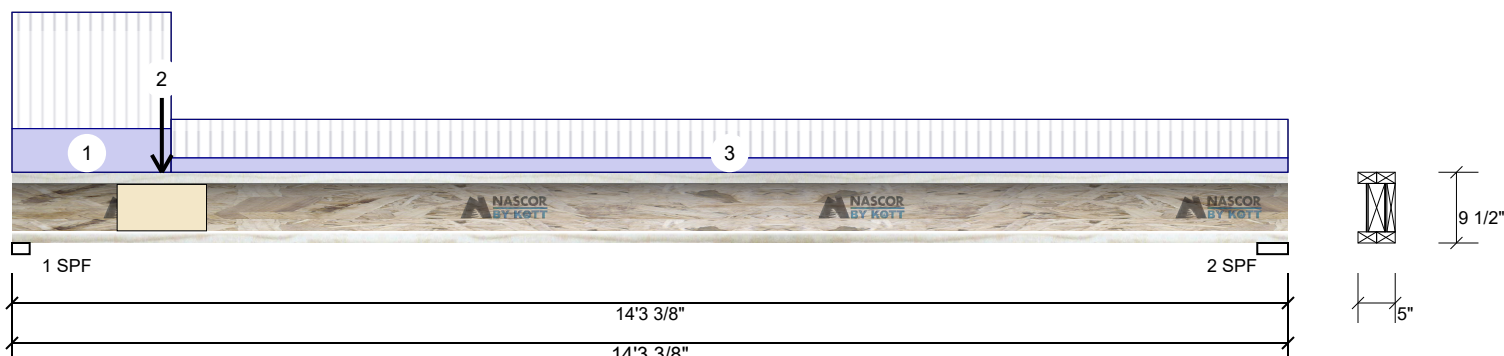


Kott Lumber Company  
14 Anderson Blvd, Ontario  
Canada  
L4A 7X4  
905-642-4400



**F9-B NJH 9.500" 2-Ply - PASSED**

Level: Ground Floor



### Member Information

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

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	531	199	0	0
2	204	77	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	33%	249 / 796	1045 L	1.25D+1.5L
2 - SPF	4.125"	13%	96 / 306	402 L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1707 ft-lb	5'2 15/16"	7660 ft-lb	0.223 (22%)	1.25D+1.5L	L
Unbraced	1707 ft-lb	5'2 15/16"	1714 ft-lb	0.996 (100%)	1.25D+1.5L	L
Shear	1027 lb	1 5/8"	3160 lb	0.325 (32%)	1.25D+1.5L	L
Perm Defl in.	0.035 (L/4746)	6'7 5/16"	0.462 (L/360)	0.080 (8%)	D	Uniform
LL Defl inch	0.094 (L/1779)	6'7 5/16"	0.462 (L/360)	0.200 (20%)	L	L
TL Defl inch	0.129 (L/1294)	6'7 5/16"	0.693 (L/240)	0.190 (19%)	D+L	L

**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.**



### Design Notes

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top flange must be laterally braced at a maximum of 8'6" o.c.
- Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-9-6	(Span)3-5-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	1-8-2		Far Face	124 lb	331 lb	0 lb	0 lb	F7
3	Tie-In	1-9-6 to 14-3-6	(Span)1-1-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	

### Notes

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

### Lumber

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

### chemicals

### Handling & Installation

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

- Provide lateral support at bearing points to avoid lateral displacement and rotation
- Web stiffeners for point load as shown Minimum point load bearing length >= 3.5 inches
- For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

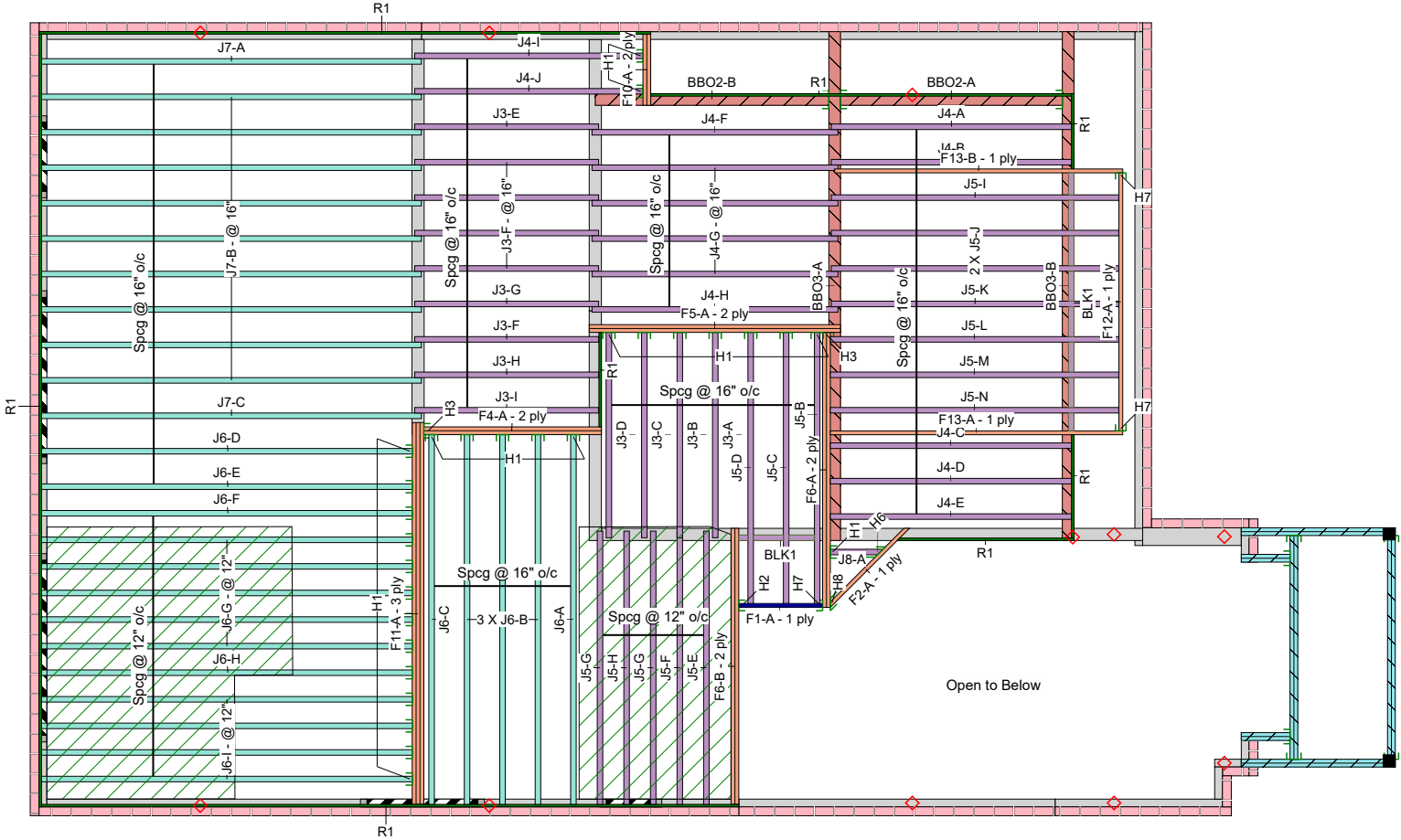
Nascor by Kott



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



Second Floor



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 MEMB CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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

Legend

Load from Above

Wall

Wall Opening

Norbord Rimboard Plus 1.125 X 9.5

NJ60H 9.5

NJH 9.5

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



Second Floor LVL/LSL (Flush)							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
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
F13	Forex 2.0E-3000Fb LVL	1.75	9.5			2	12-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	10-0-0
F12	Forex 2.0E-3000Fb LVL	1.75	9.5			1	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
J7	NJ60H	2.5	9.5			11	16-0-0
J6	NJ60H	2.5	9.5			18	14-0-0
J5	NJH	2.5	9.5			15	12-0-0
J4	NJH	2.5	9.5			13	10-0-0
J3	NJH	2.5	9.5			13	8-0-0
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			10	12

Blocking							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	NJH	2.5	9.5	LinFt		Varies	11-0-0

Hanger							
				Beam/Girder		Supported Member	
Label	Pcs	Description	Skew	Slope	fasteners	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	
H4	9	Unknown Hanger					
H6	1	SUR2.56/9 (Min)	Right		14 10dx1 1/2	2 10dx1 1/2	
H7	3	HUCQ1.81/9-SDS					
H8	1	LSSUI25	Right				

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

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

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

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

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

ARCHITECTURAL DRAWINGS:

JARDIN DESIGN GROUP INC.  
64 Jardin Dr., Suite 3A, Vaughan, ON  
Date: Rev.2; May 22,2018  
Project No: 17-55  
Model: Liana 1



Layout Name  
LIANA 1 (ELEV.2)

Design Method  
LSD

Description  
GRANELLI HOME CORP.  
BRAMPTON, ONT.

Created  
May 29, 2018

Builder  
GREEN YORK HOMES

Sales Rep  
RM

Designer  
RCO

Shipping  
Project

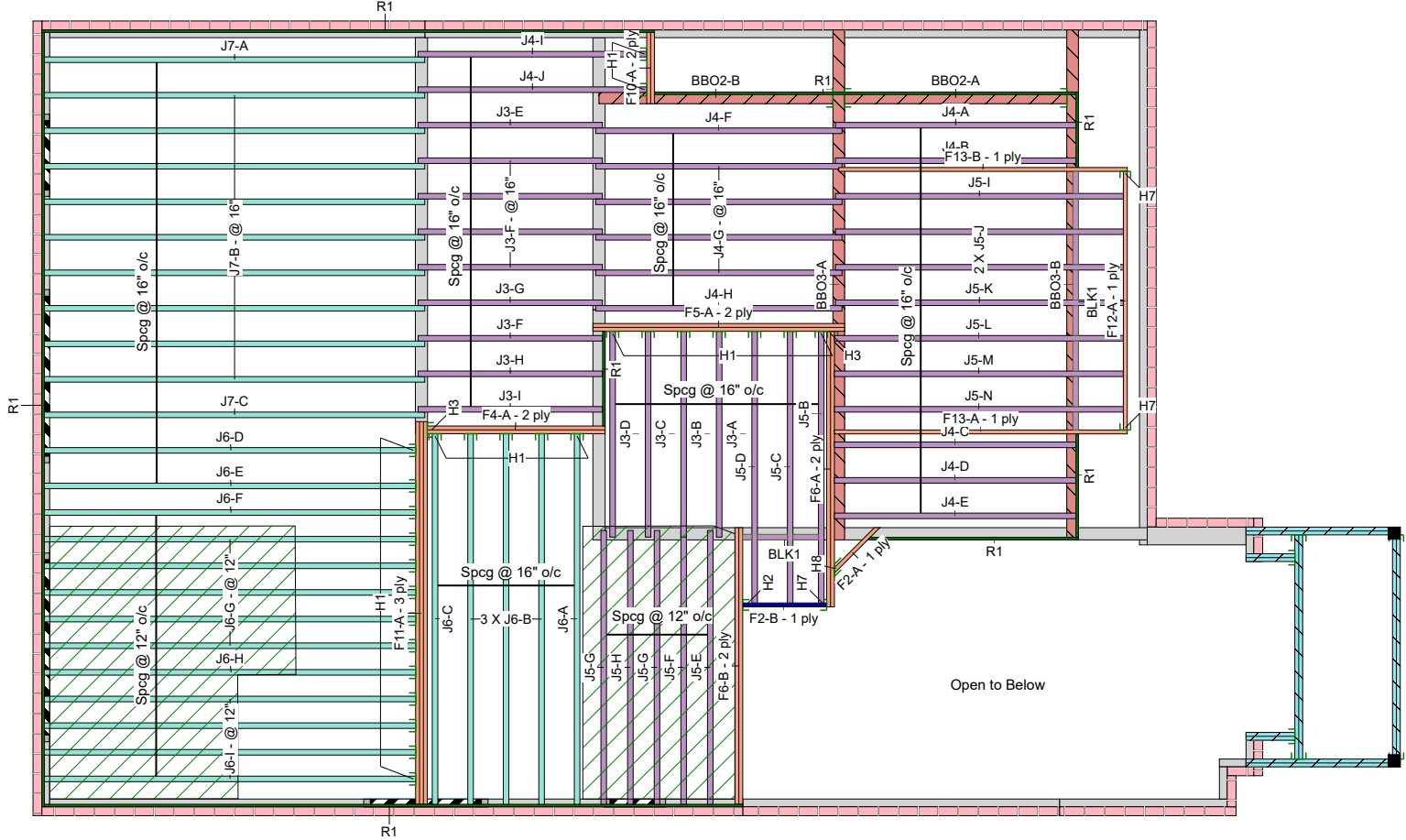
Builder's Project  
**Kott Lumber Company**  
14 Anderson Blvd  
Stouffville, Ontario  
Canada  
L4A 7X4  
905-642-4400

Job Path  
D:\Users\rochavillo\WORK FROM HOME\GREEN YORK HOMES \GRANELLI HOME CORP\MODELS \LIANA 1\LIANA 1 ELEV 2\FLOOR \LIANA 1 (ELEV.2).isi

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"	



Second Floor



**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 MEMBFD CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.**

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



**Legend**

- Load from Above
- Wall
- Wall Opening
- Norbord Rimboard Plus 1.125 X 9.5
- NJ60H 9.5
- NJH 9.5

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

Second Floor LVL/LSL (Flush)							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
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
F13	Forex 2.0E-3000Fb LVL	1.75	9.5			2	12-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	10-0-0
F12	Forex 2.0E-3000Fb LVL	1.75	9.5			1	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			2	4-0-0
F10	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	4-0-0

I Joist (Flush)							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J7	NJ60H	2.5	9.5			11	16-0-0
J6	NJ60H	2.5	9.5			18	14-0-0
J5	NJH	2.5	9.5			15	12-0-0
J4	NJH	2.5	9.5			13	10-0-0
J3	NJH	2.5	9.5			13	8-0-0

Rim Board							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			10	12

Blocking							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	NJH	2.5	9.5	LinFt		Varies	11-0-0

Hanger							
				Beam/Girder		Supported Member	
Label	Pcs	Description	Skew	Slope	fasteners	fasteners	
H1	27	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	
H4	9	Unknown Hanger					
H7	3	HUCQ1.81/9-SDS					
H8	1	LSSUI25	Right				

**NOTES:**

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

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

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

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

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

ARCHITECTURAL DRAWINGS:

JARDIN DESIGN GROUP INC.  
64 Jardin Dr., Suite 3A, Vaughan, ON  
Date: Rev.2; May 22,2018  
Project No: 17-55  
Model: Liana 1



**Layout Name**  
LIANA 1 (ELEV.2) 4 BEDROOM

**Design Method**  
LSD

**Description**  
GRANELLI HOME CORP. BRAMPTON, ONT.

**Created**  
May 29, 2018

**Builder**  
GREEN YORK HOMES

**Sales Rep**  
RM

**Designer**  
RCO

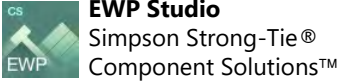
**Shipping**

**Project**

**Builder's Project**  
**Kott Lumber Company**  
14 Anderson Blvd  
Stouffville, Ontario  
Canada  
L4A 7X4  
905-642-4400

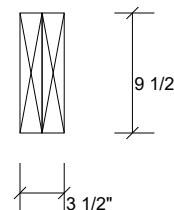
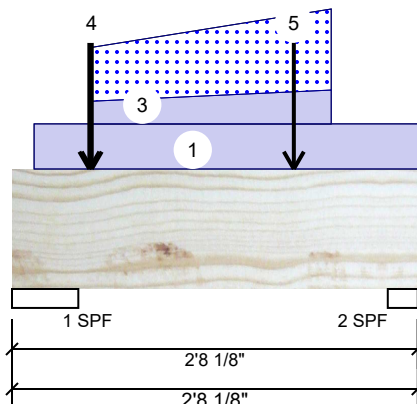
**Job Path**  
D:\Users\rochavillo\WORK FROM HOME\GREEN YORK HOMES \GRANELLI HOME CORP\MODELS \LIANA 1\LIANA 1 ELEV 2\FLOOR\4 BEDRM\LIANA 1 (ELEV.2).isl

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"	



**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	272	661	1056	0
2	143	198	134	0

**Bearings and Factored Reactions**

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	25%	826 / 1720	2546	L	1.25D+1.5S +0.5L
2 - SPF	2.375"	11%	248 / 214	462	L	1.25D+1.5L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	395 ft-lb	1'1 9/16"	22724 ft-lb	0.017 (2%)	1.25D+1.5S +0.5L	L
Unbraced	395 ft-lb	1'1 9/16"	22724 ft-lb	0.017 (2%)	1.25D+1.5S +0.5L	L
Shear	638 lb	1'2"	7792 lb	0.082 (8%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/39438)	1'4 5/8"	0.072 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.001 (L/29384)	1'3"	0.072 (L/360)	0.010 (1%)	S+0.5L	L
TL Defl inch	0.002 (L/16882)	1'3 3/4"	0.108 (L/240)	0.010 (1%)	D+S+0.5L	L

**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.**

**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.

**Notes**

Calculated Structural 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

**Manufacturer Info**

Forex  
APA: PR-L318



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**EWP Studio**  
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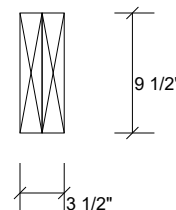
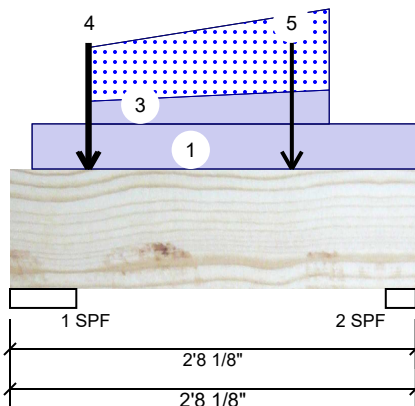
Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 2 of 2

# 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	458 lb	0 lb	1038 lb	0 lb	F14 F14
3	Tapered Start	0-6-2		Top	32 PLF	0 PLF	76 PLF	0 PLF	
	End	2-1-4			48 PLF	0 PLF	115 PLF	0 PLF	
4	Point	0-6-5		Far Face	86 lb	230 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.

## 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


## Manufacturer Info

Forex  
APA: PR-L318

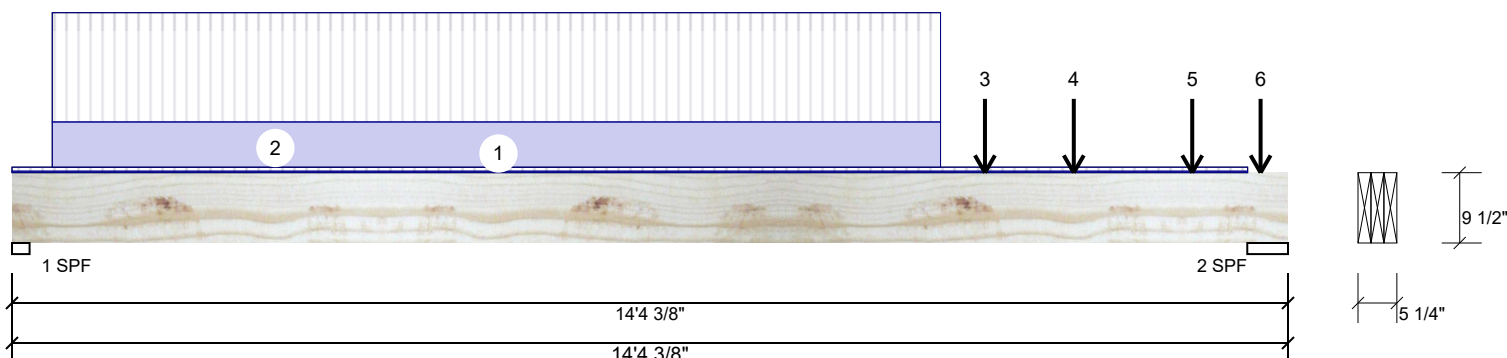


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 <b>EWP Studio</b> Simpson Strong-Tie® Component Solutions™	Client: GREEN YORK HOMES	Date: 5/31/2018	Page 1 of 1
	Project:	Designer: RCO	
	Address:	Job Name: LIANA 1 (ELEV.2)	
		Project #:	

**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

**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.**

### Design Notes

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top braced at bearings.
- Bottom braced at bearings.
- 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 Structural Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

### Lumber

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

### chemicals

### Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

- For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

Forex  
APA: PR-L318

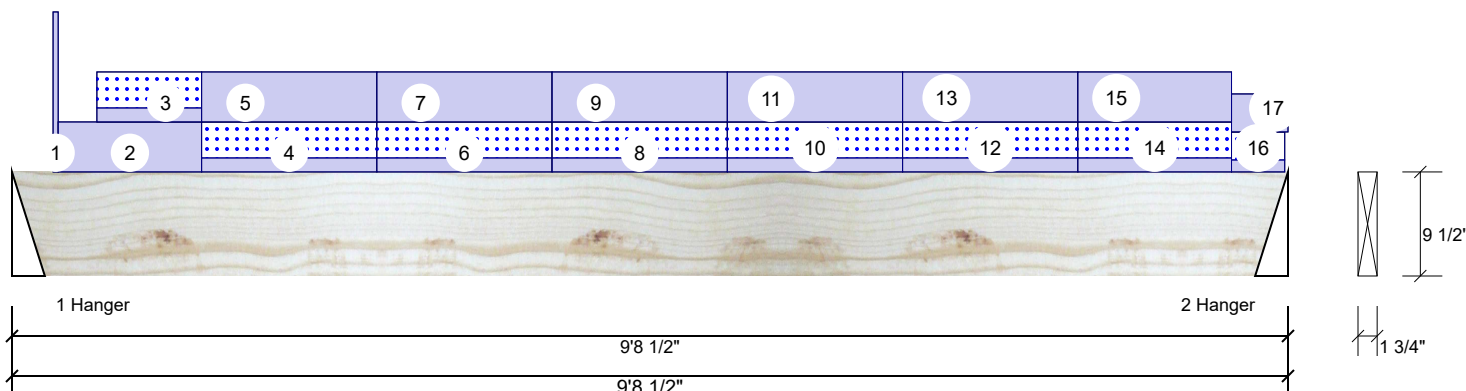


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**F12-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED**

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	0	164	76	0
2	0	171	85	0

**Bearings and Factored Reactions**

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	10%	205 / 114	319	L	1.25D+1.5S
2 - Hanger	3.000"	10%	213 / 128	341	L	1.25D+1.5S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	779 ft-lb	4'10 5/16"	9544 ft-lb	0.082 (8%)	1.25D+1.5S	L
Unbraced	779 ft-lb	4'10 5/16"	3994 ft-lb	0.195 (20%)	1.25D+1.5S	L
Shear	278 lb	11 3/4"	3896 lb	0.071 (7%)	1.25D+1.5S	L
Perm Defl in.	0.027 (L/4130)	4'10 1/4"	0.311 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.014 (L/8256)	4'10 5/16"	0.311 (L/360)	0.040 (4%)	S	L
TL Defl inch	0.041 (L/2753)	4'10 1/4"	0.467 (L/240)	0.090 (9%)	D+S	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.

**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.**



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-3-12 to 0-4-4		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-4-4 to 1-5-5		Top	25 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-7-12 to 1-5-5		Top	7 PLF	0 PLF	18 PLF	0 PLF	
4	Part. Uniform	1-5-5 to 2-9-5		Top	7 PLF	0 PLF	18 PLF	0 PLF	
5	Part. Uniform	1-5-5 to 2-9-5		Top	25 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Part. Uniform	2-9-5 to 4-1-5		Top	7 PLF	0 PLF	18 PLF	0 PLF	
7	Part. Uniform	2-9-5 to 4-1-5		Top	25 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
8	Part. Uniform	4-1-5 to 5-5-5		Top	7 PLF	0 PLF	18 PLF	0 PLF	

Continued on page 2...

**Notes**

Calculated Structural 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

**Manufacturer Info**

Forex  
APA: PR-L318

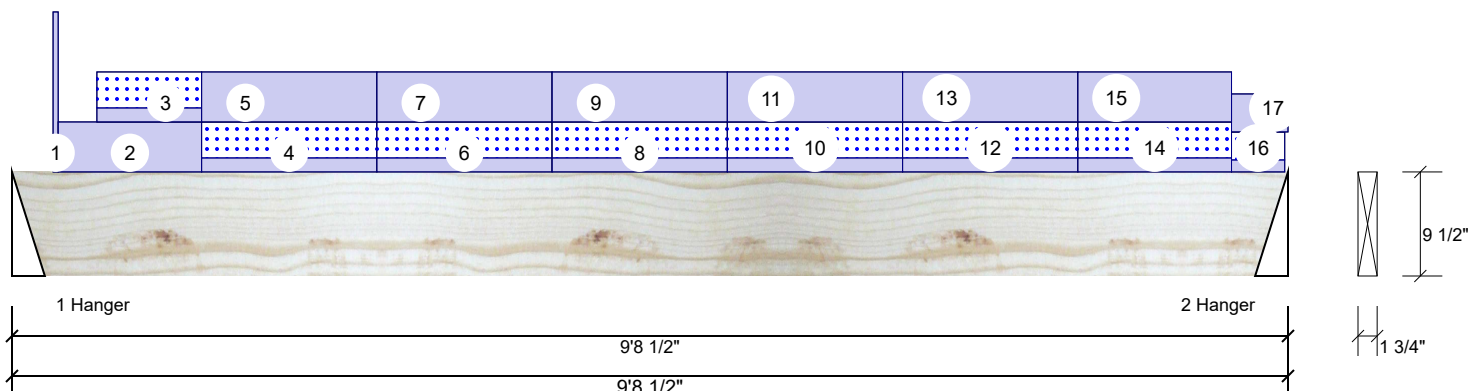


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**F12-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED**

Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
9	Part. Uniform	4-1-5 to 5-5-5		Top	25 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
10	Part. Uniform	5-5-5 to 6-9-5		Top	7 PLF	0 PLF	18 PLF	0 PLF	
11	Part. Uniform	5-5-5 to 6-9-5		Top	25 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
12	Part. Uniform	6-9-5 to 8-1-5		Top	7 PLF	0 PLF	18 PLF	0 PLF	
13	Part. Uniform	6-9-5 to 8-1-5		Top	25 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
14	Part. Uniform	8-1-5 to 9-3-5		Top	7 PLF	0 PLF	18 PLF	0 PLF	
15	Part. Uniform	8-1-5 to 9-3-5		Top	25 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
16	Part. Uniform	9-3-5 to 9-8-3		Top	6 PLF	0 PLF	14 PLF	0 PLF	
17	Part. Uniform	9-3-5 to 9-8-3		Top	19 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				4 PLF				

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NAILING OR BOLTING REQUIREMENTS.**

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

**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

**Manufacturer Info**

Forex  
APA: PR-L318



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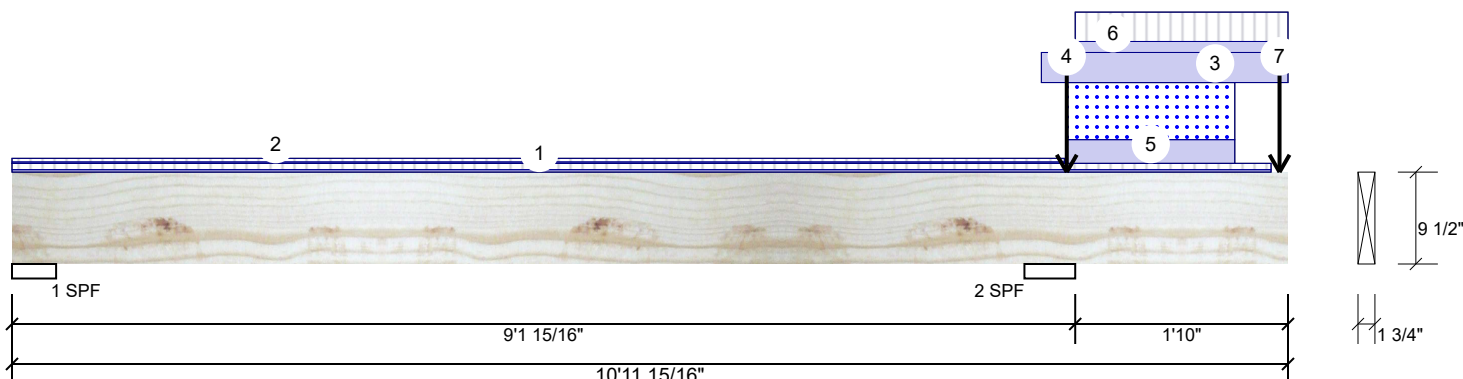
Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 1 of 2

# F13-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	105	(-1)	0 (-33)	0
2	310	826	719	0

## Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.563"	5%	-1 / 185	185 (-55)	L	0.9D+1.5L
2 - SPF	5.250"	40%	1032 / 1233	2265	LL	1.25D+1.5S +0.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-930 ft-lb	9'1 15/16"	7726 ft-lb	0.120 (12%)	1.25D+1.5L	L
Unbraced	-1198 ft-lb	9'1 15/16"	4322 ft-lb	0.277 (28%)	1.25D+1.5S +0.5L	L
Pos Moment	269 ft-lb	3'6 1/4"	8294 ft-lb	0.032 (3%)	0.9D+1.5L	L
Unbraced	269 ft-lb	3'6 1/4"	5773 ft-lb	0.047 (5%)	0.9D+1.5L	L
Shear	701 lb	9'11 7/16"	4638 lb	0.151 (15%)	1.25D+1.5S +0.5L	L
Perm Defl in.	0.011 (L/9417)	5'9 3/16"	0.287 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.015 (L/6903)	4'7 9/16"	0.287 (L/360)	0.050 (5%)	L	L
TL Defl inch	0.023 (L/4543)	5'6 3/8"	0.431 (L/240)	0.050 (5%)	D+S+0.5L	L
LL Cant	0.018 (2L/2401)	Rt Cant	0.200 (2L/480)	0.092 (9%)	S+0.5L	L
TL Cant	0.042 (2L/1038)	Rt Cant	0.300 (2L/360)	0.141 (14%)	D+S+0.5L	L

**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.**



## 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 Tie-down connection required at bearing 1 for uplift 55 lb (Combination 1.25D+1.5S+0.5L, Load Case L).
- 4 Top braced at bearings.
- 5 Bottom braced at bearings.

## Notes

Calculated Structural 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

## Manufacturer Info

Forex  
APA: PR-L318



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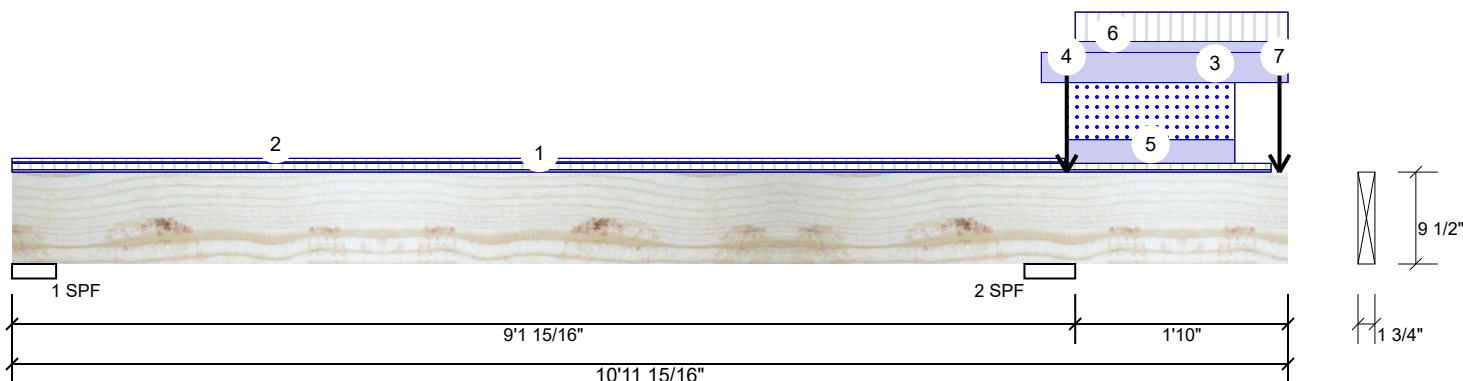
Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 2 of 2

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

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-10-3	(Span)0-10-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 9-0-13	(Span)0-5-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	8-10-7 to 10-11-15		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Point	9-1-1		Top	202 lb	0 lb	390 lb	0 lb	F15 F15
5	Part. Uniform	9-1-1 to 10-6-7		Top	63 PLF	0 PLF	152 PLF	0 PLF	
6	Tie-In	9-1-15 to 10-11-15	(Span)3-10-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Point	10-11-1		Far Face	164 lb	0 lb	76 lb	0 lb	F12
	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.

## 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

## Manufacturer Info

Forex  
APA: PR-L318

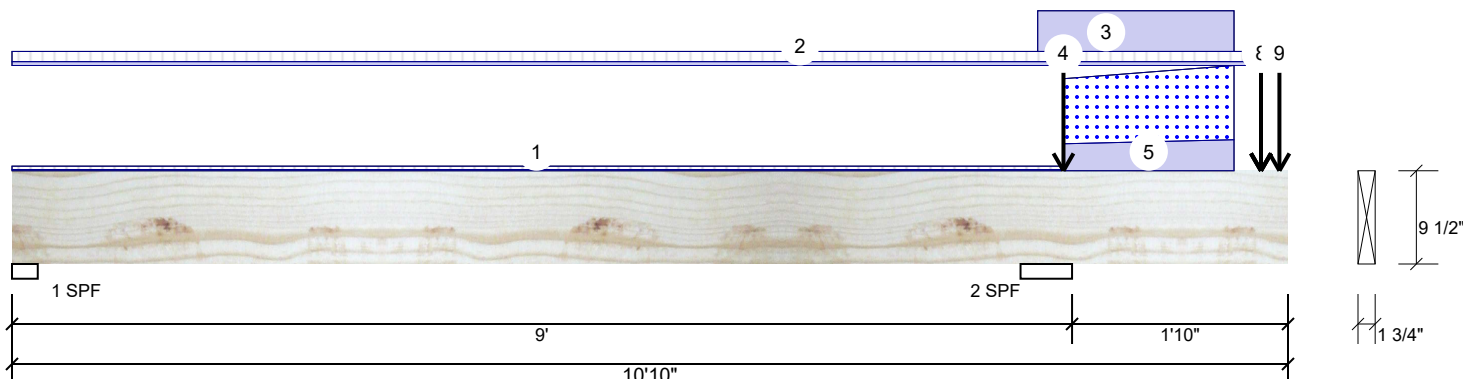


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**F13-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED**

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	116	1	0 (-37)	0
2	157	801	797	0

**Bearings and Factored Reactions**

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.625"	9%	1 / 179	180 (-54)	L	1.25D+1.5L
2 - SPF	5.250"	40%	1001 / 1274	2275	LL	1.25D+1.5S +0.5L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-1144 ft-lb	9'	11248 ft-lb	0.102 (10%)	1.25D+1.5S +0.5L	L
Unbraced	-1144 ft-lb	9'	4322 ft-lb	0.265 (26%)	1.25D+1.5S +0.5L	LL
Pos Moment	280 ft-lb	3'5 1/8"	8408 ft-lb	0.033 (3%)	0.9D+1.5L	L
Unbraced	280 ft-lb	3'5 1/8"	5672 ft-lb	0.049 (5%)	0.9D+1.5L	L
Shear	664 lb	9'9 1/2"	4638 lb	0.143 (14%)	1.25D+1.5S +0.5L	L
Perm Defl in.	0.010 (L/10431)	5'7 13/16"	0.288 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.015 (L/6902)	4'5 5/8"	0.288 (L/360)	0.050 (5%)	L	L
TL Defl inch	0.021 (L/4995)	5'4 3/4"	0.431 (L/240)	0.050 (5%)	D+S+0.5L	L
LL Cant	0.017 (2L/2601)	Rt Cant	0.200 (2L/480)	0.085 (8%)	S+0.5L	L
TL Cant	0.039 (2L/1118)	Rt Cant	0.300 (2L/360)	0.131 (13%)	D+S+0.5L	L

**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.**

**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 Tie-down connection required at bearing 1 for uplift 54 lb (Combination 0.9D+1.5S, Load Case L).
- 4 Top braced at bearings.
- 5 Bottom braced at bearings.

**Notes**

Calculated Structural 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

**Manufacturer Info**

Forex  
APA: PR-L318



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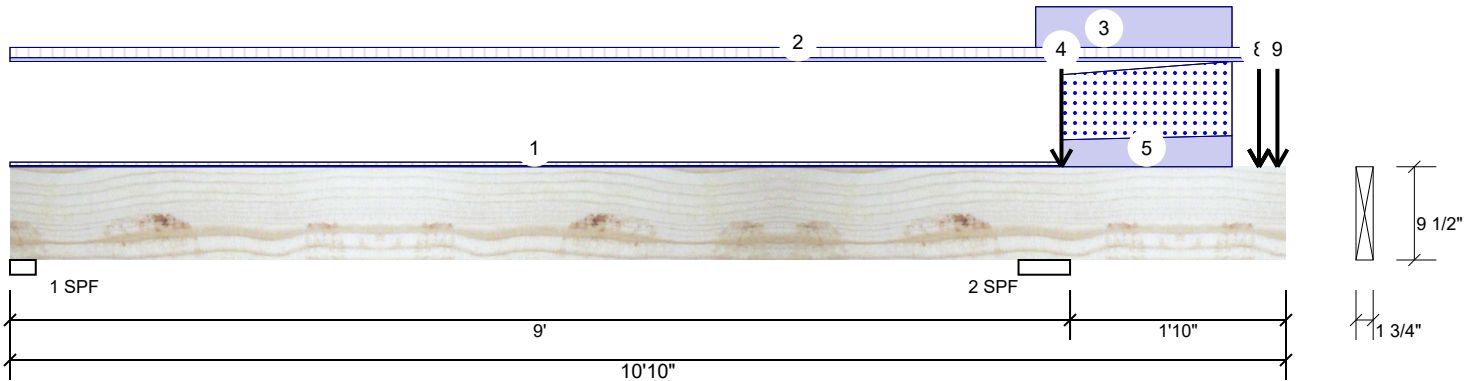
Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 2 of 2

# F13-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 8-10-14	(Span)0-3-15 to 0-3-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 10-8-4	(Span)1-0-1 to 1-0-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	8-8-8 to 10-4-8		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Point	8-11-2		Top	232 lb	0 lb	460 lb	0 lb	F15 F15
5	Tapered Start	8-11-2		Top	53 PLF	0 PLF	128 PLF	0 PLF	
	End	10-4-8			61 PLF	0 PLF	146 PLF	0 PLF	
6	Point	10-7-4		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
7	Point	10-7-4		Top	7 lb	0 lb	17 lb	0 lb	
8	Point	10-7-4		Top	26 lb	0 lb	0 lb	0 lb	Wall Self Weight
9	Point	10-9-2		Near Face	171 lb	0 lb	85 lb	0 lb	F12
	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.

## Notes

Calculated Structural 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

## Manufacturer Info

Forex  
APA: PR-L318



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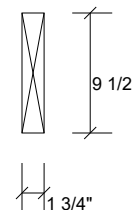
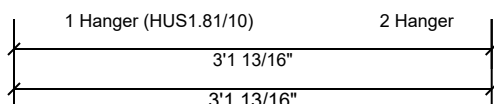
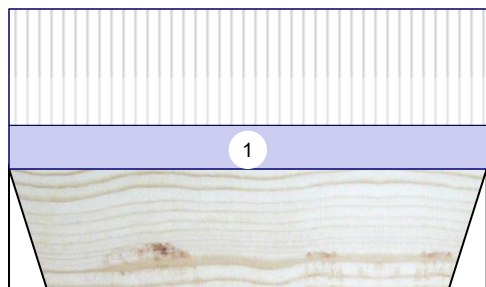
Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 1 of 1

# 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. (L/29538)	0.001	1'6 15/16"	0.093 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch (L/11546)	0.003	1'6 15/16"	0.093 (L/360)	0.030 (3%)	L	L
TL Defl inch (L/8301)	0.004	1'6 15/16"	0.139 (L/240)	0.030 (3%)	D+L	L

**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.**



## Design Notes

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

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

## Lumber

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

chemicals

## Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

- For flat roofs provide proper drainage to prevent ponding

## Manufacturer Info

Forex  
APA: PR-L318



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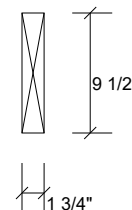
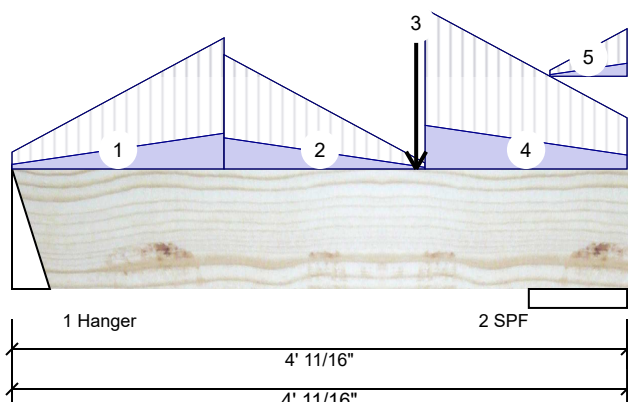
Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 1 of 1

## 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

**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.**



### 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 1-4-13	(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

Calculated Structural 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

### 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

### Manufacturer Info

Forex  
APA: PR-L318



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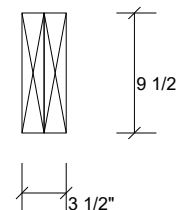
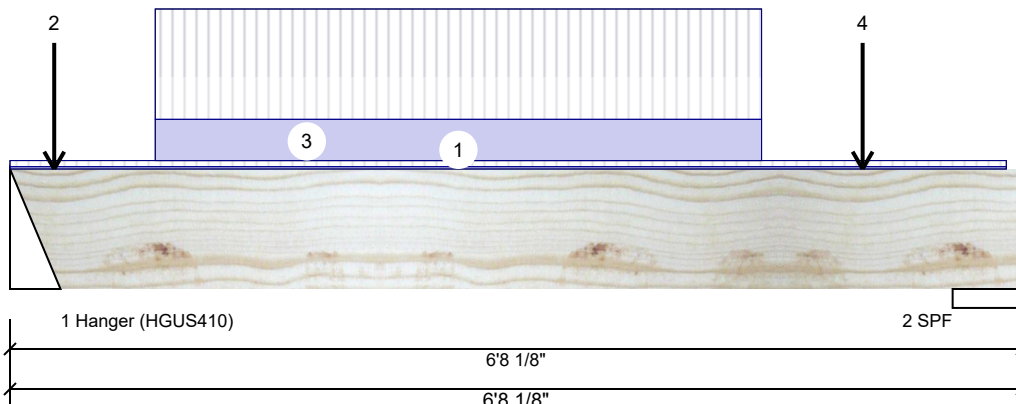
Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 1 of 1

# 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	
TL Defl inch	0.030 (L/2441)	3'3 1/2"	0.301 (L/240)	0.100 (10%)	D+L	L

**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.**



## 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 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

Calculated Structural 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

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

## Manufacturer Info

Forex  
APA: PR-L318

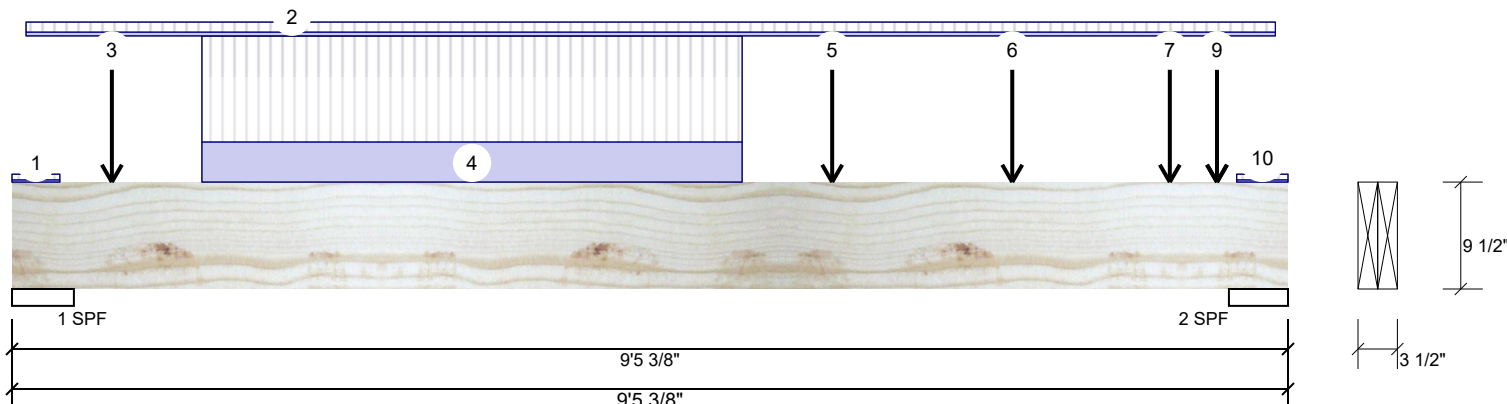


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**F5-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED**

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	708 (-2)	303	0	0
2	649 (-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%	379 / 1063	1441 L	1.25D+1.5L
2 - SPF	5.250"	11%	324 / 974	1297 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	
TL Defl inch	0.065 (L/1607)	4'8 11/16"	0.434 (L/240)	0.150 (15%)	D+L	L

**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.**

**Design Notes**

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top braced at bearings.
- Bottom braced at bearings.
- 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 0-4-4	(Span)0-4-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-1-4 to 9-4-4	(Span)0-8-9	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**

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

**Lumber**

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

**chemicals****Handling & Installation**

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

- For flat roofs provide proper drainage to prevent ponding

**Manufacturer Info**

Forex  
APA: PR-L318



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





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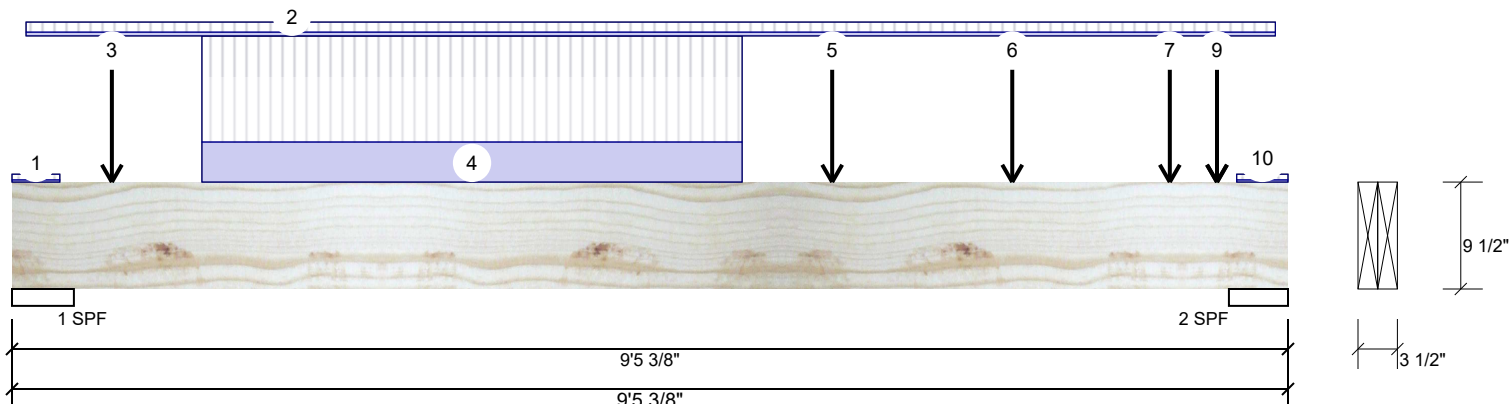
Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 2 of 2

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

Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
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.

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

## Notes

Calculated Structural 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

## Manufacturer Info

Forex  
APA: PR-L318



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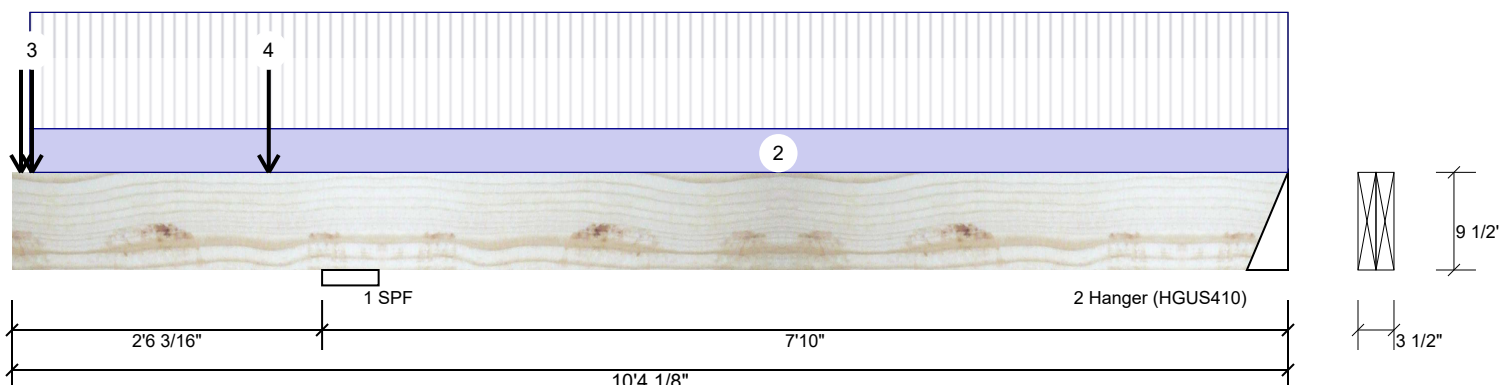
Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 1 of 2

# **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. (L/22511)	0.004	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_

**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.**



## Design Notes

- Fill all hanger nailing holes.
- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Tie-down connection required at bearing 2 for uplift 242 lb (Combination 1.25D+1.5L, Load Case L\_).
- Top braced at bearings.
- Bottom braced at bearings.
- Lateral slenderness ratio based on full section width.

## Notes

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

## Lumber

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

chemicals

## Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

- For flat roofs provide proper drainage to prevent ponding

## Manufacturer Info

Forex  
APA: PR-L318



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





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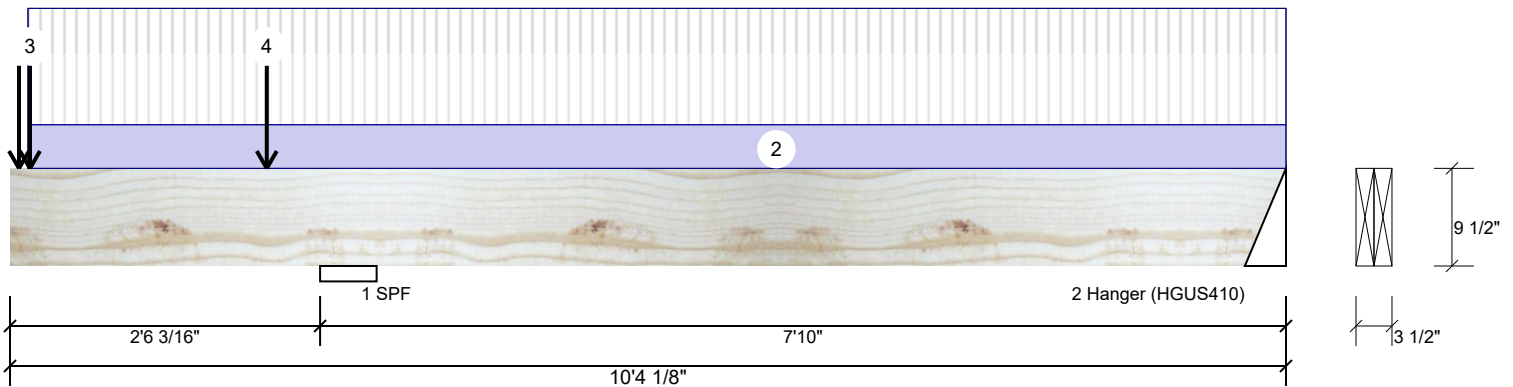
Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 2 of 2

# 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.

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

## 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

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

## Manufacturer Info

Forex  
APA: PR-L318



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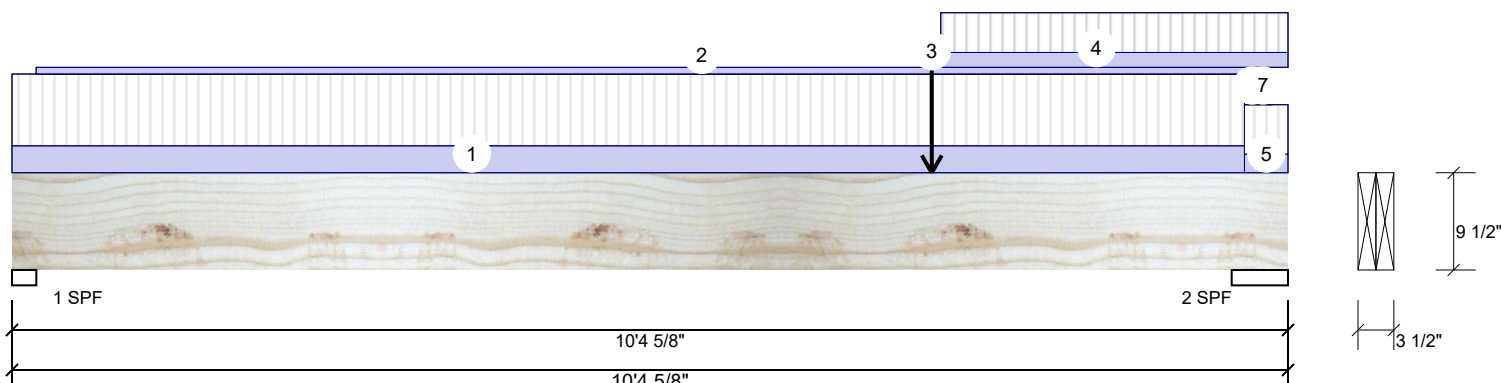
Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

Page 1 of 2

# **F6-B 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	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	
TL Defl inch	0.047 (L/2502)	5'6 1/4"	0.493 (L/240)	0.100 (10%)	D+L	L

**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.**



## Design Notes

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top braced at bearings.
- Bottom braced at bearings.
- 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 10-0-6	(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

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

## Lumber

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

chemicals

## Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

- For flat roofs provide proper drainage to prevent ponding

## Manufacturer Info

Forex  
APA: PR-L318



Kott Lumber Company  
14 Anderson Blvd, Ontario  
Canada  
L4A 7X4  
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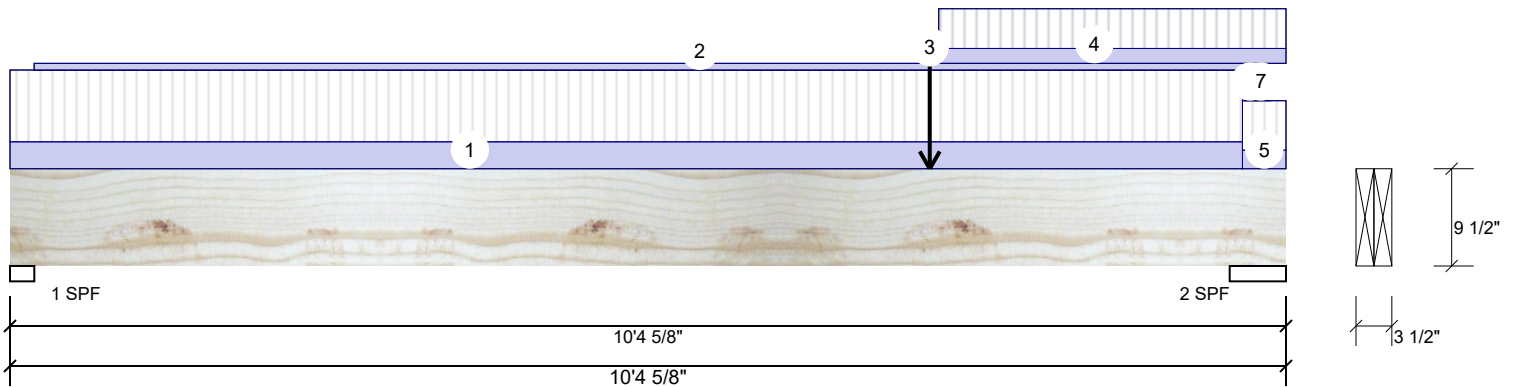
Client: GREEN YORK HOMES  
Project:  
Address:

Date: 5/31/2018  
Designer: RCO  
Job Name: LIANA 1 (ELEV.2)  
Project #:

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

Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
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				

### Notes

Calculated Structural 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
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6. For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

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APA: PR-L318

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